DIAWeb Designer Software User Manual

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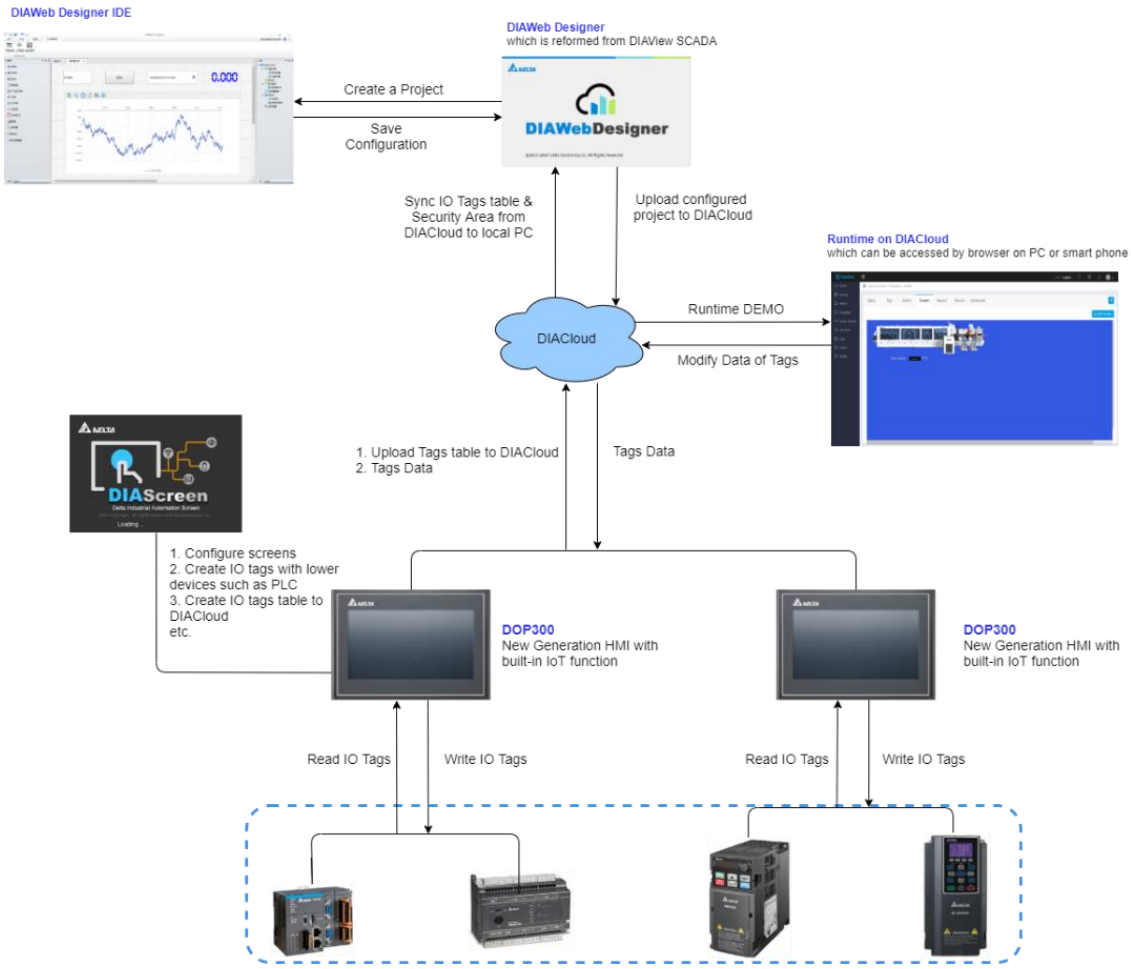
Chapter 1 Introduction

1.1 Overview

1.1.1 Background

With the development of industry and social economy, information technology based on computers, high-speed networks, cloud services is becoming more and more mature and advanced, and the scope of application spans from industrial manufacturing, import and export trade, transportation, electric power, petroleum, chemical industry, metallurgy to people's daily life, culture and entertainment, etc. Information technology is also gradually developing towards automation, intellectualization and cloudification, which is pushing forward the revolution of productivity and improvement in human's standard of living.

The cloud platform model refers to the deployment where local data is uploaded to a cloud service platform. Delta's IoT cloud platform, DIACloud, can communicate with remote devices at any time, in any place, and under any network. It realizes browsing of the status of connected industrial equipment and collected data, receiving alarms, push notifications, and other information sent by the cloud platform, as well as graphical analysis and display for the data. Users can monitor operation and alarm information of the equipment in real time through mobile APP or webpage at any place, which is convenient for remote maintenance, guidance and troubleshooting, and provides users with comprehensive solutions and services for remote management and monitoring of industrial equipment.



The graphical interface editor, DIAWeb Designer, provides professional design tools for DIACloud. The extensive graphical configuration options and charts allows user to quickly create exquisite page displays.

1.2 Features

- Based on Windows operating system, widely adaptable with flexibility and reliability.
- Adopt .NET application platform with HTML supported to create visually appealing interfaces through Web technology.
- Distributed layout for strong scalability.
- User-friendly and intuitive interfaces with extensive graphical options makes it easier to configure, use and maintain.
- Simple template binding function.
- Efficient data download and upload mode.
- Apply VBScript, the script language easy to learn and use.

Chapter 2 Installation and Uninstallation

2.1 System Requirements

Item	System Requirements
CPU	2GHz or above
Memory	4GB or above
Hard Disk Drive	20GB or above
Monitor	Resolution: 1024 x 768 Pixels or above
Operating System	Windows 7 SP1 (32 / 64 bits) (Professional / Ultimate / Enterprise)
	Windows 8 (32 / 64 bits) (Professional / Ultimate / Enterprise)
	Windows 10 (32 / 64 bits) (Professional / Ultimate / Enterprise)
	Windows 11 (32 / 64 bits) (Professional / Ultimate / Enterprise)
	Windows Server 2008 R2 SP1 (64 bits)
	Windows Server 2012 (64 bits)
	Languages: Traditional Chinese, Simplified Chinese, English
Access Rights	Administrator permissions are required for Windows
Browser	Chrome official version 124.0.6367.60 (64 bits) and Edge official version 123.0.2420.97 (64 bits) are recommended

2.2Installing and Uninstalling DIAWeb Designer

This section introduces how to install and uninstall DIAWeb Designer.

2.2.1Installation

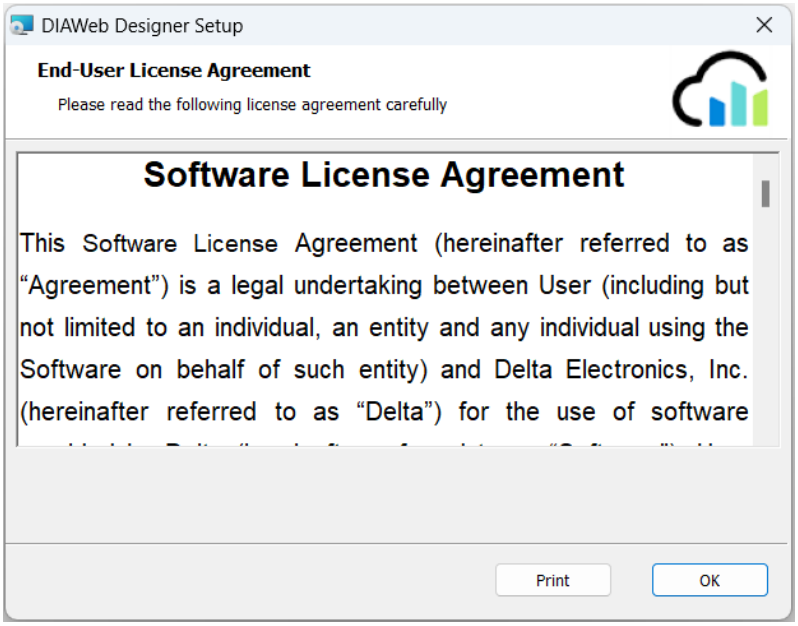
To install DIAWeb Designer (based on Windows 11 Professional):

1. Double-click the **DIAWeb DesignerSetup.exe** file.

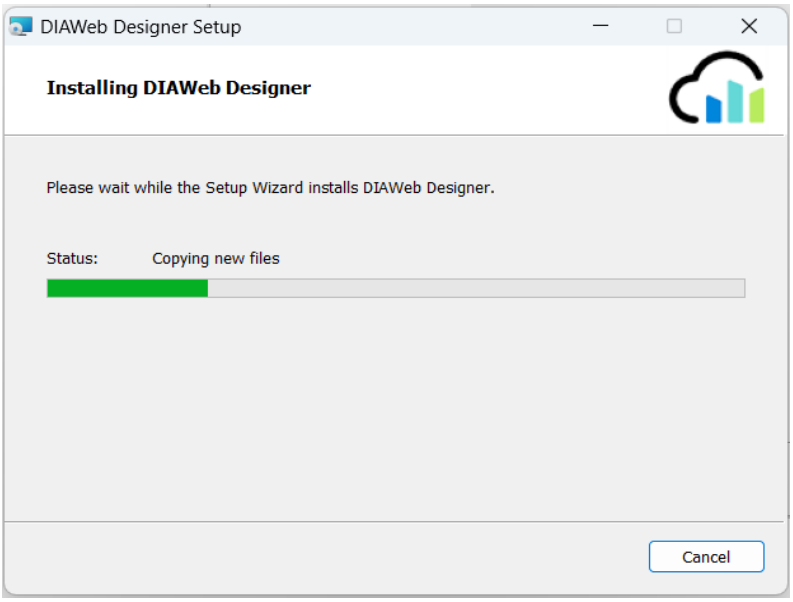
2. Select the language: click to open the drop-down list and select the language you require. Click **OK** to continue.

3. The **DIAWeb Designer Setup** dialog will appear.
   The default download path is C:\Program Files (x86)\Delta Industrial Automation\DIAWeb Designer. Click **Browser** to change the path if necessary.

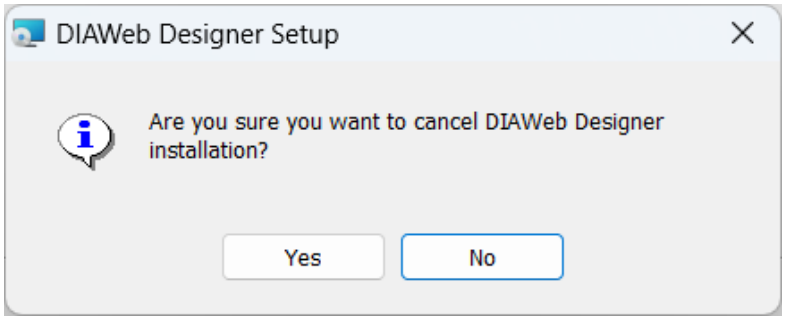
Click **Agreement** to read the **End-User License Agreement** or print it out. Click **OK** to close the dialog.



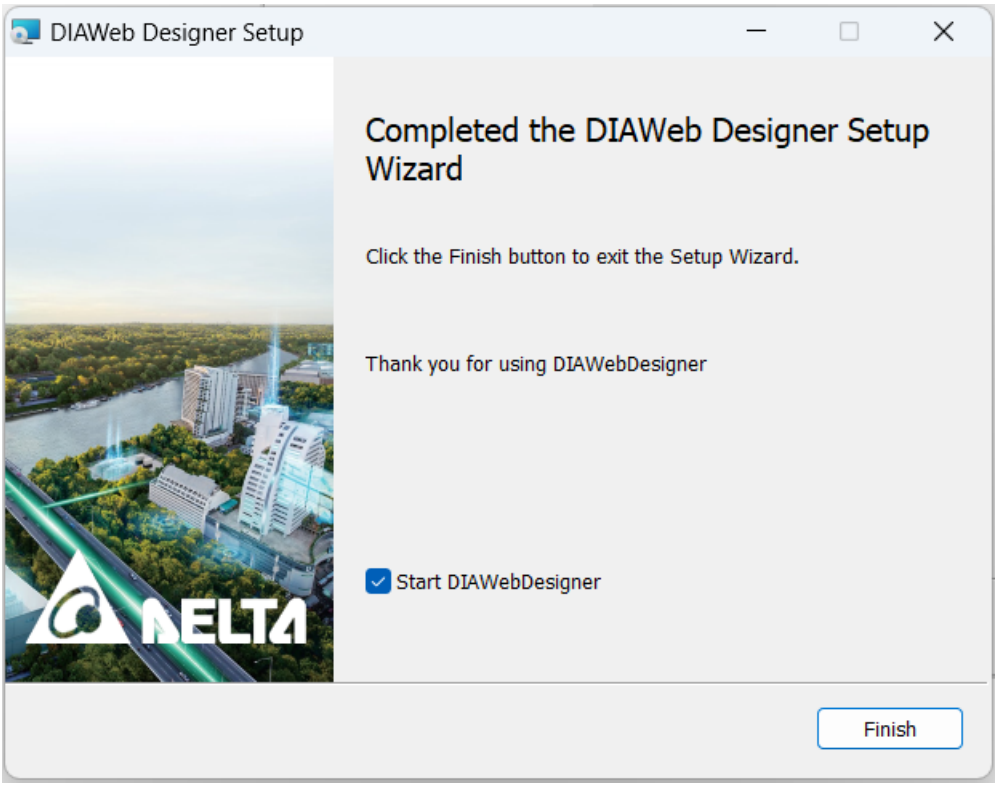
4. Check the box of **I accept the terms in the License Agreement**. Then click **Start Install**. The **DIAWeb Designer Setup** dialog will appear.



Click **Cancel** if you want to stop installation. A dialog for double confirmation will pop up. Click **Yes** to stop or **No** to continue installation.



5. The dialog below will appear after installation is done. Click **Finish** to complete and exit the Setup Wizard. If the **Start DIAWebDesigner** box is ticked, the DIAWeb Designer software will be opened directly after clicking **Finish**.

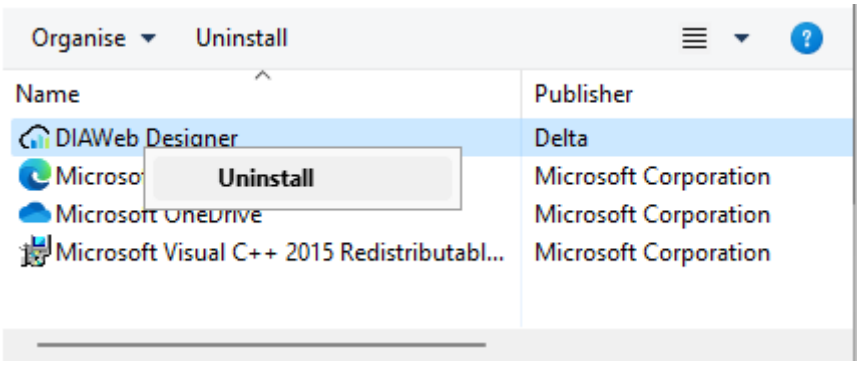


2.1.2 Uninstallation

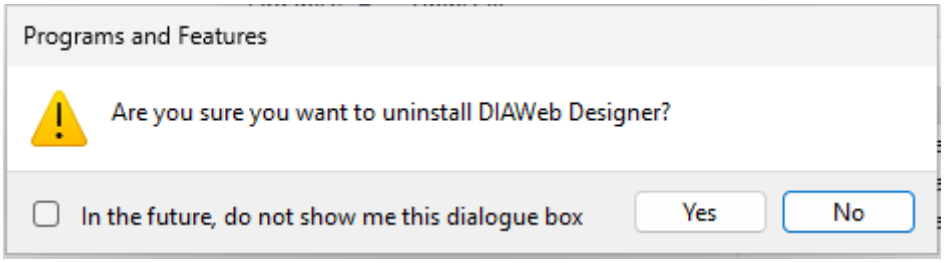
There are three approaches to uninstall DIAWeb Designer (based on Windows 11 Professional):

- **Approach 1**

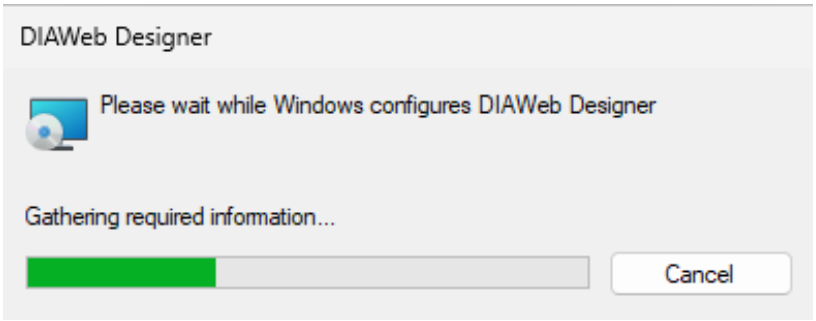
  1. Open the **Control Panel**. Select **Programs and Features**. Right-click **DIAWeb Designer** and select **Uninstall**.



  2. A dialog for double confirmation will pop up.

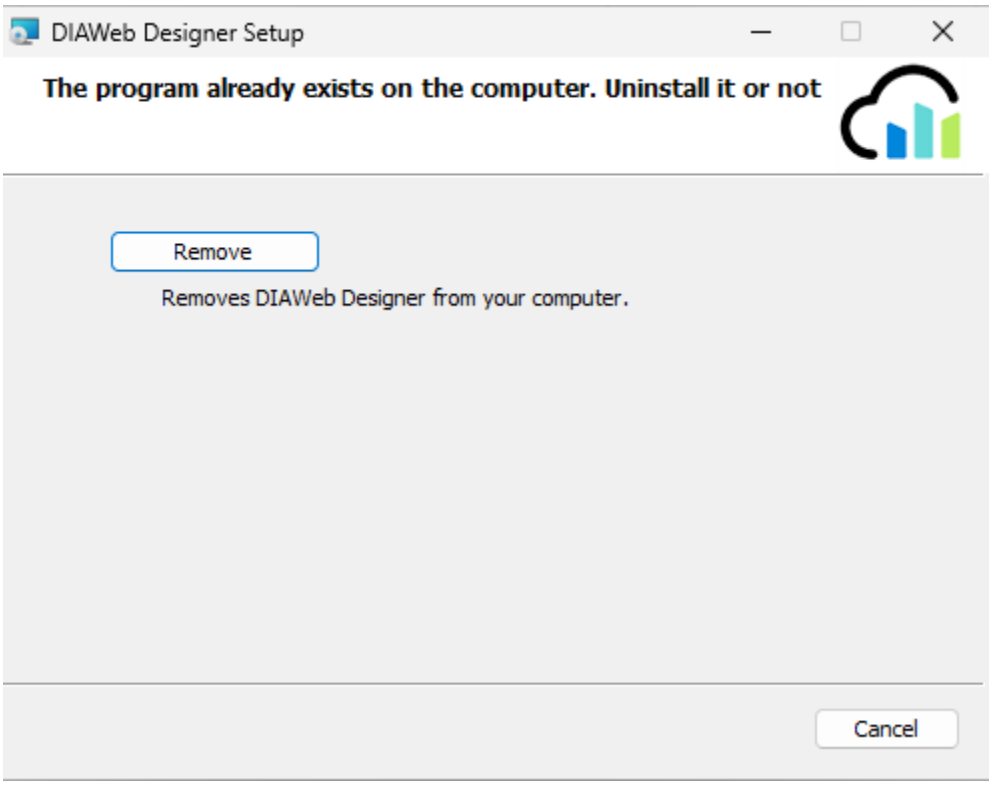


Click **Yes** and then DIAWeb Designer will be removed automatically. Or, click **No** to exit.



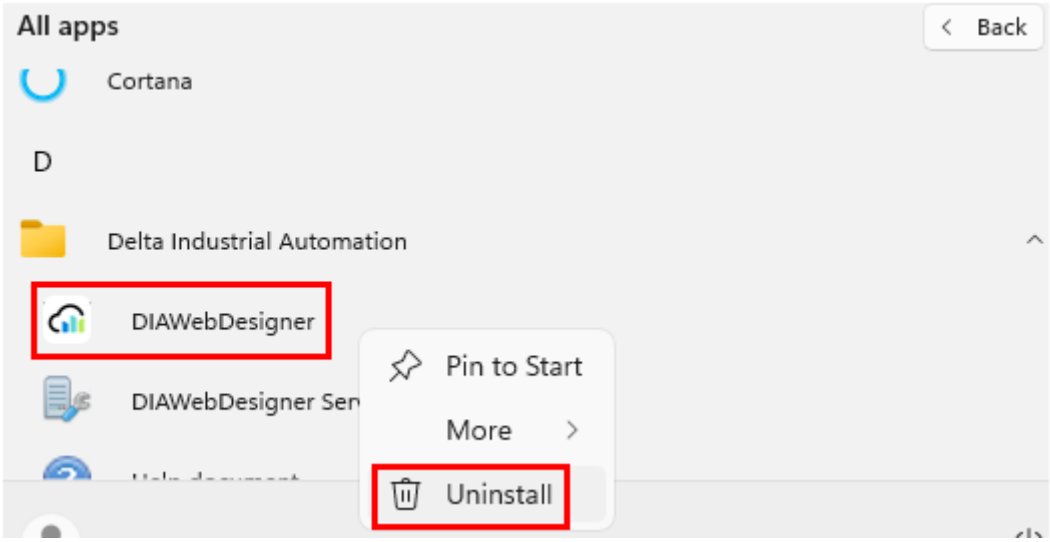
Approach 2

1. Open the **DIAWeb DesignerSetup.exe** file and click **Remove** to uninstall.



- **Approach 3**

1. Select **Start** on the desktop, go to the **Settings** page and select **Apps > Apps & Features**.
2. Find the **Delta Industrial Automation** folder. Right-click **DIAWeb Designer** and select **Uninstall**.



Chapter 3 Getting Started with DIAWeb Designer

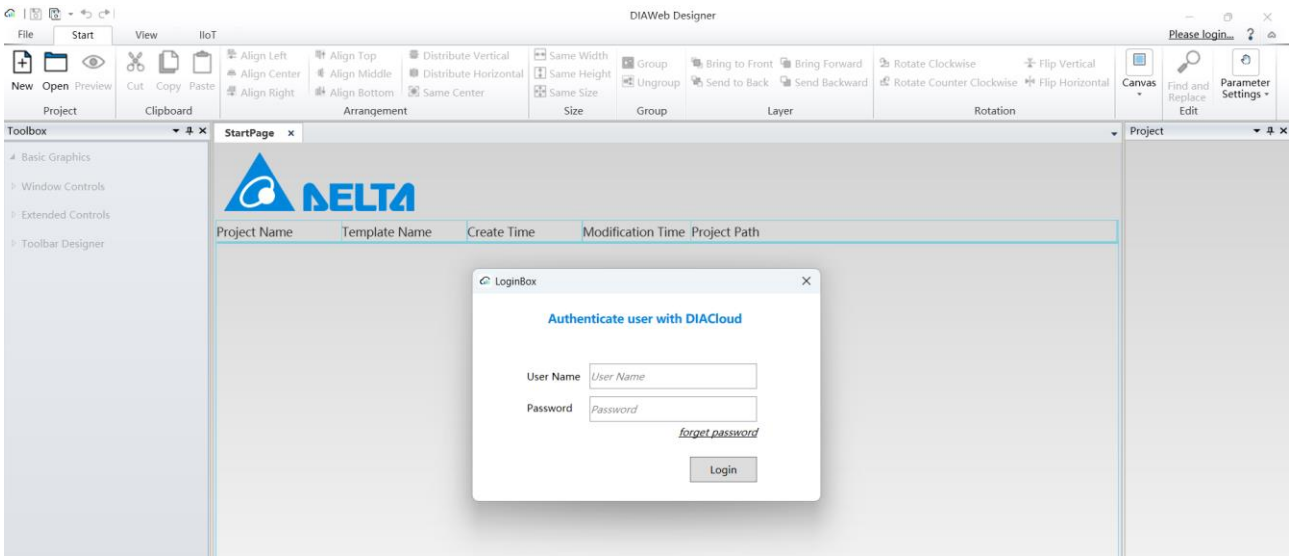
This chapter introduces the basic setup for project development in DIAWeb Designer. It is important to note that each project application differs, and these steps only serve as general guidelines. Users are advised to select the most appropriate configurations based on the specific project requirements.

3.1 Quick Start

1. **Open the DIAWeb Designer software.**

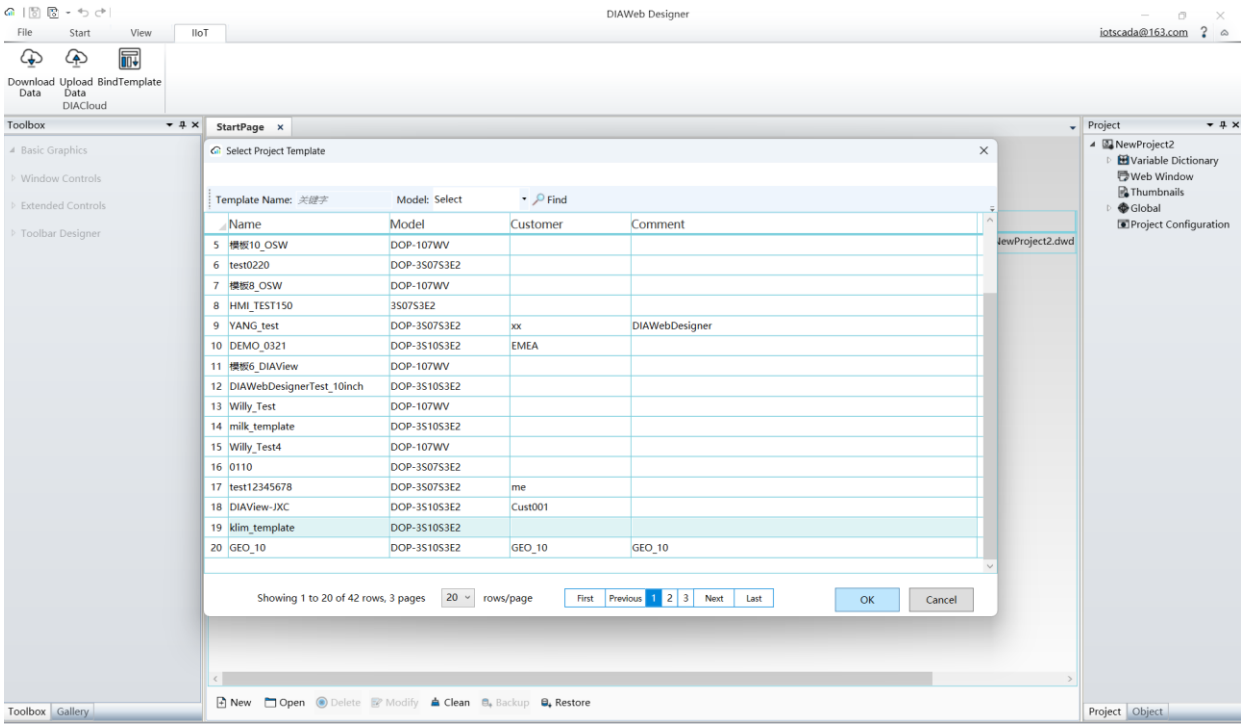
2. **To create a new project:**
   On the **StartPage**, click **File > New** or **Start > New** to create a new project. Specify a name and storage location for the project to get started. The **Project** pane will appear on the right-hand side after you click **OK**.

3. **To log in:**
   Please log in to access the template binding feature. Click **Please login** at the top-right corner to open the **LoginBox** dialog. Click **Login** after entering user name and password.



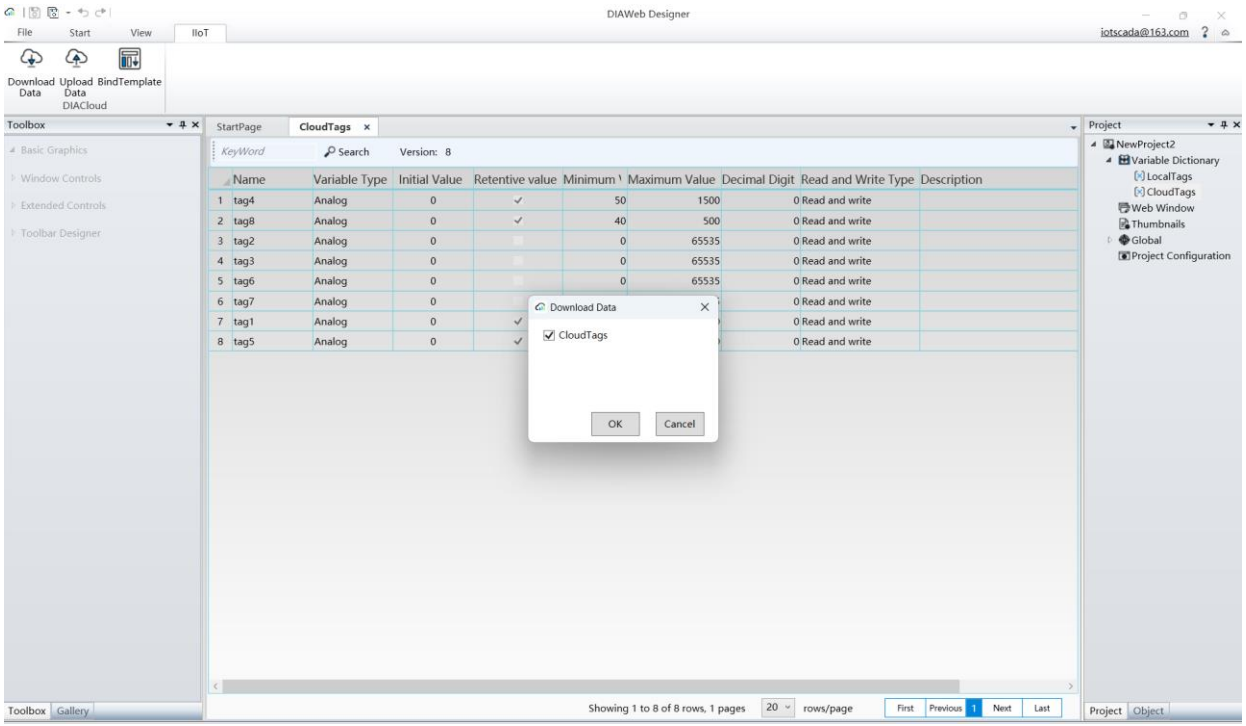
4. To bind a template:

Click **IIoT > Bind Template** and select a template for your project. After binding a template, you will be able to download and upload data between the template on DIACloud and the project.



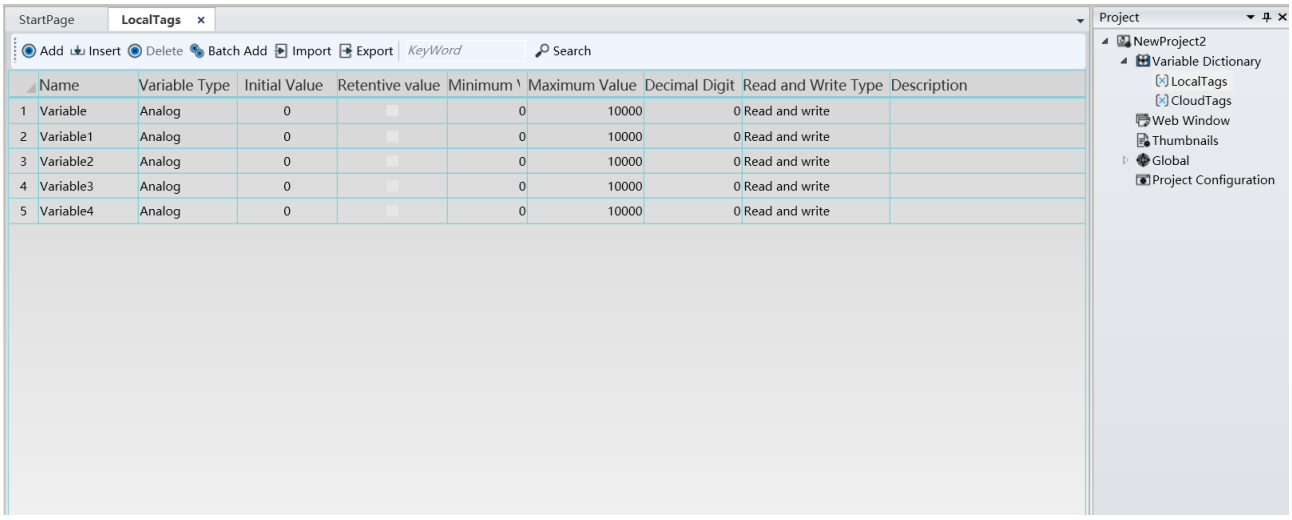
5. To synchronize the data:

There are local tags and cloud tags in the variable dictionary. Select **IIoT > Download Data** to synchronize the data.



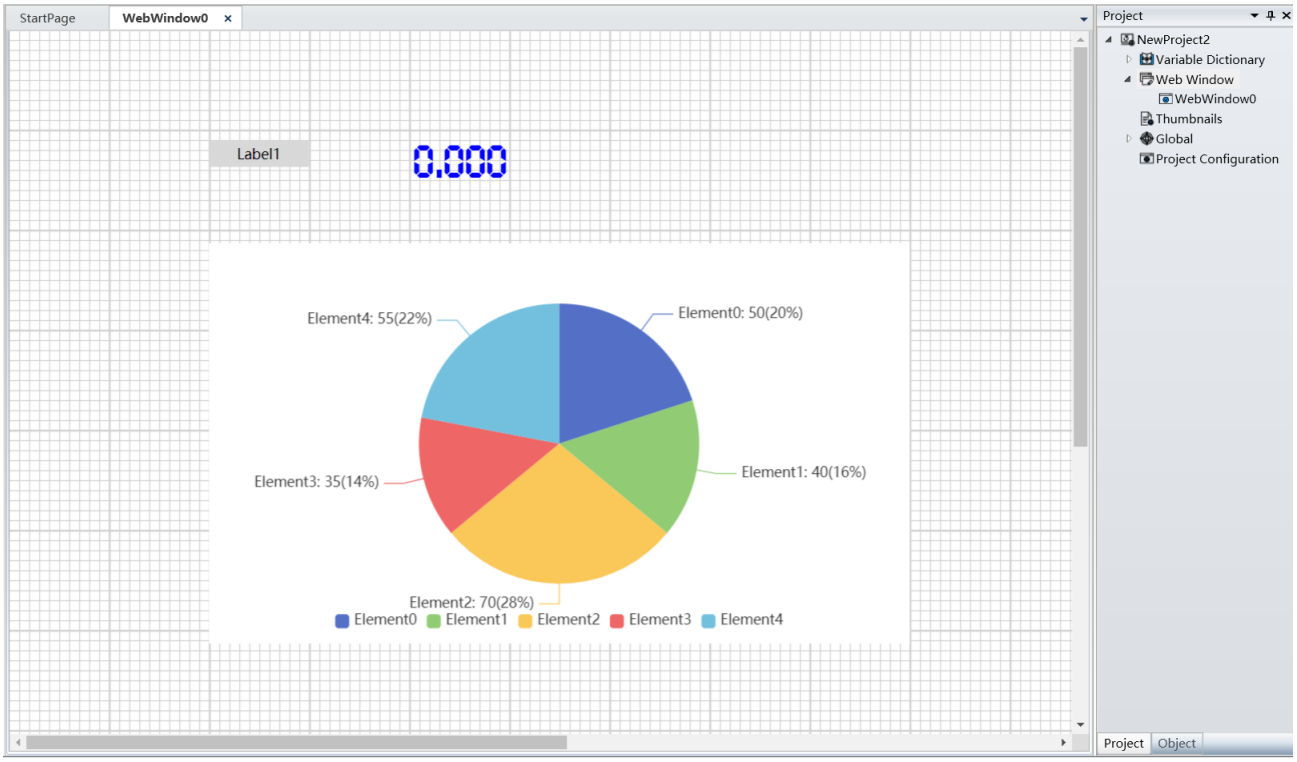
6. To add local tags:

On the **Project** pane, double-click **LocalTags** under **Variable Dictionary** to add local variables.



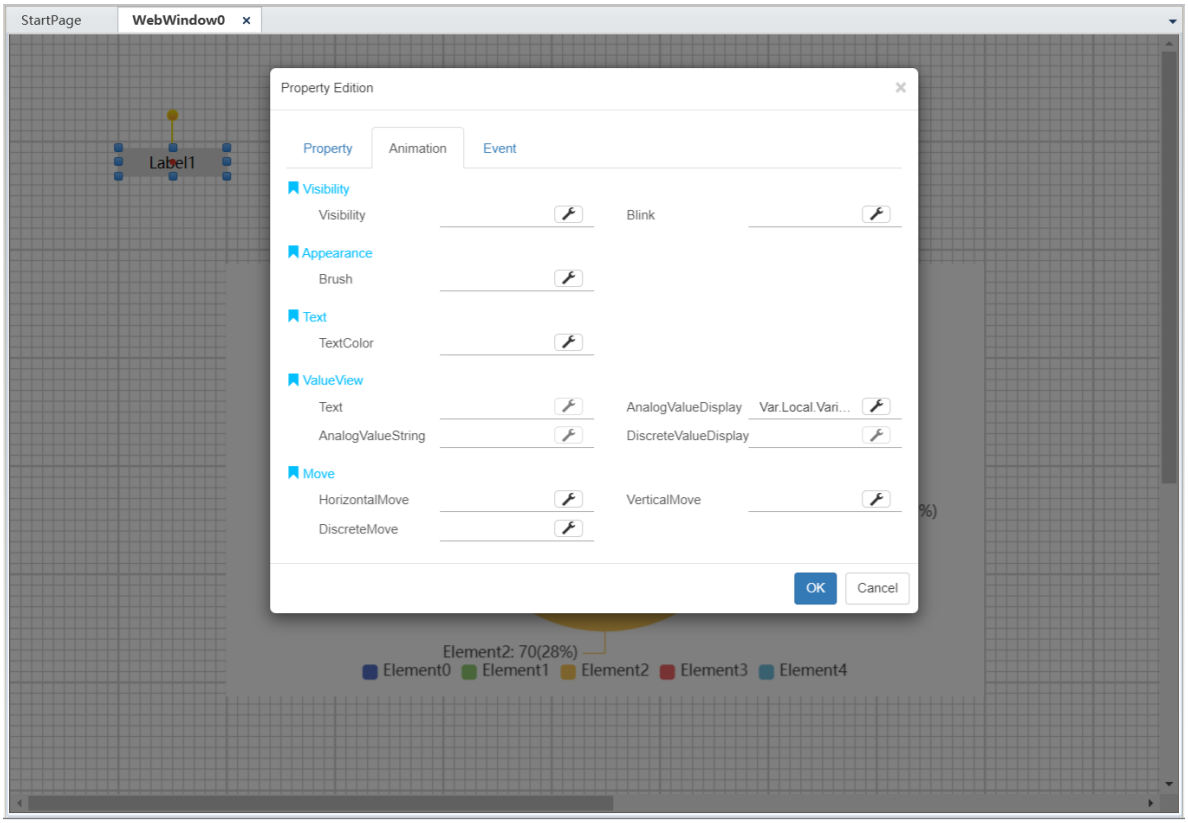
7. To create a web window:

It involves creating graphical interfaces for the system, drawing graphics for on-site simulation, and configuring related properties, charts, and so on. On the **Project** pane, right-click **Web Window** to create a new window. To configure, you can drag and drop the controls from the **Toolbox** pane.



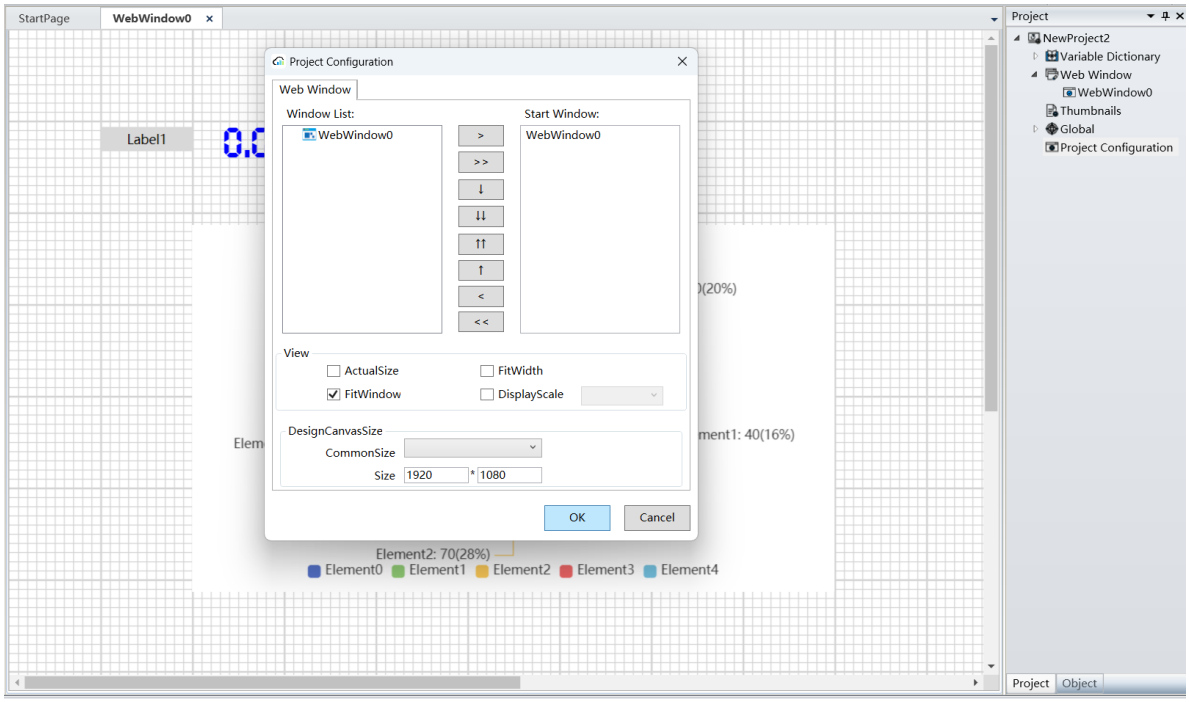
8. To configure an animation:

Double-click the control you have selected and its **Property Edition** dialog will pop up. Select the **Animation** tab to edit the display.



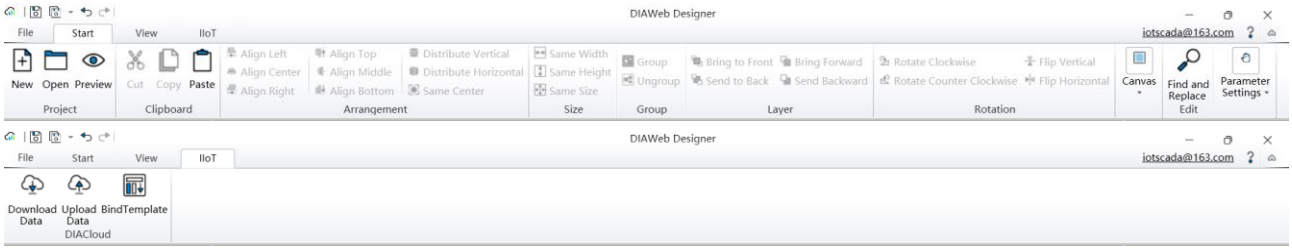
9. To configure the project:

Click **Project Configuration** on the **Project** pane to set the start window for project execution.



10. To start running the project:

You can check whether the designs and functionality meet the project requirements or not through **Start > Preview** or **IIoT > Upload Data**.



Chapter 4 Development Environment

4.1 Terminology

This section introduces the terminology which is commonly used in DIAWeb Designer.

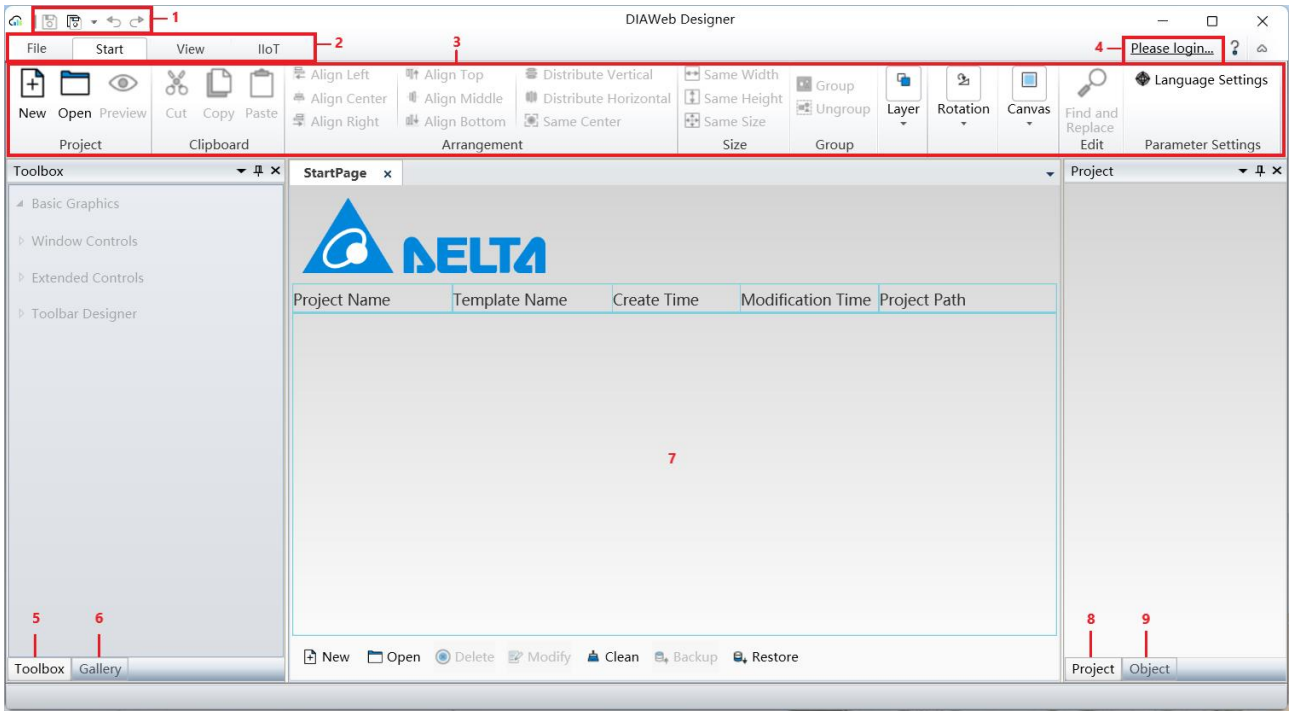
Term	Definition
Project	A project is a set of automation application systems developed using DIAWeb Designer according to users' demands. It mainly includes the development of automation monitoring and control systems and the collection of configuration information. It encompasses graphical interfaces, variables, thumbnails, project configurations and other elements. Project developers can manage each part of the project uniformly and centrally on DIAWeb Designer.
Authenticate user with DIACloud	Users are required to attain cloud authentication by logging in before having access to the functions such as downloading and uploading data or binding templates.
Download Data	Download data from DIACloud to synchronize it in the project.
Upload Data	Upload the project in the DIAWeb Designer to the cloud.
Bind Template	It is required to bind a template with the project before downloading data from or upload the project to the cloud.
Development environment / runtime environment	DIAWeb Designer consists of two parts: the development environment and the runtime environment. The development environment is the platform where users are provided with graphical interface design, function configurations, etc. for project design and development. Users can create new projects in the development environment, define variable dictionaries in the project, drawing graphics for on-site simulation, and configure animations, events, and curve charts on the canvas. It also allows background scripts editing based on data and mathematical expressions for logical processing. The runtime environment, on the other hand, is the platform for dynamic operation of the project where runtime display and interface control are provided, allowing users to conduct real-time monitoring.
Variable Dictionary / Local Tags / Cloud Tags	Variable dictionary refers to a collection of variables that can be managed in a project while variables are values that can be changed at any time in a project and play a crucial role in system data exchange. In DIAWeb Designer, variable dictionary is divided into local tags and cloud tags.

Term	Definition
Web Window	The web window is the core component provided for drawing on-site simulation, configuring parameters, and displaying data. It serves as the foundation for realizing real-time visualization in DIAWeb Designer. In the web window, it offers basic graphics, window controls, extended controls, and other elements for drawing. The system is equipped with both built-in and custom-built graphics libraries for users. Additionally, it provides a pop-up window where configurations of property, animation and event are available. In DIAWeb Designer, a web window corresponds to one scene.
Property	Property refers to the traits of graphics such as name, appearance, and so on.
Animation	Animation is related to the visibility of graphics. It displays the process that changes with the variation of variables during project operation.
Event	Event refers to the operation that can be identified and responded to by the graphics. The interactions between users and the graphical objects drive the controls to perform particular actions.
Thumbnails	When publishing a project, it is optional to submit related images to provide an overview of the project for quick review and enhancement of user experience.
Global	Global allows users to choose different display languages.
Project Configuration	Project configuration is related to the settings of the runtime environment in DIAWeb Designer includes the start window, view, and canvas size.
Preview	Preview allows users to run and test a project created in the development environment on local devices without deploying it to a remote server.

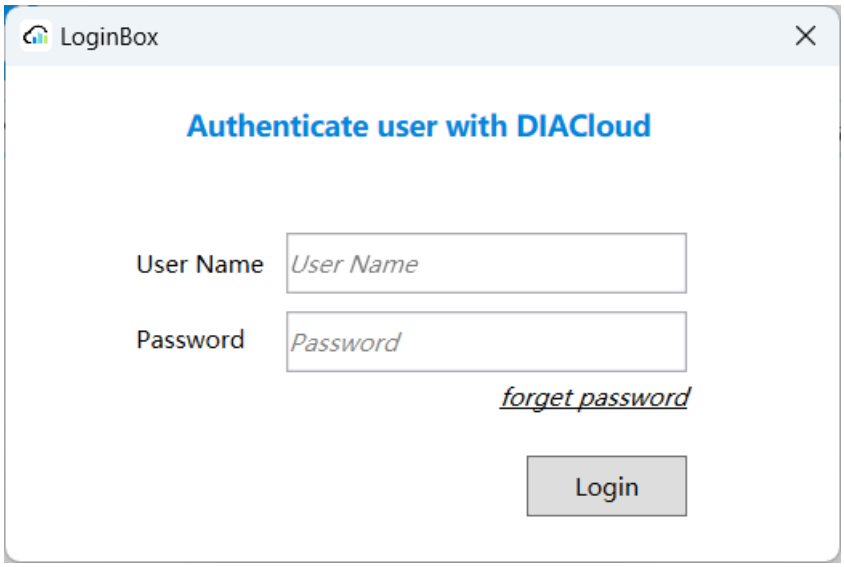
4.2 Introduction to the Development Environment

4.2.1 General Layout

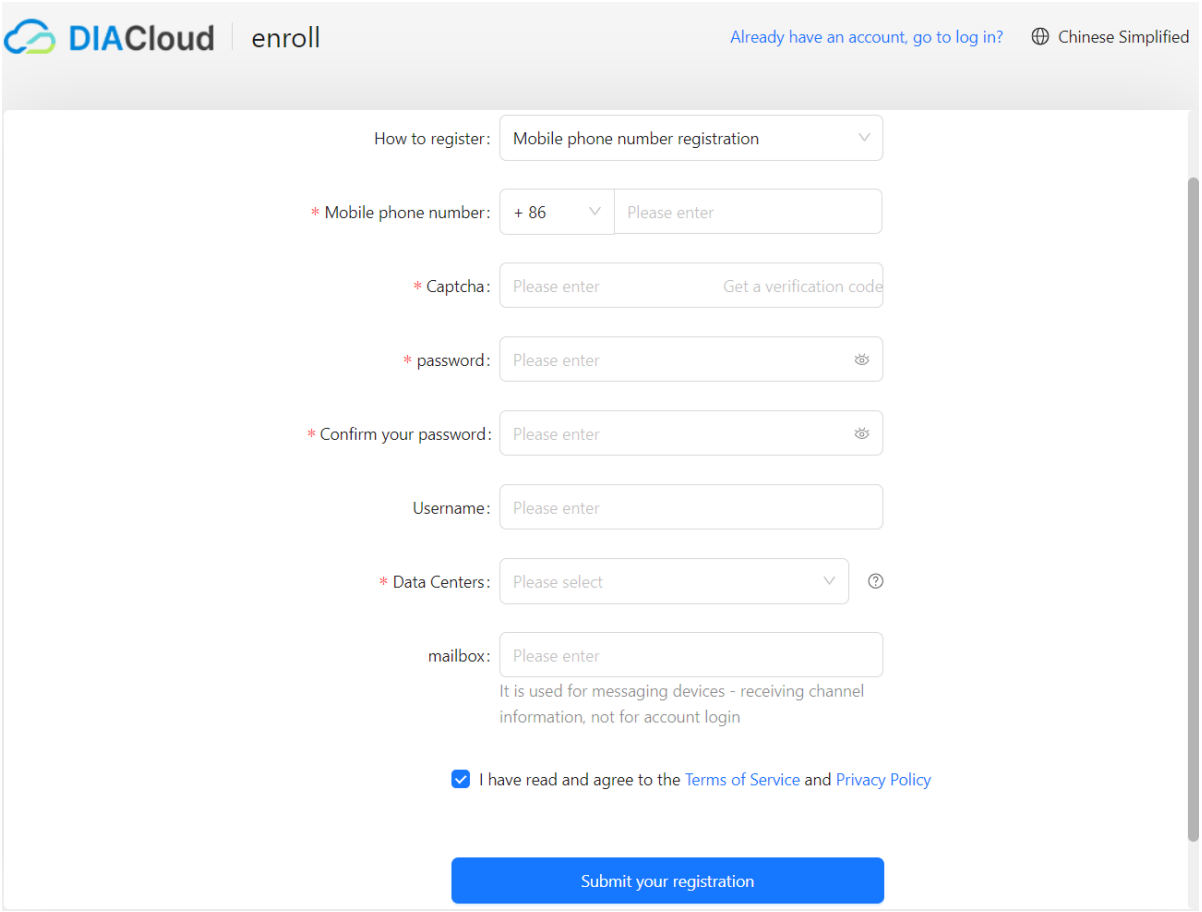
Open DIAWeb Designer. The main interface consists of the following parts:



1. **Quick access toolbar:** to display the frequently used commands.
2. **Menu bar:** to provide the basic functions for project development.
3. **Toolbar:** to show the commands of each function.
4. **Login:** to provide entry for user login. Click to open the **LoginBox** dialog as shown below.

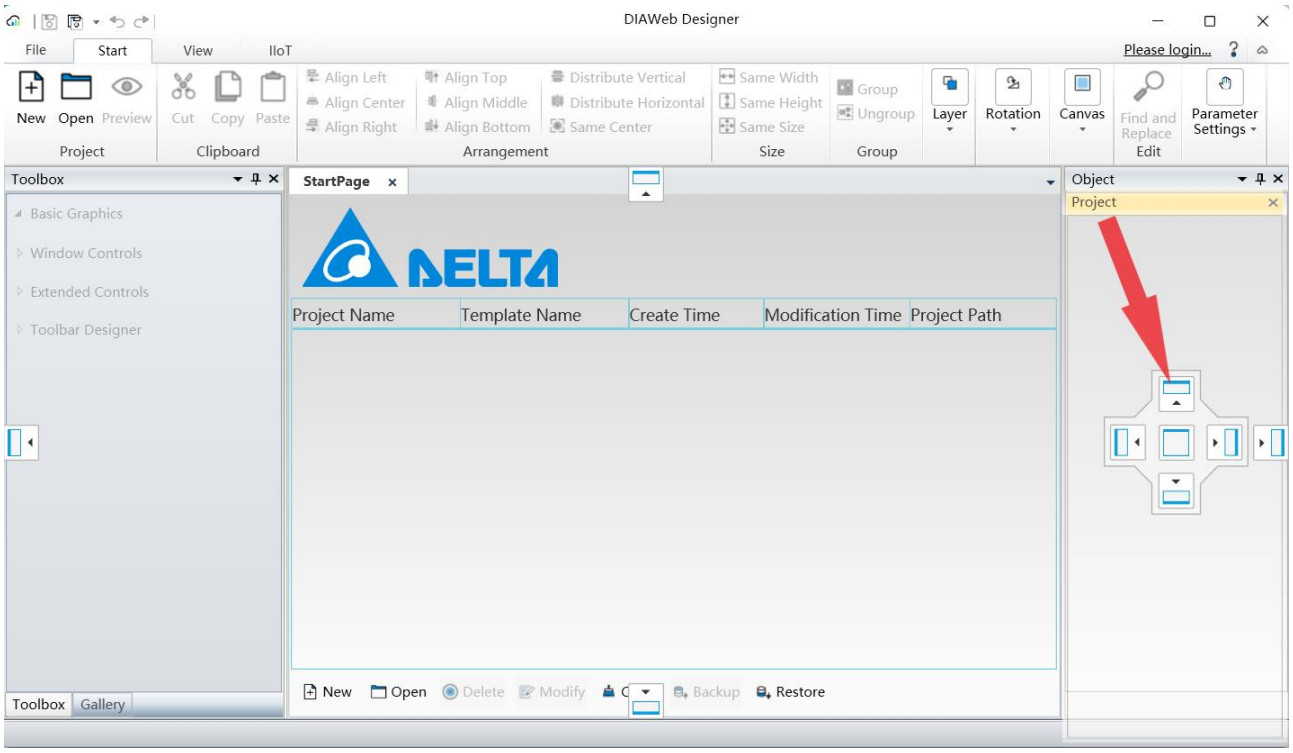


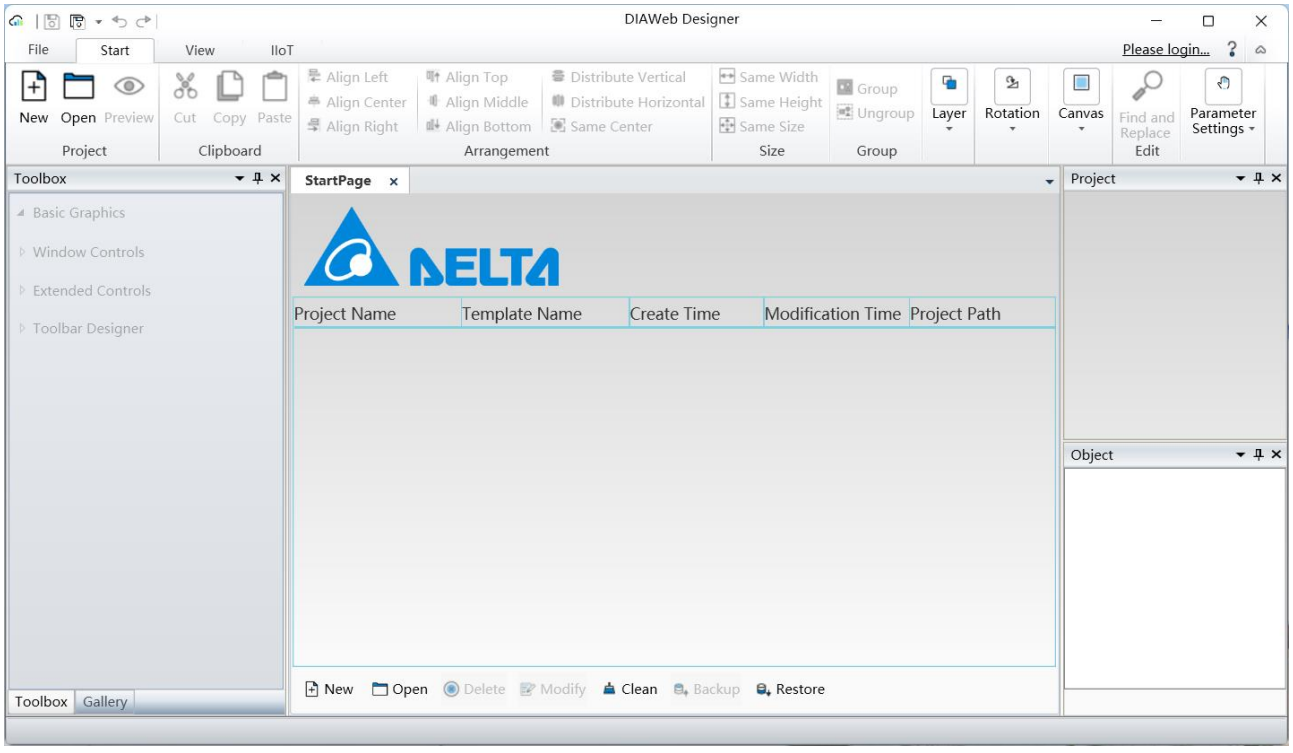
If the user does not have an account yet, please visithttps://hms.diacloudsolutions.com to sign up.



5. **Toolbox:** to provide the frequently used graphics and controls.
6. **Gallery:** to include the built-in graphics library and the custom-built graphics library.
7. **Canvas workspace:** the main area for project management and graphics editing.
8. **Project pane:** to display the directory in the form of a project tree, allowing for configuration.
9. **Object pane:** to display all the objects contained in the web window.

Users can adjust the layout by dragging the panes to a different position. In the following example, the positions of the **Object** pane and the **Project** pane are rearranged.

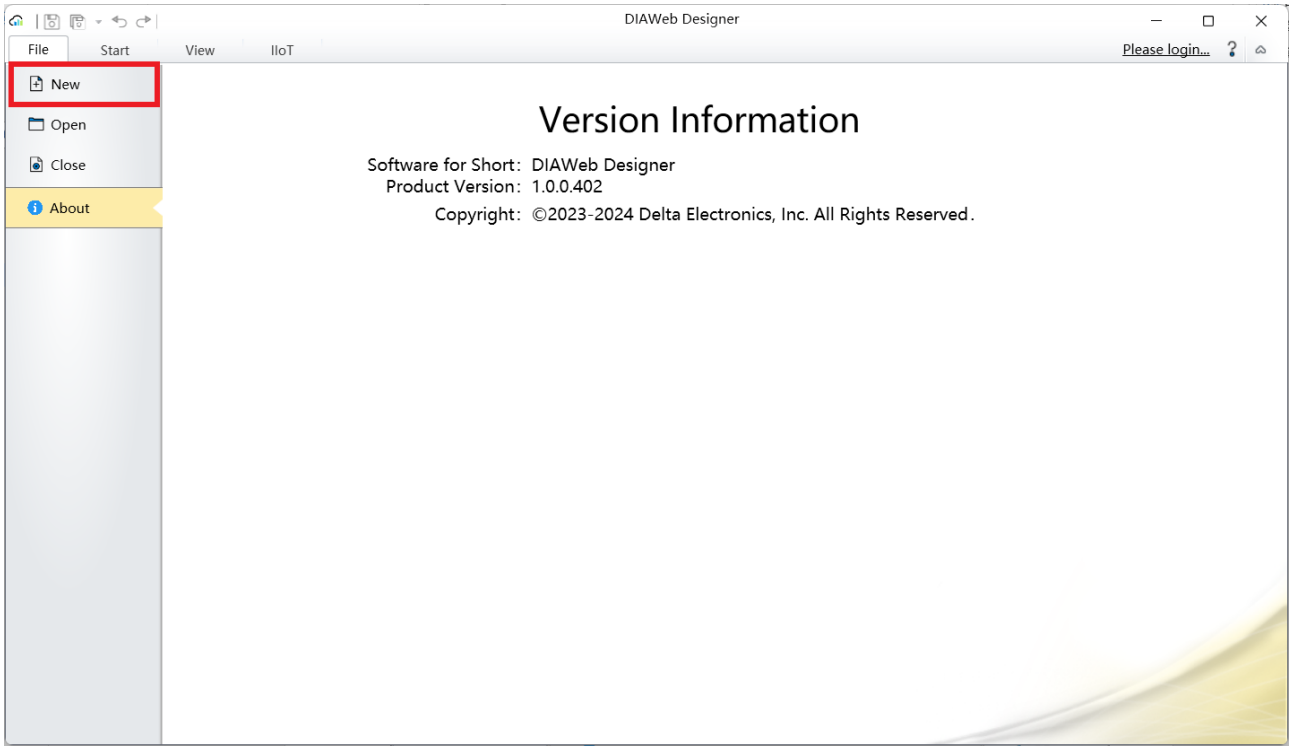




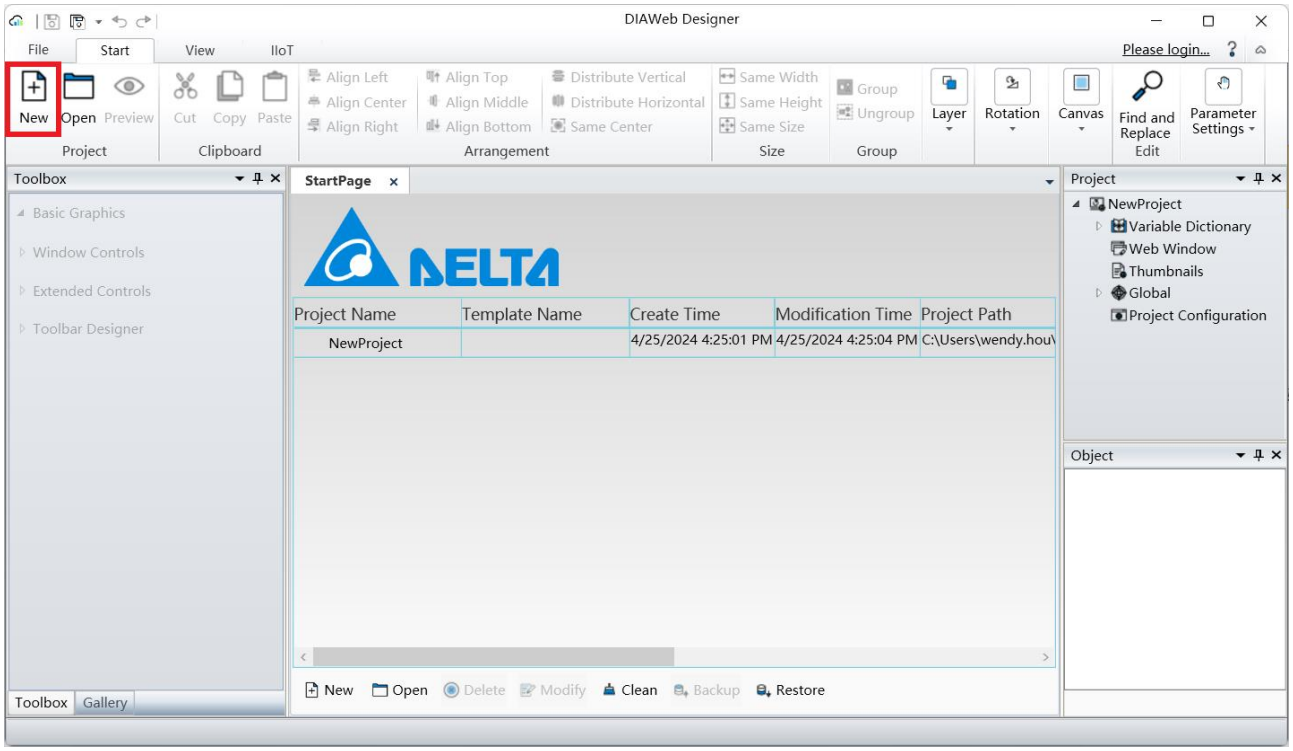
4.2.2 Create a New Project

There are four ways to start a new project in DIAWeb Designer.

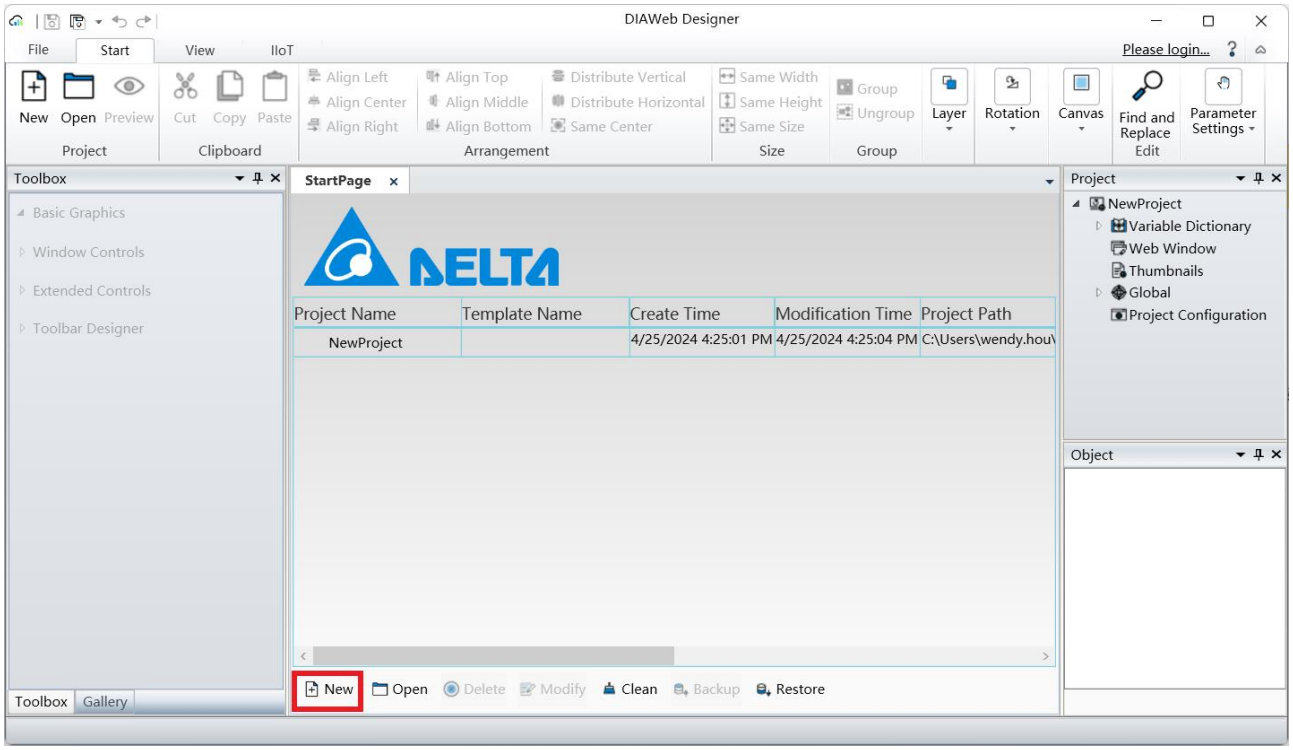
1. In the **File** tab, click **New**.



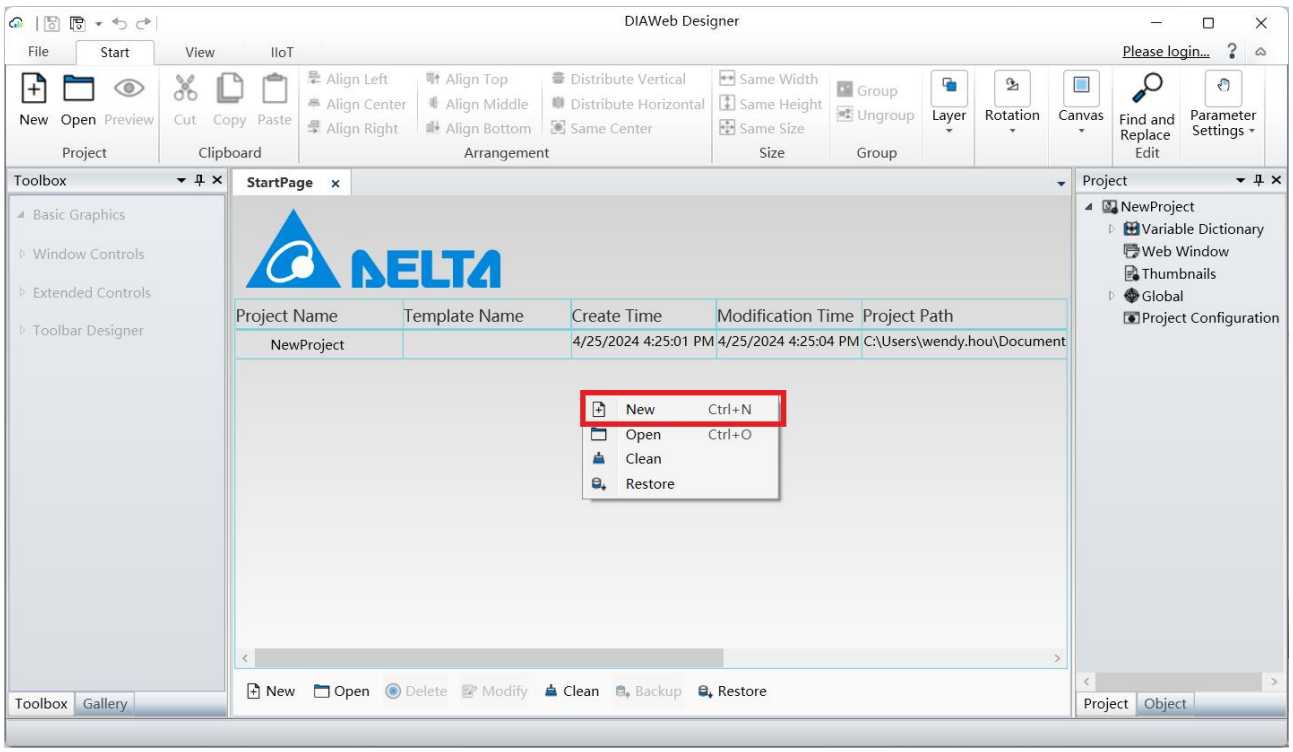
2. In the **Start** tab, click **New**.



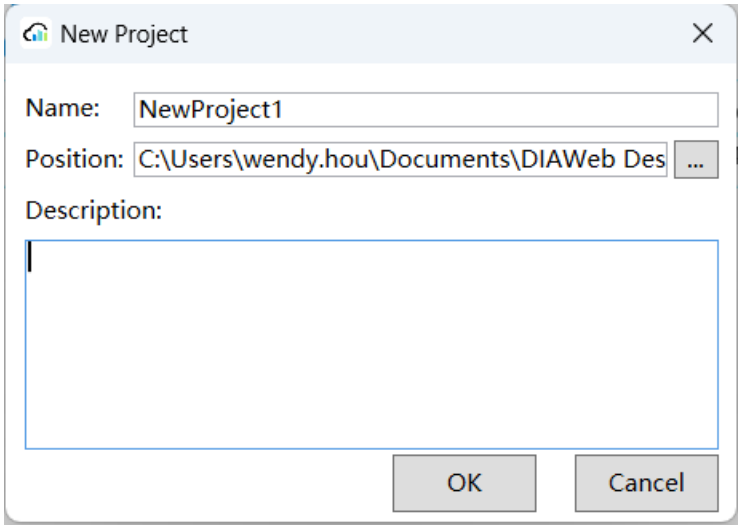
3. On the **StartPage**, click **New** in the toolbar located at the bottom of the page.



4. Right-click anywhere on the **StartPage**, and select **New**.



Specify a name and position for the project to get started.



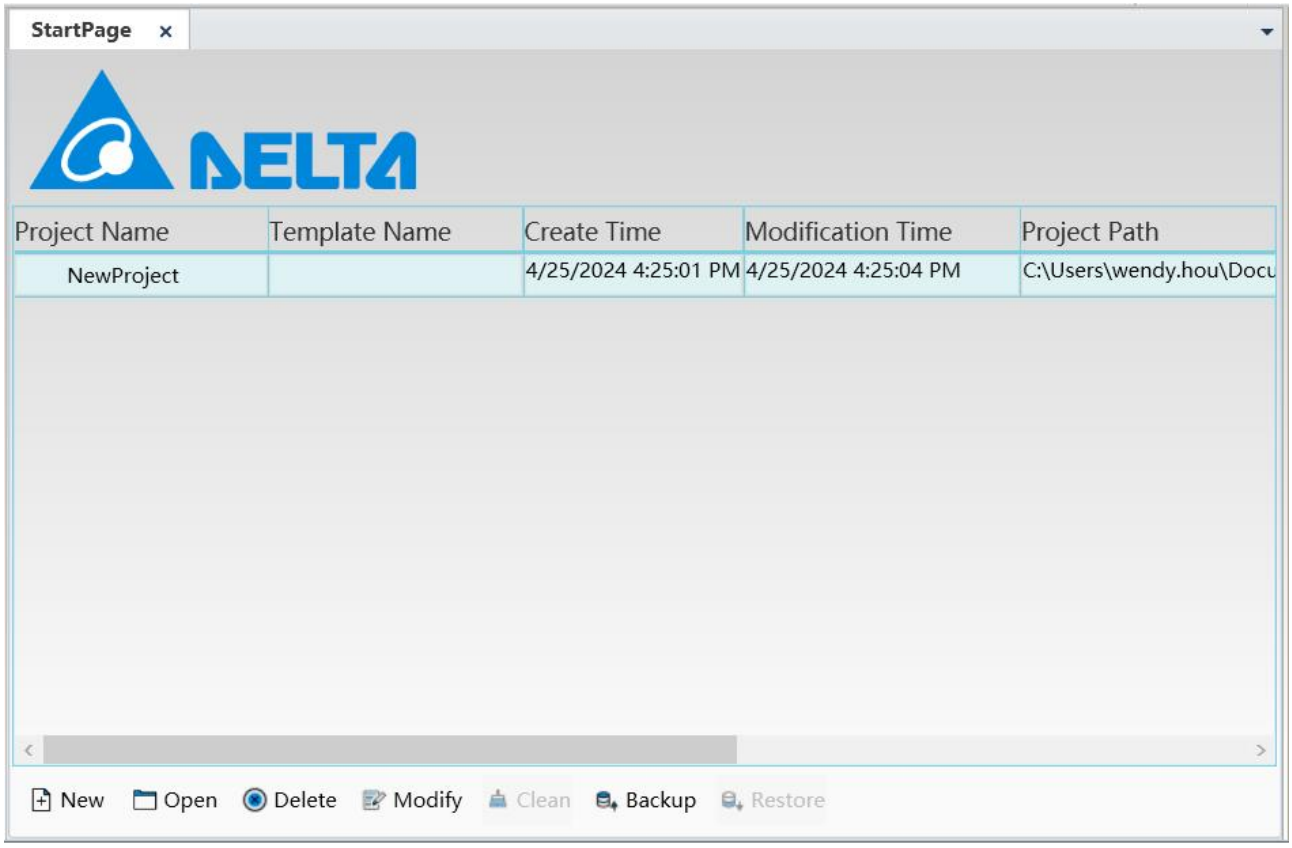
Item	Description
Name	It is mandatory to specify a name for the project. Users can keep the name which is automatically generated by the system or name it by themselves. The naming rules are based on VBScript as follows: 1. Consist of letters, numbers, Chinese characters, and underscores; must begin with a letter or Chinese character. 2. Not case-sensitive. 3. Cannot contain spaces, periods, exclamation marks, or special characters such as @$#&*?. 4. Cannot exceed 100 characters, with no more than 25 Chinese characters. 5. Cannot share the same name with other created projects within the same project folder. 6. Only support names in traditional Chinese, simplified Chinese, or English.
Position	It refers to the storage location of the project. Click ... to modify.
Description	It allows users to add project-related information or description here.

4.2.3 Project Management Window

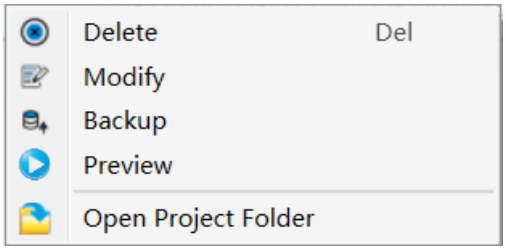
In DIAWeb Designer, it offers two approaches to manage projects: through the StartPage or through the Menu bar (please refer to section 4.4.1).

- **StartPage**

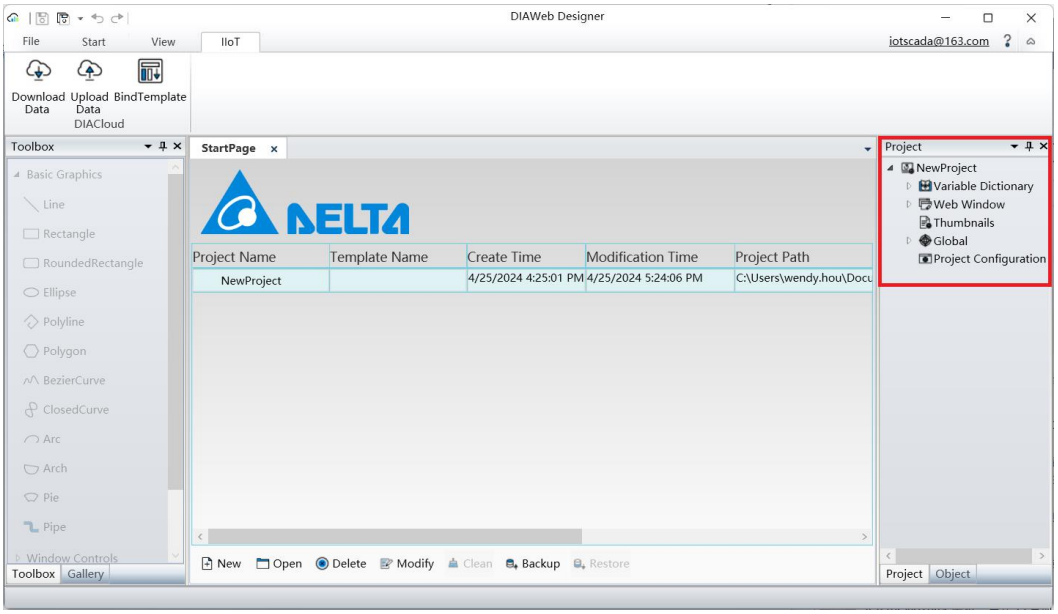
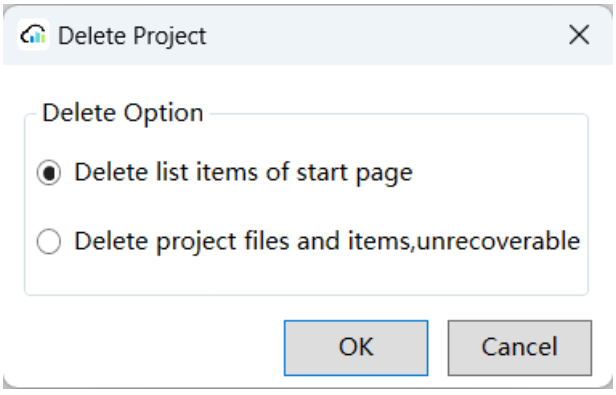
  Open DIAWeb Designer with the **StartPage** automatically as the initial page, where information of the created projects such as project name, template name, create time, modification time, project path, etc. is listed. On the **StartPage**, users can create, open, delete, modify, clean, backup, or restore projects.

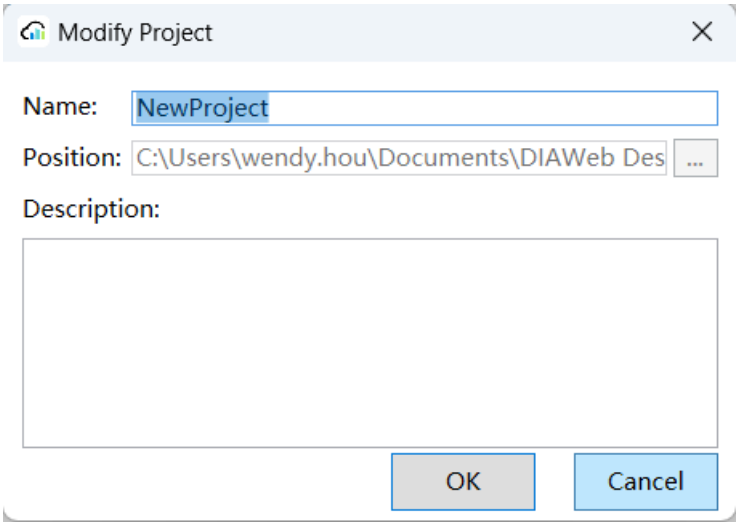


Right-click on the **StartPage** to find more options.



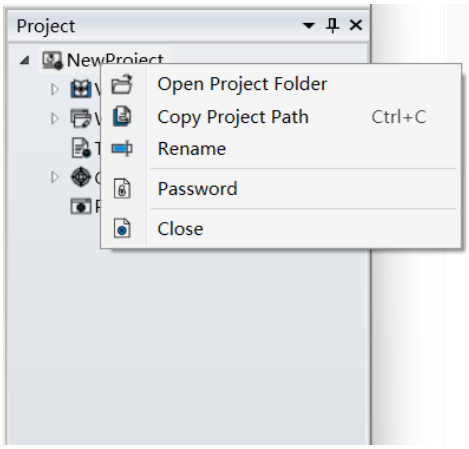
The following table lists the buttons and their functions on the **StartPage**.

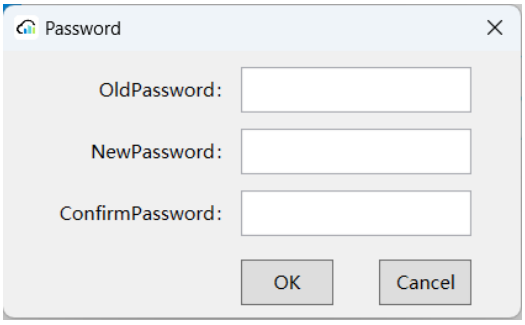
Item	Description
New	To create a project. The project created will be added to the project list on the **StartPage** with its project tree shown on the **Project** pane. Please refer to section 4.2.2.
Open	To select and open a project. Or double-click the project in the list on the **StartPage**. After the project is opened, the **Project** pane will appear on the right-hand side. 
Delete	To delete the selected project. Select the project that you want to delete from the list on the **StartPage** and click **Delete**, or right-click the project to open the **Delete Project** dialog.  There are two delete options: 1. Delete list items of start page: remove the selected project information from the project list on the **StartPage** but the project itself is not deleted. 2. Delete project files and items, unrecoverable: remove the selected project information from the project list on the **StartPage**, and the project itself is completely deleted.

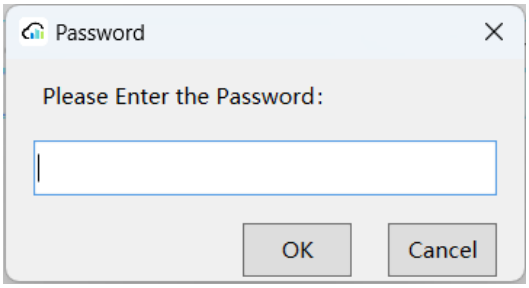
Item	Description
Modify	To rename the project or rewrite the description. Click **Modify** or right-click to open the **Modify Project** dialog. 
Clean	To refresh the project information on the **StartPage**. The project which has been deleted but still remains in the list will be cleaned.
Backup	To back up the selected project and save as a **.dwdzip** file.
Restore	To restore the backup projects.
Preview	To preview the project operation on local devices.
Open Project Folder	To open the folder in which the selected project is.

- **Operations on the NewProject node**

  After creating a project, the **Project** pane will appear on the right-hand side, displaying the project tree. Right-click the project name to open the context menu as shown below.

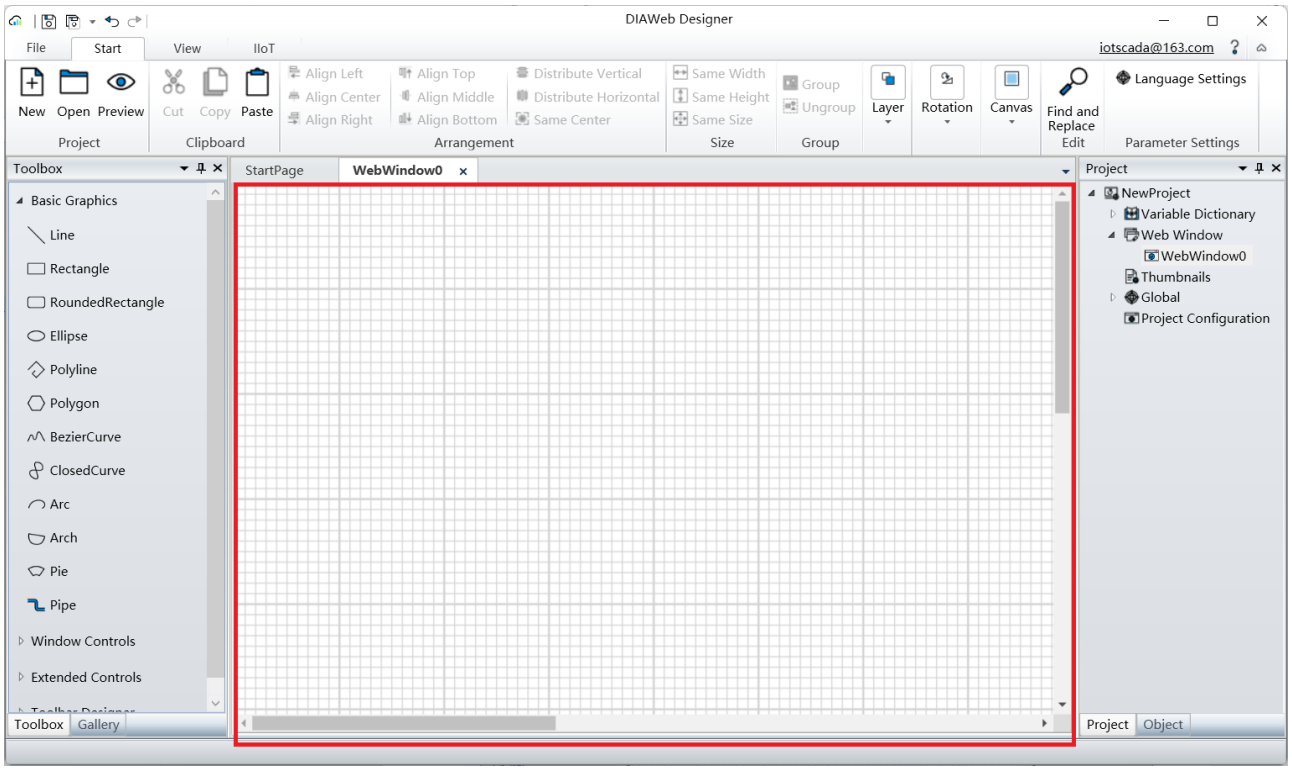


Item	Description
Open Project Folder	To open the folder in which the selected project is.
Copy Project Path	To copy the storage path of the project.
Rename	To modify the project name.
Password	To set a password for the project. Right-click the project name and select Password, then the dialog below will pop up.  1. OldPassword: enter the current password (if you are setting a password for the first time, leave it empty). 2. NewPassword: set the new password. 3. ConfirmPassword: enter the new password again. Afterwards, users will be requested to enter the password to open the project.

Item	Description
	
Close	To close the current project.

4.2.4 Project Development Window

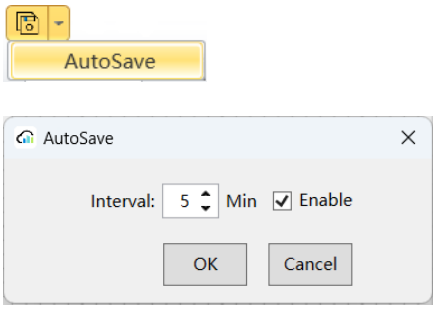
On the **Project** pane, right-click **Web Window** and select **New Web Window**. Then a blank window for graphics drawing and editing will be created.



Its components are based on the elements introduced in section 4.2.1.

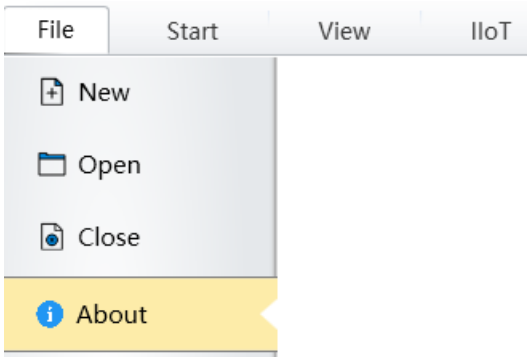
4.3 Quick Access Toolbar

The quick access toolbar involves the frequently used commands as listed in the table below.

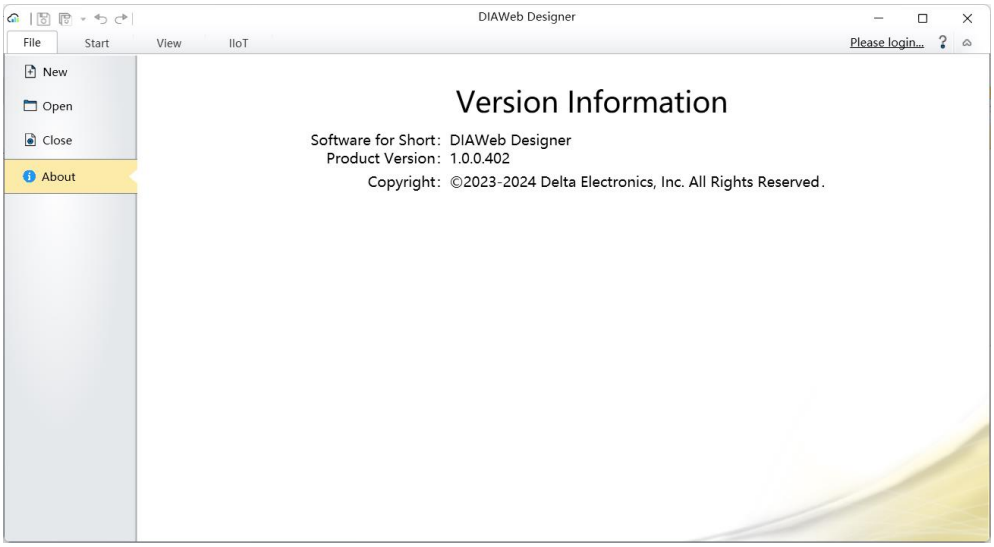
Icon	Command	Description
	Save	To save the web window you are editing.
	SaveAll	To save all the web windows and configurations in the project. Click the triangle right next to the **SaveAll** button to enable the **AutoSave** function, then set the interval as required. 
	Undo	To undo the previous action. Click the icon repeatedly to undo multiple steps in reverse order.
	Redo	To redo the last action that you have undone.
Please login.	Log in	To attain user authentication from DIACloud by logging in.
	Help (F1)	To find the files for help.
	Fold	To show or hide the toolbar.

4.4 Menu Bar

4.4.1 File



The **File** tab is for project management, including the following items.

Item	Description
New	To create a new project.
Open	To open a created project.
Close	To close the project that has been opened.
About	To browse the current version information of DIAWeb Designer. 

4.4.2 Start

The **Start** tab is for project management and graphical interface design, which includes the position, layer, and other arrangements of graphics. The availability of each command in this tab is determined by the attribute of the selected graphics. When the mouse is placed over an icon, a tooltip will appear to explain its function. Please refer to the following sections for details.

4.4.2.1 Project

Icon	Command	Description
	New	To create a new project.
	Open	To open a created project.
	Preview	To preview the project that is currently opened in the development environment.

4.4.2.2 Clipboard

Icon	Command	Description
	Cut	To cut the selected object to the clipboard.
	Copy	To copy the selected object to the clipboard.
	Paste	To paste the selected object to the canvas.

4.4.2.3 Arrangement

Icon	Command	Description
	Align Left	To left align two or more selected objects with the left edge of the first selected object.
	Align Center	To vertically align the center of two or more selected objects with the center of the first selected object.
	Align Right	To right align two or more selected objects with the right edge of the first selected object.
	Align Top	To top align two or more selected objects with the top edge of the first selected object.
	Align Middle	To horizontally align the center of two or more selected objects with the center of the first selected object.

Icon	Command	Description
	Align Bottom	To align the bottom of two or more selected objects with the bottom edge of the first selected object.
	Distribute Vertical	To align the vertical intervals between three or more selected objects.
	Distribute Horizontal	To align the horizontal intervals between three or more selected objects.
	Same Center	To align the center point of two or more selected objects with the center point of the first selected object.

4.4.2.4 Size

Icon	Command	Description
	Same Width	To make the width of two or more objects the same as the width of the first selected object.
	Same Height	To make the height of two or more objects the same as the height of the first selected object.
	Same Size	To make the size of two or more objects the same as the size of the first selected object.

4.4.2.5 Group

Icon	Command	Description
	Group	Where there are multiple objects on the canvas, group the selected objects into an assembly.
	Ungroup	Ungroup an assembly into its component object.

4.4.2.6 Layer

Icon	Command	Description
	Bring to Front	When there are multiple objects overlapped, click to move the selected one in front of all others.
	Send to Back	When there are multiple objects overlapped, click to move the selected one behind all others.
	Bring Forward	When there are multiple objects overlapped, click to move the selected one forward one layer.
	Send Backward	When there are multiple objects overlapped, click to move the selected one back one layer.

4.4.2.7 Rotation

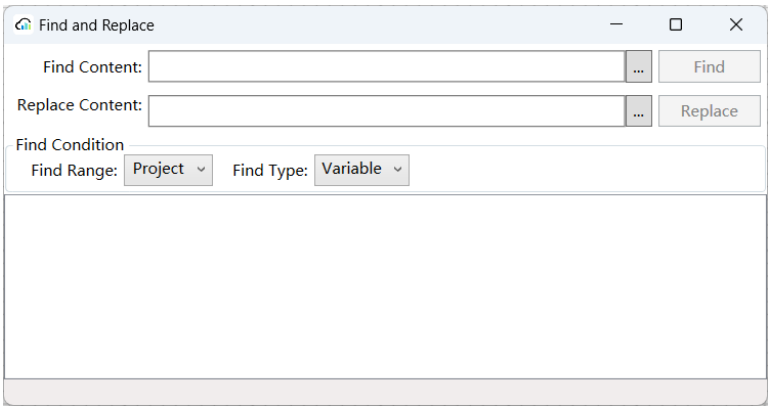
Icon	Command	Description
	Rotate Clockwise	To rotate the selected object 90 degrees right.
	Rotate Counter Clockwise	To rotate the selected object 90 degrees left.
	Flip Vertical	To flip the selected object along the x-axis of the center point (upside down).
	Flip Horizontal	To flip the selected object along the y-axis of the center point (from left to right).

4.4.2.8 Canvas

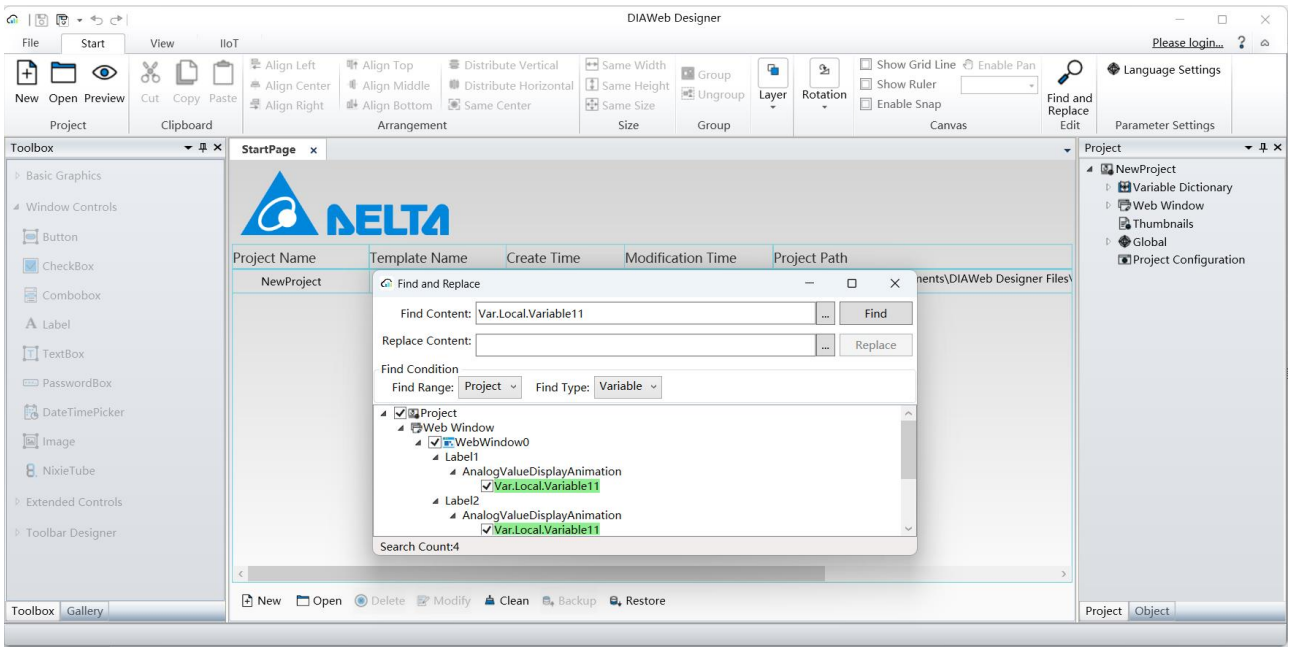
Icon	Command	Description
Show Grid Line	Show Grid Line	To show or hide the grid line of the canvas.
Show Ruler	Show Ruler	To show or hide the main framework ruler of the canvas.
Enable Snap	Enable Snap	If the snap function is enabled, the objects are created or moving along the grid lines.
Enable Pan	Enable Pan	If the pan function is enabled, the hand tool appears for users to move the canvas.
100%	Zoom Ratio	To set the zoom ratio for the current canvas.

4.4.2.9 Edit

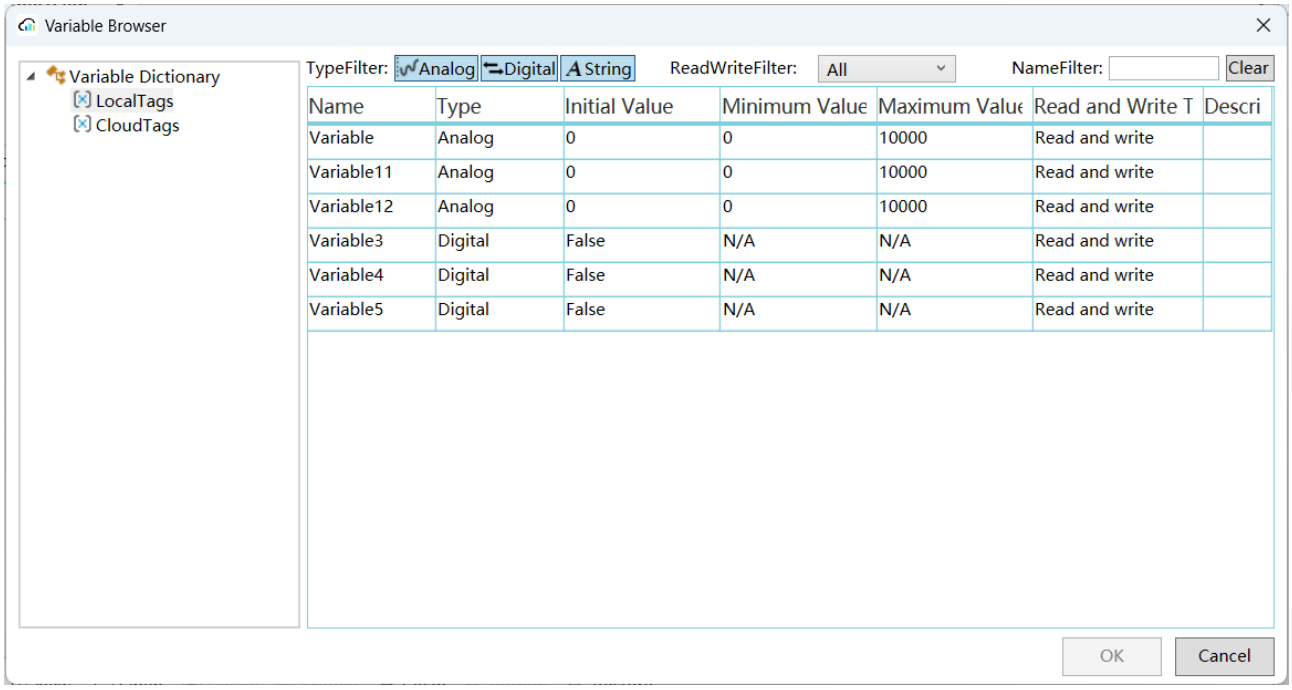
In the development environment, open a project and click the **Find and Replace** button or press **Ctrl + F** to bring out the dialog.



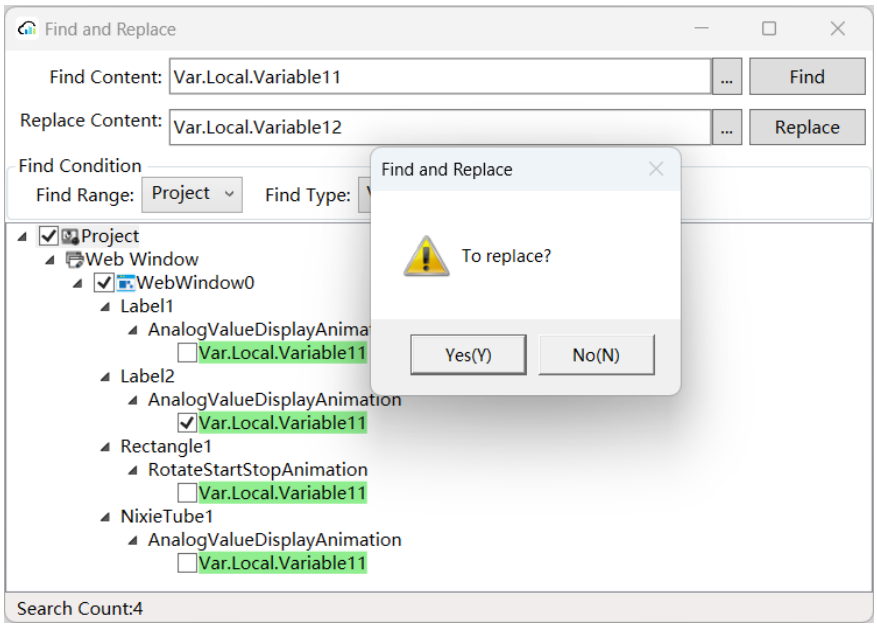
In the **Find Condition** section, only **Project** is available in **Find Range** and so as **Variable** in **Find Type**. Specify the contents you want to search for and click **Find** to see the results with green background. The **Search Count** is shown at the bottom-left corner.



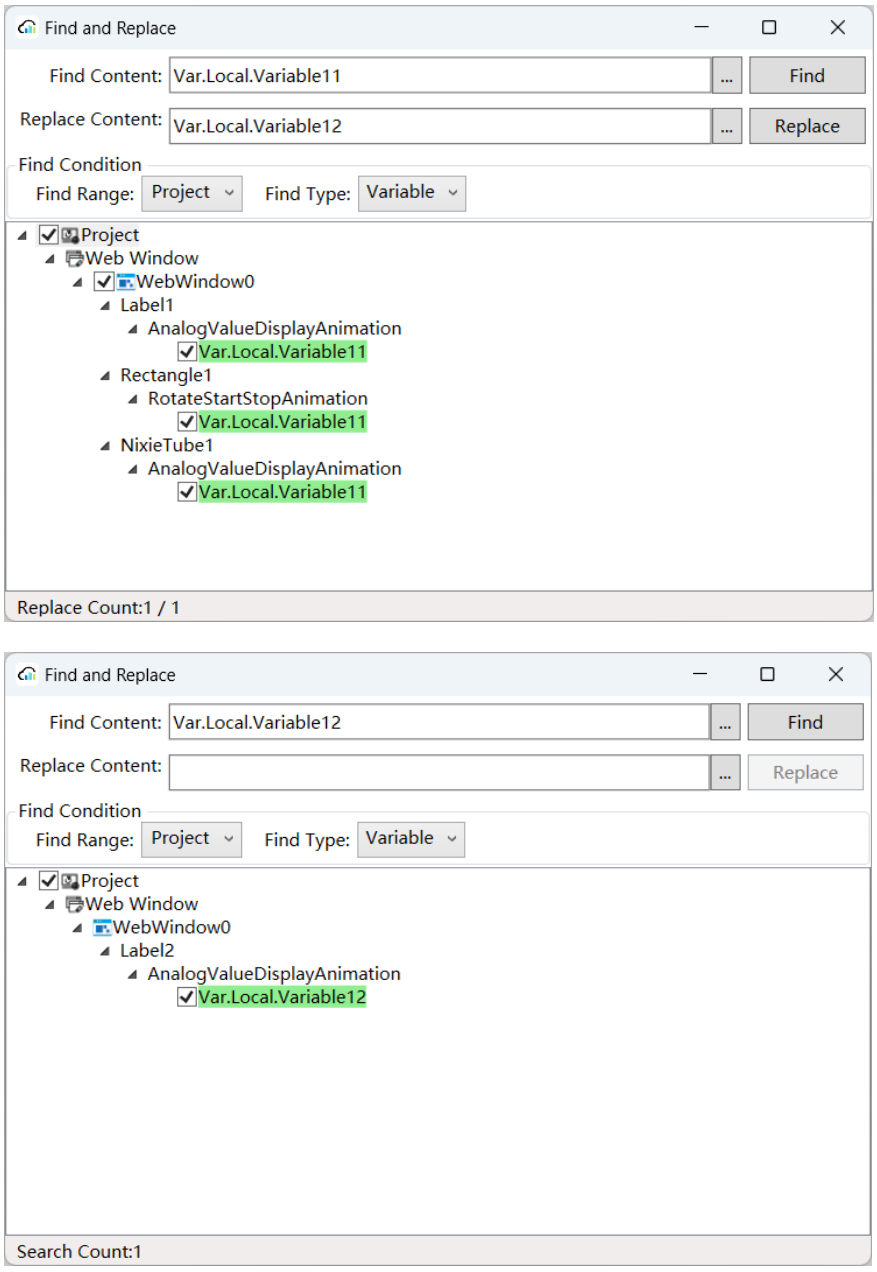
As the **Find Type: Variable** requests exact matches for the content you enter, it is suggested to click ... next to the search box to select a variable from the list.



As for the replace function, check the box in front of the address to be replaced first and then specify the **Replace Content**. Click **Replace** to see a pop-up for double confirmation. Click **Yes** to continue or **No** to close.

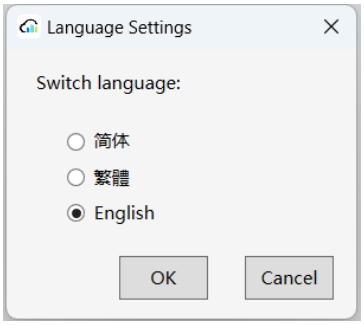

Find and Replace
Find Content:
Var.Local.Variable11
...
Find
Replace Content:
Var.Local.Variable12
...
Replace
Find Condition
Find Range:
Project
Find Type:
Project
Web Window
WebWindow0
Label1
AnalogValueDisplayAnima
Var.Local.Variable11
Label2
AnalogValueDisplayAnimation
Var.Local.Variable11
Rectangle1
RotateStartStopAnimation
Var.Local.Variable11
NixieTube1
AnalogValueDisplayAnimation
Var.Local.Variable11
Search Count:4
Find and Replace
To replace?
Yes(Y)
No(N)

In the example, **Var.Local.Variable12** is substituted for **Var.Local.Variable11**.



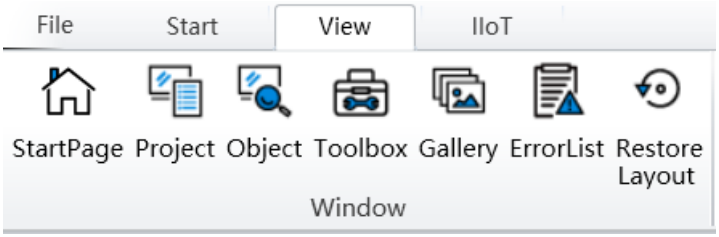
4.4.2.10 Parameter Settings

This is for language settings in the development environment. Three languages are supported: Simplified Chinese, Traditional Chinese, and English. Click **Parameter Settings > Language Settings** and select the language to switch. The language settings take effect after the software restarts.



4.4.3 View

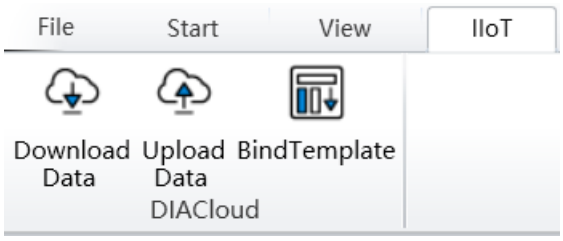
In the **View** tab, users can select to open the particular configuration windows such as Project, Toolbox, Gallery, etc.



Icon	Command	Description
	StartPage	To open the **StartPage** pane.
	Project	To open the **Project** pane.
	Object	To open the **Object** pane.
	Toolbox	To open the **Toolbox** pane.
	Gallery	To open the **Gallery** pane.
	ErrorList	To open the **ErrorList** pane.
	Restore Layout	To restore the layout of the overall interface.

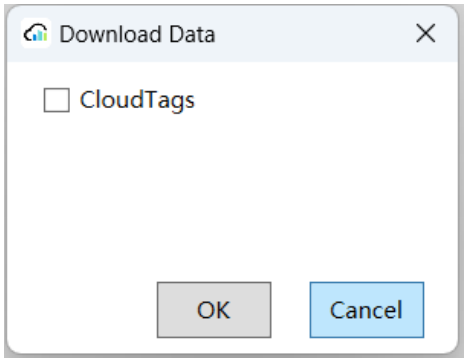
4.4.4 IIoT

The commands in the **IIoT** tab are used for binding the project with a template in DIACloud or uploading the local project up to DIACloud, achieving data synchronization between the local project and the cloud server.

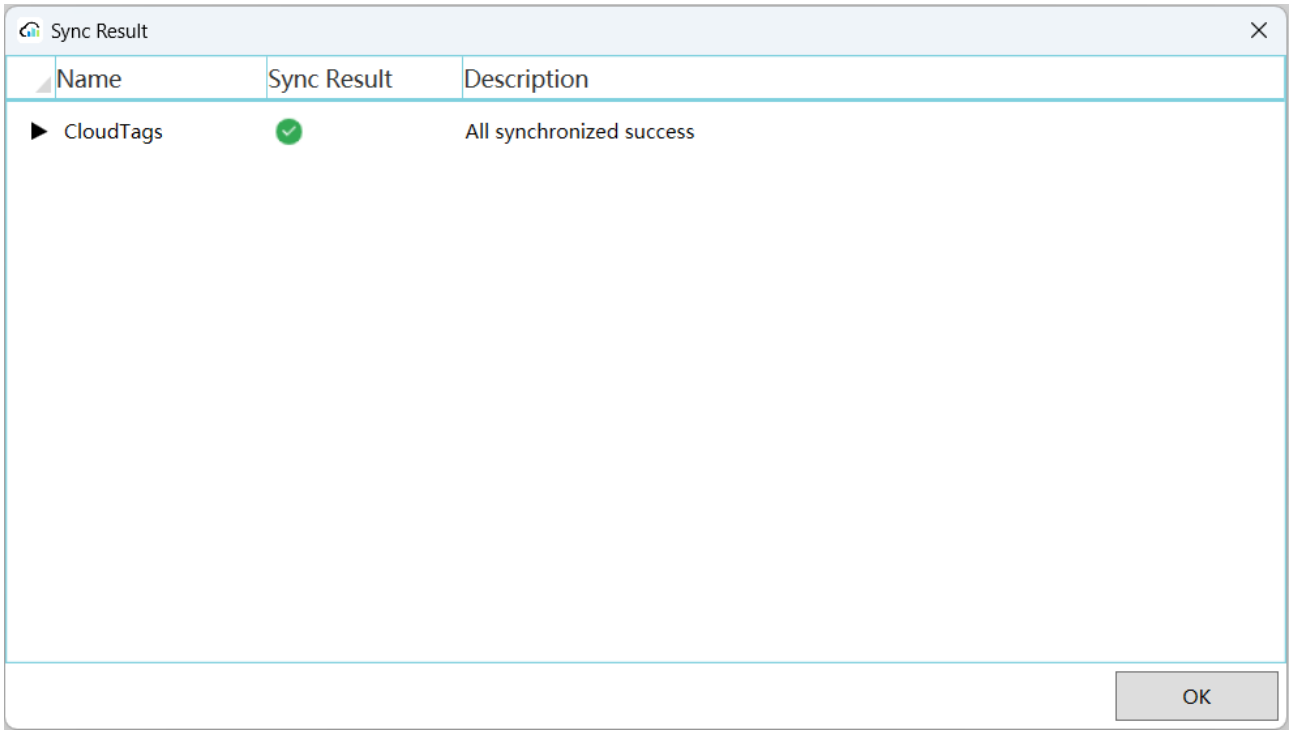


4.4.4.1 Download Data

To synchronize the project data with DIACloud, click **Download Data** to retrieve data from DIACloud. Then, the dialog below will appear. Please log in first and bind a template for the project prior to this step.

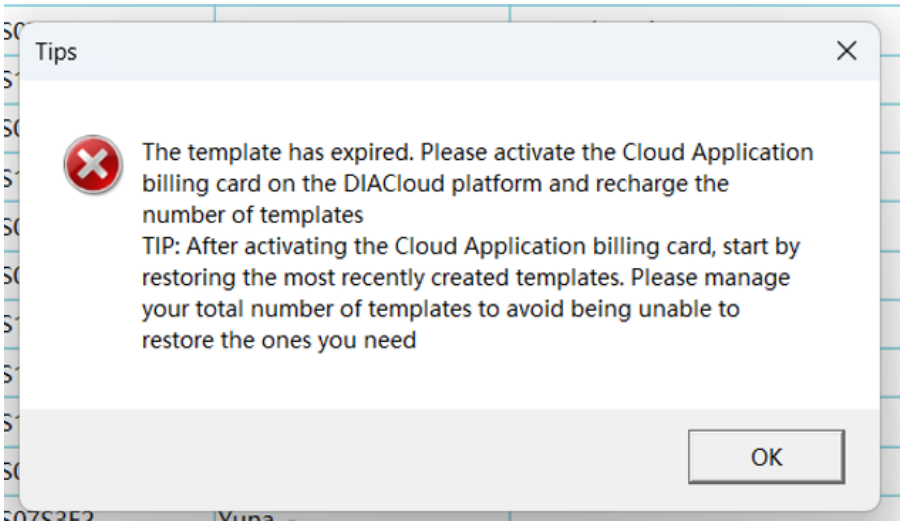


Check the box in front of **CloudTags** then click **OK**. Data synchronization is started. The result is displayed as in the dialog below.



Click **OK** to finish.

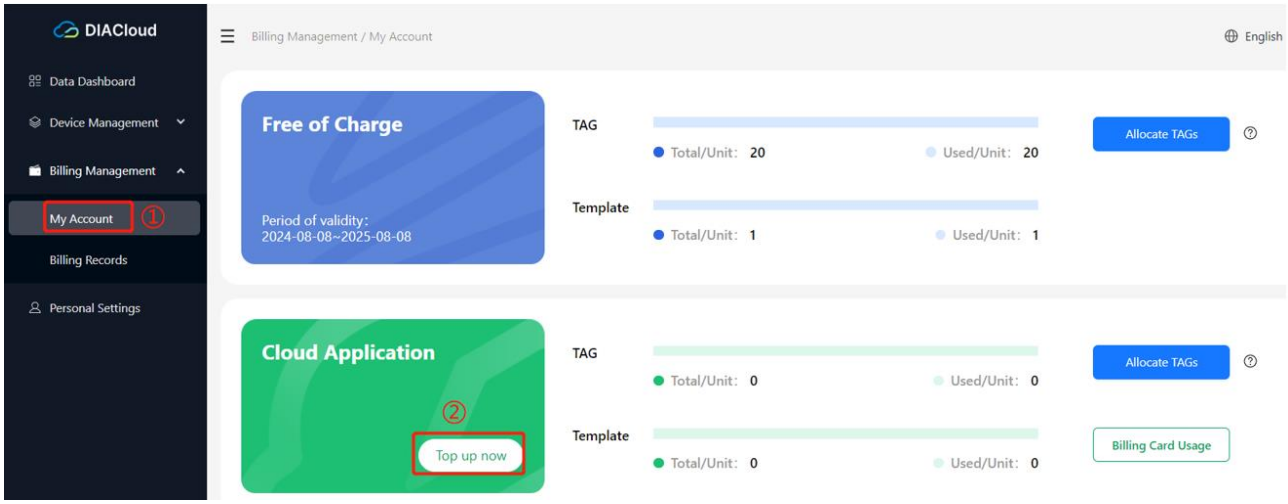
If the bound template is locked due to billing issues, the following window will pop up:



User needs to log in to the DIACloud platform to recharge it before using it. The DIACloud platform login URL is demonstrated as follow:

https://hms.diacloudsolutions.com

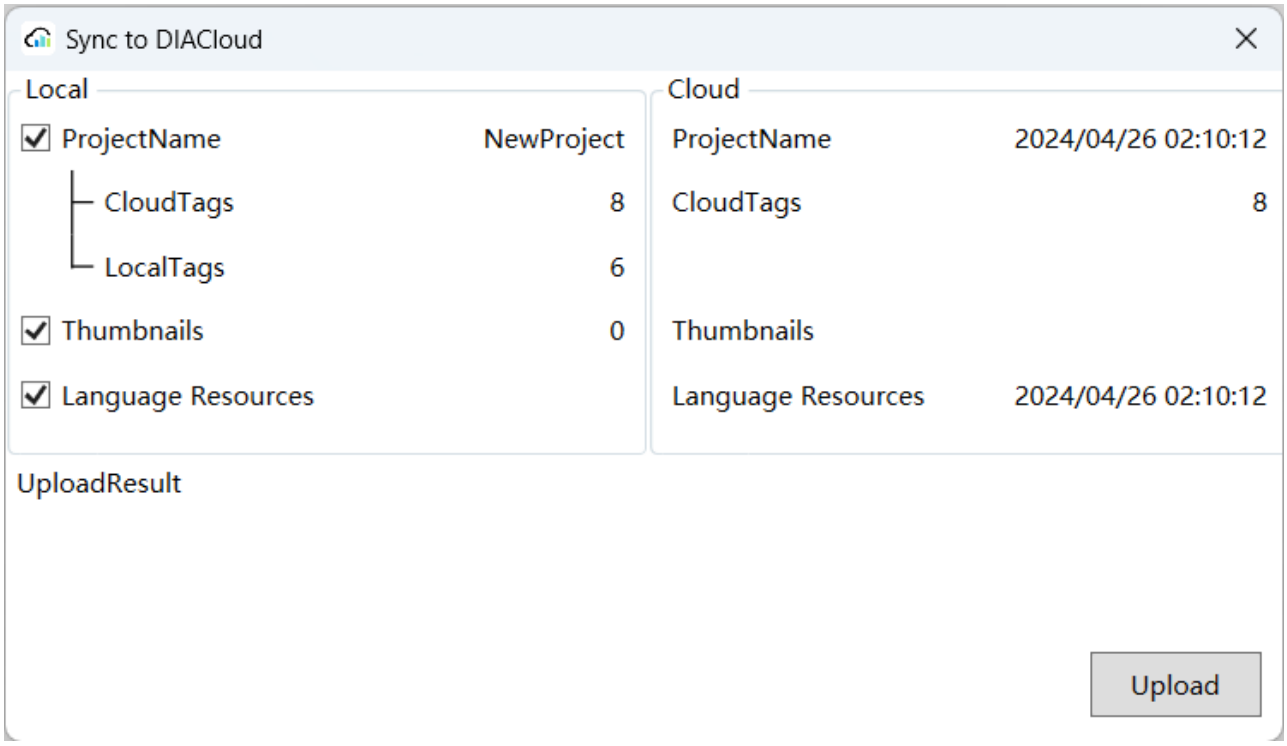
After logging in as a user, click **My Account** on the left to open the recharge portal and perform recharge operations:



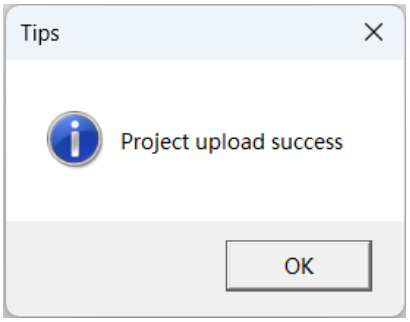
4.4.4.2 Upload Data

This is to upload the project data to DIACloud. Click **Upload Data** with the **Sync to DIACloud** dialog popping up.

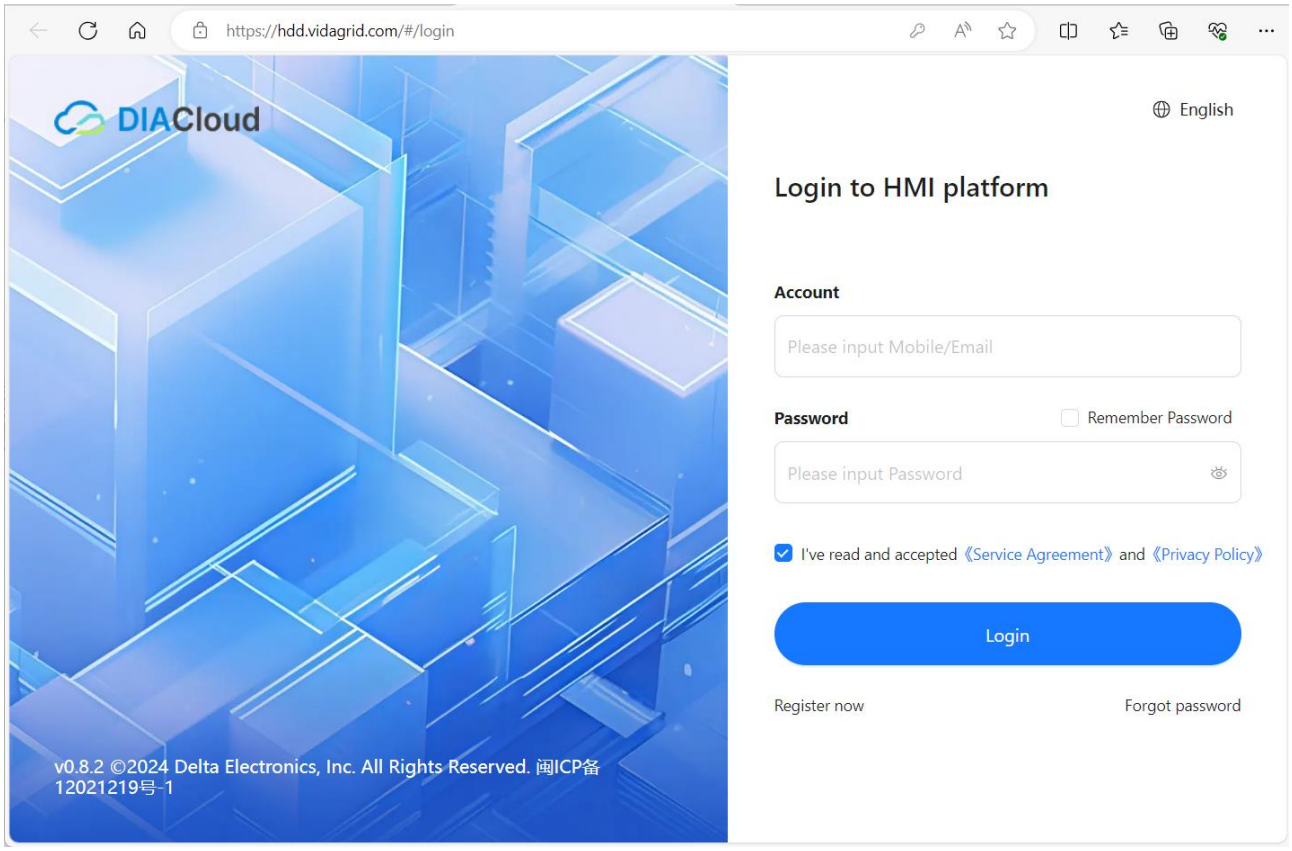
Please log in first and bind a template for the project prior to this step.



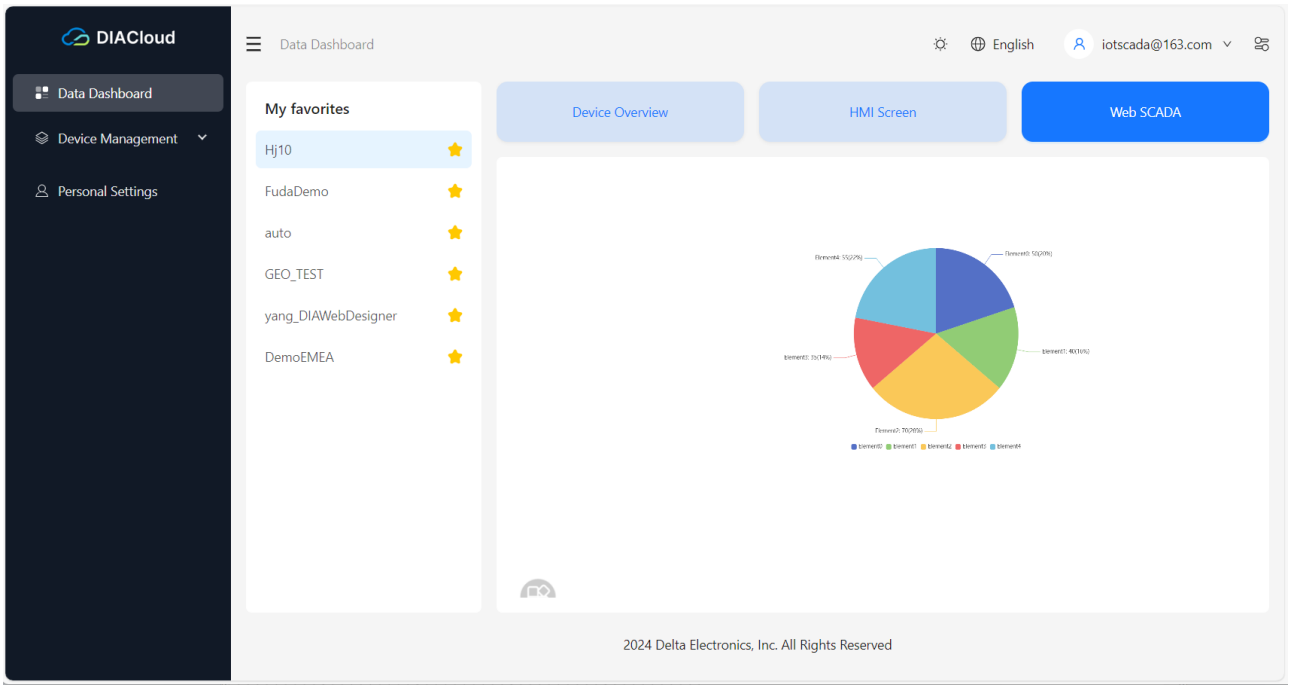
Click **Upload** and the dialog below will appear after the project is successfully uploaded.



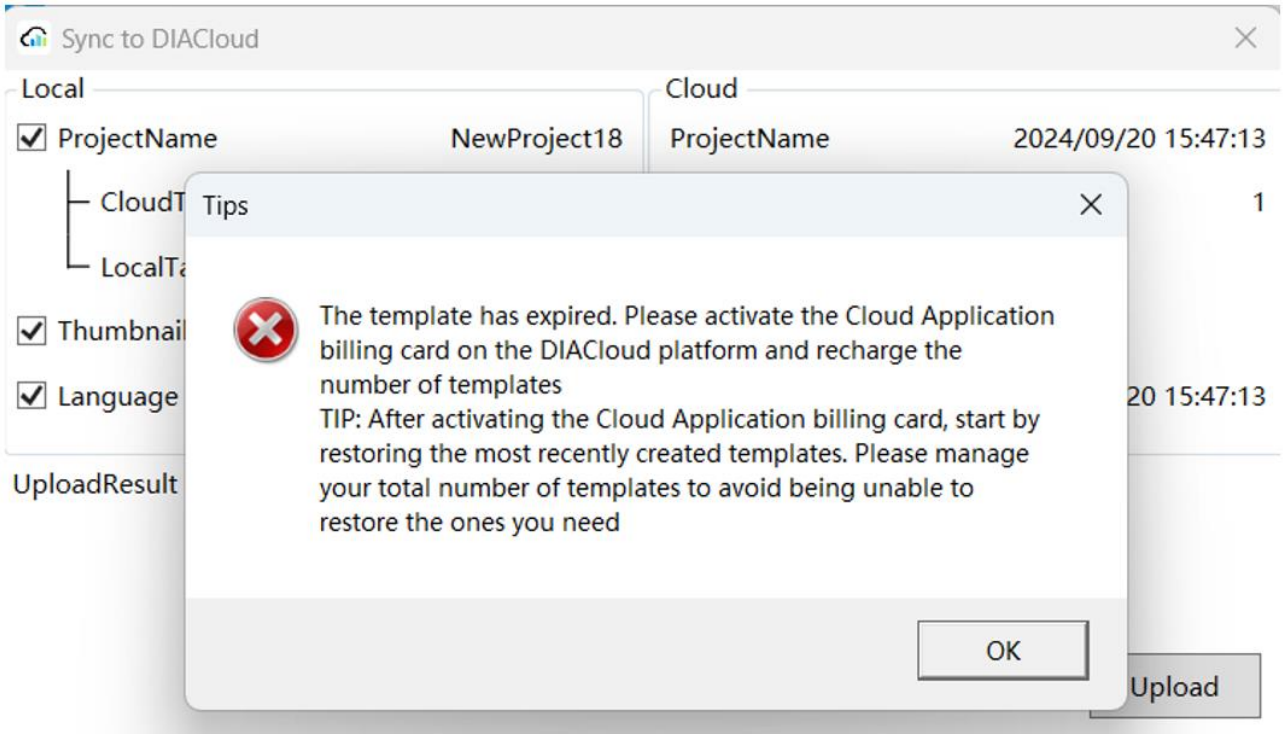
Click **OK** and you will be directed to the login page of DIACloud.



After login, you can run the project on DIACloud.



If the bound template is locked due to billing issues, the following window will pop up:



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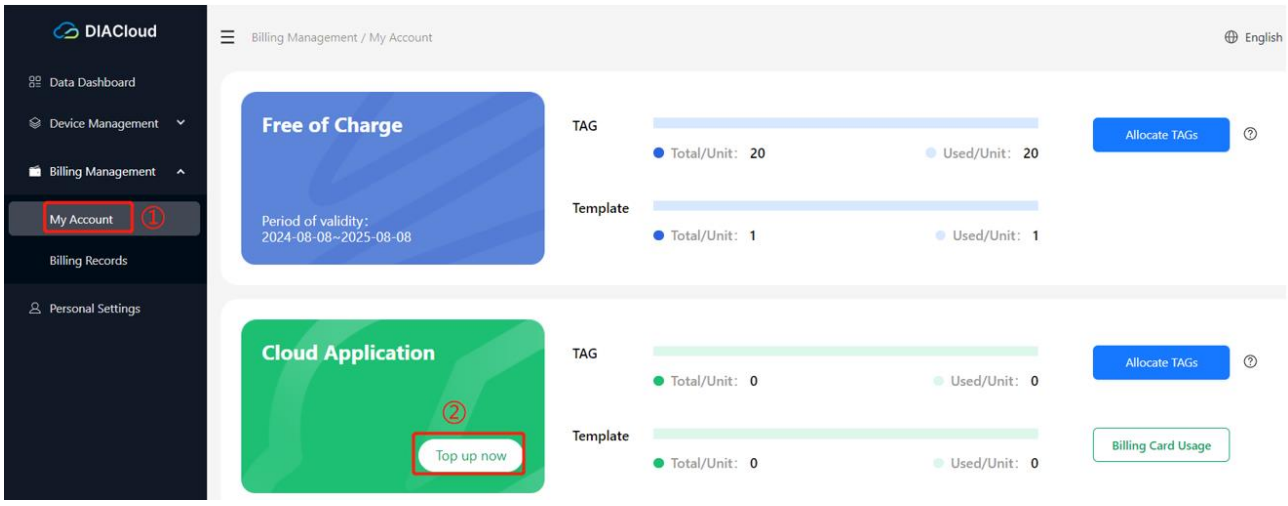
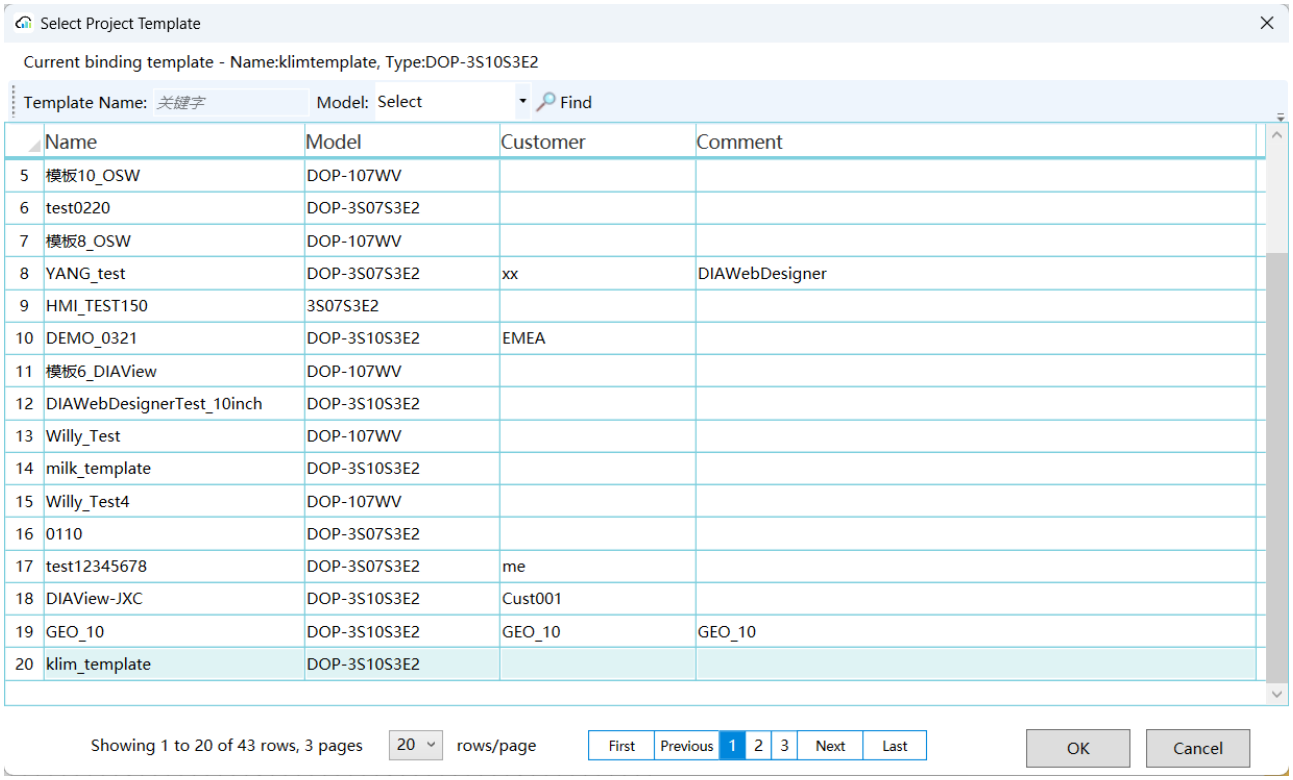
After logging in as a user, click **My Account** on the left to open the recharge portal and perform recharge operations:



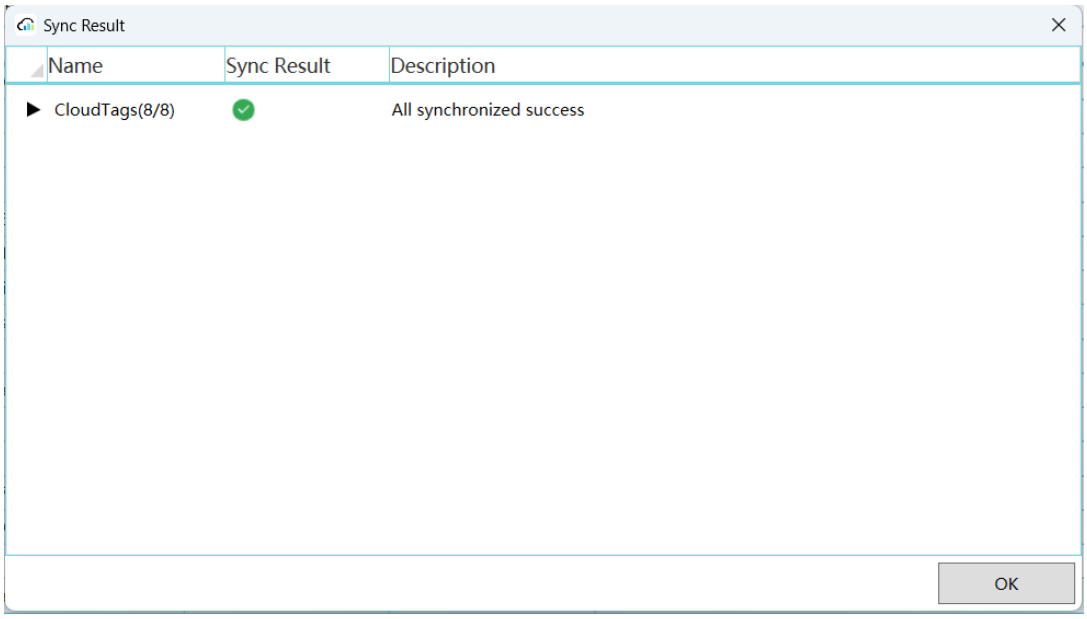
4.4.4.3 Bind Template

Template binding is necessary for uploading the project to DIACloud. Click **BindTemplate**, the **Select Project Template** dialog will appear.

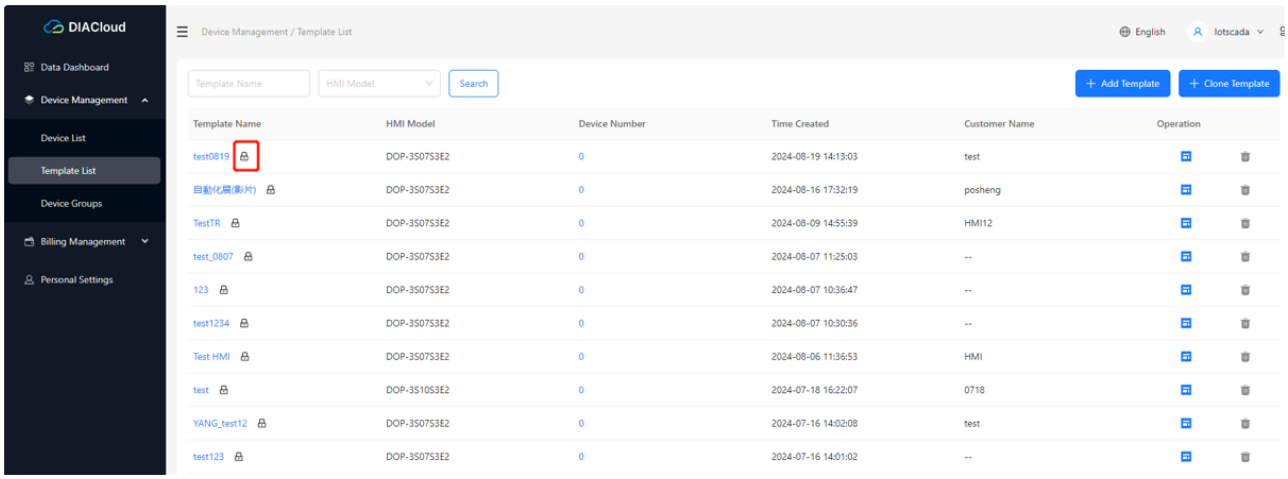


Item	Description
Template Name	Enter the keyword to search for a template.
Model	Select a device using the drop-down list.
Find	To start searching based on the template name and model provided.
Customer	Customer information
Comment	Note

Select the template and click **OK**. The following dialog appears. Click **OK** again to complete template binding.



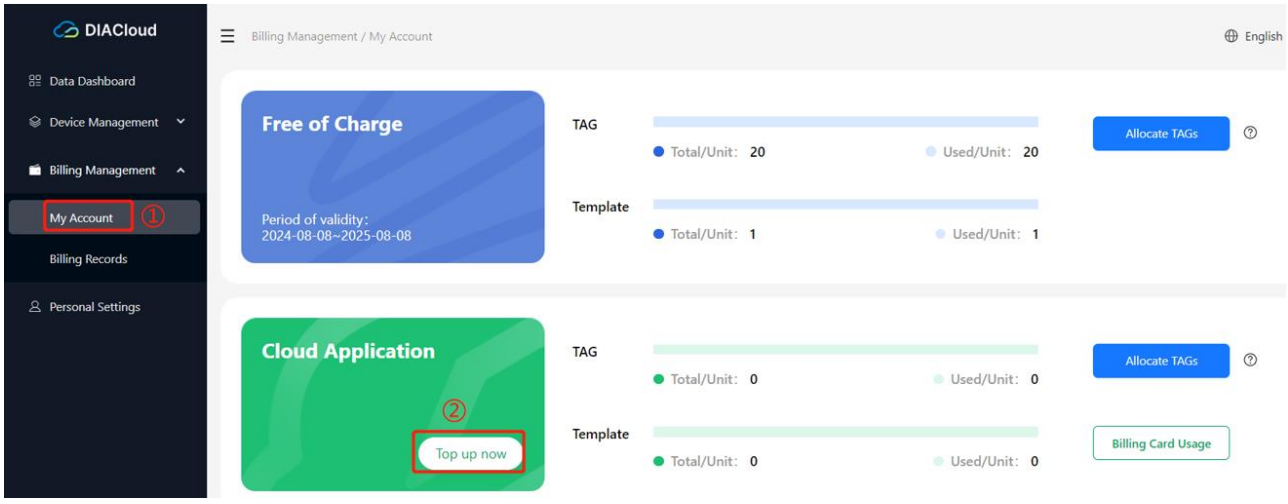
If the template is bound, an icon will appear on the right side of the template, indicating that the current template has been locked, as shown below:



User needs to log in to the DIACloud platform to recharge it before using it. The DIACloud platform login URL is demonstrated as follow:

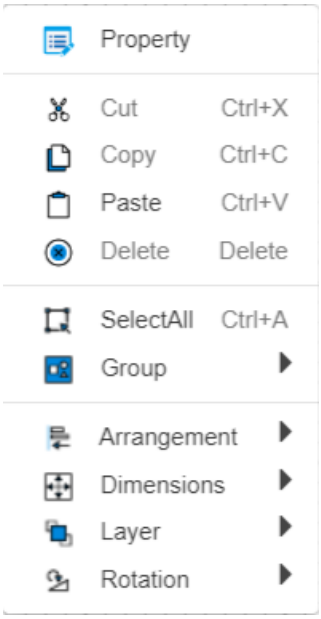
https://hms.diacloudsolutions.com

After logging in as a user, click **My Account** on the left to open the recharge portal and perform recharge operations:



4.5 Context Menu for Canvas

Right-click on the blank space of the canvas in the web window tab to bring out the context menu as shown below.



Item	Description
Property	To open the **Property Edition** dialog.
Cut	To cut the selected object to the clipboard.
Copy	To copy the selected object to the clipboard.
Paste	To paste the selected object to the canvas.
Delete	To remove the selected object from the canvas.
SelectAll	To select all objects on the canvas.
Group	Where there are multiple objects on the canvas, group the selected objects into an assembly.
Arrangement	To align or distribute the selected objects in different ways.
Dimensions	To modify the size of the selected objects in different ways.
Layer	To change the layering of the selected objects in different ways.
Rotation	To rotate the selected objects in different ways.

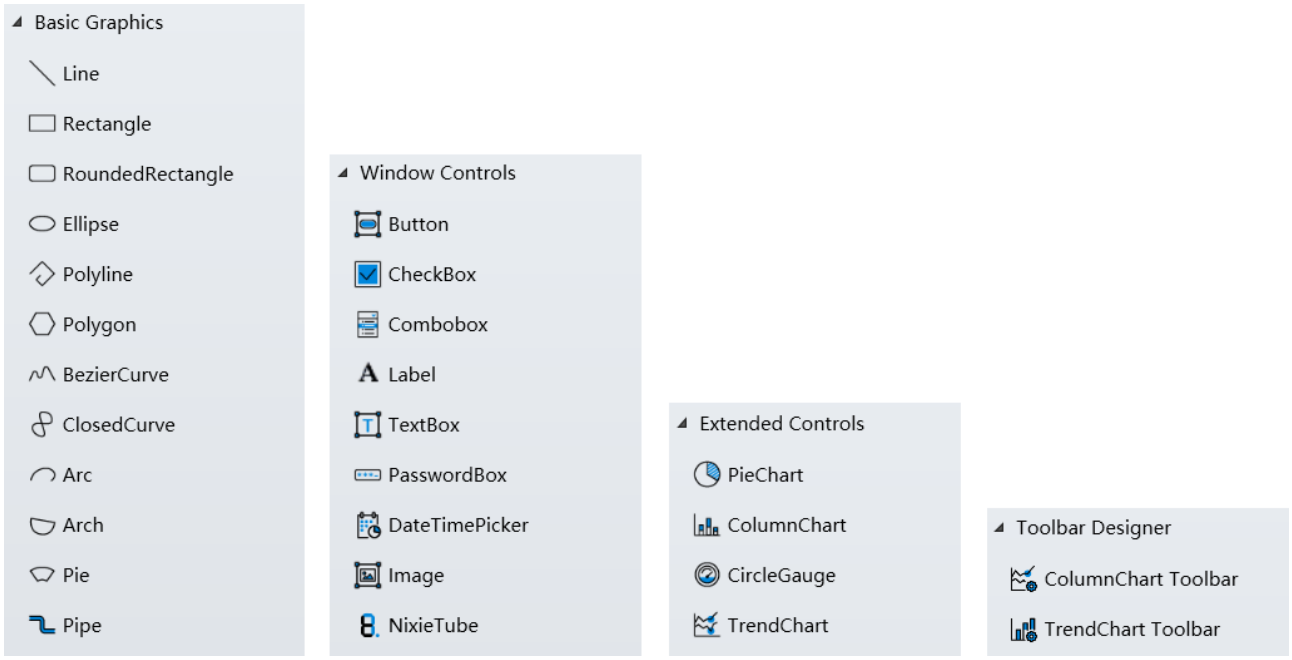
4.6 Keyboard Shortcuts

Keyboard shortcuts are keys or combinations of keys that serve as an alternative way to give commands that you typically do with a mouse. The following table lists the available shortcuts in DIAWeb Designer.

Shortcut	Command
Ctrl + O	Open a project
Ctrl + N	Create a new project
Ctrl + R	Preview the project
F11	Maximize the window / Exit full screen mode
Ctrl + C	Copy
Ctrl + X	Cut
Ctrl + V	Paste
Ctrl + Z	Undo
Ctrl + Y	Redo
Ctrl + S	Save
Ctrl + G	Group
Ctrl + U	Ungroup
Delete	Delete
↑	Move up
↓	Move down
←	Move left
→	Move right

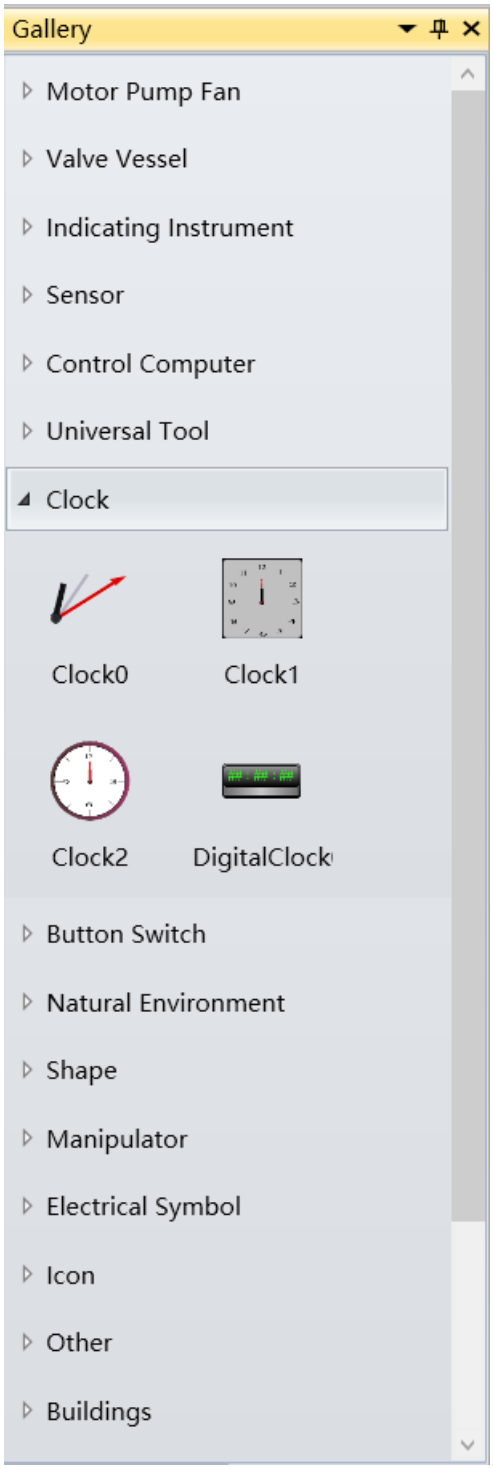
4.7 Toolbox

On the **Toolbox** pane, it provides the basic graphics, controls, and toolbar designer as shown in the figure below.



4.8 Gallery

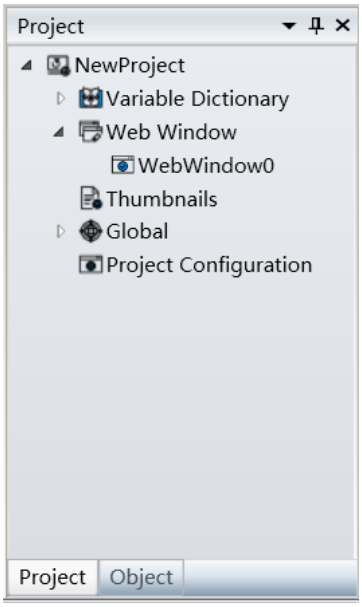
On the **Gallery** pane, it provides the frequently used graphic models. Users can also add self-defined or customized items to the gallery.



4.9 Project

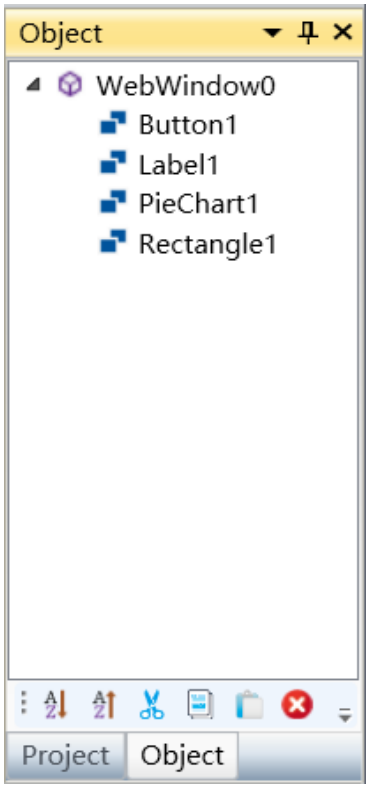
On the **Project** pane, it displays the directory where all the function nodes are listed hierarchically. The nodes serve as the manager and entrance to access functions and information related to project configuration. Right-click or double-click any of the nodes to proceed with related configurations.

If there are sub-items under a root node, you will see a ▷ in front of the entry. Click ▷ to expand all the sub-items and double-click the selected item to open it on the canvas for further configuration.



4.10 Object

On the **Project** pane, it lists all the objects on the currently displayed canvas. Click any of the object in the list and the corresponding graphic on the canvas is selected.

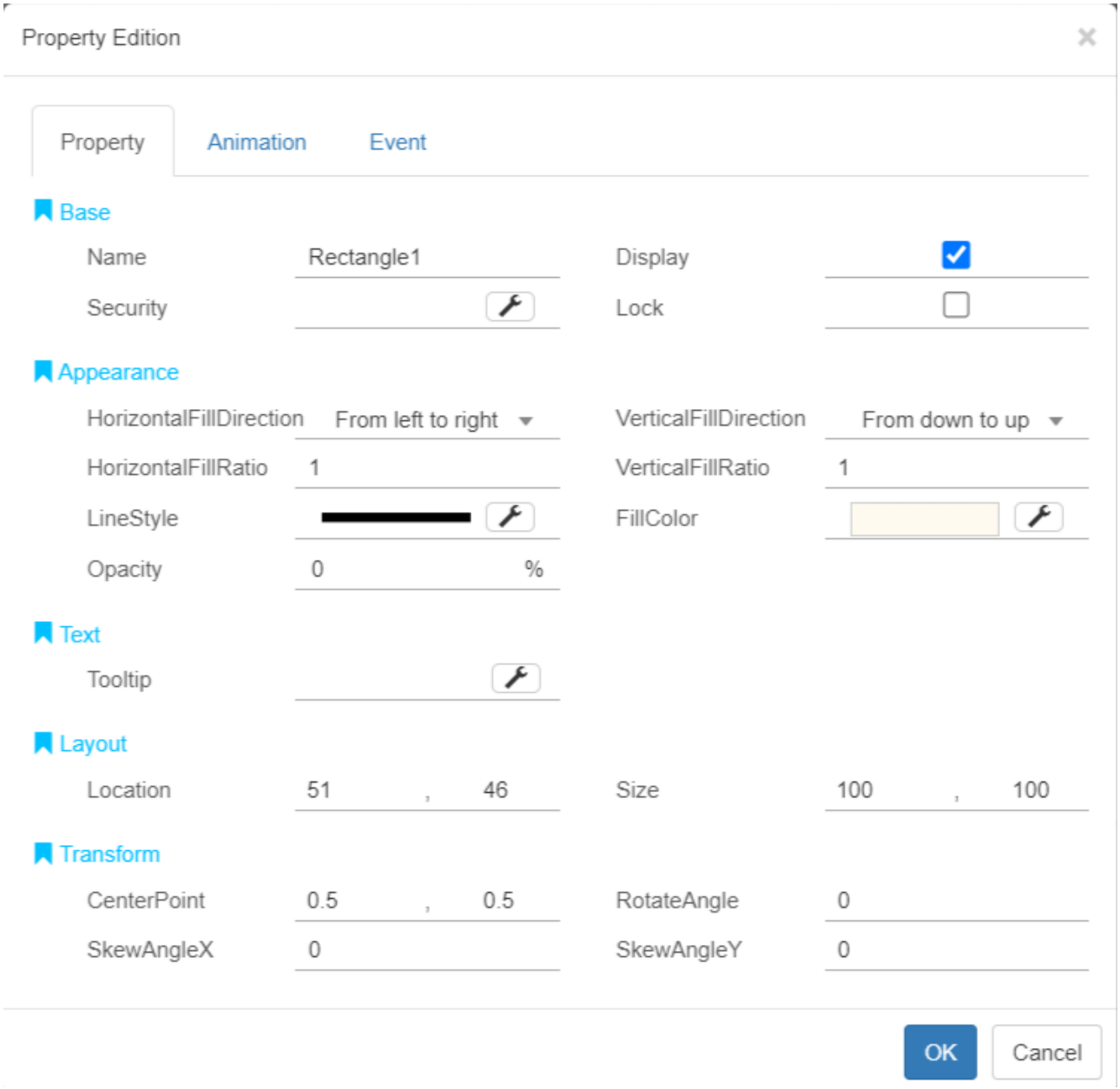

Object
WebWindow0
Button1
Label1
PieChart1
Rectangle1
Project
Object

4.11 Property Edition

In the **Property Edition** dialog, users can manage the property, animation, and event of the graphic. Double-click any graphic on the canvas or right-click it and select **Property** to open the dialog.

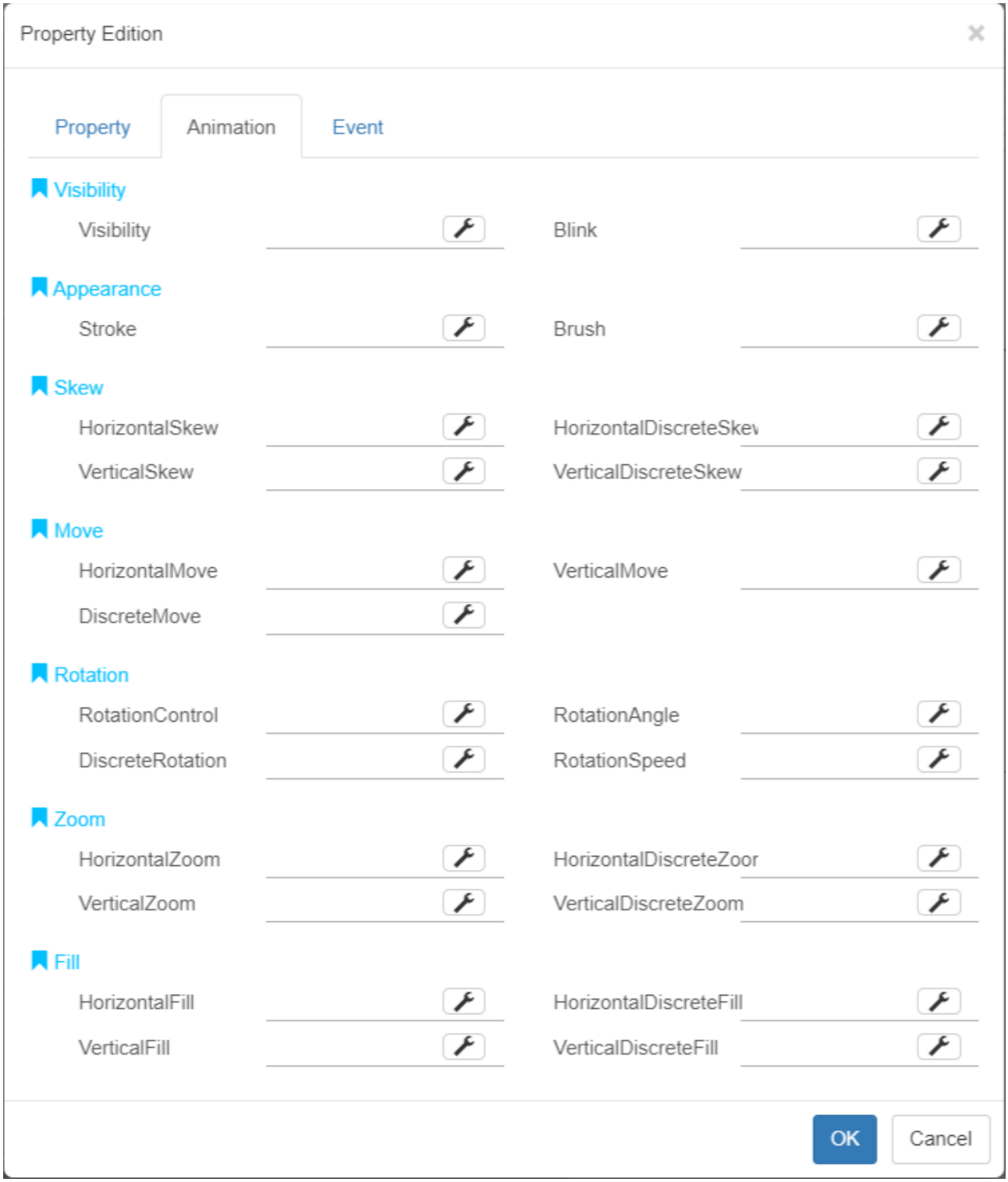
4.11.1 Property

In the **Property** tab, users can modify the properties of the graphic including its name, appearance, layout, etc.



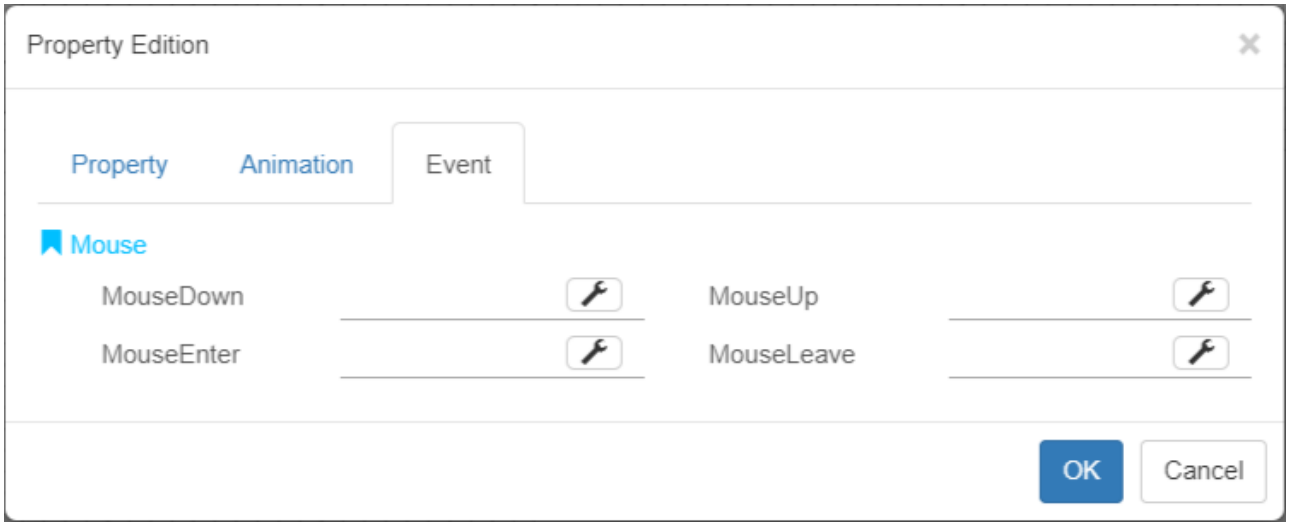
4.11.2 Animation

In the **Animation** tab, users can configure animations for the graphic. The configuration requires connecting relevant properties and variables.



4.11.3 Event

In the **Event** tab, users can manage events for the graphic. The configuration involves mover mouse and requires relevant variables to complete.



Chapter 5 Variable Dictionary

5.1 Overview

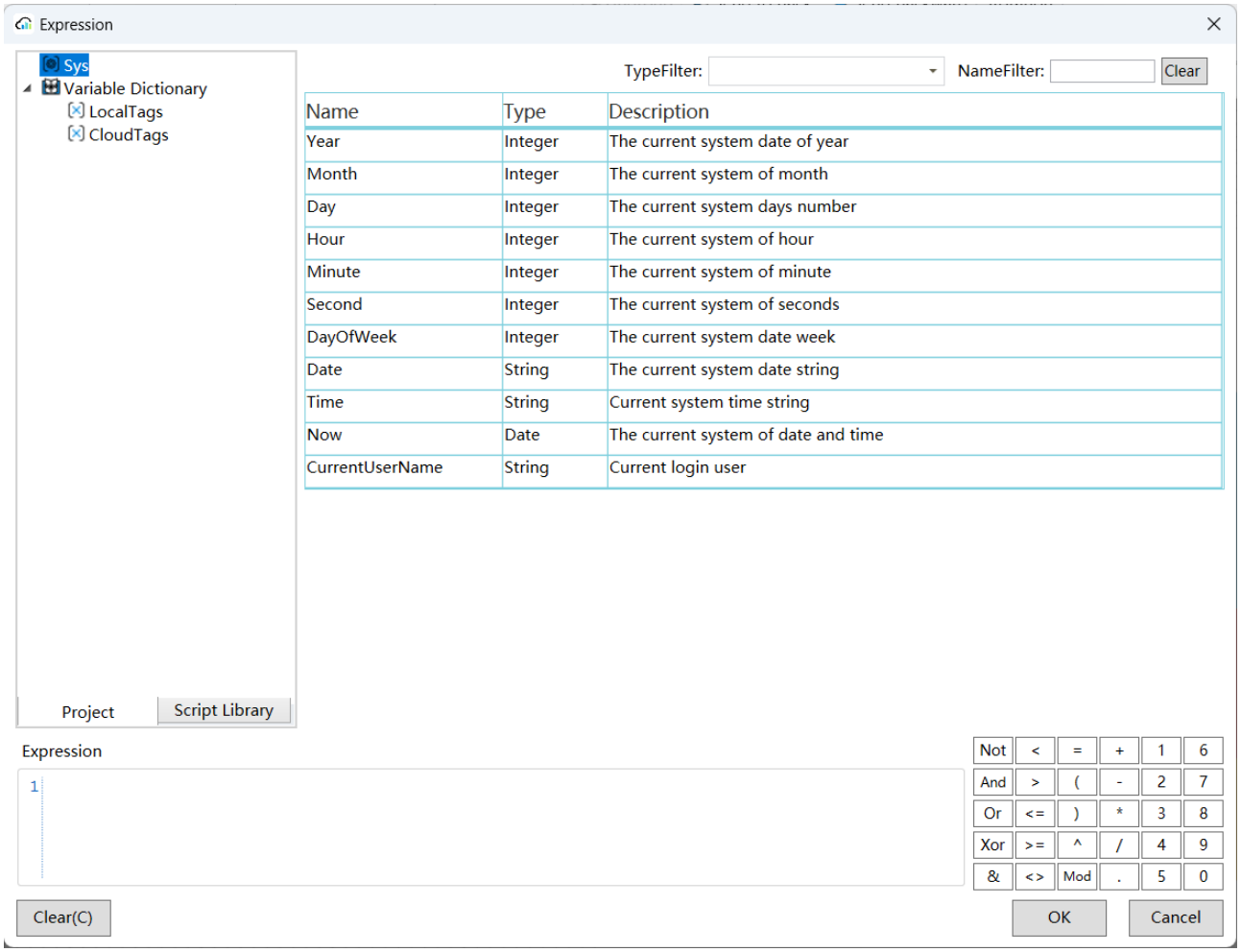
To manage and present the on-site operation in real time, projects created in DIAWeb Designer involve a variety of variables and data interactions.

There are three types of variables in DIAWeb Designer, which are system variables, local variables (local tags), and cloud variables (cloud tags). System variables are variables that come with the software system and cannot be modified.

Local tags and cloud tags are project variables, namely, user-defined variables in the project, which are generally managed by the Variable Dictionary.

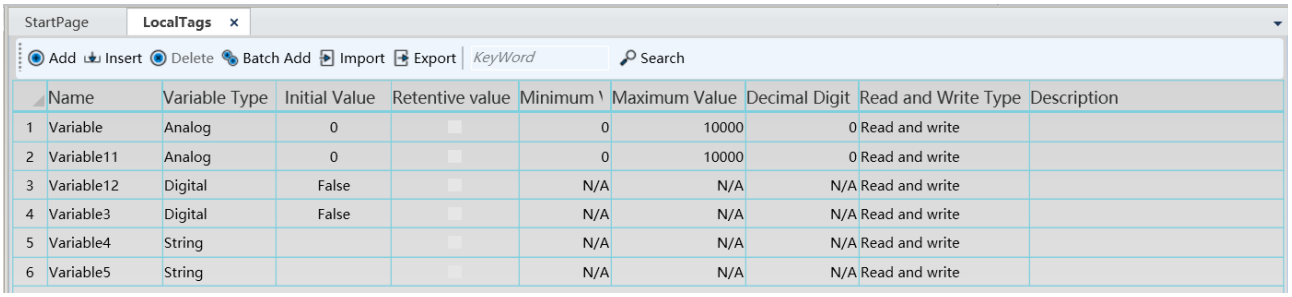
Variable Dictionary provides unified and centralized management of all variables in the project; Local Tags can be added, deleted, copied, pasted, imported, exported, retrieved and so on, while Cloud Tags are synchronized with the templates in DIACloud and cannot be revised.

- **System Variables**: Fixed variables that come with the system; there are 11 system variables in DIAWeb Designer, which can be directly called by users.



5.2 Local Tags

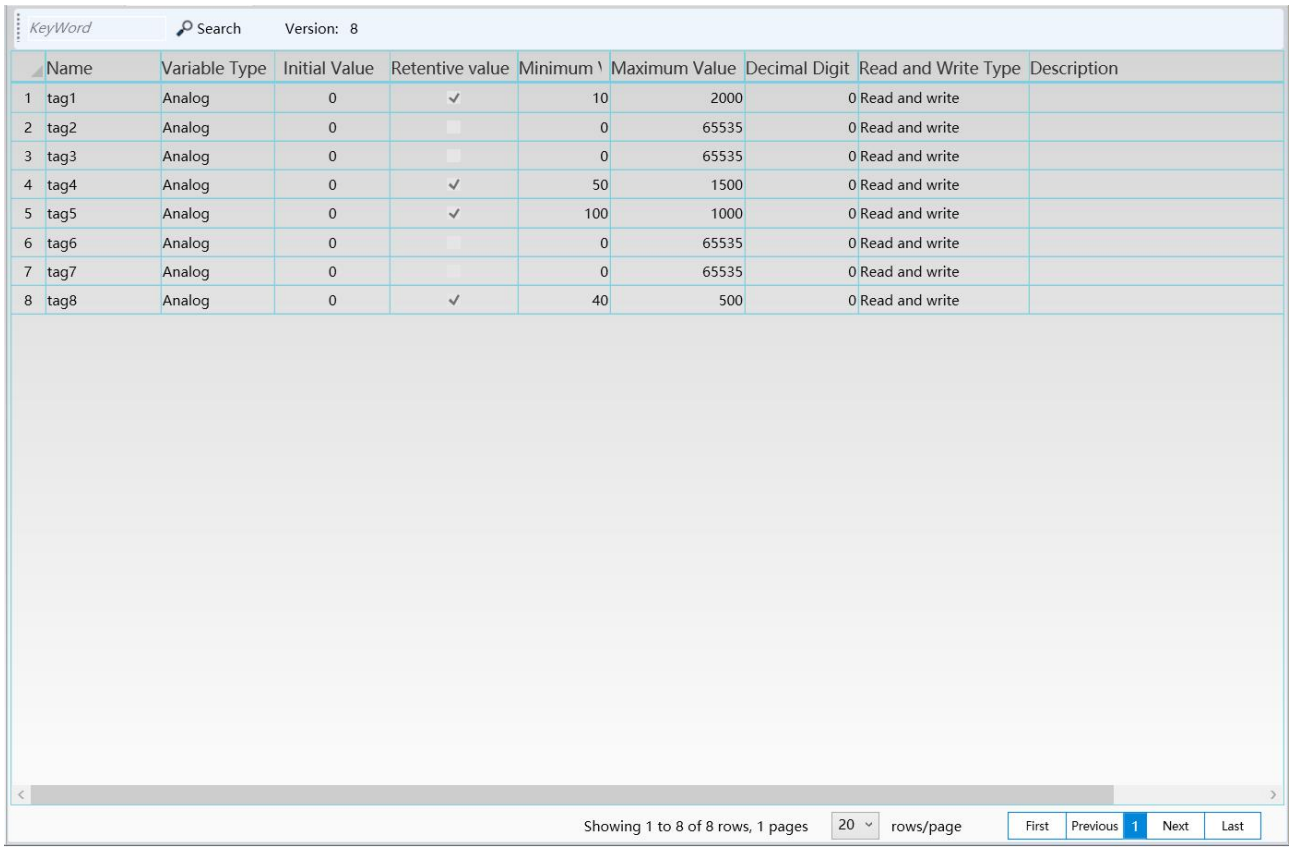
Local tags are values that can be changed at any time in the project, which play a crucial part in system data exchange. Information about local tags is introduced in this section.



Item	Description
Name	To specify the name of the local variable. The naming rules are as follows: 1. Consist of letters, numbers, Chinese characters, and underscores; must begin with a letter or Chinese character. 2. Not case-sensitive. 3. Cannot contain spaces, periods, exclamation marks, or special characters such as @$#?*&. 4. Cannot exceed 200 characters, with no more than 25 Chinese characters. 5. Cannot share the same name with other created local variables. 6. Only support names in traditional Chinese, simplified Chinese, or English.
Variable Type	To define the variable type. There are three types: 1. Text: string (maximum length: 2000 bytes) 2. Digital: False / True 3. Analog: int / float
Initial Value	To set the initial value of the variable.
Minimum Value / Maximum Value	To specify the range of value (only available for analog variables).
Decimal Digit	To specify the decimal place (only available for analog variables).
Read and Write Type	To set the read and write type: read and write (default) or read only.
Description	To add more information on the variable.

5.3 Cloud Tags

Cloud tags are values synchronized with the templates in DIACloud and cannot be revised. Information about cloud tags is introduced in this section.



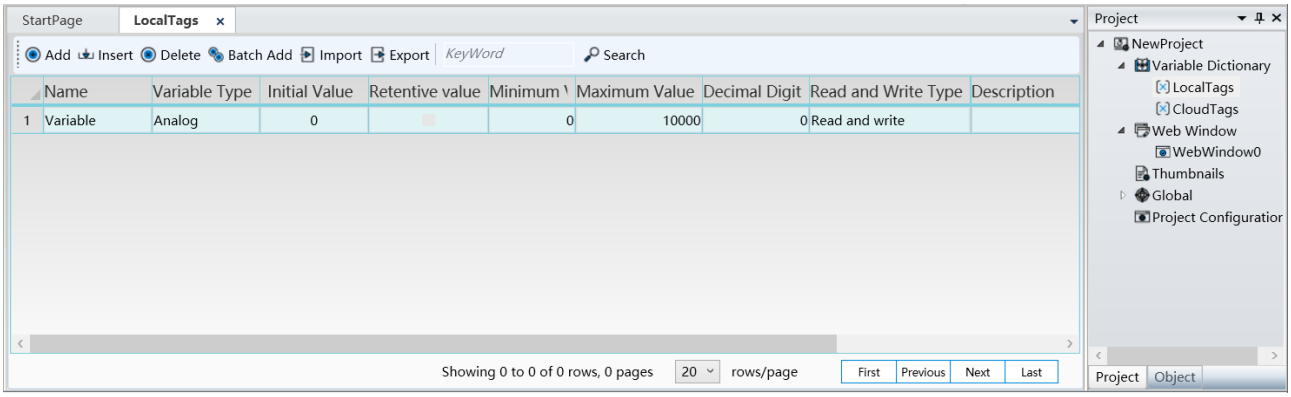
Item	Description
Name	The variable name is case-sensitive.
Variable Type	There are three variable types: 1. Text: string (maximum length: 2000 bytes) 2. Digital: False / True 3. Analog: int / float
Initial Value	The initial value of the variable.
Retentive Value	If the box is checked, the initial value will be set as the last obtained value at the end of system operation; otherwise, it will remain unchanged.
Minimum Value / Maximum Value	The range of value for the variable (only available for analog variables).
Decimal Digit	The decimal place of the variable (only available for analog variables).
Read and Write Type	The read and write type: read and write, write only or read only.
Description	To add more information on the variable.

5.4 Toolbar

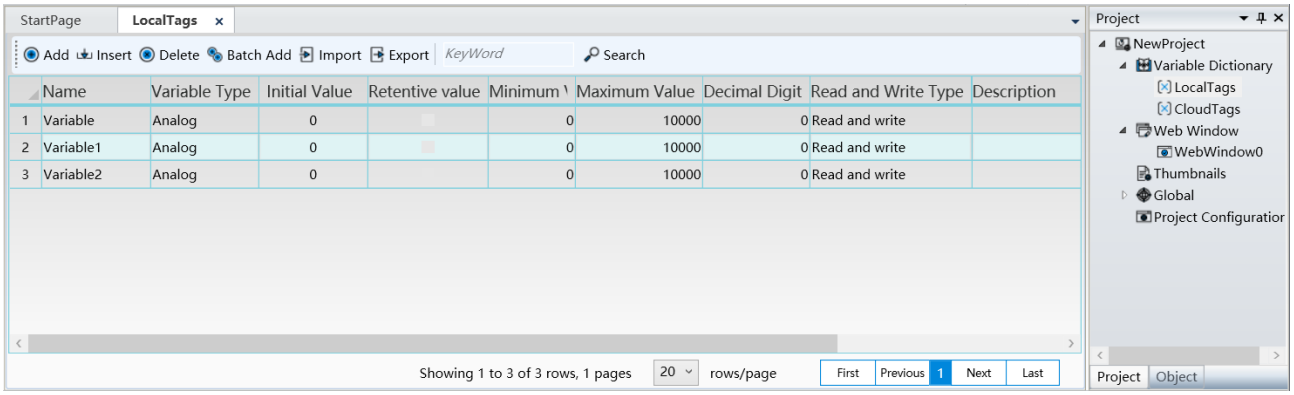
The following table lists the toolbar items and descriptions.

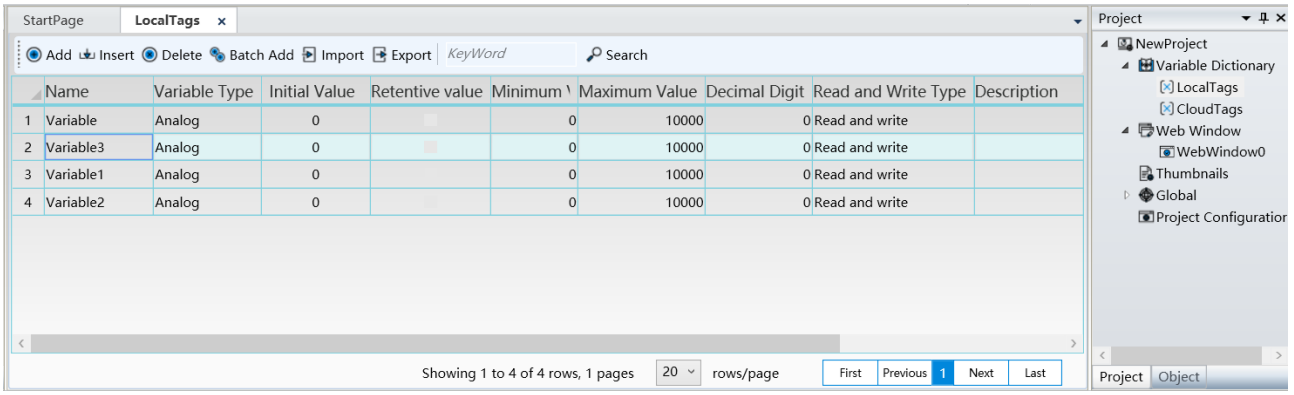
c	Description
Add	To add a new variable.
Insert	To add a new variable by inserting it before the selected variable.
Delete	To delete the selected variables.
Batch Add	To add multiple variables in a batch.
Import	To import a variable table.
Export	To export the current variable table.
KeyWord	To provide a keyword for searching.
Search	To start searching based on the keyword provided

- **Add:** On the **Project** pane, click **LocalTags** under **Variable Dictionary** to open the setting window. Then click **Add** to add a default variable called **Variable** in the table.

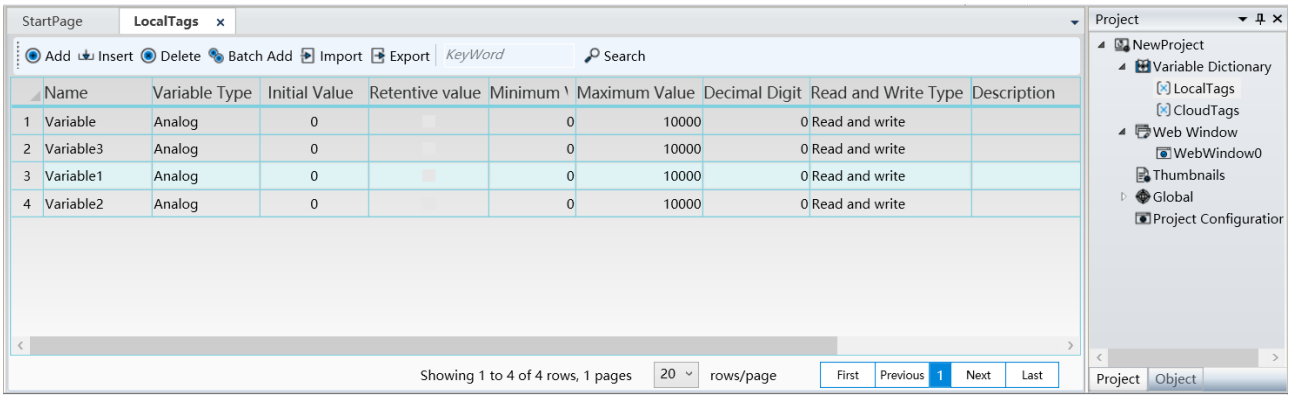


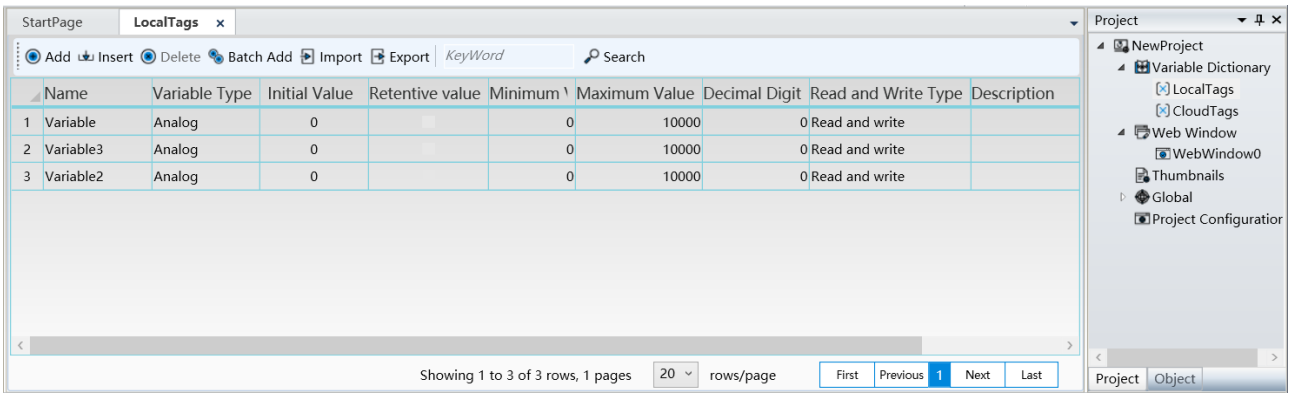
- **Insert:** Select **Variable1** in the following table and click **Insert**. The new variable **Variable3** is then added before Variabel1.



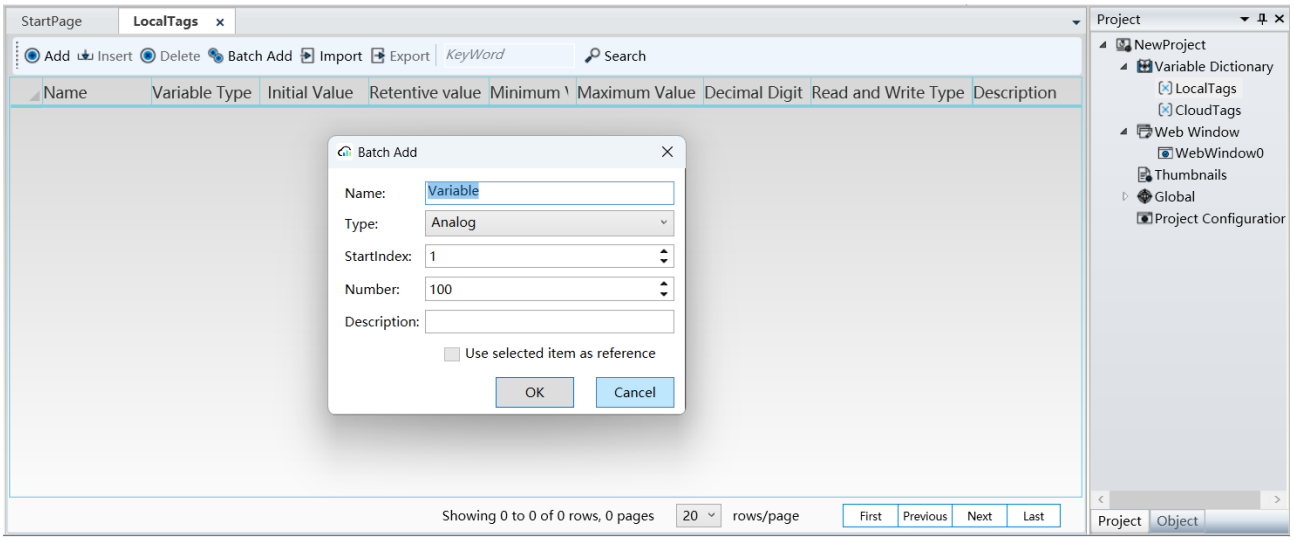


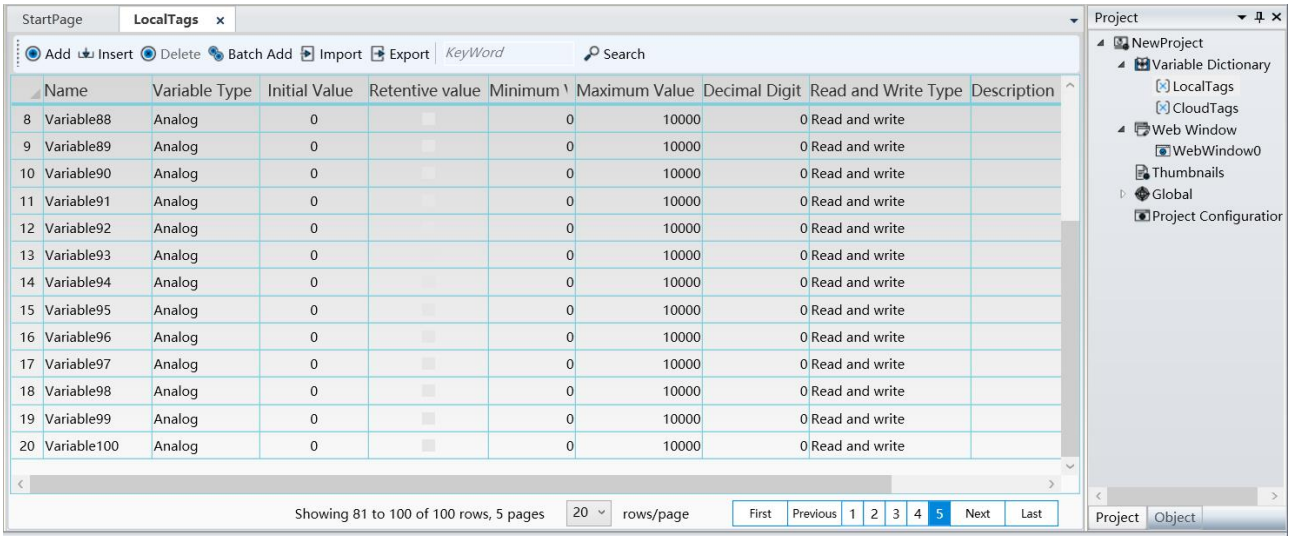
- **Delete:** Select **Variable1** and click **Delete**. Variable1 is removed from the table.





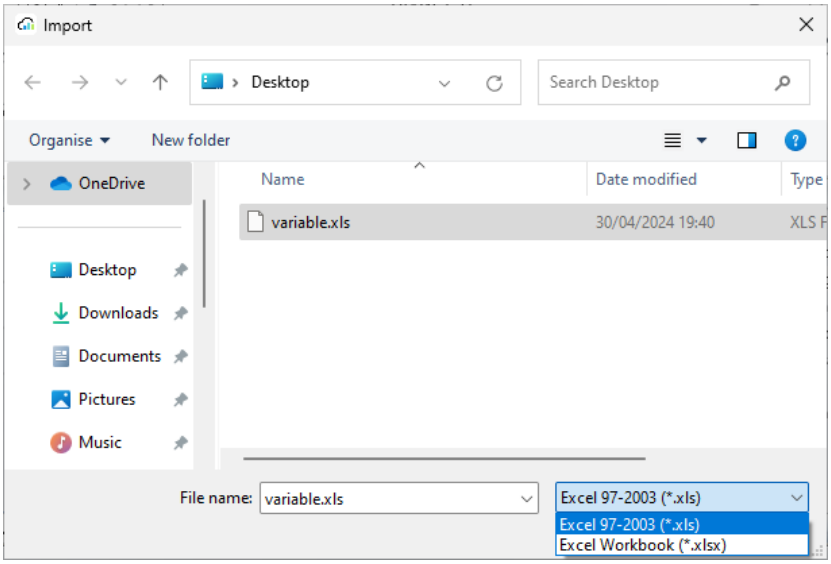
- **Batch Add:** Click **Batch Add** to add multiple variables at a time.



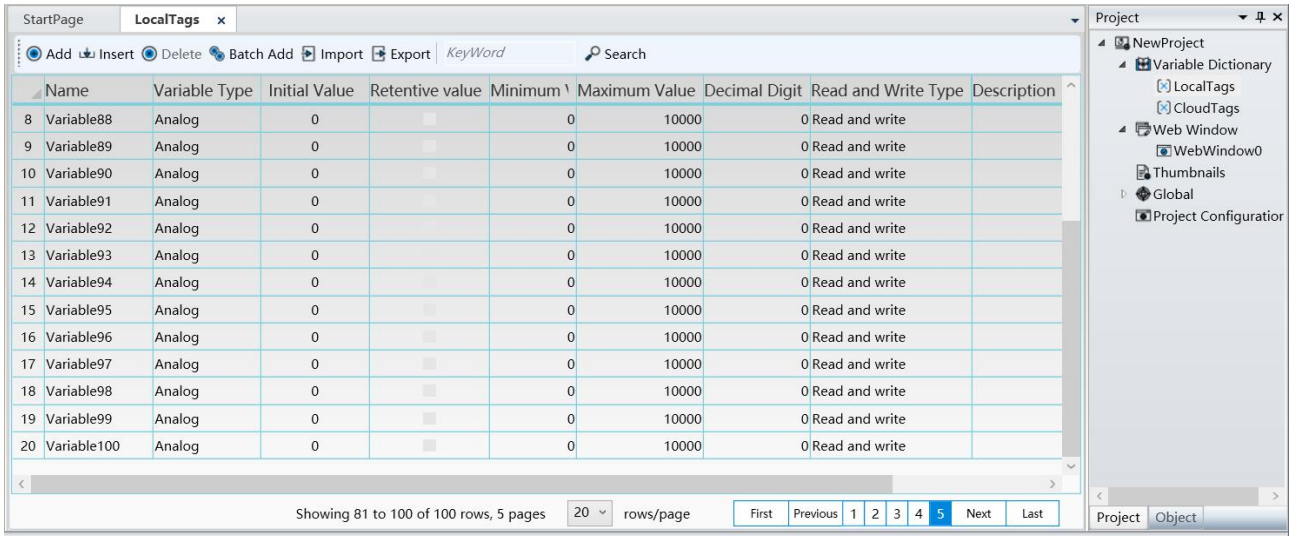


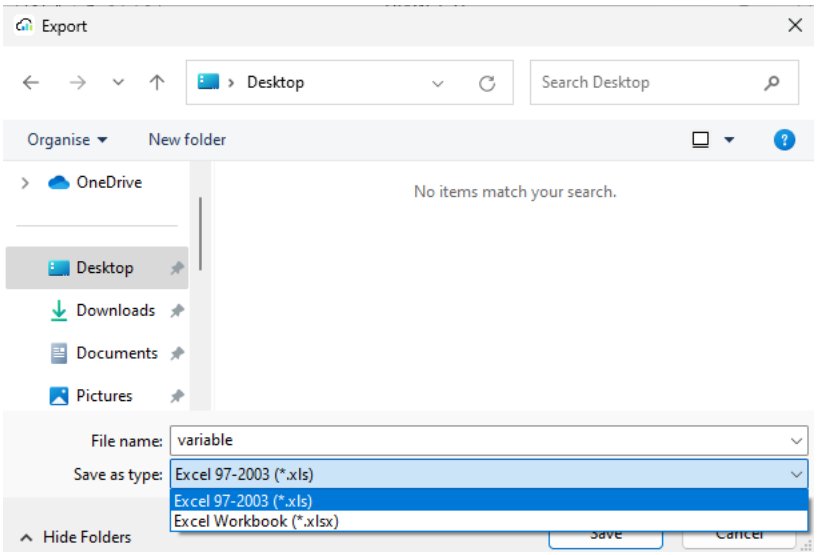
- **Import:** DIAWeb Designer allows import of variables in .xls file format.

  Click **Import** on the **LocalTags** tab and select the file in which the variables are correct and valid to input.

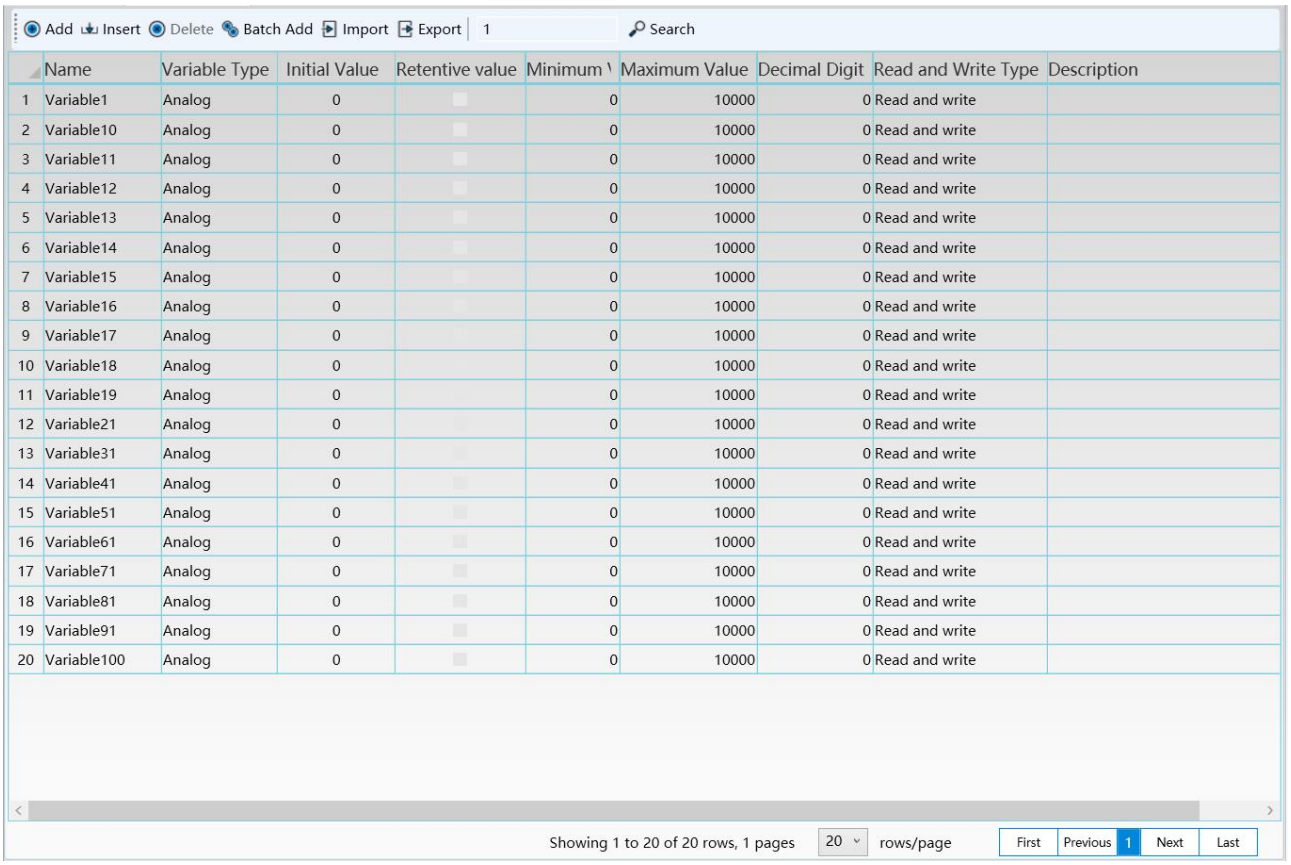


- **Export:** Click **Export** and specify the storage location to save the variables in .xls file format.




Export
Desktop
Search Desktop
Organise
New folder
OneDrive
No items match your search.
Desktop
Downloads
Documents
Pictures
File name:
variable
Save as type:
Excel 97-2003 (*.xls)
Excel 97-2003 (*.xls)
Excel Workbook (*.xlsx)
Hide Folders
Save
Cancel

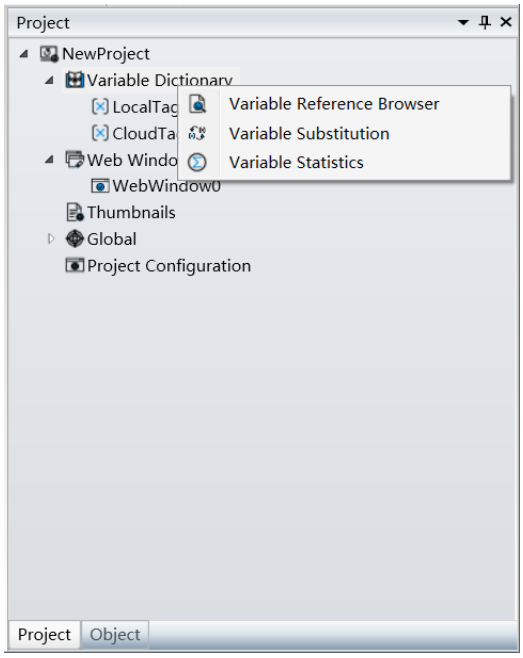
- **Search:** With several variables created, enter a keyword and click **Search**. The table will only display variables that match the keyword. If no keyword is input, the table will display all variables. Enter variable names only in the **KeyWord** box



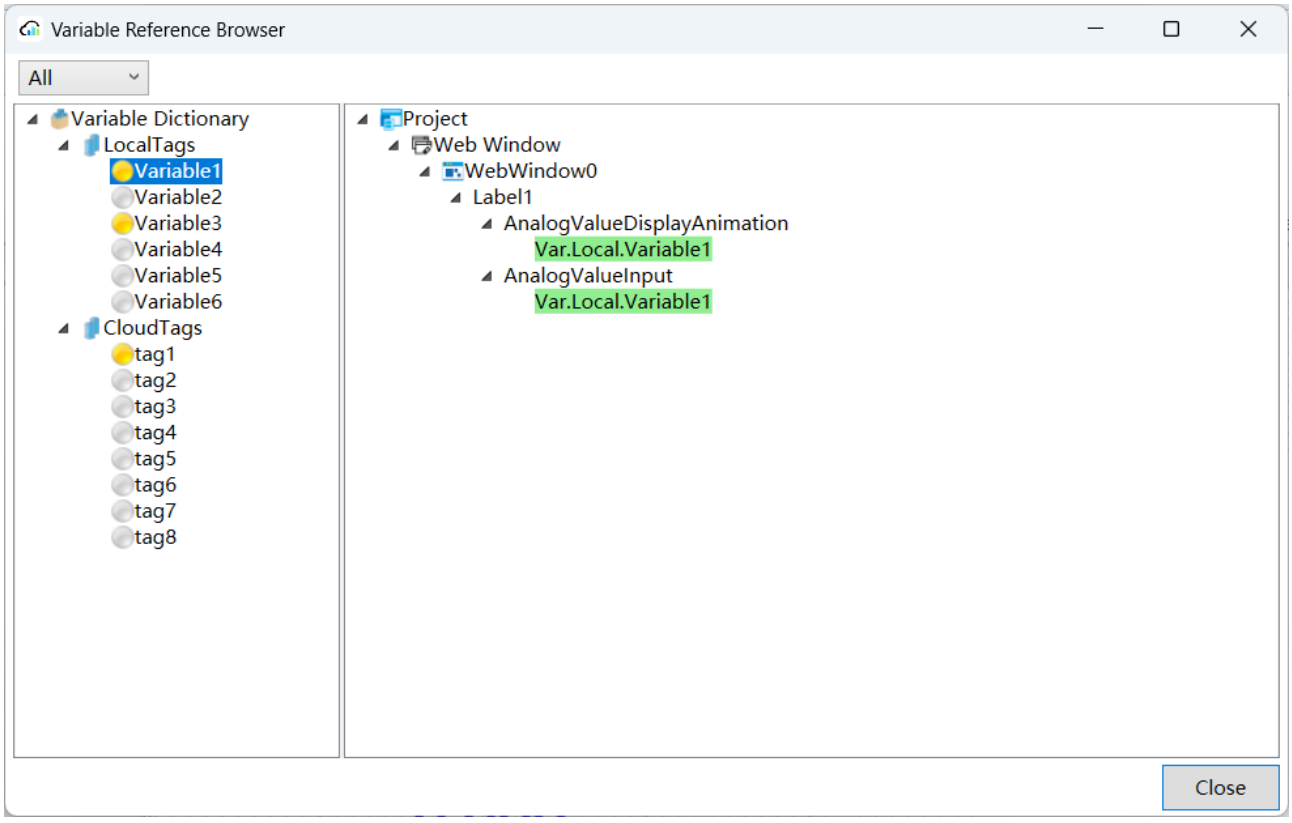
5.5 Variable Reference Browser

The **Variable Reference Browser** dialog is for viewing all the references of variables in Variable Dictionary, allowing users to check whether the variables are referenced and the referenced path.

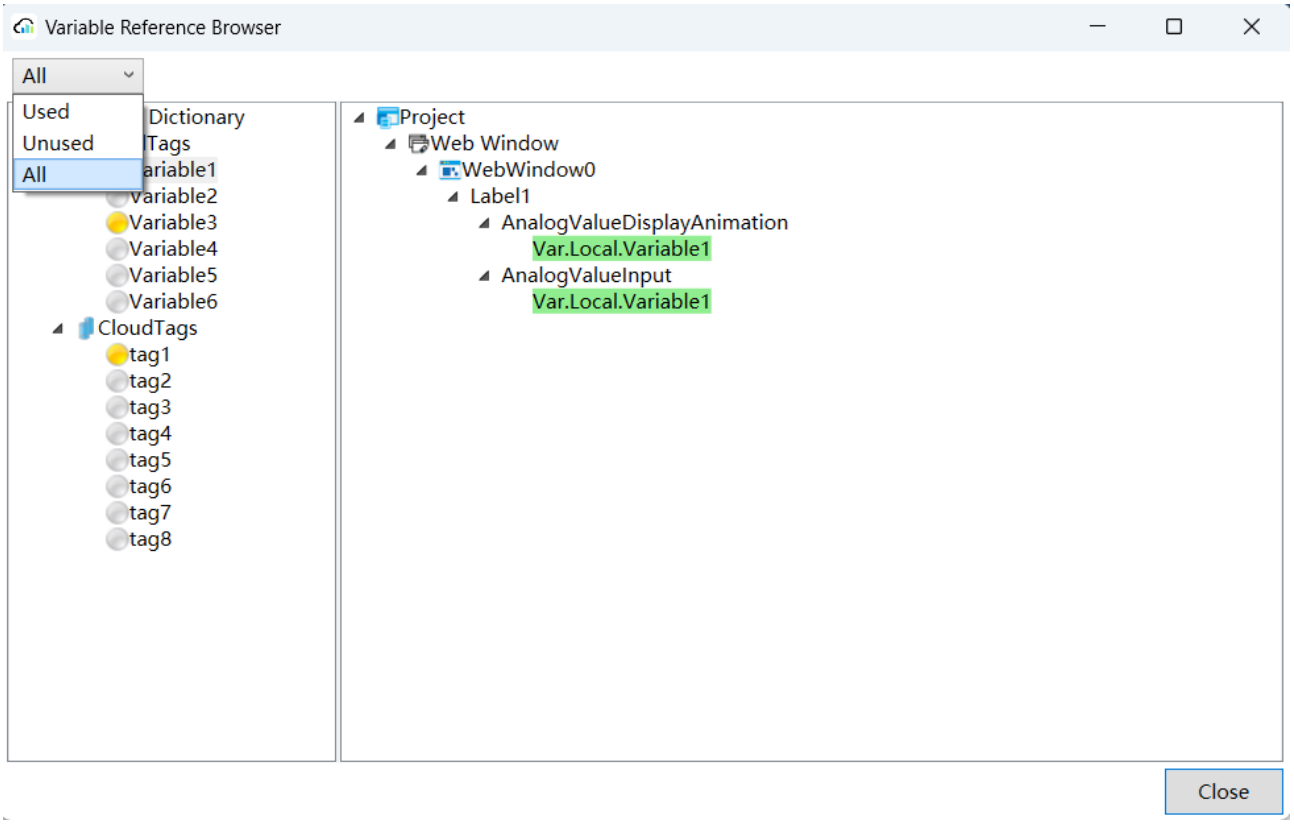
On the **Project** pane, right-click **Variable Dictionary** and select **Variable Reference Browser**.



The following dialog appears.



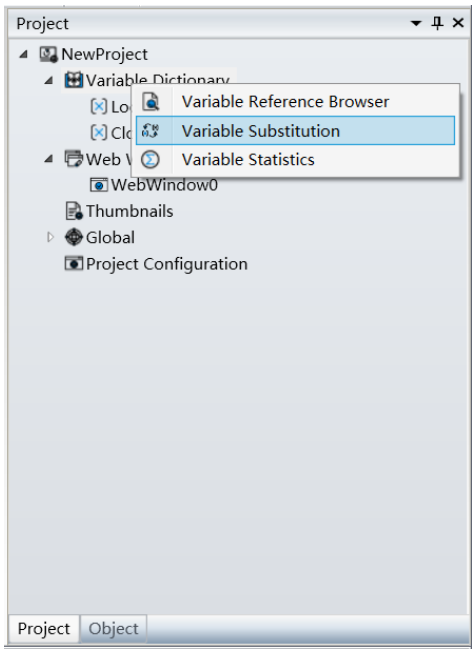
1. On the left is the directory of variable dictionary, and the right side displays the reference information.
2. In the directory, the variables marked with a yellow circle are referenced while those with a grey circle are not.
3. Select the variable you would like to check in the directory, and view the corresponding information on the right pane where all the objects that have referenced the variable are listed in tree diagram. It helps locate the web window where the objects are in the project.
4. Click the box at the top left corner to open the drop-down list for filtering variables.

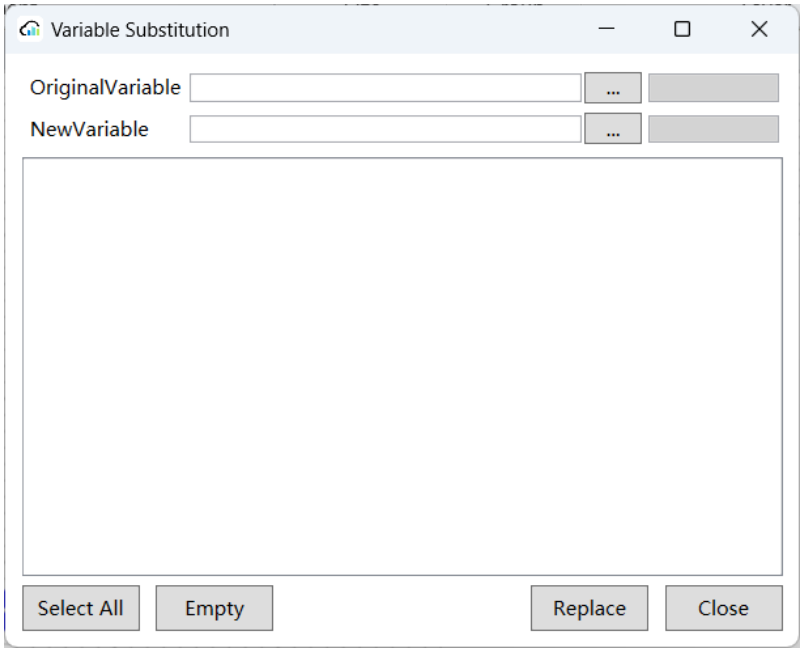


5.6 Variable Substitution

The **Variable Substitution** dialog is for replacing the referenced variable which is selected with a new variable.

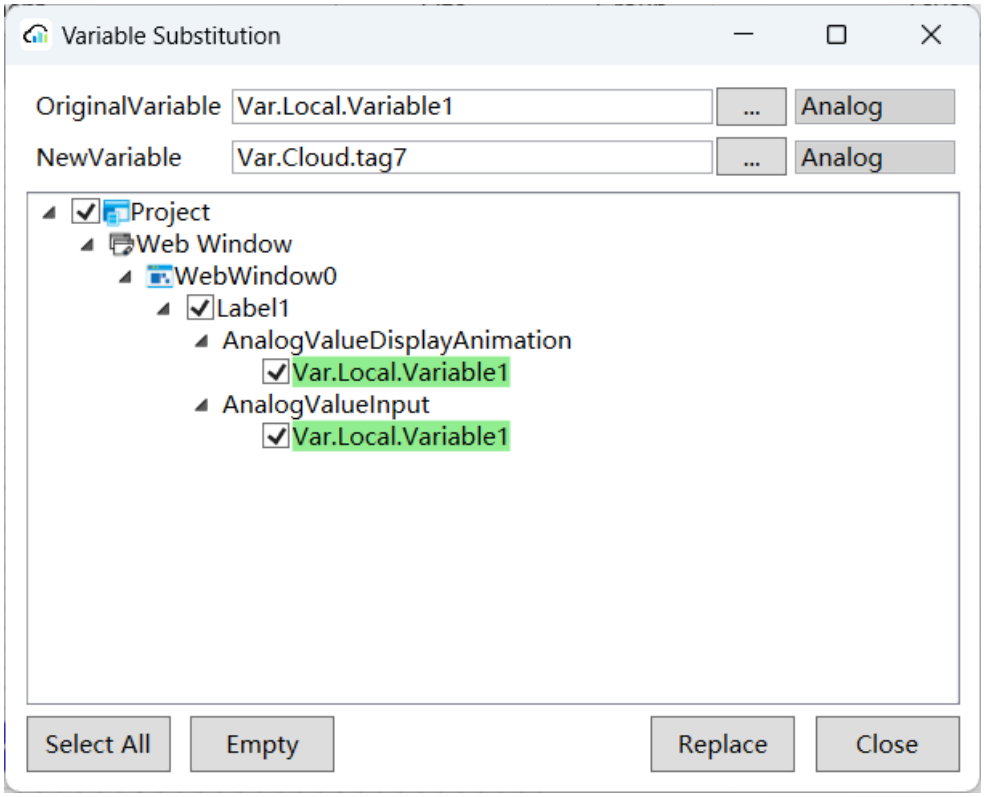
On the **Project** pane, right-click **Variable Dictionary** and select **Variable Substitution**.



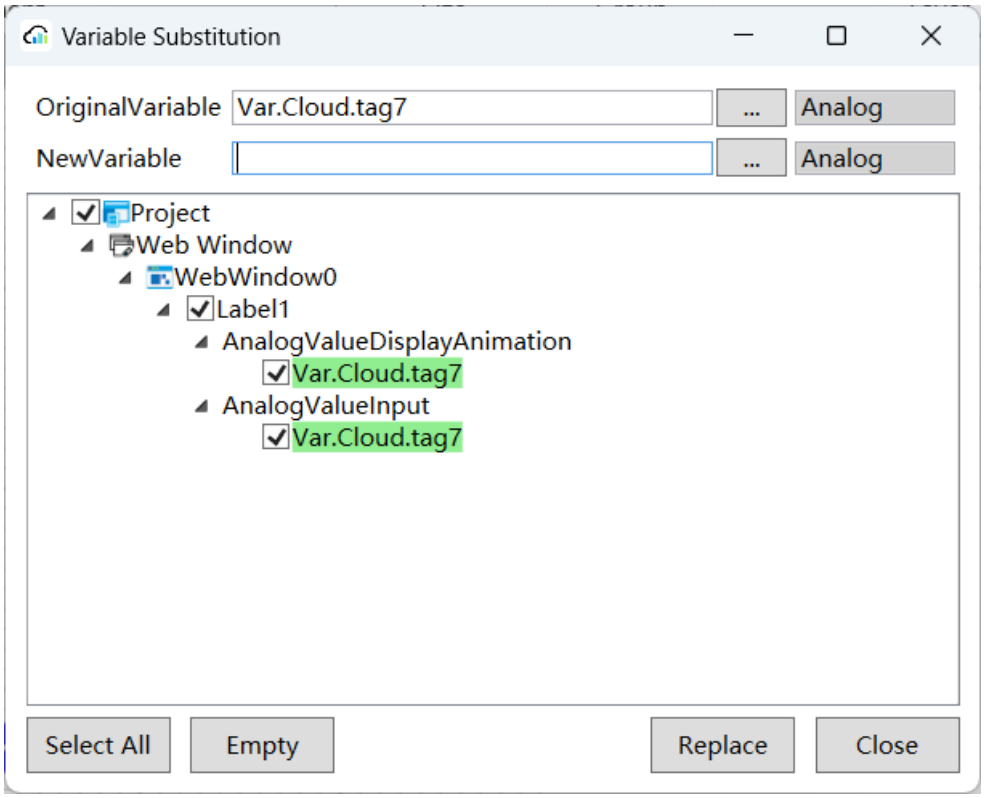


Click ... next to the **OriginalVariable** box to select the variable to be replaced. The selected variable must have been referenced, or the hierarchical list below will not appear.

Then click ... next to the **NewVariable** box to select the variable to be the substitute. Check the variables to be replaced in the hierarchical list (select all by default) or click **Select All** to choose all the variables. Click **Replace**.



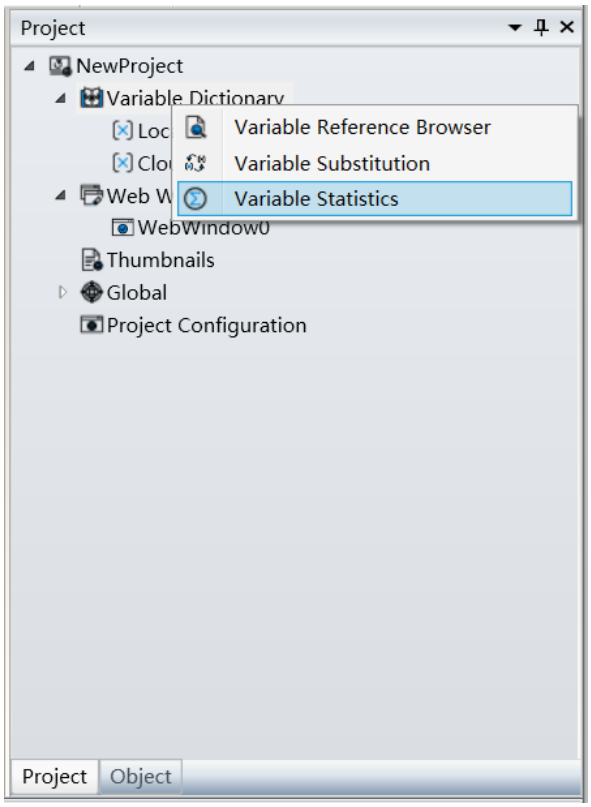
The result is shown below.

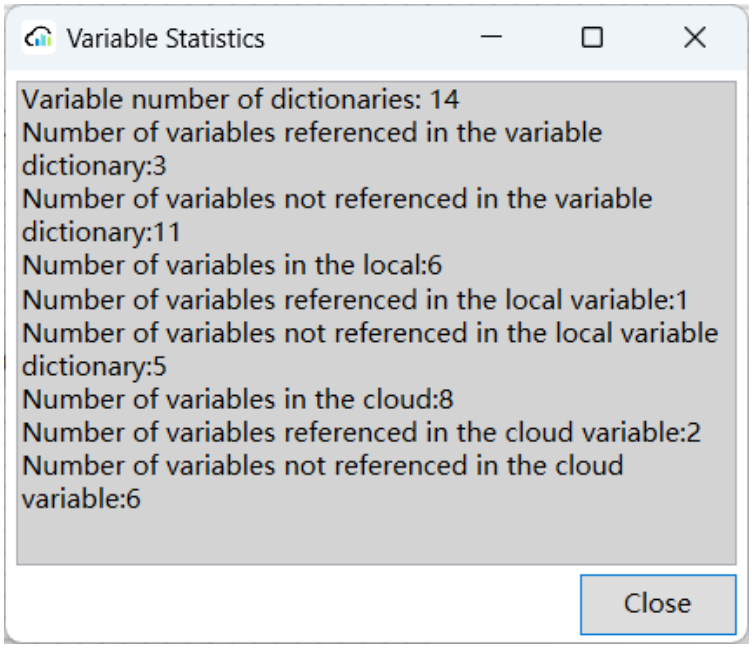


5.7 Variable Statistics

The **Variable Statistics** dialog displays the total number of variables and their application in the project.

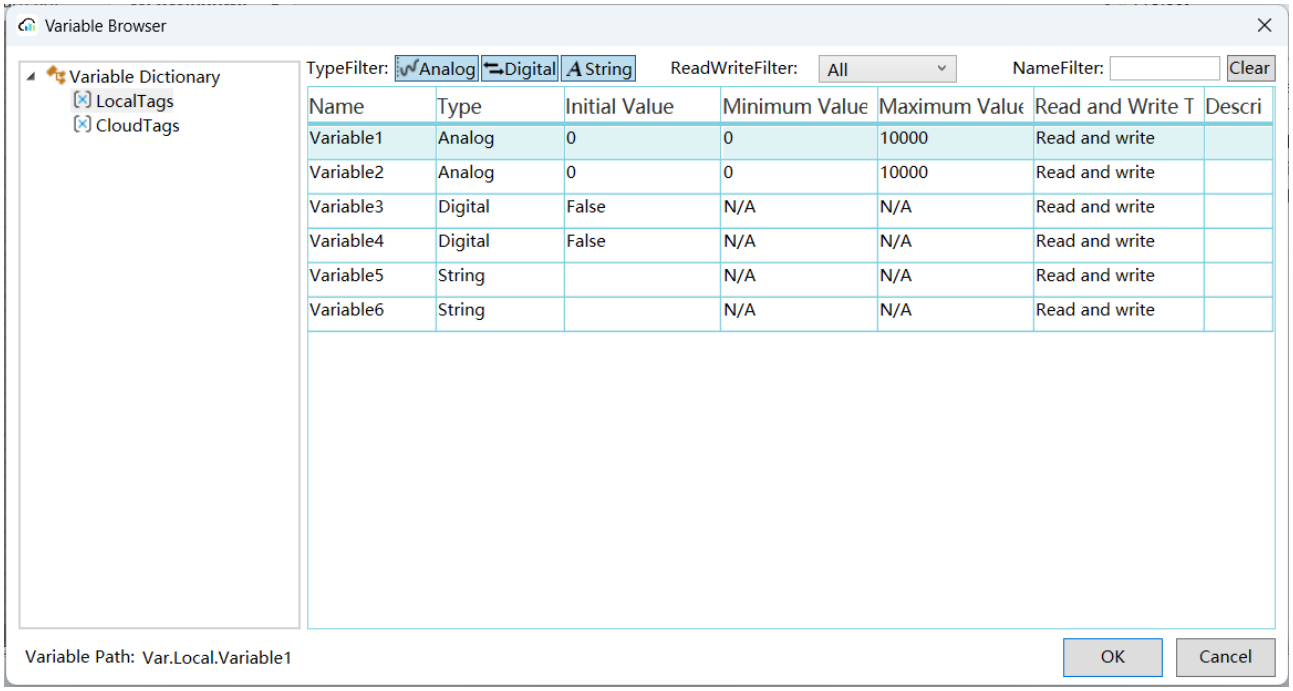
On the **Project** pane, right-click **Variable Dictionary** and select **Variable Statistics**.





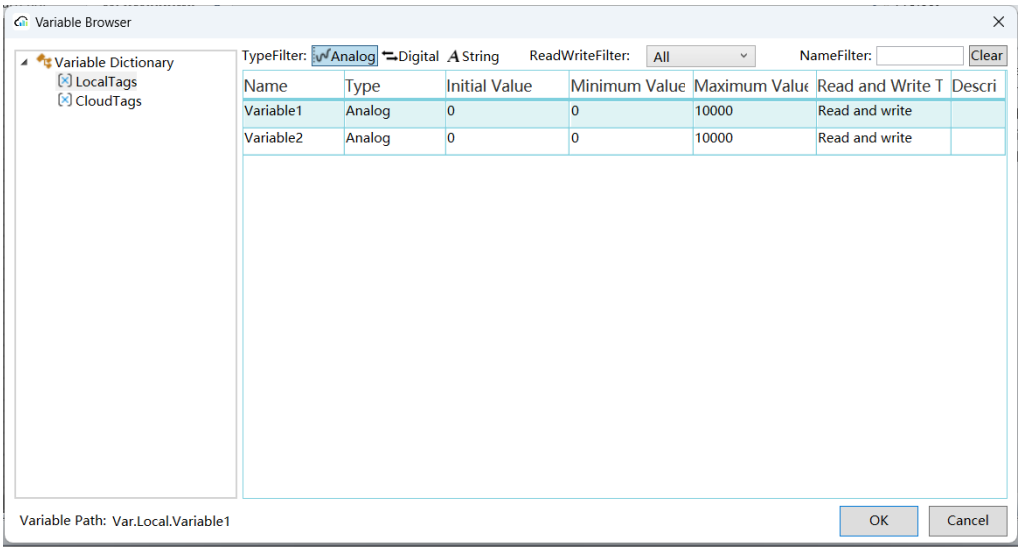
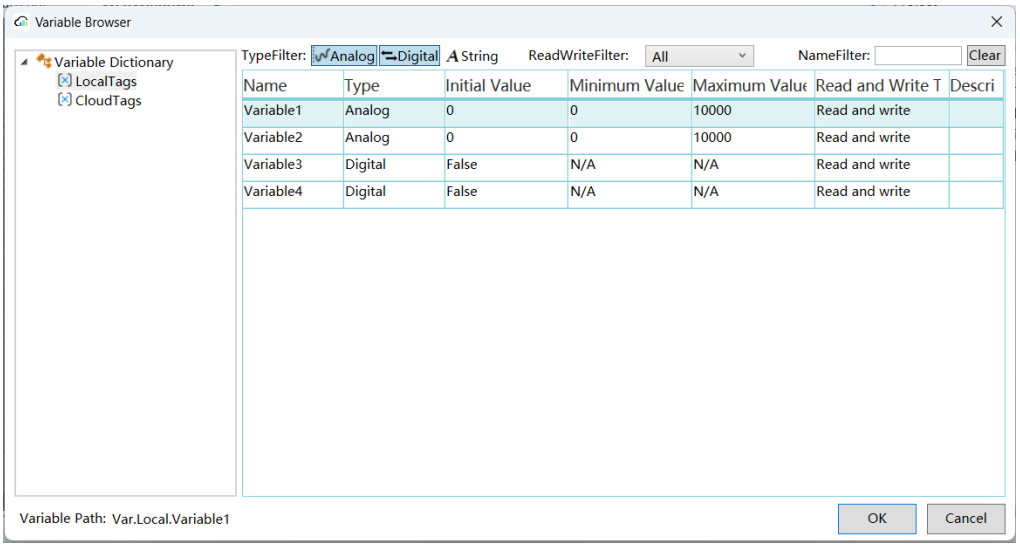
5.8 Variable Browser

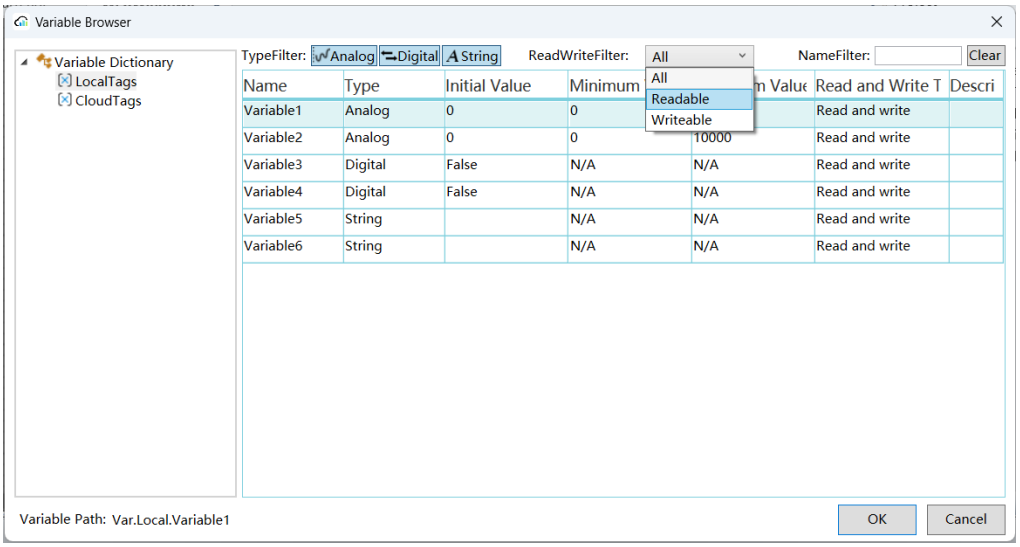
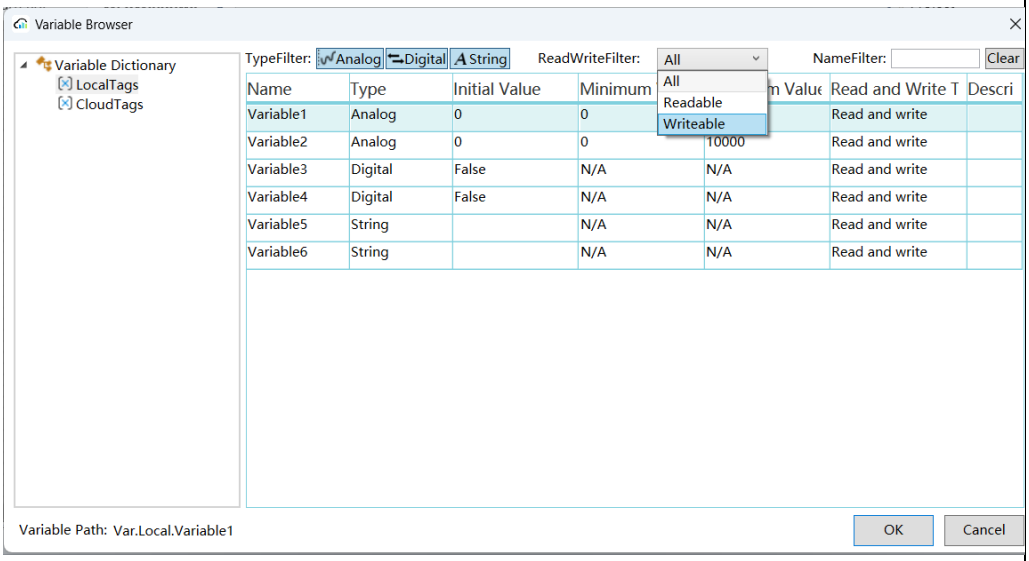
In the **Variable Browser** dialog, it displays all variables in the Variabel Dictionary. Many functions in the project require the use of variables. Open the **Variable Browser** dialog as shown below to search for the desired variables when necessary.



The left is the directory of variable dictionary. Click **LocalTags** to check all variables in this category on the right side. Select the desired variable and click **OK**, or double-click the desired variable directly to use it.

- **Toolbar**

Item	Description
TypeFilter	The background of the variable type turns blue when it is selected with all the variables of this type in the variable dictionary being listed in the table below. The variables of the type that is not selected will not appear. 1. View **Analog** only  2. View **Analog** and **Digital** 

Item	Description
ReadWriteFilter	Users can select the read and write type in the drop-down list. The table below only shows the variables that match. 1. View **Readable** only  2. View **Writeable** only 
NameFilter	Type in a keyword to search for the variables that match.

5.9 Expression

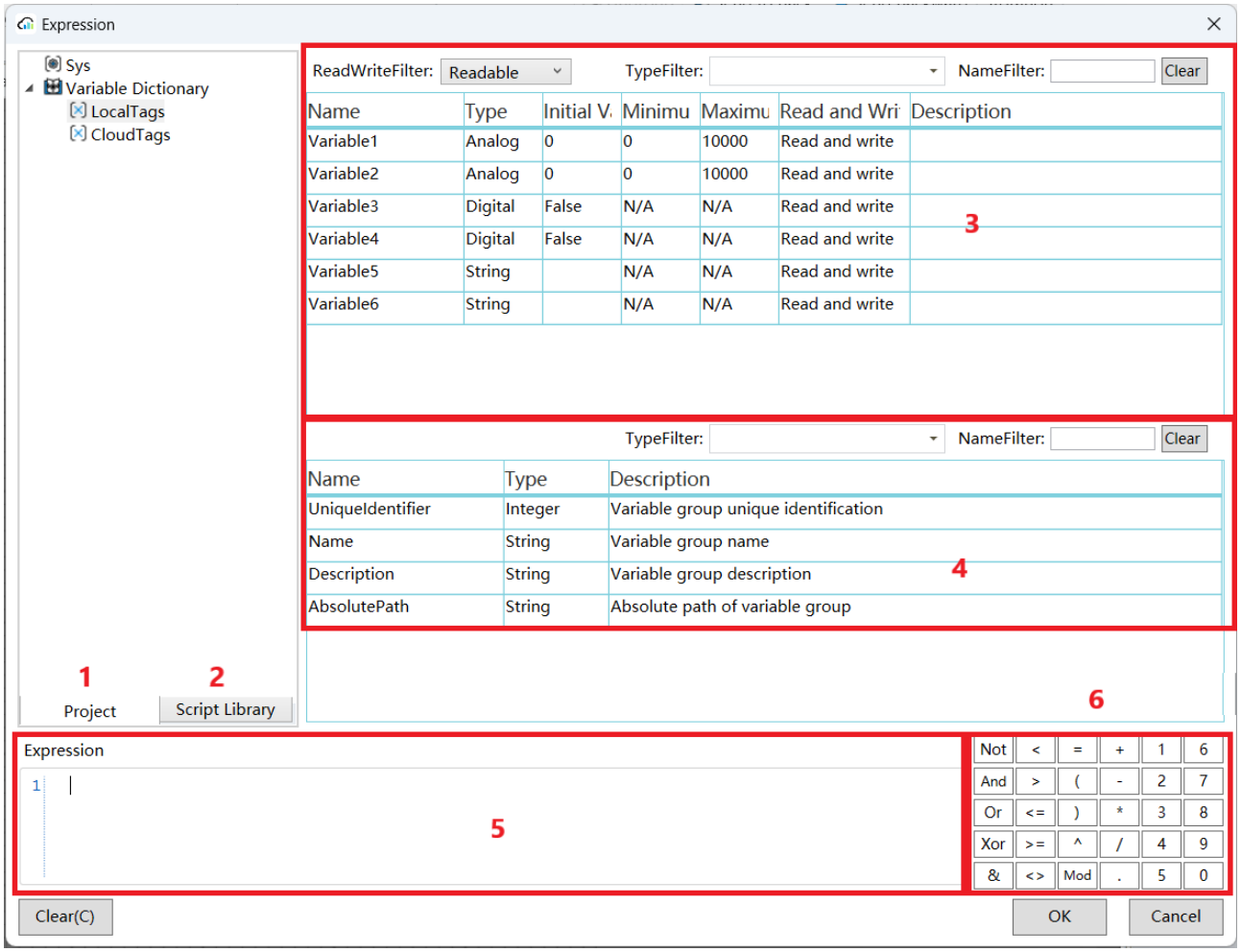
An expression is a combination of digits, operators, separators (e.g. brackets), variables, etc. arranged in a meaningful way that can produce a value. It is used to perform logical, arithmetic and relational operations to producte values for animation, event and script configurations, satisfying the implementation of certain functions in the project.

Here are some commonly used operators:

Type	Operator	Operation	Example	Result	Order
Arithmetic operators	^	Raise a number to the power of an exponent.	5^2	25	From the highest to the lowert (relational operators have the same precedence), the order can be changed using parentheses "()".
	*	Multiply two numbers.	80*2	160	
	/	Divide two numbers and return a floating-point result.	5/3	2.5	
	\	Divide two numbers and return an integer result.	20\6	3	
	Mod	Divide two numbers and return only the remainder.	20Mod6	2	
	+	Sum two numbers.	50+50.1	100.1	
	-	Find the difference between two numbers or to denote negative values.	50-50.1	-0.1	
String operators	&	Combine two strings to form one string (use & operator to force string concatenation).	"stu"&"dent"; "1"& "2"	student; 12	
	+		"1"+"2"	12	
Relational (comparison) operators	<	Less than	4<7	True	
	<=	Less than or equal	39<=10	False	
	>	Greater than	"abc">"abced"	False	
	>=	Greater than or equal	39>=10	True	
	=	Equal to	"A"="a"	False	
	<>	Not equal to	9<>8	True	

Type	Operator	Operation	Example	Result	Order
Logical operators	Not	Returns True when the expression is not true.	Not 39>10 Not 10>39	False True	
	And	Returns True when expression 1 and expression 2 are true.	39>10 And 8>10	False	
	Or	Returns True when either expression is true.	39>10 Or 8>10	True	
	Xor	Returns True when either expression 1 or expression 2 is true, but not both.	1 Xor 1 0 Xor 1 1 Xor 0 1 Xor 1	False True True False	
	Eqv	Returns True when both expression 1 and expression 2 are true, or when both expression 1 and expression 2 are false.	0 Eqv 0 0 Eqv 1 1 Eqv 0 1 Eqv 1	True False False True	
	Imp	Perform a logical implication on two expressions.	0 Imp 0 0 Imp 1 1 Imp 0 1 Imp 1	True True False True	

The figures below are the expression dialogs used when configuring an animation.



	Section	Description
1	Project	To provide a directory of system variables, local varialbes and cloud variables.
2	Script Library	To provide system functions.
3	Variable List	To list the filtered variables. Double-click to select the desired variable.
4	Variable Property List	To display the properties of the selected variable. Double-click to select and use the property.
5	Expression	To edit expressions.
6	Operator and Number Keys	To select and use the operators, digits and so on.

Chapter 6 Graphical Interface Development

6.1 Overview

Graphical interface development is to depict on-site facilities, equipment, and construction vividly on canvases in DIAWeb Designer software, constituting simulations of industrial sites. The data parameters of current equipment can be updated to DIAWeb Designer by uploading and downloading via DIACloud, allowing real-time data display in DIAWeb Designer for monitoring of on-site condition.

Graphical interface development plays a crucial part in realization of the monitoring and control system and is regarded as the core of the entire project. By integrating system resources to fulfill project requirements, it enables the windows in DIAWeb Designer to serve as the platform for live data display and system control.

The basic elements that compose the graphical interface are called graphics or objects. DIAWeb Designer provides canvases, basic graphics, controls, graphic models, etc. for drawing; meanwhile, it is equipped with windows for property, animation and event configurations of graphics, making it a comprehensive platform for developing graphical interfaces.

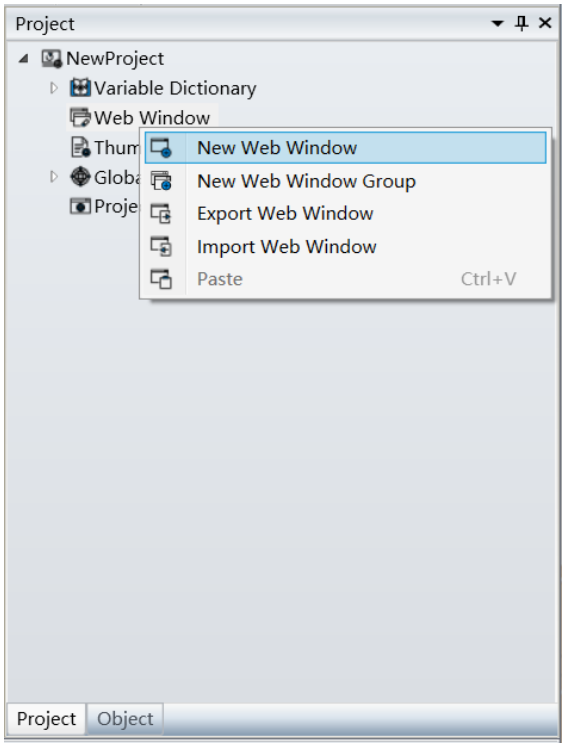
6.2 Web Window

6.2.1 Operations on the Web Window Node

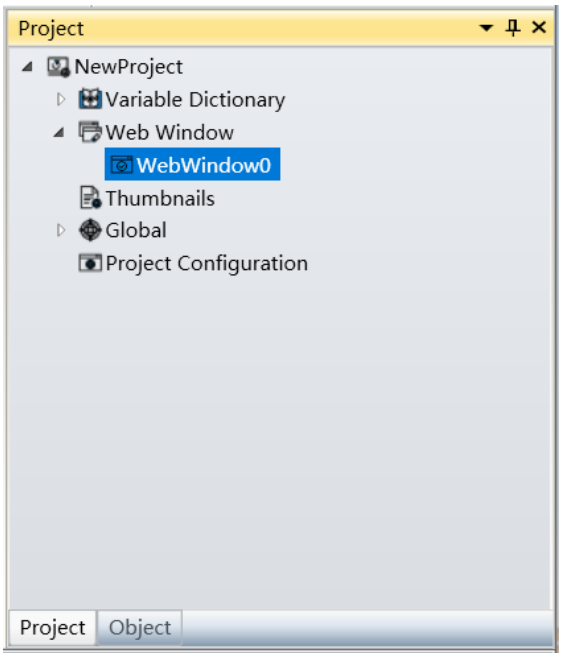
Web windows are the core of on-site simulation, parameter configuration and data display as well as the foundation of real-time visualization in DIAWeb Designer.

10. **New Web Window:**

    On the **Project** pane, right-click **Web Window** and select **New Web Window**.

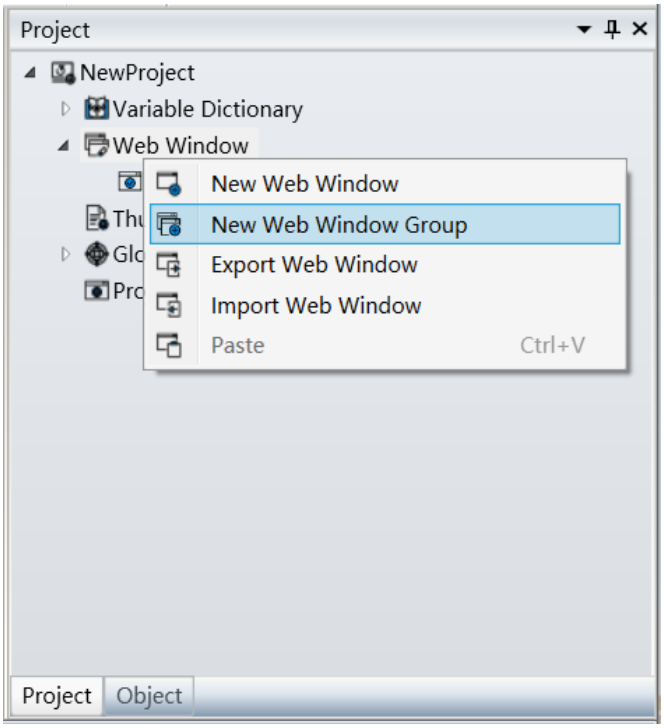


A sub-item is created under the Web Window node with a default name, and its canvas is shown in the canvas workspace.

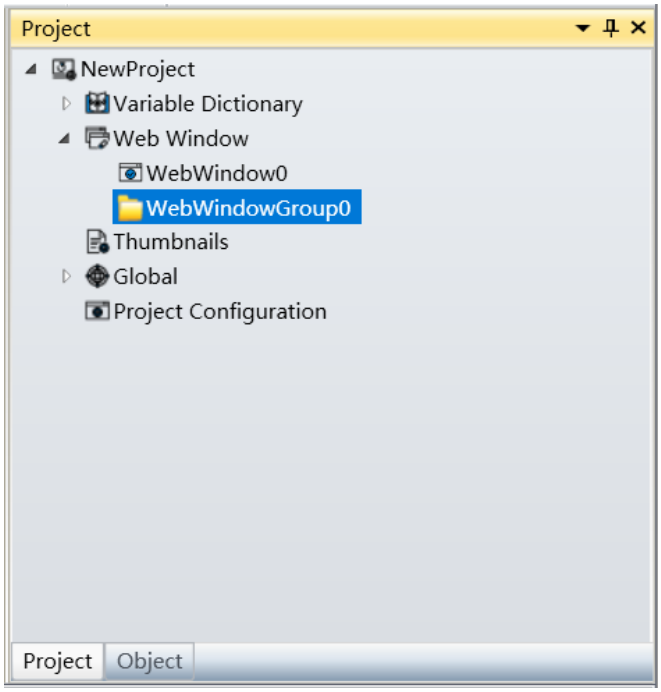


11. **New Web Window Group:**

To group and manage web windows. In the project users can group windows of different types and purposes to manage them.
On the **Project** pane, right-click **Web Window** and select **New Web Window Group**.

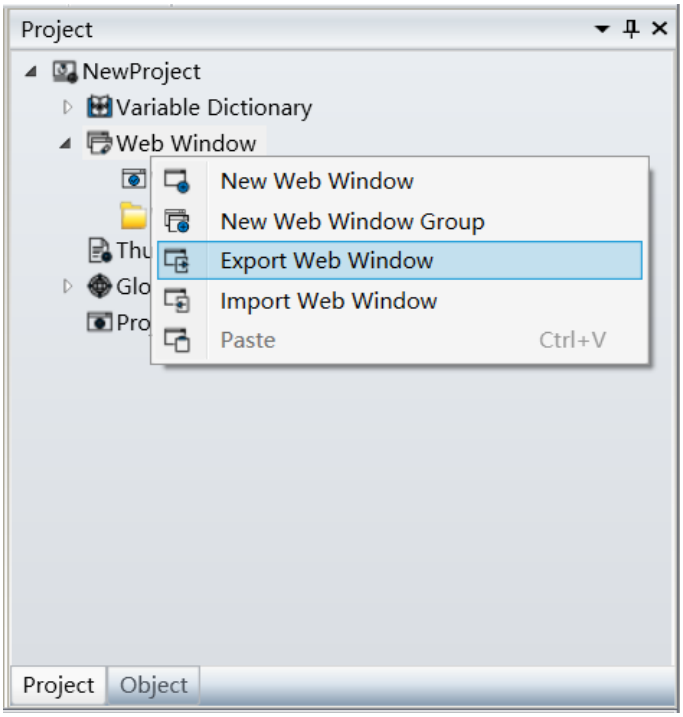


Then a sub-item is created under the Web Window node with a default group name.


Project
NewProject
Variable Dictionary
Web Window
WebWindow0
WebWindowGroup0
Thumbnails
Global
Project Configuration
Project
Object

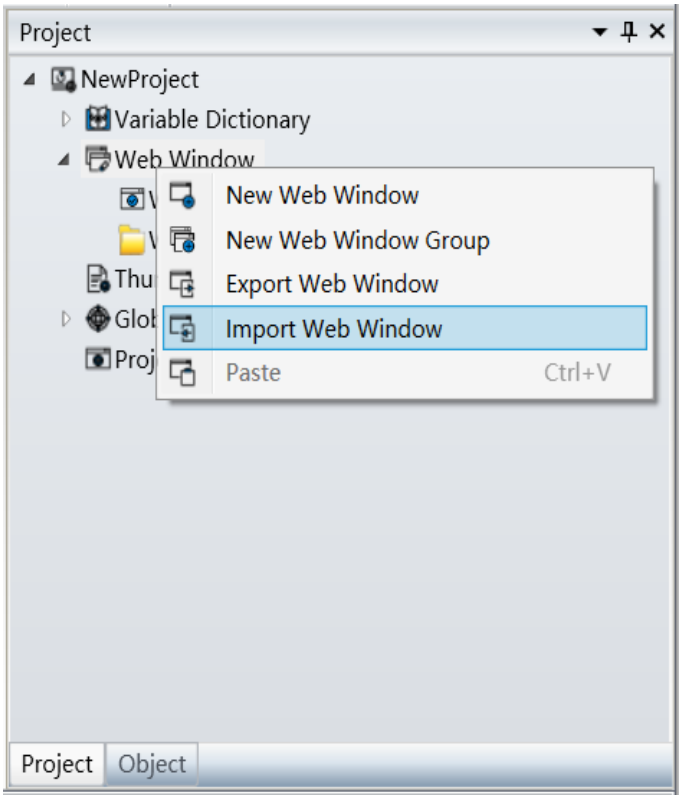
12. **Export Web Window:**

    To export web windows to a designated location. On the **Project** pane, right-click **Web Window** and select **Export Web Window**.



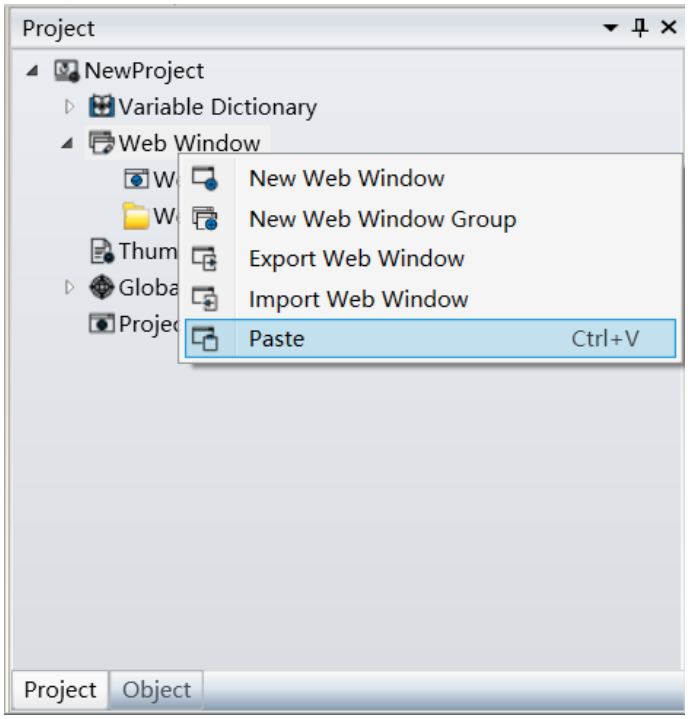
13. **Import Web Window:**

    To import web windows to the project as sub-items under the Web Window node. On the **Project** pane, right-click **Web Window** and select **Import Web Window**.



14. **Paste:**

To paste the copied web window to the Web Window node. On the **Project** pane, right-click **Web Window** and select **Paste**.

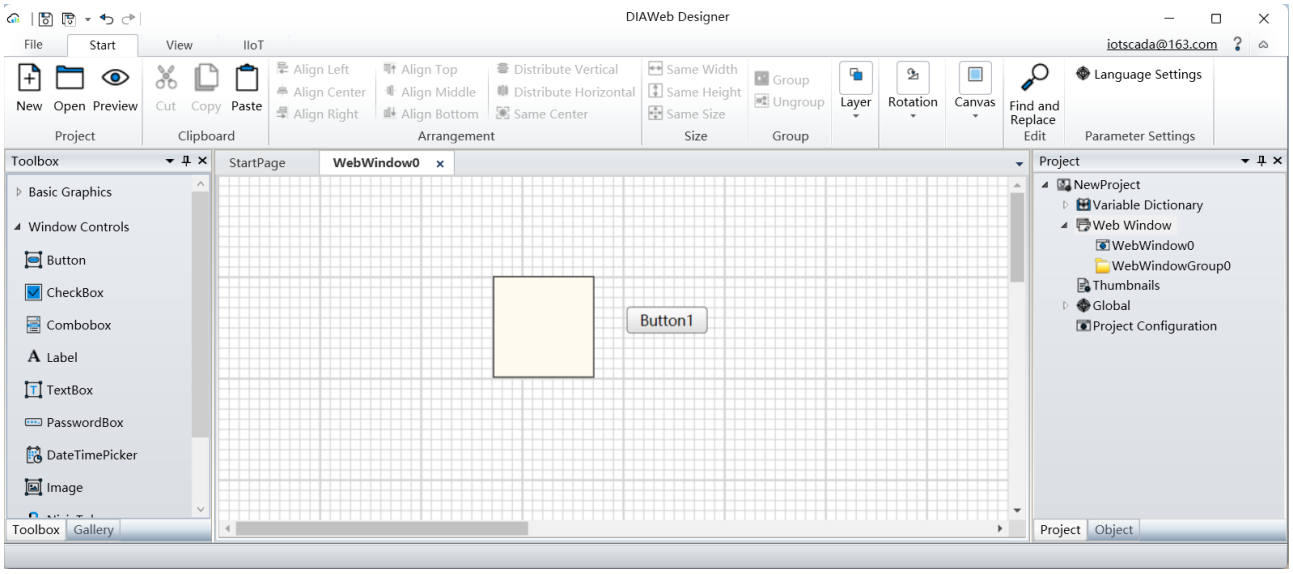


6.2.2 Web Window Operation

5. Open a web window:

When a web window is newly created, it is automatically opened in the canvas workspace. If it is an existed web window, double-click the web window you want to open on the **Project** pane.

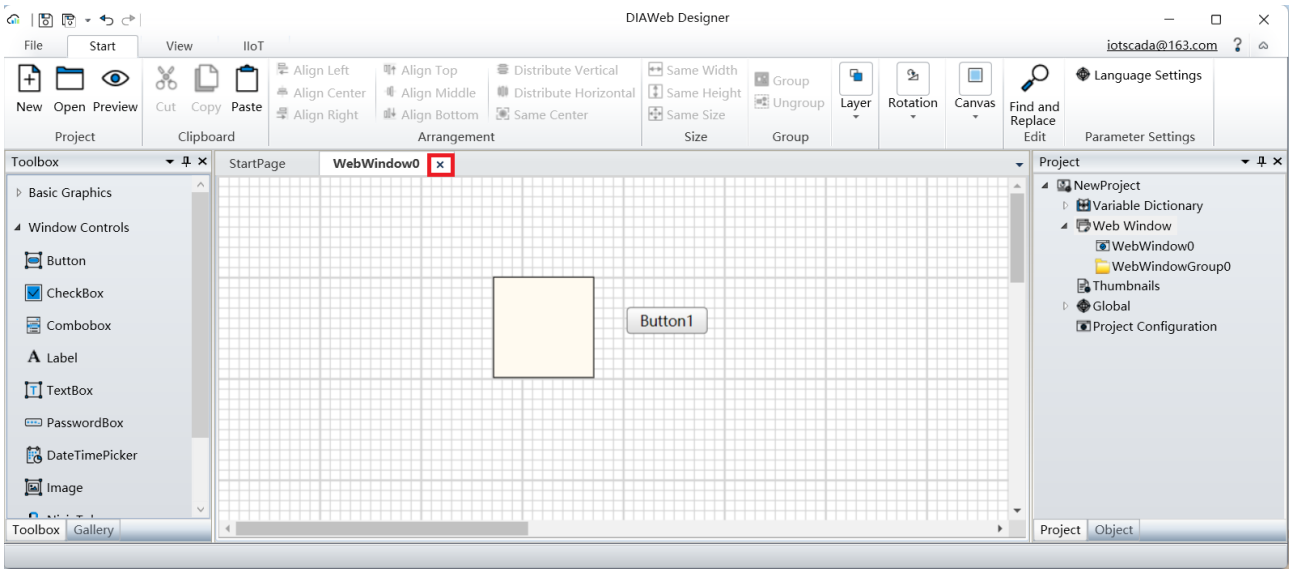
More than one web window can be opened in the canvas workspace at the same time.



6. Close a web window:

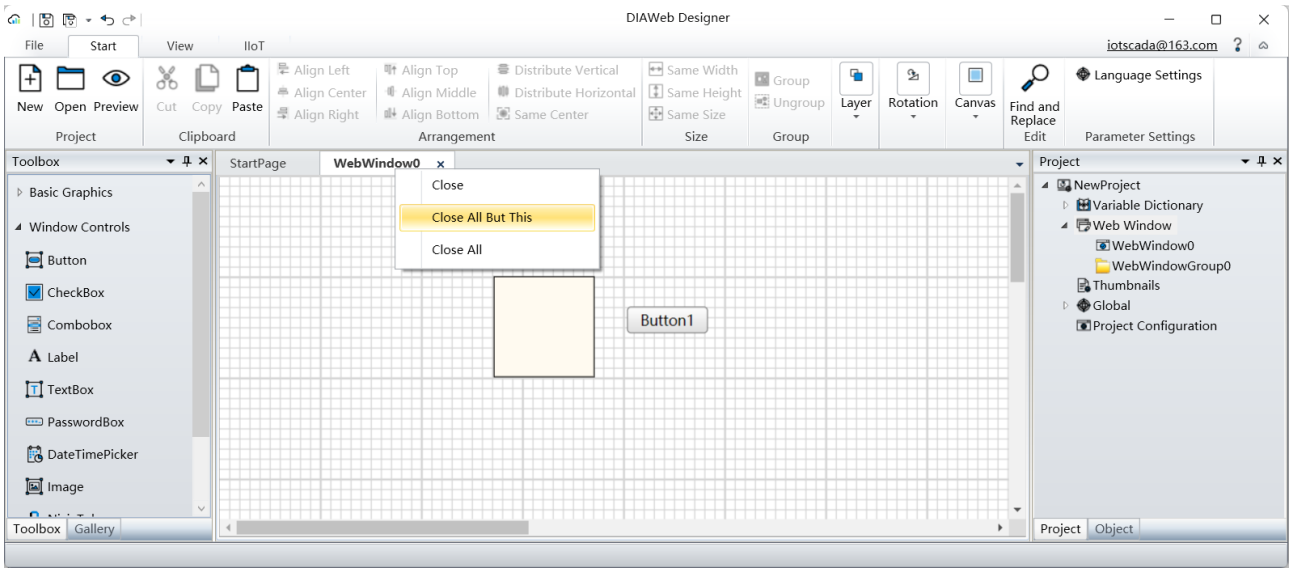
There are several ways to close a web window.

a. In the canvas workspace, click ✕ next to the web window name to close it



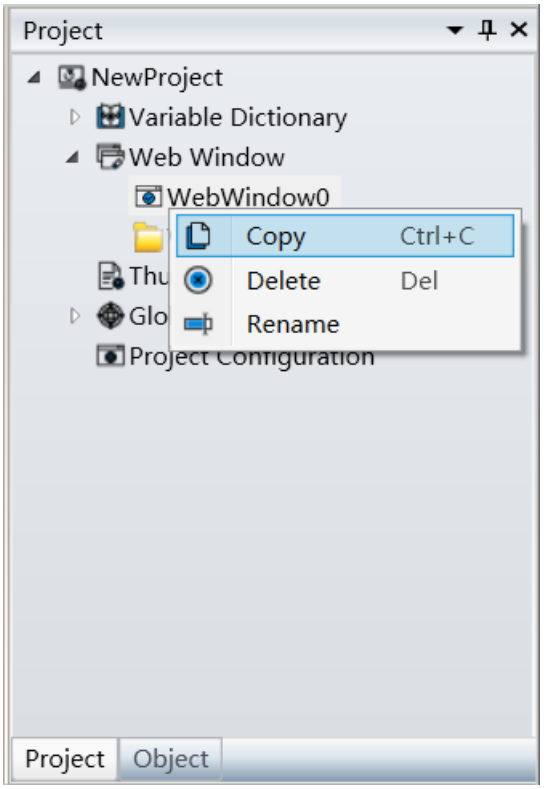
b. In the canvas workspace, right-click the web window name to select the way to close:

- Close: close the current web window.
- Close All But This: close all the other web windows except for the current one.
- Close All: close all web windows.

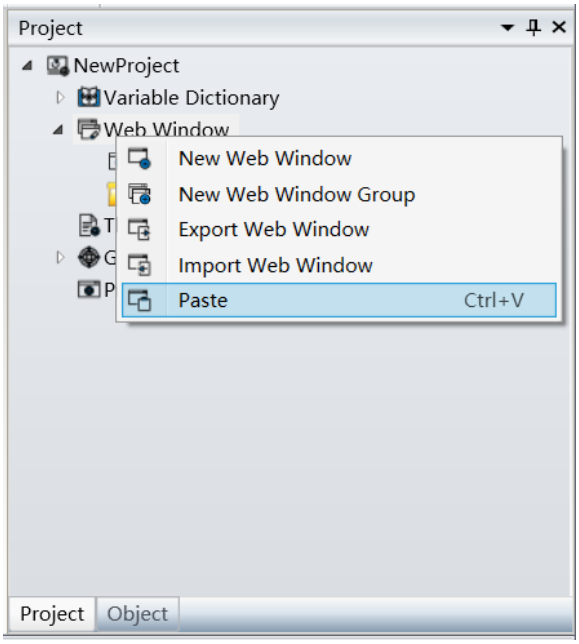


7. Copy a web window:

On the **Project** pane, right-click the web window to copy and select **Copy**. Save the configuration of the web window before copying.

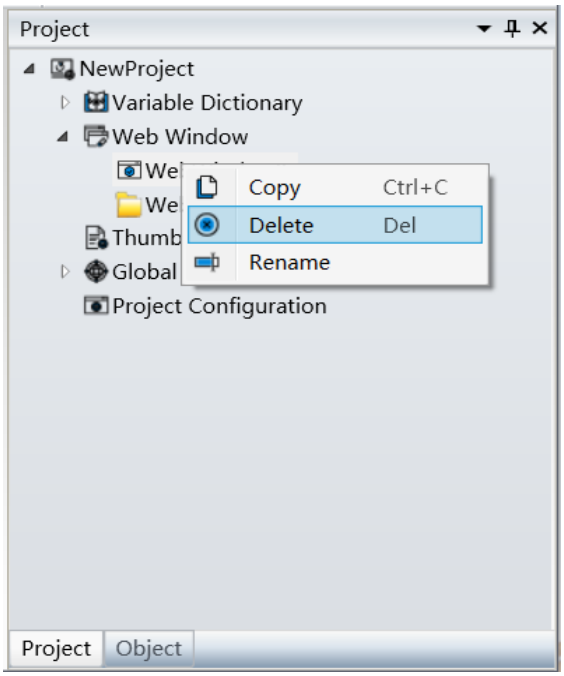


To paste the copied web window, right-click **Web Window** and select **Paste**.



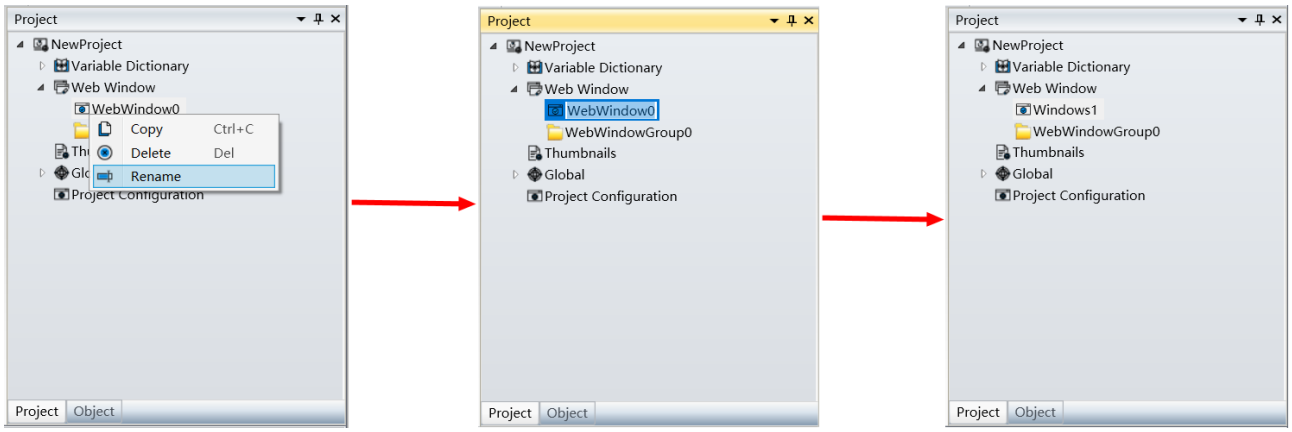
8. Delete a web window:

On the **Project** pane, right-click the web window to delete and select **Delete**.



9. Rename a web window:

On the **Project** pane, right-click the web window to rename and select **Rename**. Then enter the new name.



Naming rule:

a. Consist of letters, numbers, Chinese characters, or underscores; must begin with a letter or Chinese character.

b. Not case-sensitive.

c. Cannot contain spaces, periods, exclamation marks, or special characters such as @$#?*&.

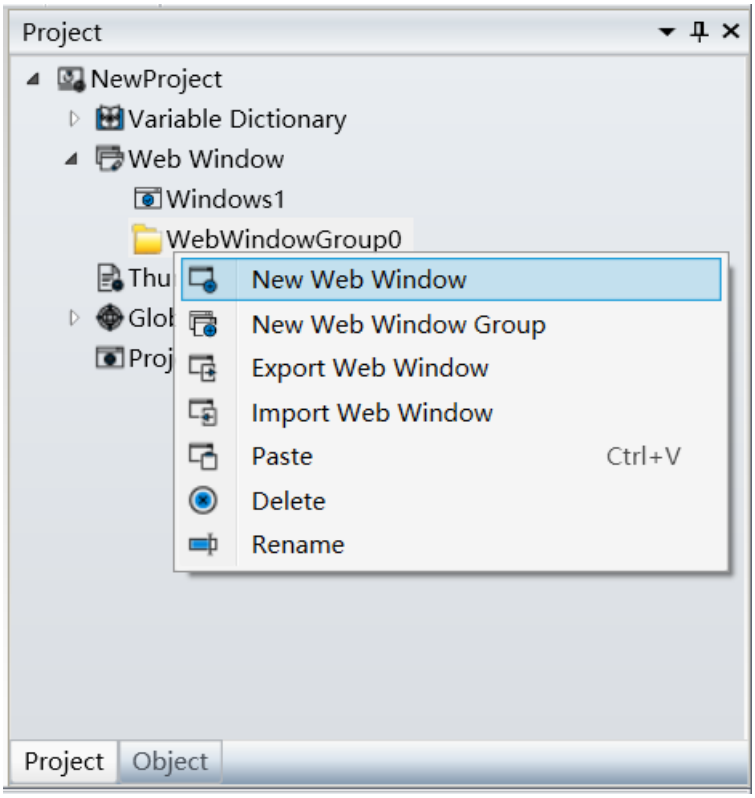
d. Cannot exceed 100 characters, with no more than 25 Chinese characters.

e. Cannot share the same name with other created web windows, project or script keywords within the same project.

f. Only supports names in traditional Chinese, simplified Chinese, or English.

6.2.3 Web Window Group

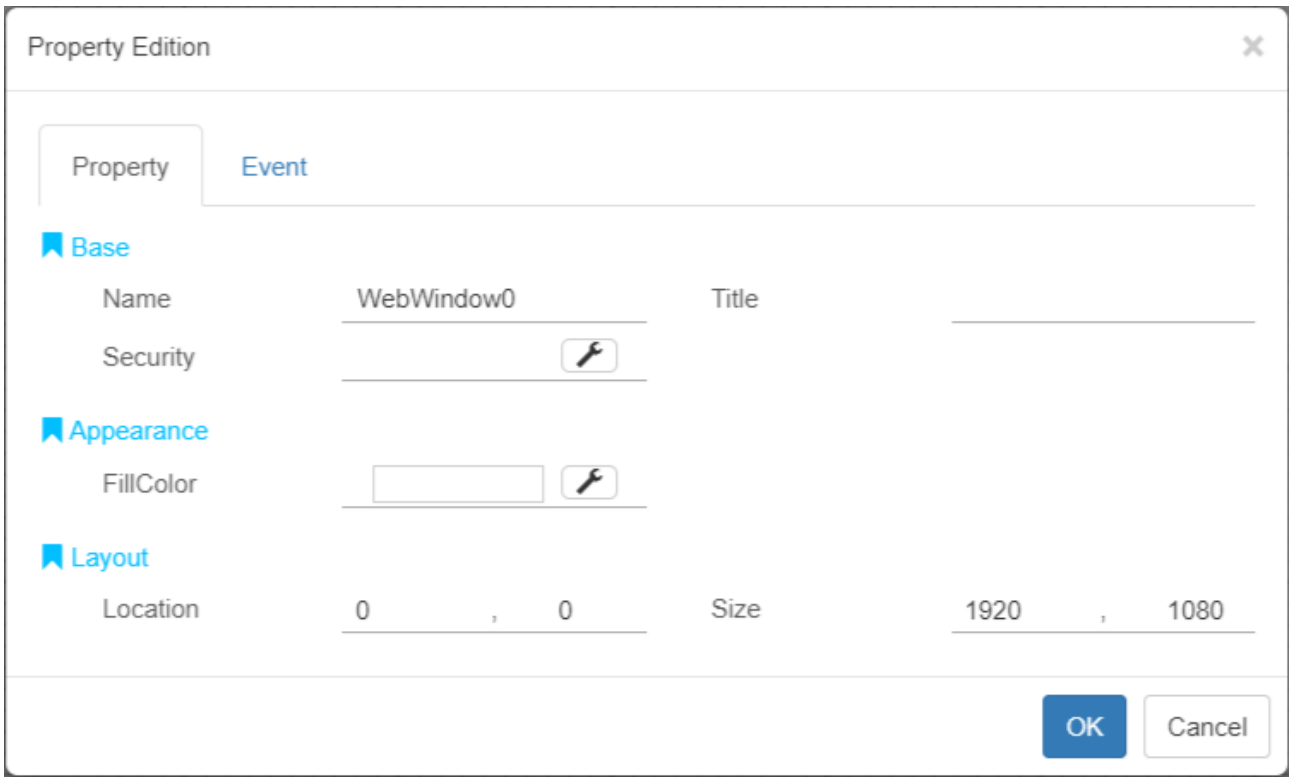
Users can create multiple web windows under a web window group. Right-click the selected web window group and select **New Web Window**.



Item	Description
New Web Window Group	To create a new web window group under the web window group. Right-click the selected web window group and select **New Web Window Group**.
Export Web Window	To export web windows under the web window group to a designated location. Right-click the selected web window group and select **Export Web Window**.
Import Web Window	To import web windows to the selected web window group. Right-click the selected web window group and select **Import Web Window**.
Paste	To paste the copied web windows to the current web window group. Right-click the selected web window group and select **Paste**.
Delete	To delete a web window group. Right-click the web window group to delete and select **Delete**.
Rename	Follow the naming rule of web window to rename a web window group. Right-click the web window group to rename and select **Rename**. Then enter the new name.

6.2.4 Web Window Configuration

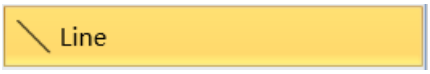
Open a web window, right-click on the blank space of the canvas and select **Property**.



Item	Description
Name	To set the name of the web window. The name is the same as shown on the Project pane.
Title	To set the title name when the web window is displayed as a dialog. For example, script operation.
Fill Color	To set the background of the canvas, including styles such as monochrome, picture, gradient, radiation, etc.
Location	To set the location of the web window at runtime.
Size	To set the width and height of the canvas (unit: pixels).

6.3 Introduction to Basic Graphics

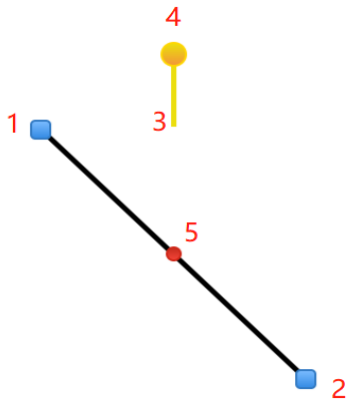
6.3.1 Line



Open a web window, select **Basic Graphics > Line** on the **Toolbox** pane.

Place the cursor on the canvas. Select a starting point, click and hold the mouse, then drag and drop to draw a line. Press **Shift** key while dragging to draw a vertical or horizontal line. Repeat the steps to draw another one.

- **Introduction**

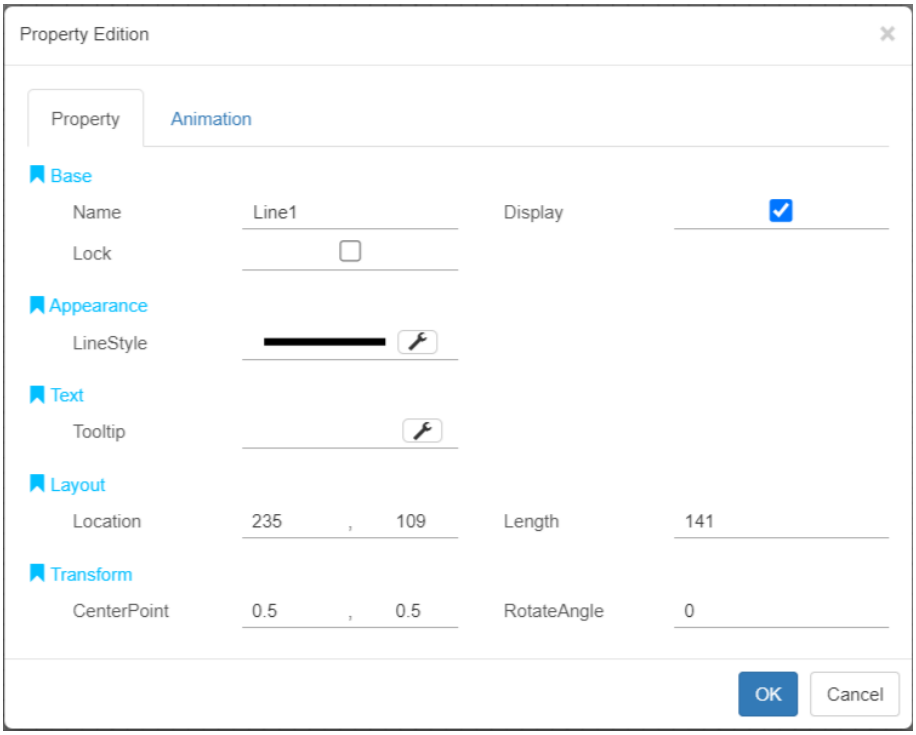


Users can click the line to put it in edit mode as in the image above.

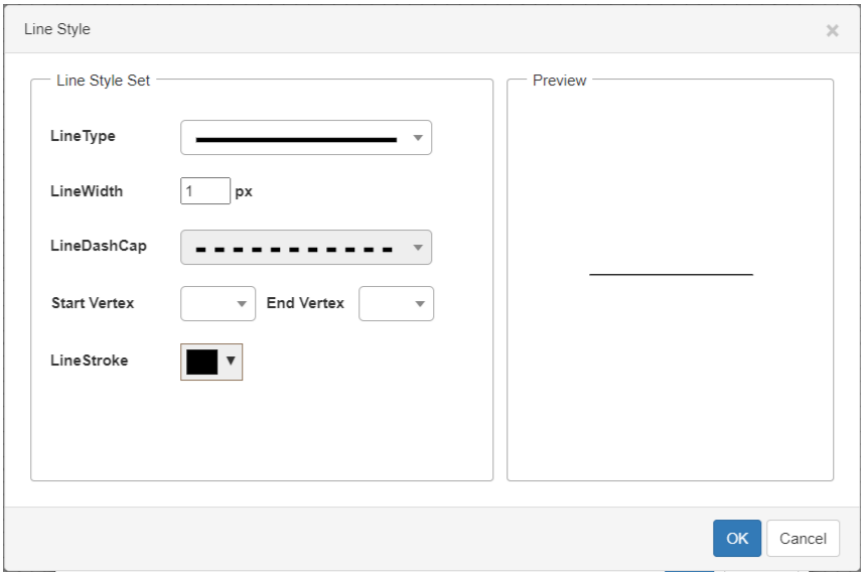
Points 1 and 2 are for size adjustment; point 3 is for skewing; point 4 is for rotation and point 5 is the center point.

- **Property**

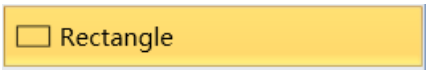
The property of a line consists of base, appearance, text, layout, and transform.



Item		Description
Base	**Name**	The name of the graphic in the web window. The naming rules are as follows: 1. Consists of letters, numbers, Chinese characters, or underscores; must begin with a letter or Chinese character. 2. Not case-sensitive. 3. Cannot contain spaces, periods, exclamation marks, or special characters such as @$#?*&. 4. Cannot exceed 200 characters, with no more than 25 Chinese characters. 5. Cannot share the same name with other objects in the same web window or with the web window where it is. 6. Only supports names in traditional Chinese, simplified Chinese, or English.
	Display	To decide whether the graphic is shown or hidden at runtime.
	Lock	If the graphic is locked, mouse operations are invalid but users can still edit properties via the Property Edition dialog. A small lock will appear around the locked graphic.
Appearance	**Line Style**	To set the style of the line, including line type, width, dash style, start and end vertices, color of line stroke and so on. The width field ranges from 0 to 256 and may contain two decimal places. As for the color setting, only monochrome is supported. You can see the preview on the right side.

Item		Description
		
Text	**Tooltip**	To edit the content of the tooltip. Multiple languages are supported.
Layout	**Location**	To set the X and Y coordinates of the graphic in the web window. The values are kept as integers only.
	Length	To set the length of the graphic. The value is kept as integer only (unit: pixels).
Transform	**Center Point**	To set the ratio of the X and Y coordinates of the graphic's center point relative to its width and height. The default value is 0.5, 0.5.
	Rotate Angle	To set the angle of rotation for the graphic (unit: degree).

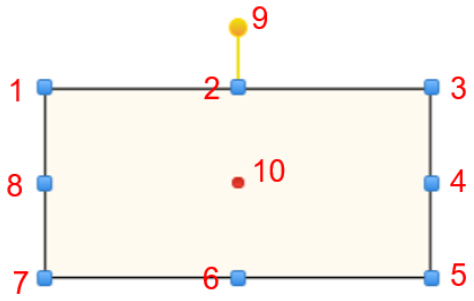
6.3.2 Rectangle



Open a web window, select **Basic Graphics > Rectangle** on the **Toolbox** pane.

Place the cursor on the canvas. Select a starting point, click and hold the mouse, then drag to the lower right and drop to draw a rectangle. Repeat the steps to draw another one.

- **Introduction**

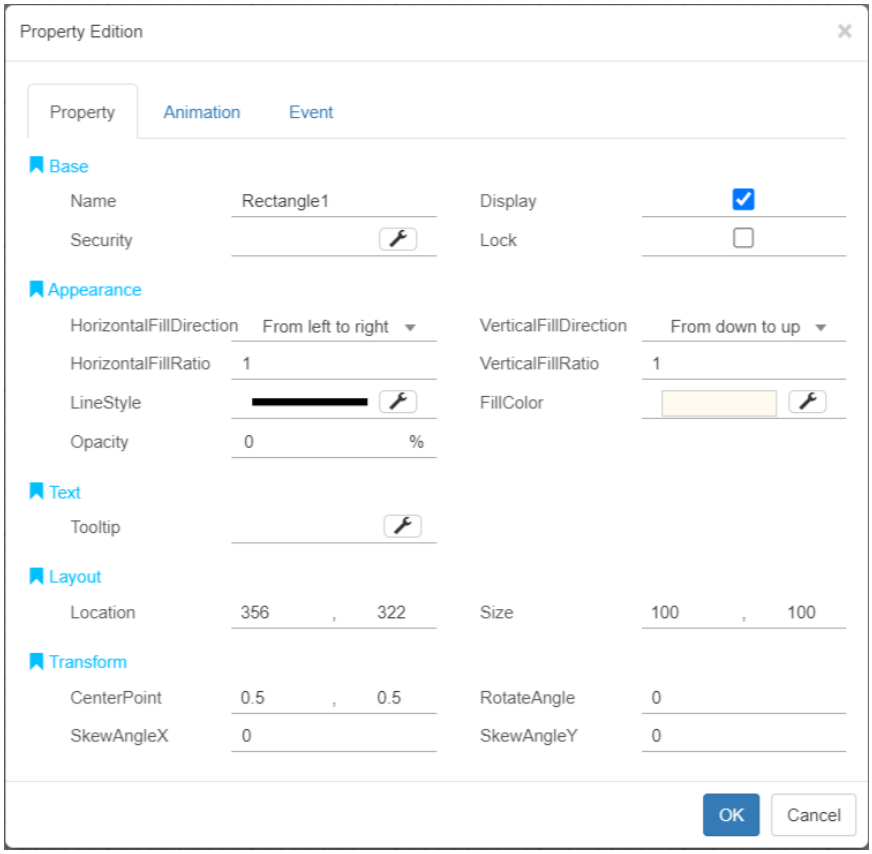


Users can click the rectangle to put it in edit mode as in the image above.

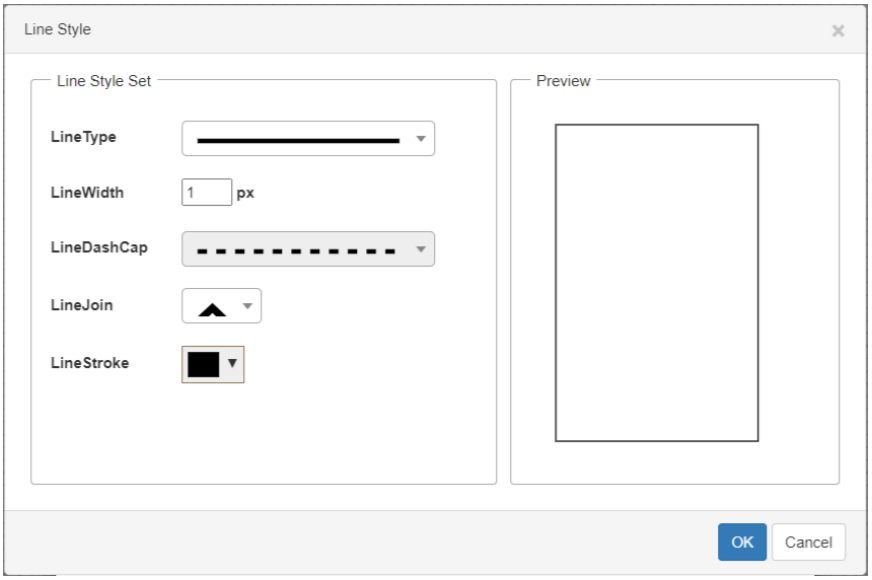
Points 1 to 8 are for size adjustment, point 9 is for rotation, point 10 is the center point, and the space above point 2 is for horizontal skewing.

- **Property**

The property of a rectangle consists of base, appearance, text, layout, and transform.



Item		Description
Base	**Name**	The name of the graphic in the web window. The naming rules are as follows: 1. Consists of letters, numbers, Chinese characters, or underscores; must begin with a letter or Chinese character. 2. Not case-sensitive. 3. Cannot contain spaces, periods, exclamation marks, or special characters such as @$#?*&. 4. Cannot exceed 200 characters, with no more than 25 Chinese characters. 5. Cannot share the same name with other objects in the same web window or with the web window where it is. 6. Only supports names in traditional Chinese, simplified Chinese, or English.
	Display	To decide whether the graphic is shown or hidden at runtime.
	Security	To set permissions for operation on the graphic. Assign the graphic to one or more securities for user access management.
	Lock	If the graphic is locked, mouse operations are invalid but users can still edit properties via the Property Edition dialog. A small lock will appear around the locked graphic.
Appearance	**Horizontal Fill Direction**	To select the direction when filling the graphic horizontally (from left to right / from right to left / from the middle to the edge).

Item		Description
	Vertical Fill Direction	To select the direction when filling the graphic vertically (from up to down / from down to up / from the middle to the edge).
	Horizontal Fill Ratio	To set the ratio of the width of the filled area to the width of the graphic. The field ranges from 0 to 1 and may contain two decimal places. The default value is 1.
	Vertical Fill Ratio	To set the ratio of the height of the filled area to the height of the graphic. The field ranges from 0 to 1 and may contain two decimal places. The default value is 1.
	Line Style	To set the line style, including line type, width, dash style, join, color of line stroke and so on. The width field ranges from 0 to 256 and may contain two decimal places. As for the color setting, only monochrome is supported. 
	Fill Color	To set the fill color of the graphic. It supports styles such as monochrome, pattern, picture, gradient, and radiation.
	Opacity	To set the opacity of the graphic. The field ranges from 0% to 100% and is kept as integer only. The default value is 0%. 0% represents full opacity while 100% represents full transparency.
Text	**Tooltip**	To edit the content of the tooltip. Multiple languages are supported.
Layout	**Location**	To set the X and Y coordinates of the graphic in the web window. The values are kept as integers only.
	Size	To set the width and height of the graphic. The values are kept as integers only (unit: pixels).
Transform	**Center Point**	To set the ratio of the X and Y coordinates of the graphic's center point relative to its width and height. The default value is 0.5, 0.5.
	Rotate Angle	To set the angle of rotation for the graphic (unit: degree).
	Skew Angle X	To set the angle of skewing in the horizontal direction. The field ranges from -80 to 80 and may contain two decimal places. The default value is 0 (unit: degree).

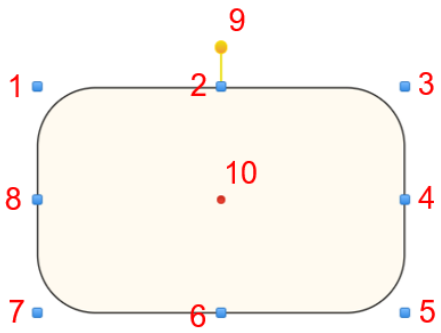
Item		Description
	Skew Angle Y	To set the angle of skewing in the vertical direction. The field ranges from -80 to 80 and may contain two decimal places. The default value is 0 (unit: degree).

6.3.3 Rounded Rectangle

Open a web window, select **Basic Graphics > Rounded Rectangle** on the **Toolbox** pane.

Place the cursor on the canvas. Select a starting point, click and hold the mouse, then drag to the lower right and drop to draw a rounded rectangle. Repeat the steps to draw another one.

- **Introduction**

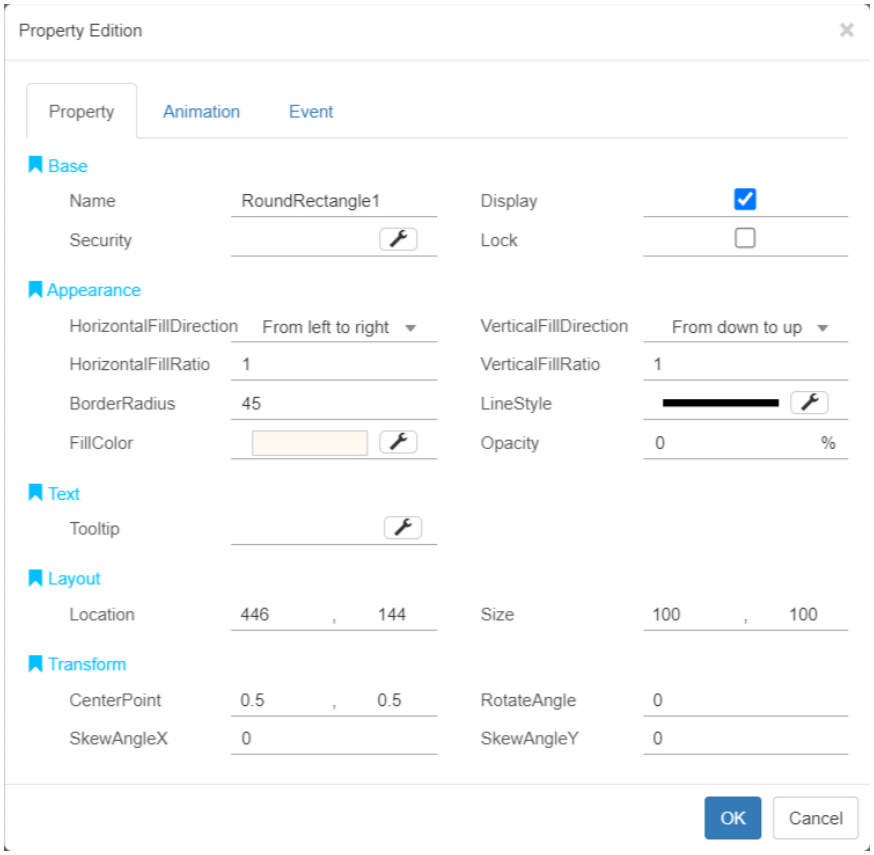


Users can click the rounded rectangle to put it in edit mode as in the image above.

Points 1 to 8 are for size adjustment, point 9 is for rotation, point 10 is the center point, and the space above point 2 is for horizontal skewing.

- **Property**

The property of a rounded rectangle consists of base, appearance, text, layout, and transform.



Item		Description
Base	**Name**	The name of the graphic in the web window. The naming rules are as follows: 1. Consists of letters, numbers, Chinese characters, or underscores; must begin with a letter or Chinese character. 2. Not case-sensitive. 3. Cannot contain spaces, periods, exclamation marks, or special characters such as @$#?*&. 4. Cannot exceed 200 characters, with no more than 25 Chinese characters. 5. Cannot share the same name with other objects in the same web window or with the web window where it is. 6. Only supports names in traditional Chinese, simplified Chinese, or English.
	Display	To decide whether the graphic is shown or hidden at runtime.
	Security	To set permissions for operation on the graphic. Assign the graphic to one or more securities for user access management.
	Lock	If the graphic is locked, mouse operations are invalid but users can still edit properties via the Property Edition dialog. A small lock will appear around the locked graphic.
Appearance	**Horizontal Fill Direction**	To select the direction when filling the graphic horizontally (from left to right / from right to left / from the middle to the edge).

Item		Description
	Vertical Fill Direction	To select the direction when filling the graphic vertically (from up to down / from down to up / from the middle to the edge).
	Horizontal Fill Ratio	To set the ratio of the width of the filled area to the width of the graphic. The field ranges from 0 to 1 and may contain two decimal places. The default value is 1.
	Vertical Fill Ratio	To set the ratio of the height of the filled area to the height of the graphic. The field ranges from 0 to 1 and may contain two decimal places. The default value is 1.
	Border Radius	To set the curvature radius of the rounded corners. The radius cannot exceed half of the minimum side length of the graphic.
	Line Style	To set the line style, including line type, width, dash style, color of line stroke and so on. The width field ranges from 0 to 256 and may contain two decimal places. As for the color setting, only monochrome is supported.
	Fill Color	To set the fill color of the graphic. It supports styles such as monochrome, pattern, picture, gradient, and radiation.
	Opacity	To set the opacity of the graphic. The field ranges from 0% to 100% and is kept as integer only. The default value is 0%. 0% represents full opacity while 100% represents full transparency.
Text	**Tooltip**	To edit the content of the tooltip. Multiple languages are supported.
Layout	**Location**	To set the X and Y coordinates of the graphic in the web window. The values are kept as integers only.
	Size	To set the width and height of the graphic. The values are kept as integers only (unit: pixels).
Transform	**Center Point**	To set the ratio of the X and Y coordinates of the graphic's center point relative to its width and height. The default value is 0.5, 0.5.
	Rotate Angle	To set the angle of rotation for the graphic (unit: degree).
	Skew Angle X	To set the angle of skewing in the horizontal direction. The field ranges from -80 to

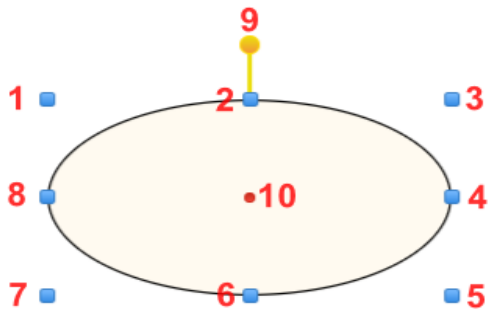
Item		Description
		80 and may contain two decimal places. The default value is 0 (unit: degree).
	Skew Angle Y	To set the angle of skewing in the vertical direction. The field ranges from -80 to 80 and may contain two decimal places. The default value is 0 (unit: degree).

6.3.4 Ellipse

Open a web window, select **Basic Graphics > Ellipse** on the **Toolbox** pane.

Place the cursor on the canvas. Select a starting point, click and hold the mouse, then drag to the lower right and drop to draw an ellipse. Repeat the steps to draw another one.

- **Introduction**

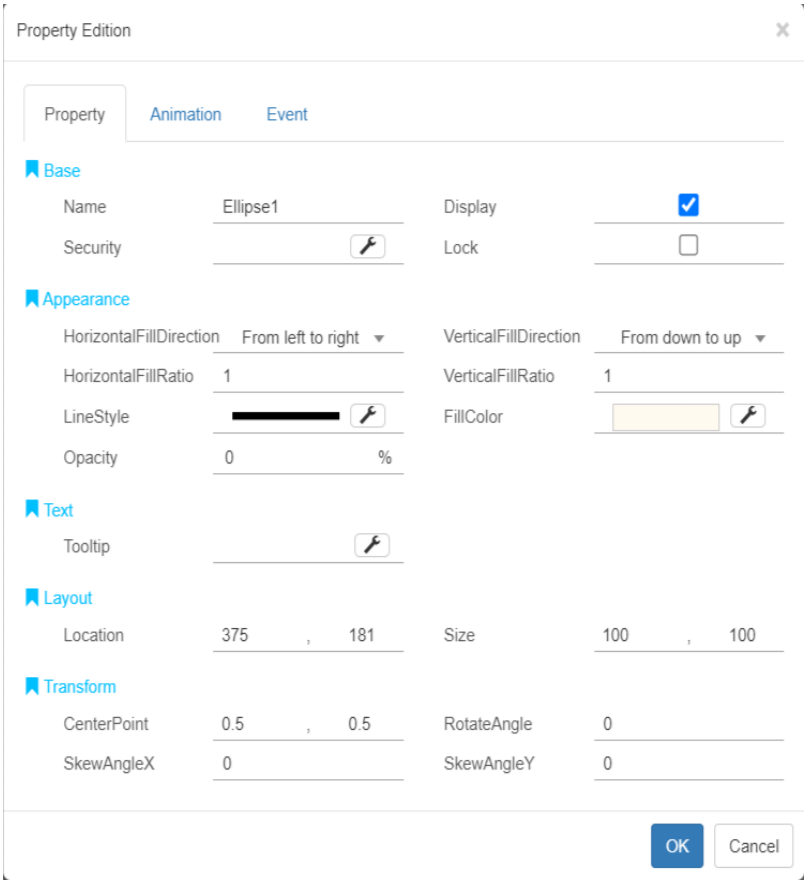


Users can click the ellipse to put it in edit mode as in the image above.

Points 1 to 8 are for size adjustment, point 9 is for rotation, point 10 is the center point, and the space above point 2 is for horizontal skewing.

- **Property**

The property of an ellipse consists of base, appearance, text, layout, and transform.



Item		Description
Base	**Name**	The name of the graphic in the web window. The naming rules are as follows: 1. Consists of letters, numbers, Chinese characters, or underscores; must begin with a letter or Chinese character. 2. Not case-sensitive. 3. Cannot contain spaces, periods, exclamation marks, or special characters such as @$#?*&. 4. Cannot exceed 200 characters, with no more than 25 Chinese characters. 5. Cannot share the same name with other objects in the same web window or with the web window where it is. 6. Only supports names in traditional Chinese, simplified Chinese, or English.
	Display	To decide whether the graphic is shown or hidden at runtime.
	Security	To set permissions for operation on the graphic. Assign the graphic to one or more securities for user access management.
	Lock	If the graphic is locked, mouse operations are invalid but users can still edit properties via the Property Edition dialog. A small lock will appear around the locked graphic.
Appearance	**Horizontal Fill Direction**	To select the direction when filling the graphic horizontally (from left to right / from right to left / from the middle to the edge).

Item		Description
	Vertical Fill Direction	To select the direction when filling the graphic vertically (from up to down / from down to up / from the middle to the edge).
	Horizontal Fill Ratio	To set the ratio of the width of the filled area to the width of the graphic. The field ranges from 0 to 1 and may contain two decimal places. The default value is 1.
	Vertical Fill Ratio	To set the ratio of the height of the filled area to the height of the graphic. The field ranges from 0 to 1 and may contain two decimal places. The default value is 1.
	Line Style	To set the line style, including line type, width, dash style, color of line stroke and so on. The width field ranges from 0 to 256 and may contain two decimal places. As for the color setting, only monochrome is supported.
	Fill Color	To set the fill color of the graphic. It supports styles such as monochrome, pattern, picture, gradient, and radiation.
	Opacity	To set the opacity of the graphic. The field ranges from 0% to 100% and is kept as integer only. The default value is 0%. 0% represents full opacity while 100% represents full transparency.
Text	**Tooltip**	To edit the content of the tooltip. Multiple languages are supported.
Layout	**Location**	To set the X and Y coordinates of the graphic in the web window. The values are kept as integers only.
	Size	To set the width and height of the graphic. The values are kept as integers only (unit: pixels).
Transform	**Center Point**	To set the ratio of the X and Y coordinates of the graphic's center point relative to its width and height. The default value is 0.5, 0.5.
	Rotate Angle	To set the angle of rotation for the graphic (unit: degree).
	Skew Angle X	To set the angle of skewing in the horizontal direction. The field ranges from -80 to 80 and may contain two decimal places. The default value is 0 (unit: degree).

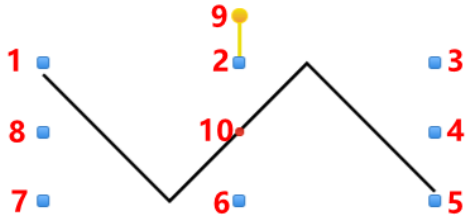
Item		Description
	Skew Angle Y	To set the angle of skewing in the vertical direction. The field ranges from -80 to 80 and may contain two decimal places. The default value is 0 (unit: degree).

6.3.5 Polyline

Open a web window, select **Basic Graphics > Polyline** on the **Toolbox** pane.

Place the cursor on the canvas. Select a starting point and click, then move the cursor to another point and click to draw a polyline. Pressing **Shift** key while moving allows drawing at angles in multiples of 15 degrees. Click once to create a vertex and double-click to finish drawing. Repeat the steps to draw another polyline.

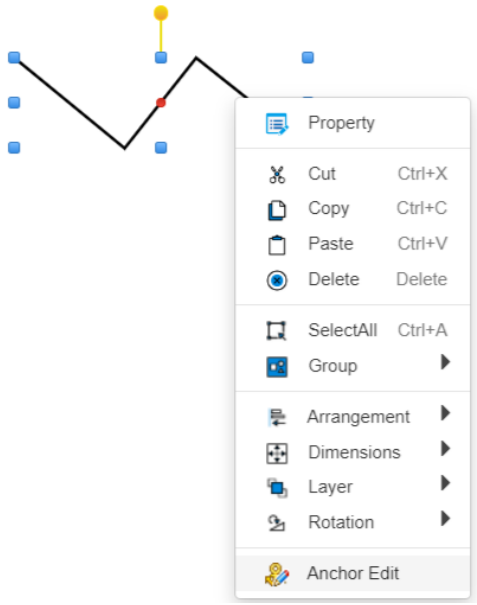
- **Introduction**

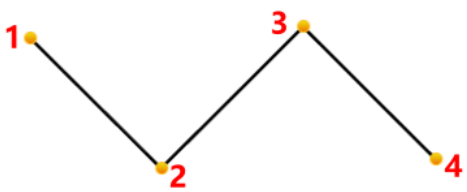


Users can click the polyline to put it in edit mode as in the image above.

Points 1 to 8 are for size adjustment, point 9 is for rotation, point 10 is the center point, and the space above point 2 is for horizontal skewing.

Right-click the polyline and select **Anchor Edit** to put it in anchor edit mode.

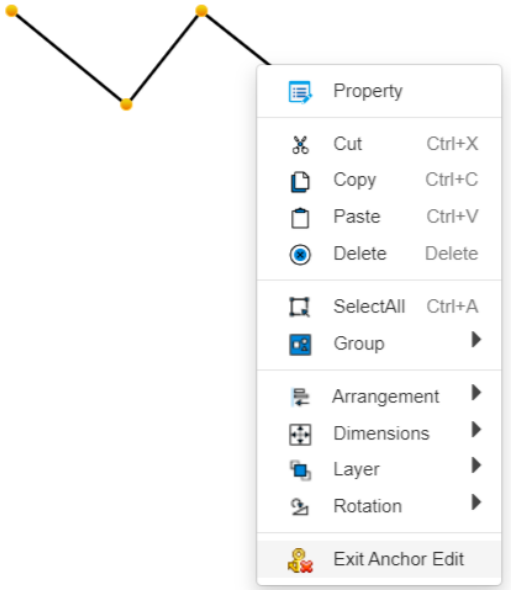




Point 1 is the starting point, points 2 and 3 are vertices of the polyline, and point 4 is the endpoint.

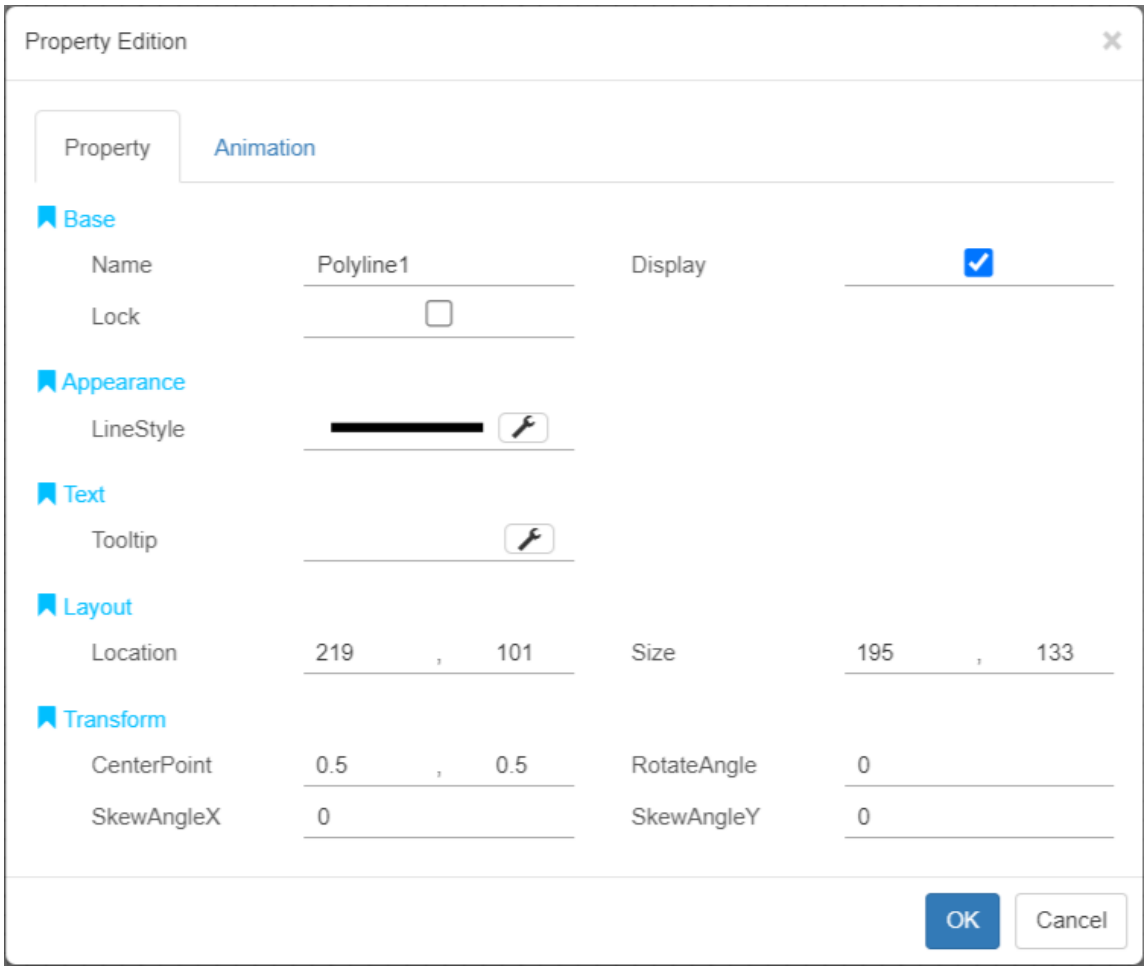
When you hover the mouse over the point, the cursor is changed into , which means you can move the point to change the shape of the polyline.

To exit anchor edit mode, right-click the polyline and select **Exit Anchor Edit** as shown below. Then the graphic is back into edit mode.

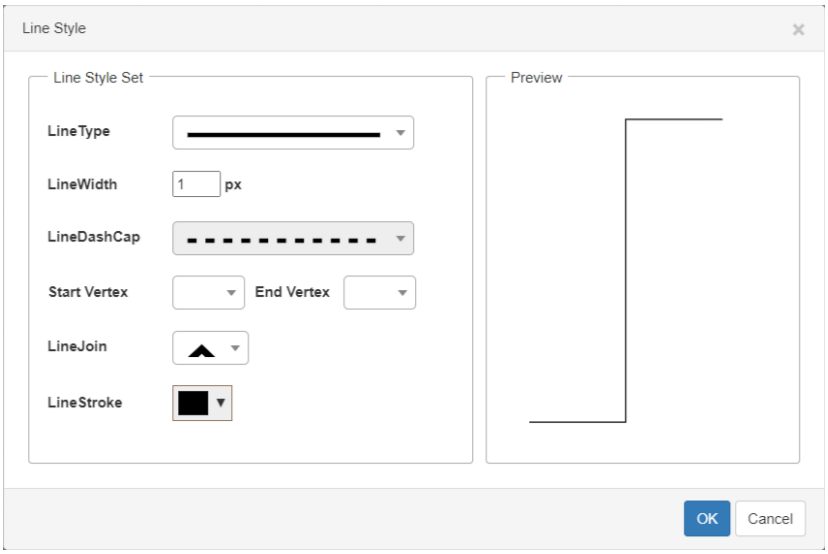


- **Property**

The property of a polyline consists of base, appearance, text, layout, and transform.



Item		Description
Base	**Name**	The name of the graphic in the web window. The naming rules are as follows: 1. Consists of letters, numbers, Chinese characters, or underscores; must begin with a letter or Chinese character. 2. Not case-sensitive. 3. Cannot contain spaces, periods, exclamation marks, or special characters such as @$#?*&. 4. Cannot exceed 200 characters, with no more than 25 Chinese characters. 5. Cannot share the same name with other objects in the same web window or with the web window where it is. 6. Only supports names in traditional Chinese, simplified Chinese, or English.
	Display	To decide whether the graphic is shown or hidden at runtime.
	Lock	If the graphic is locked, mouse operations are invalid but users can still edit properties via the Property Edition dialog. A small lock will appear around the locked graphic.

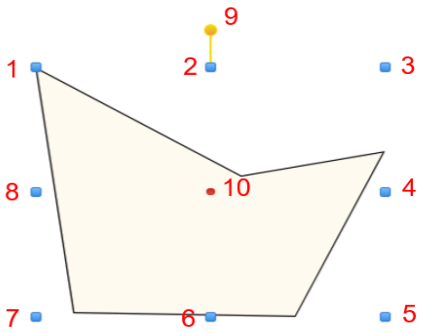
Item		Description
Appearance	Line Style	To set the line style, including line type, width, dash style, start and end vertices, join, color of line stroke and so on. The width field ranges from 0 to 256 and may contain two decimal places. As for the color setting, only monochrome is supported. 
Text	Tooltip	To edit the content of the tooltip. Multiple languages are supported.
Layout	Location	To set the X and Y coordinates of the graphic in the web window. The values are kept as integers only.
	Size	To set the width and height of the graphic. The values are kept as integers only (unit: pixels).
Transform	Center Point	To set the ratio of the X and Y coordinates of the graphic's center point relative to its width and height. The default value is 0.5, 0.5.
	Rotate Angle	To set the angle of rotation for the graphic (unit: degree).
	Skew Angle X	To set the angle of skewing in the horizontal direction. The field ranges from -80 to 80 and may contain two decimal places. The default value is 0 (unit: degree).
	Skew Angle Y	To set the angle of skewing in the vertical direction. The field ranges from -80 to 80 and may contain two decimal places. The default value is 0 (unit: degree).

6.3.6 Polygon

Open a web window, select **Basic Graphics > Polygon** on the **Toolbox** pane.

Place the cursor on the canvas. Select a starting point and click, then move the cursor to another point and click to draw one side of a polyline. Click once to create a vertex and double-click to finish drawing. Repeat the steps to draw another polygon.

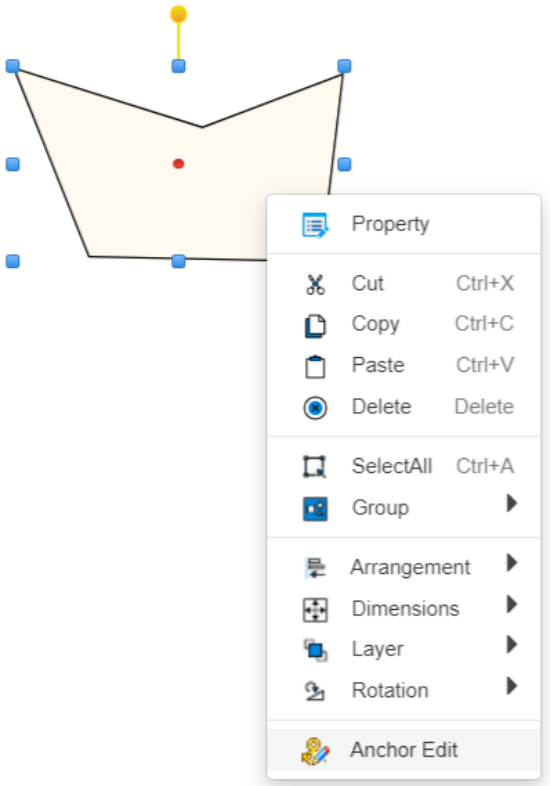
- **Introduction**

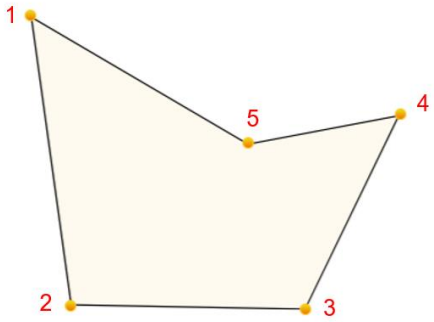


Users can click the polygon to put it in edit mode as in the image above.

Points 1 to 8 are for size adjustment, point 9 is for rotation, point 10 is the center point, and the space above point 2 is for horizontal skewing.

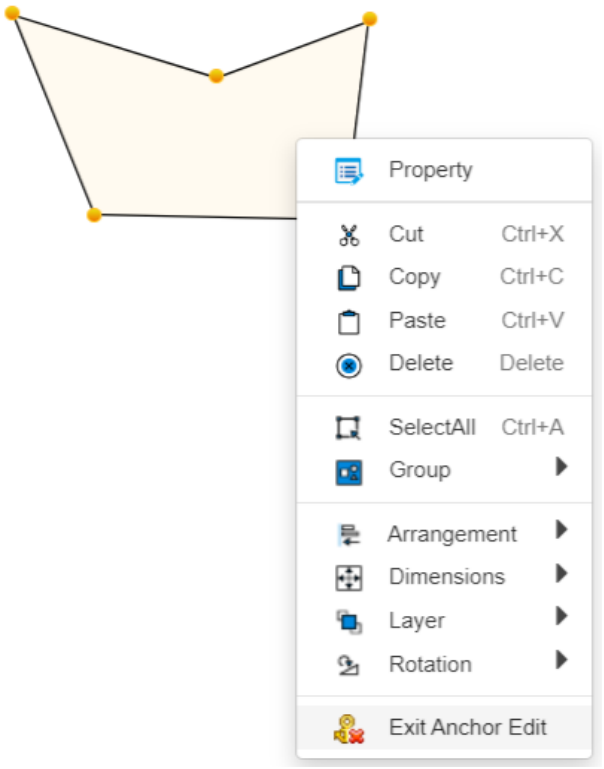
Right-click the polygon and select **Anchor Edit** to put it in anchor edit mode.





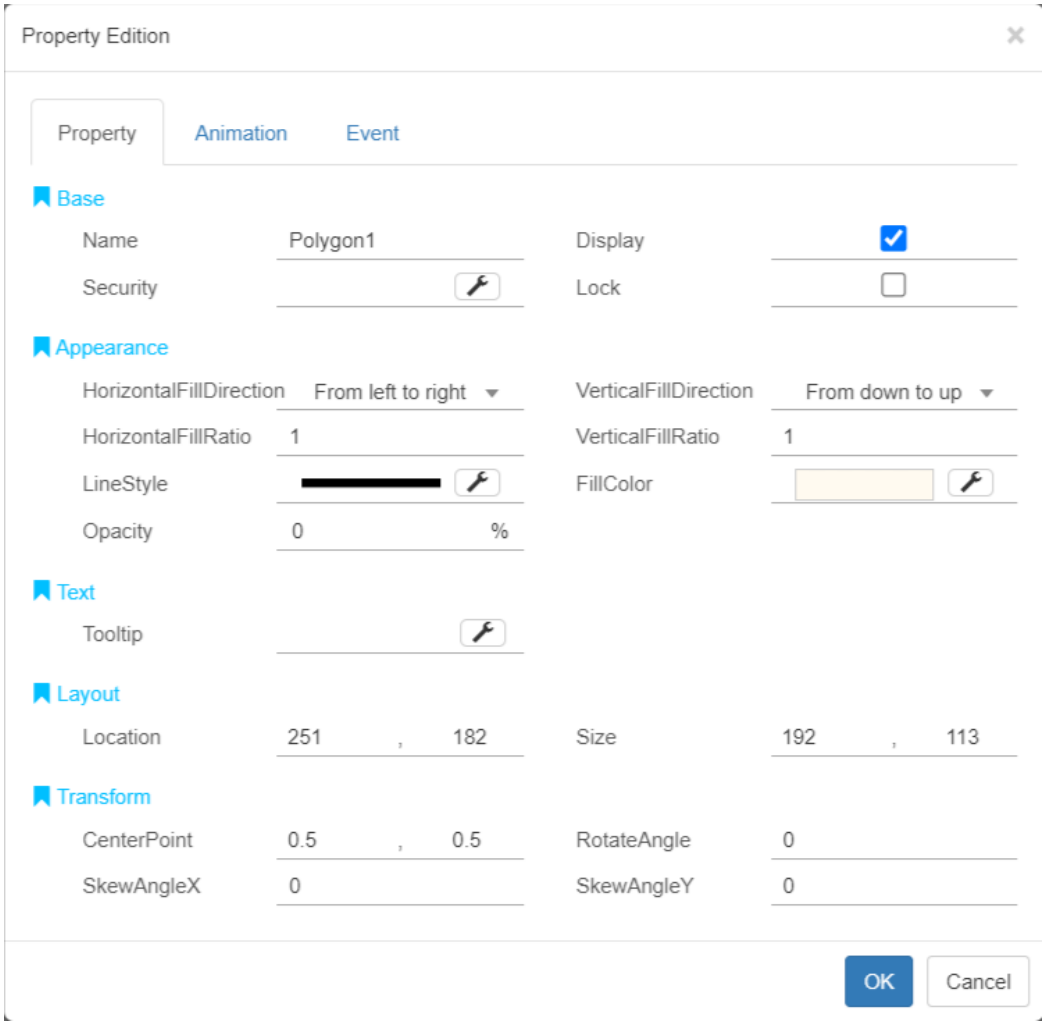
When you hover the mouse over the point, the cursor is changed into , which means you can move the point to change the shape of the polygon.

To exit anchor edit mode, right-click the polygon and select **Exit Anchor Edit** as shown below. Then the graphic is back into edit mode.

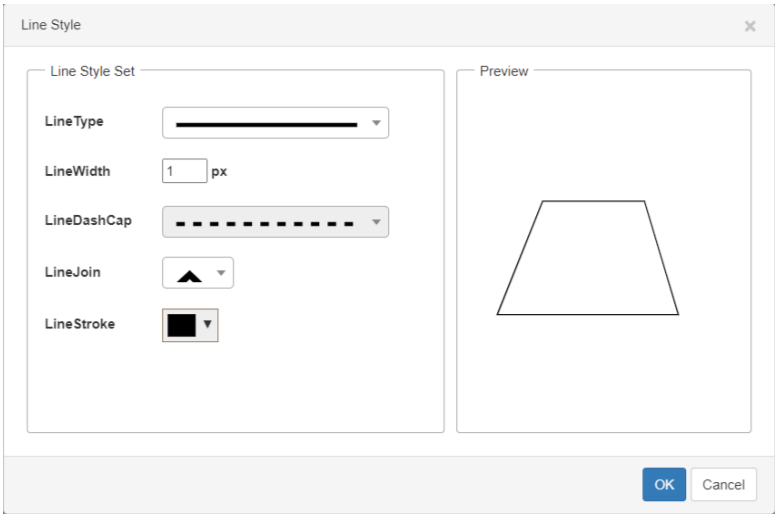


- **Property**

The property of a polygon consists of base, appearance, text, layout, and transform.



Item		Description
Base	**Name**	The name of the graphic in the web window. The naming rules are as follows: 1. Consists of letters, numbers, Chinese characters, or underscores; must begin with a letter or Chinese character. 2. Not case-sensitive. 3. Cannot contain spaces, periods, exclamation marks, or special characters such as @$#?*&. 4. Cannot exceed 200 characters, with no more than 25 Chinese characters. 5. Cannot share the same name with other objects in the same web window or with the web window where it is. 6. Only supports names in traditional Chinese, simplified Chinese, or English.
	Display	To decide whether the graphic is shown or hidden at runtime.
	Security	To set permissions for operation on the graphic. Assign the graphic to one or more securities for user access management.

Item		Description
	Lock	If the graphic is locked, mouse operations are invalid but users can still edit properties via the Property Edition dialog. A small lock will appear around the locked graphic.
Appearance	**Horizontal Fill Direction**	To select the direction when filling the graphic horizontally (from left to right / from right to left / from the middle to the edge).
	Vertical Fill Direction	To select the direction when filling the graphic vertically (from up to down / from down to up / from the middle to the edge).
	Horizontal Fill Ratio	To set the ratio of the width of the filled area to the width of the graphic. The field ranges from 0 to 1 and may contain two decimal places. The default value is 1.
	Vertical Fill Ratio	To set the ratio of the height of the filled area to the height of the graphic. The field ranges from 0 to 1 and may contain two decimal places. The default value is 1.
	Line Style	To set the line style, including line type, width, dash style, join, color of line stroke and so on. The width field ranges from 0 to 256 and may contain two decimal places. As for the color setting, only monochrome is supported. 
	Fill Color	To set the fill color of the graphic. It supports styles such as monochrome, pattern, picture, gradient, and radiation.
	Opacity	To set the opacity of the graphic. The field ranges from 0% to 100% and is kept as integer only. The default value is 0%. 0% represents full opacity while 100% represents full transparency.
Text	**Tooltip**	To edit the content of the tooltip. Multiple languages are supported.
Layout	**Location**	To set the X and Y coordinates of the graphic in the web window. The values are kept as integers only.
	Size	To set the width and height of the graphic. The values are kept as integers only (unit: pixels).

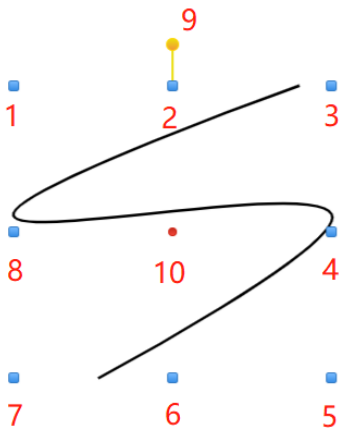
Item		Description
Transform	Center Point	To set the ratio of the X and Y coordinates of the graphic's center point relative to its width and height. The default value is 0.5, 0.5.
	Rotate Angle	To set the angle of rotation for the graphic (unit: degree).
	Skew Angle X	To set the angle of skewing in the horizontal direction. The field ranges from -80 to 80 and may contain two decimal places. The default value is 0 (unit: degree).
	Skew Angle Y	To set the angle of skewing in the vertical direction. The field ranges from -80 to 80 and may contain two decimal places. The default value is 0 (unit: degree).

6.3.7 Bezier Curve

Open a web window, select **Basic Graphics > Bezier Cruve** on the **Toolbox** pane.

Place the cursor on the canvas. Select a starting point and click, then move the cursor to another point and click to draw a Bezier curve. Click once to create a vertex and double-click to finish drawing. Repeat the steps to draw another Bezier curve.

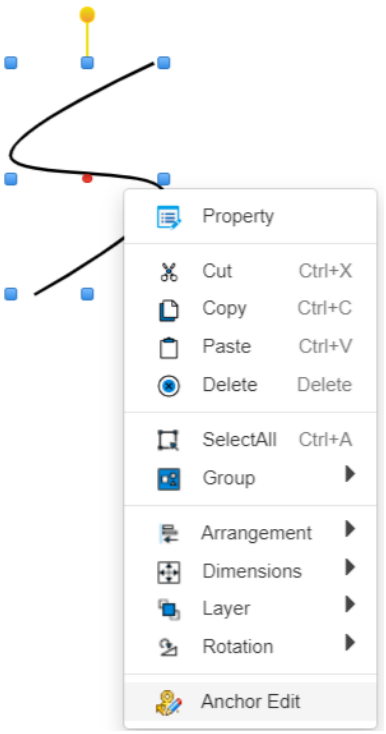
- **Introduction**

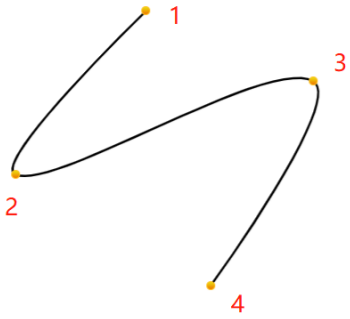


Users can click the Bezier curve to put it in edit mode as in the image above.

Points 1 to 8 are for size adjustment, point 9 is for rotation, point 10 is the center point, and the space above point 2 is for horizontal skewing.

Right-click the Bezier curve and select **Anchor Edit** to put it in anchor edit mode.

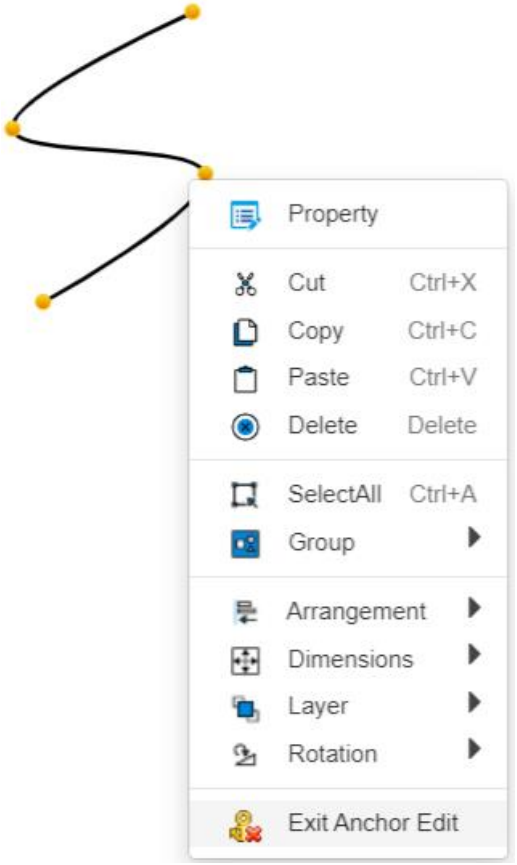




Point 1 is the starting point, points 2 and 3 are vertices of the curve, and point 4 is the endpoint.

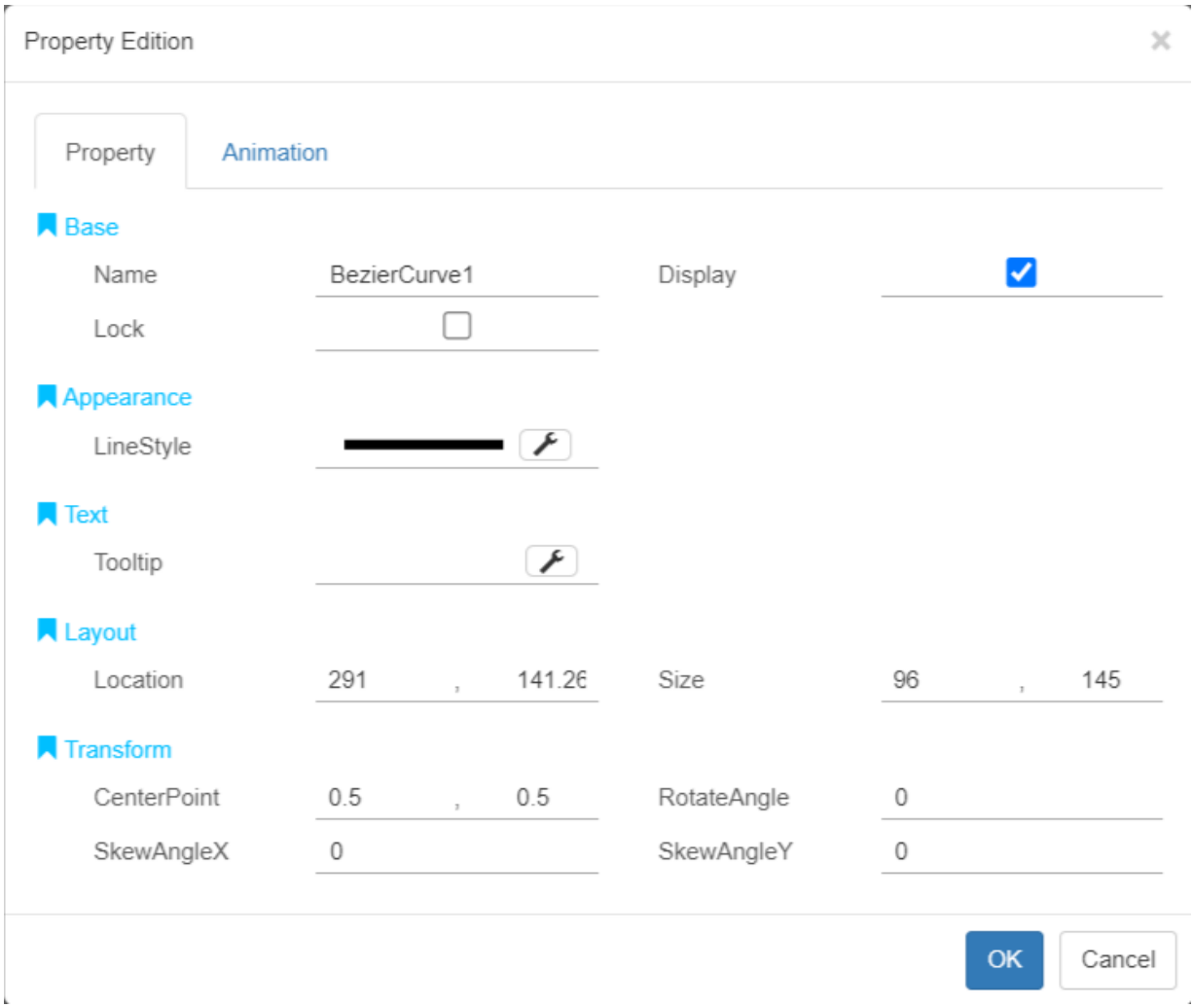
When you hover the mouse over the point, the cursor is changed into , which means you can move the point to change the shape of the Bezier curve.

To exit anchor edit mode, right-click the Bezier curve and select **Exit Anchor Edit** as shown below. Then the graphic is back into edit mode.

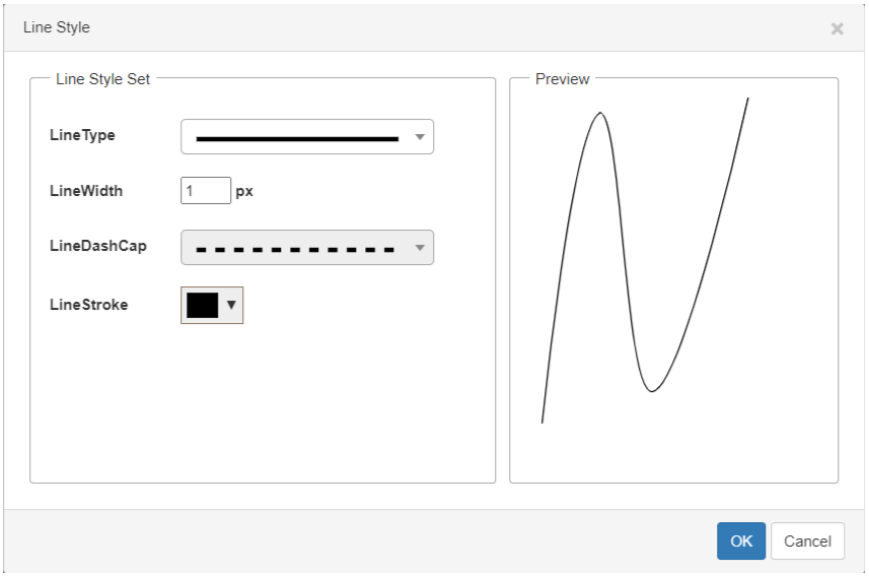

Property
Cut Ctrl+X
Copy Ctrl+C
Paste Ctrl+V
Delete Delete
SelectAll Ctrl+A
Group
Arrangement
Dimensions
Layer
Rotation
Exit Anchor Edit

- **Property**

The property of a Bezier curve consists of base, appearance, text, layout, and transform.



Item		Description
Base	**Name**	The name of the graphic in the web window. The naming rules are as follows: 1. Consists of letters, numbers, Chinese characters, or underscores; must begin with a letter or Chinese character. 2. Not case-sensitive. 3. Cannot contain spaces, periods, exclamation marks, or special characters such as @$#?*&. 4. Cannot exceed 200 characters, with no more than 25 Chinese characters. 5. Cannot share the same name with other objects in the same web window or with the web window where it is. 6. Only supports names in traditional Chinese, simplified Chinese, or English.
	Display	To decide whether the graphic is shown or hidden at runtime.

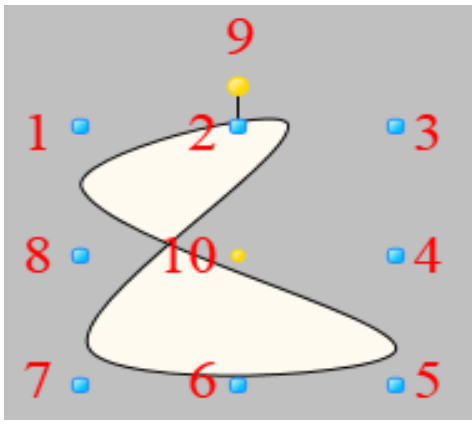
Item		Description
	Lock	If the graphic is locked, mouse operations are invalid but users can still edit properties via the Property Edition dialog. A small lock will appear around the locked graphic.
Appearance	**Line Style**	To set the line style, including line type, width, dash style, color of line stroke and so on. The width field ranges from 0 to 256 and may contain two decimal places. As for the color setting, only monochrome is supported. 
Text	**Tooltip**	To edit the content of the tooltip. Multiple languages are supported.
Layout	**Location**	To set the X and Y coordinates of the graphic in the web window. The values are kept as integers only.
	Size	To set the width and height of the graphic. The values are kept as integers only (unit: pixels).
Transform	**Center Point**	To set the ratio of the X and Y coordinates of the graphic's center point relative to its width and height. The default value is 0.5, 0.5.
	Rotate Angle	To set the angle of rotation for the graphic (unit: degree).
	Skew Angle X	To set the angle of skewing in the horizontal direction. The field ranges from -80 to 80 and may contain two decimal places. The default value is 0 (unit: degree).
	Skew Angle Y	To set the angle of skewing in the vertical direction. The field ranges from -80 to 80 and may contain two decimal places. The default value is 0 (unit: degree).

6.3.8 Closed Curve

Open a web window, select **Basic Graphics > Closed Curve** on the **Toolbox** pane.

Place the cursor on the canvas. Select a starting point and click, then move the cursor to another point and click to draw one side of a closed curve. Click once to create a vertex and double-click to finish drawing. Repeat the steps to draw another closed curve.

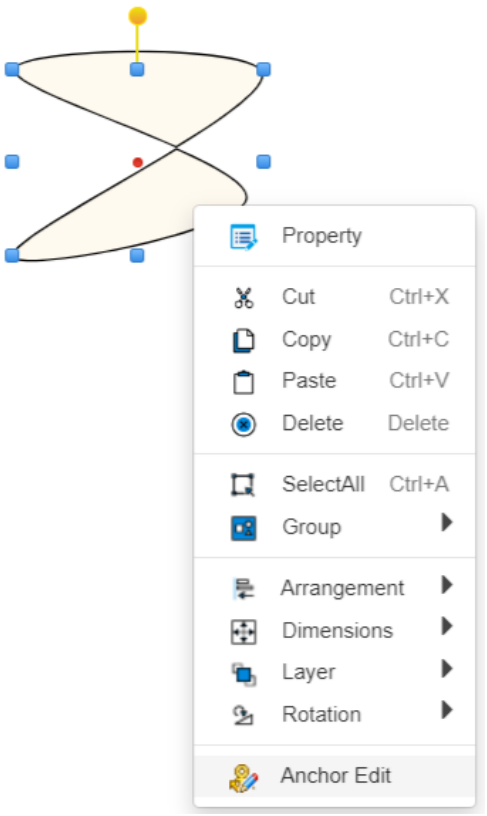
- **Introduction**

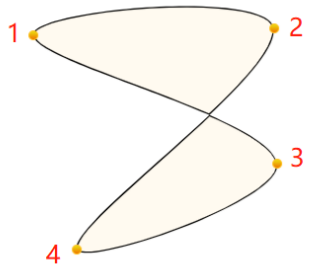


Users can click the closed curve to put it in edit mode as in the image above.

Points 1 to 8 are for size adjustment, point 9 is for rotation, point 10 is the center point, and the space above point 2 is for horizontal skewing.

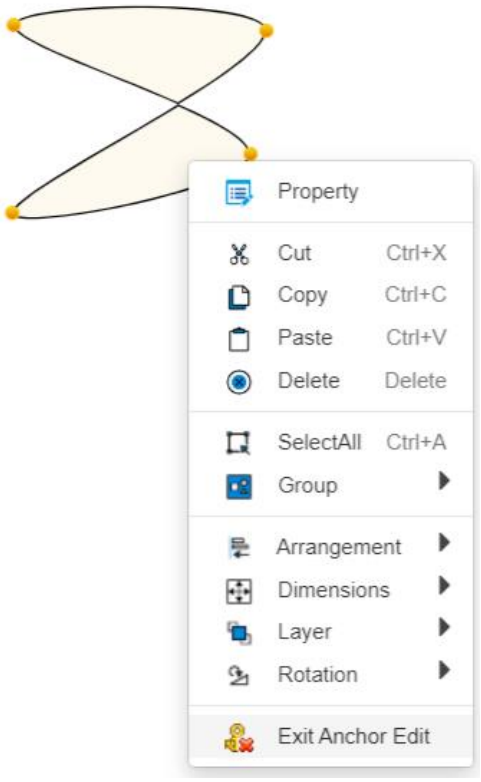
Right-click the closed curve and select **Anchor Edit** to put it in anchor edit mode.





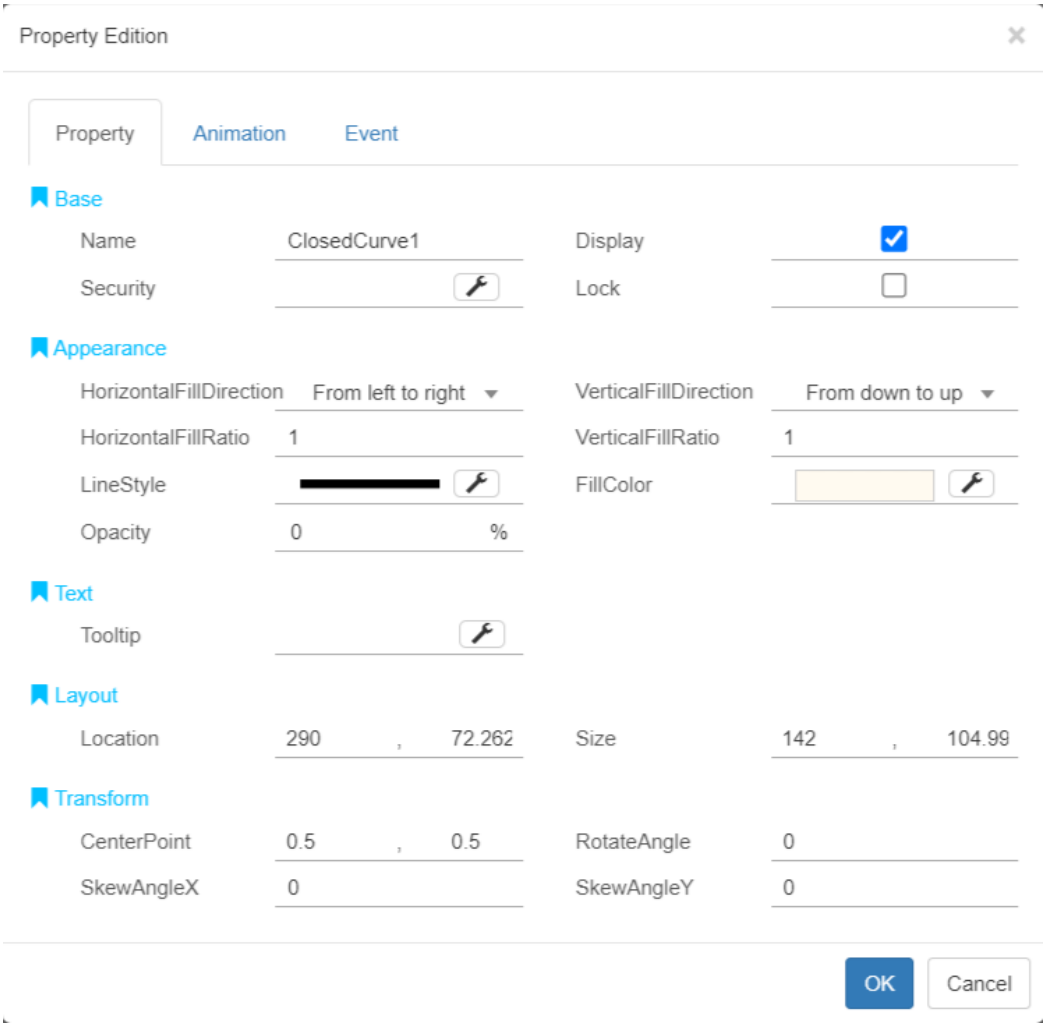
When you hover the mouse over the point, the cursor is changed into , which means you can move the point to change the shape of the closed curve.

To exit anchor edit mode, right-click the closed curve and select **Exit Anchor Edit** as shown below. Then the graphic is back into edit mode.


Property
Cut Ctrl+X
Copy Ctrl+C
Paste Ctrl+V
Delete Delete
SelectAll Ctrl+A
Group
Arrangement
Dimensions
Layer
Rotation
Exit Anchor Edit

- **Property**

  The property of a closed curve consists of base, appearance, text, layout, and transform.



Item		Description
Base	**Name**	The name of the graphic in the web window. The naming rules are as follows: 1. Consists of letters, numbers, Chinese characters, or underscores; must begin with a letter or Chinese character. 2. Not case-sensitive. 3. Cannot contain spaces, periods, exclamation marks, or special characters such as @$#?*&. 4. Cannot exceed 200 characters, with no more than 25 Chinese characters. 5. Cannot share the same name with other objects in the same web window or with the web window where it is. 6. Only supports names in traditional Chinese, simplified Chinese, or English.
	Display	To decide whether the graphic is shown or hidden at runtime.
	Security	To set permissions for operation on the graphic. Assign the graphic to one or more securities for user access management.

Item		Description
	Lock	If the graphic is locked, mouse operations are invalid but users can still edit properties via the Property Edition dialog. A small lock will appear around the locked graphic.
Appearance	**Horizontal Fill Direction**	To select the direction when filling the graphic horizontally (from left to right / from right to left / from the middle to the edge).
	Vertical Fill Direction	To select the direction when filling the graphic vertically (from up to down / from down to up / from the middle to the edge).
	Horizontal Fill Ratio	To set the ratio of the width of the filled area to the width of the graphic. The field ranges from 0 to 1 and may contain two decimal places. The default value is 1.
	Vertical Fill Ratio	To set the ratio of the height of the filled area to the height of the graphic. The field ranges from 0 to 1 and may contain two decimal places. The default value is 1.
	Line Style	To set the line style, including line type, width, dash style, color of line stroke and so on. The width field ranges from 0 to 256 and may contain two decimal places. As for the color setting, only monochrome is supported.
	Fill Color	To set the fill color of the graphic. It supports styles such as monochrome, pattern, picture, gradient, and radiation.
	Opacity	To set the opacity of the graphic. The field ranges from 0% to 100% and is kept as integer only. The default value is 0%. 0% represents full opacity while 100% represents full transparency.
Text	**Tooltip**	To edit the content of the tooltip. Multiple languages are supported.
Layout	**Location**	To set the X and Y coordinates of the graphic in the web window. The values are kept as integers only.
	Size	To set the width and height of the graphic. The values are kept as integers only (unit: pixels).

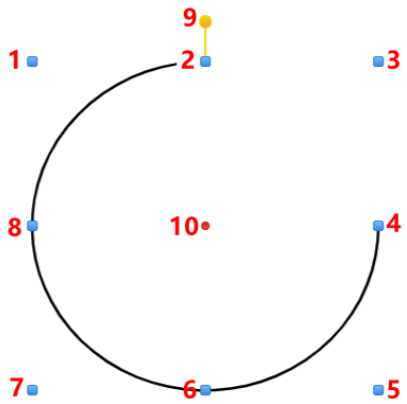
Item		Description
Transform	Center Point	To set the ratio of the X and Y coordinates of the graphic's center point relative to its width and height. The default value is 0.5, 0.5.
	Rotate Angle	To set the angle of rotation for the graphic (unit: degree).
	Skew Angle X	To set the angle of skewing in the horizontal direction. The field ranges from -80 to 80 and may contain two decimal places. The default value is 0 (unit: degree).
	Skew Angle Y	To set the angle of skewing in the vertical direction. The field ranges from -80 to 80 and may contain two decimal places. The default value is 0 (unit: degree).

6.3.9 Arc

Open a web window, select **Basic Graphics > Arc** on the **Toolbox** pane.

Place the cursor on the canvas. Select a starting point, click and hold the mouse, then drag to the lower right and drop to draw an arc. Repeat the steps to draw another one.

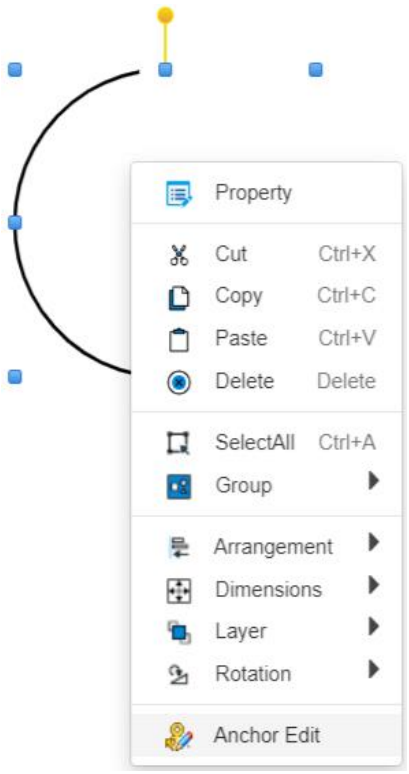
- **Introduction**

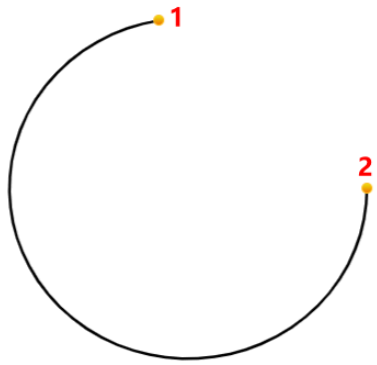


Users can click the arc to put it in edit mode as in the image above.

Points 1 to 8 are for size adjustment, point 9 is for rotation, point 10 is the center point, and the space above point 2 is for horizontal skewing.

Right-click the arc and select **Anchor Edit** to put it in anchor edit mode.

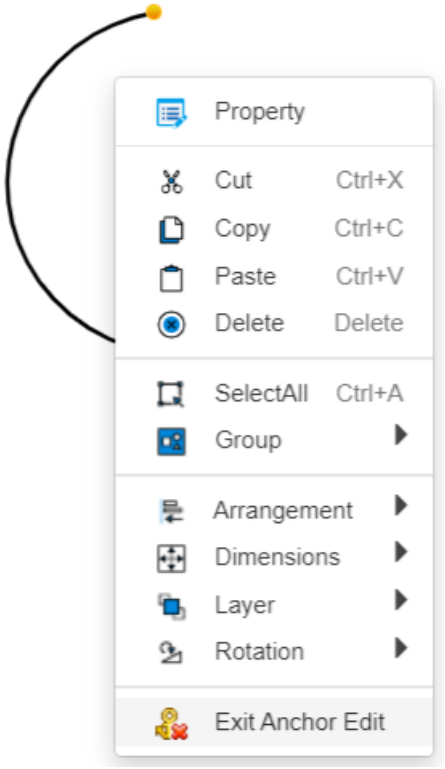




Points 1 and 2 are for arc length adjustment.

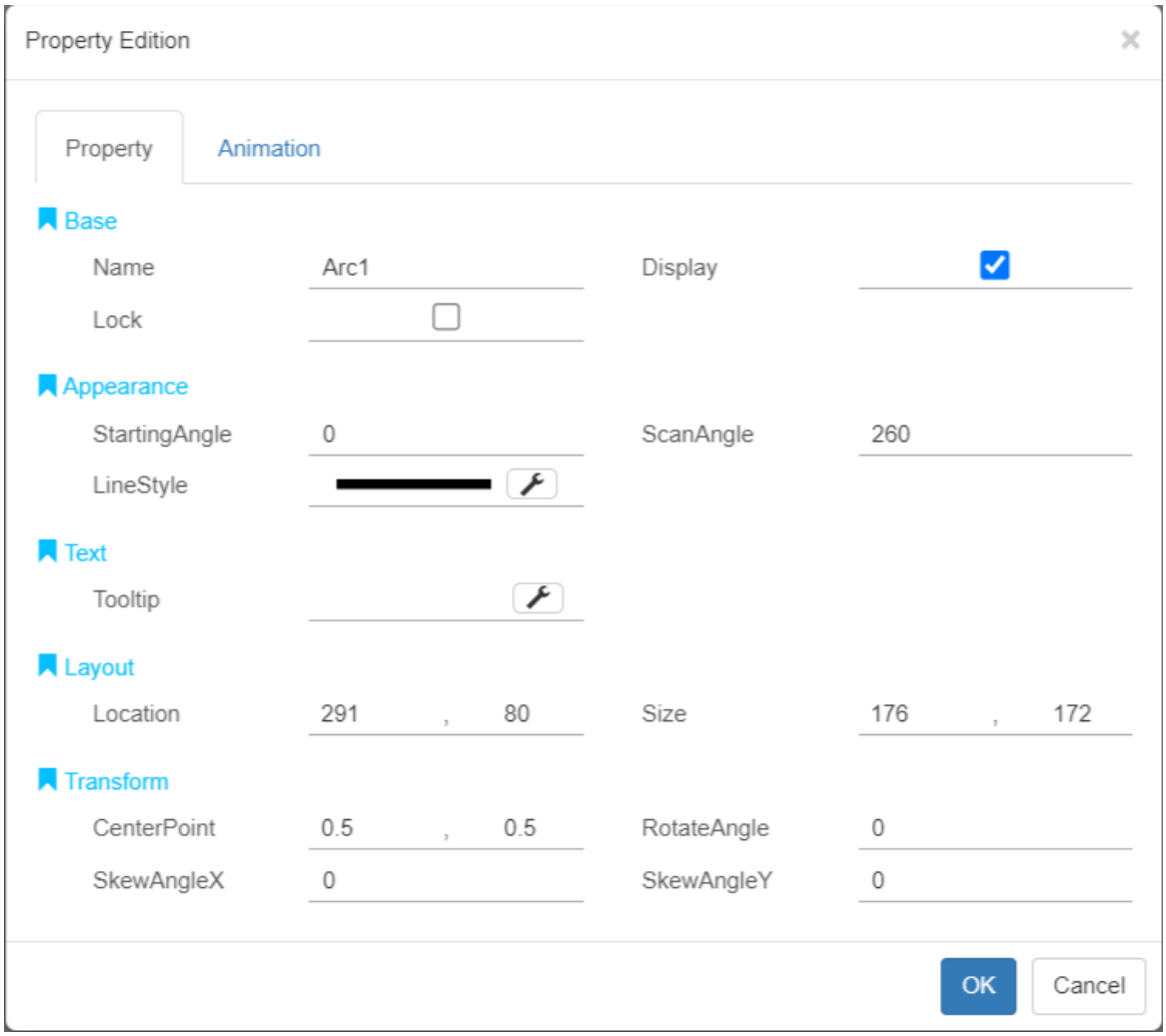
When you hover the mouse over the point, the cursor is changed into , which means you can move the point to change the arc length.

To exit anchor edit mode, right-click the arc and select **Exit Anchor Edit** as shown below. Then the graphic is back into edit mode.

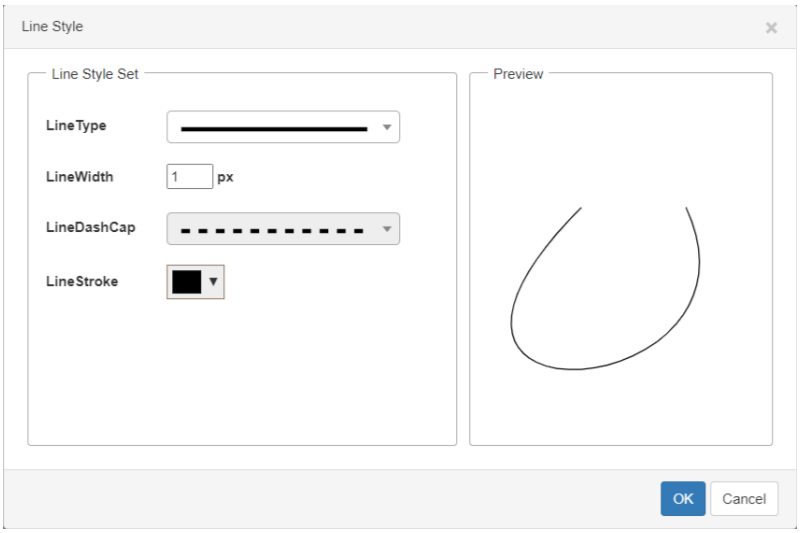

Property
Cut Ctrl+X
Copy Ctrl+C
Paste Ctrl+V
Delete Delete
SelectAll Ctrl+A
Group
Arrangement
Dimensions
Layer
Rotation
Exit Anchor Edit

- **Property**

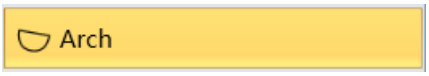
  The property of an arc consists of base, appearance, text, layout, and transform.



Item		Description
Base	**Name**	The name of the graphic in the web window. The naming rules are as follows: 1. Consists of letters, numbers, Chinese characters, or underscores; must begin with a letter or Chinese character. 2. Not case-sensitive. 3. Cannot contain spaces, periods, exclamation marks, or special characters such as @$#?*&. 4. Cannot exceed 200 characters, with no more than 25 Chinese characters. 5. Cannot share the same name with other objects in the same web window or with the web window where it is. 6. Only supports names in traditional Chinese, simplified Chinese, or English.
	Display	To decide whether the graphic is shown or hidden at runtime.

Item		Description
	Lock	If the graphic is locked, mouse operations are invalid but users can still edit properties via the Property Edition dialog. A small lock will appear around the locked graphic.
Appearance	**Starting Angle**	To set the starting angle. The field ranges from 0 to 359 and is kept as integer only. The default value is 0 (unit: degree).
	Scan Angle	To set the angle that the endpoints of the arc subtend at the circle's center. The field ranges from 0 to 359 and is kept as integer only. The default value is 260 (unit: degree).
	Line Style	To set the line style, including line type, width, dash style, color of line stroke and so on. The width field ranges from 0 to 256 and may contain two decimal places. As for the color setting, only monochrome is supported. 
Text	**Tooltip**	To edit the content of the tooltip. Multiple languages are supported.
Layout	**Location**	To set the X and Y coordinates of the graphic in the web window. The values are kept as integers only.
	Size	To set the width and height of the graphic. The values are kept as integers only (unit: pixels).
Transform	**Center Point**	To set the ratio of the X and Y coordinates of the graphic's center point relative to its width and height. The default value is 0.5, 0.5.
	Rotate Angle	To set the angle of rotation for the graphic (unit: degree).
	Skew Angle X	To set the angle of skewing in the horizontal direction. The field ranges from -80 to 80 and may contain two decimal places. The default value is 0 (unit: degree).
	Skew Angle Y	To set the angle of skewing in the vertical direction. The field ranges from -80 to 80 and may contain two decimal places. The default value is 0 (unit: degree).

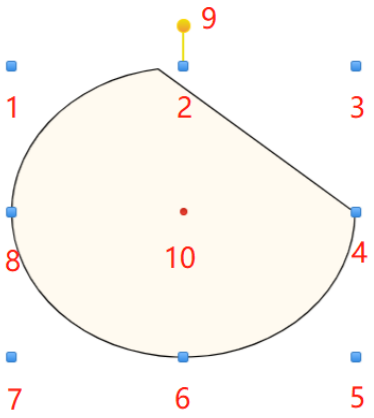
6.3.10 Arch



Open a web window, select **Basic Graphics > Arch** on the **Toolbox** pane.

Place the cursor on the canvas. Select a starting point, click and hold the mouse, then drag to the lower right and drop to draw an arch. Repeat the steps to draw another one.

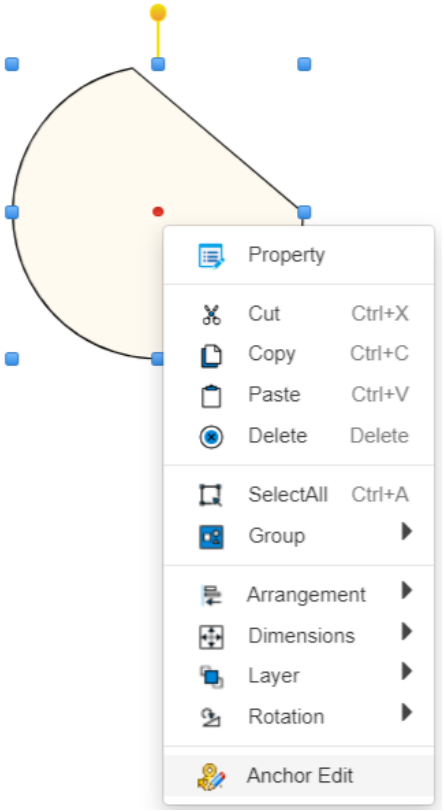
- **Introduction**

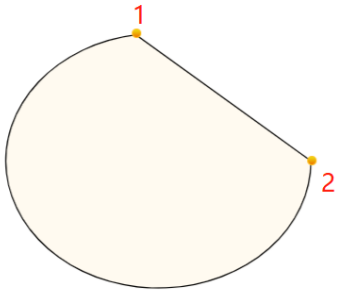


Users can click the arch to put it in edit mode as in the image above.

Points 1 to 8 are for size adjustment, point 9 is for rotation, point 10 is the center point, and the space above point 2 is for horizontal skewing.

Right-click the arch and select **Anchor Edit** to put it in anchor edit mode.

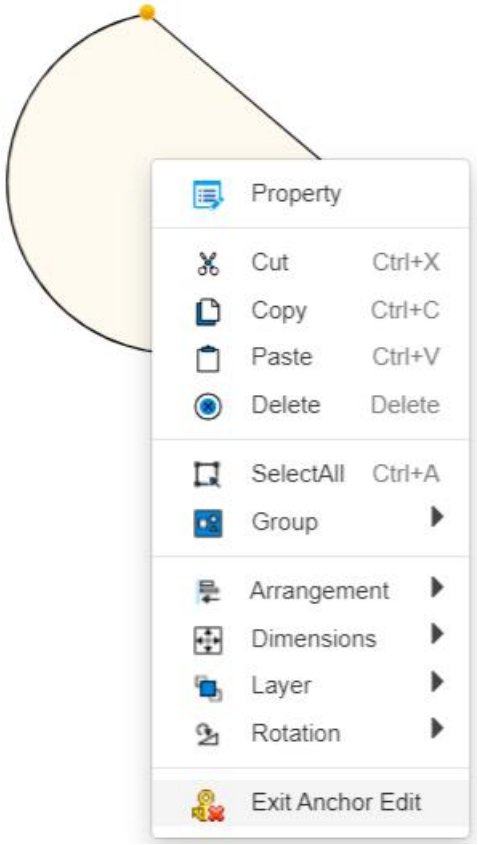




Points 1 and 2 are for angle adjustment.

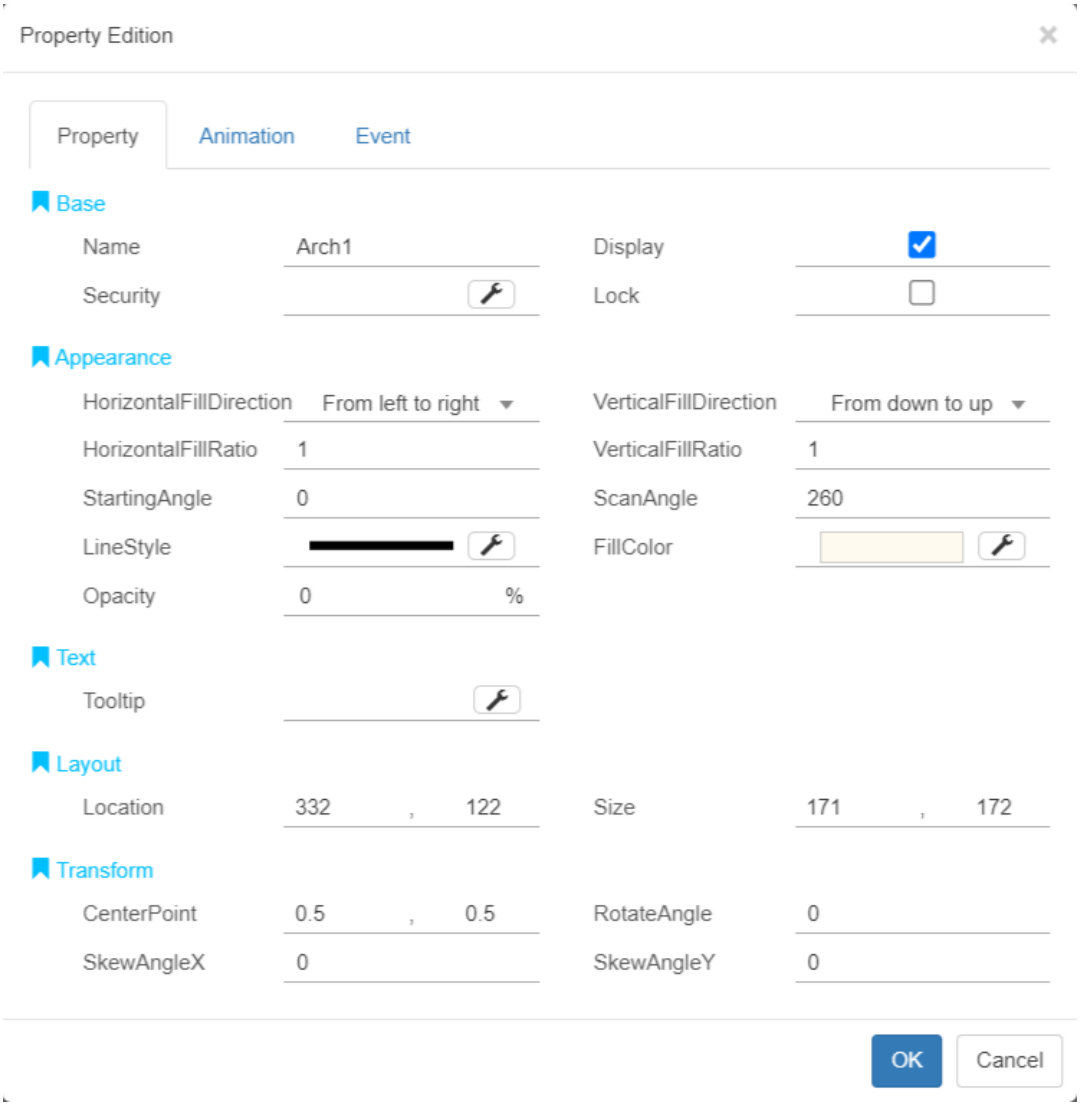
When you hover the mouse over the point, the cursor is changed into , which means you can move the point to change the angle of the graphic.

To exit anchor edit mode, right-click the arch and select **Exit Anchor Edit** as shown below. Then the graphic is back into edit mode.

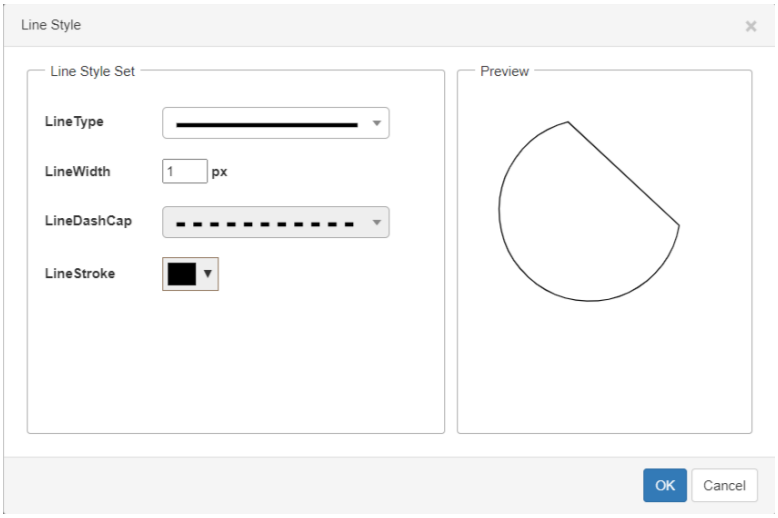

Property
Cut Ctrl+X
Copy Ctrl+C
Paste Ctrl+V
Delete Delete
SelectAll Ctrl+A
Group
Arrangement
Dimensions
Layer
Rotation
Exit Anchor Edit

- **Property**

  The property of an arch consists of base, appearance, text, layout, and transform.



Item		Description
Base	**Name**	The name of the graphic in the web window. The naming rules are as follows: 1. Consists of letters, numbers, Chinese characters, or underscores; must begin with a letter or Chinese character. 2. Not case-sensitive. 3. Cannot contain spaces, periods, exclamation marks, or special characters such as @$#?*&. 4. Cannot exceed 200 characters, with no more than 25 Chinese characters. 5. Cannot share the same name with other objects in the same web window or with the web window where it is. 6. Only supports names in traditional Chinese, simplified Chinese, or English.
	Display	To decide whether the graphic is shown or hidden at runtime.

Item		Description
	Security	To set permissions for operation on the graphic. Assign the graphic to one or more securities for user access management.
	Lock	If the graphic is locked, mouse operations are invalid but users can still edit properties via the Property Edition dialog. A small lock will appear around the locked graphic.
Appearance	**Horizontal Fill Direction**	To select the direction when filling the graphic horizontally (from left to right / from right to left / from the middle to the edge).
	Vertical Fill Direction	To select the direction when filling the graphic vertically (from up to down / from down to up / from the middle to the edge).
	Horizontal Fill Ratio	To set the ratio of the width of the filled area to the width of the graphic. The field ranges from 0 to 1 and may contain two decimal places. The default value is 1.
	Vertical Fill Ratio	To set the ratio of the height of the filled area to the height of the graphic. The field ranges from 0 to 1 and may contain two decimal places. The default value is 1.
	Starting Angle	To set the starting angle. The field ranges from 0 to 359 and is kept as integer only. The default value is 0 (unit: degree).
	Scan Angle	To set the angle that the endpoints of the arch subtend at the circle's center. The field ranges from 0 to 359 and is kept as integer only. The default value is 260 (unit: degree).
	Line Style	To set the line style, including line type, width, dash style, color of line stroke and so on. The width field ranges from 0 to 256 and may contain two decimal places. As for the color setting, only monochrome is supported. 
	Fill Color	To set the fill color of the graphic. It supports styles such as monochrome, pattern, picture, gradient, and radiation.
	Opacity	To set the opacity of the graphic. The field ranges from 0% to 100% and is kept as integer only. The default value is 0%. 0% represents full opacity while 100% represents

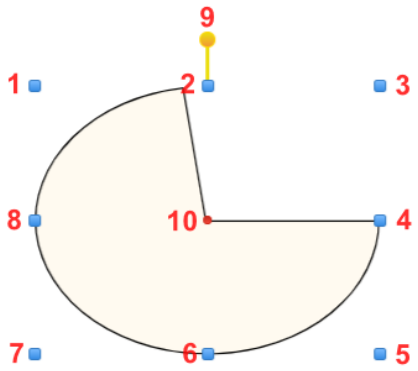
Item		Description
		full transparency.
Text	**Tooltip**	To edit the content of the tooltip. Multiple languages are supported.
Layout	**Location**	To set the X and Y coordinates of the graphic in the web window. The values are kept as integers only.
	Size	To set the width and height of the graphic. The values are kept as integers only (unit: pixels).
Transform	**Center Point**	To set the ratio of the X and Y coordinates of the graphic's center point relative to its width and height. The default value is 0.5, 0.5.
	Rotate Angle	To set the angle of rotation for the graphic (unit: degree).
	Skew Angle X	To set the angle of skewing in the horizontal direction. The field ranges from -80 to 80 and may contain two decimal places. The default value is 0 (unit: degree).
	Skew Angle Y	To set the angle of skewing in the vertical direction. The field ranges from -80 to 80 and may contain two decimal places. The default value is 0 (unit: degree).

6.3.11 Pie

Open a web window, select **Basic Graphics > Pie** on the **Toolbox** pane.

Place the cursor on the canvas. Select a starting point, click and hold the mouse, then drag to the lower right and drop to draw a pie. Repeat the steps to draw another one.

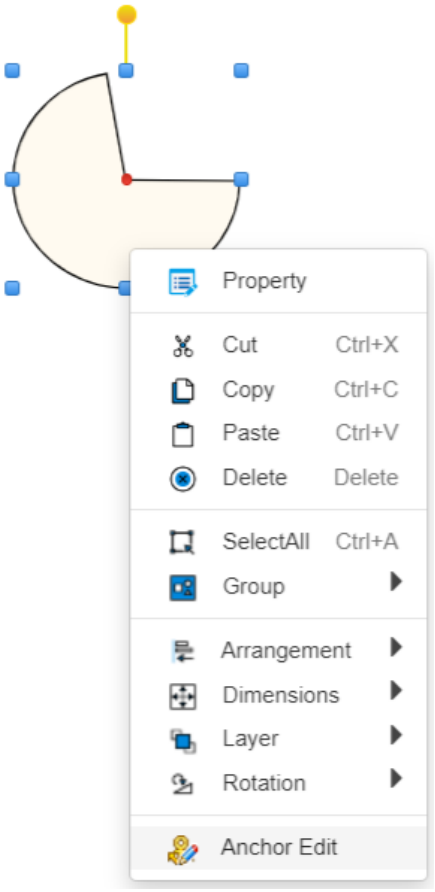
- **Introduction**

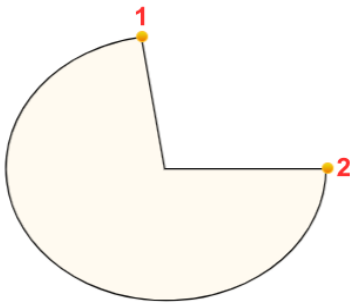


Users can click the pie to put it in edit mode as in the image above.

Points 1 to 8 are for size adjustment, point 9 is for rotation, point 10 is the center point, and the space above point 2 is for horizontal skewing.

Right-click the pie and select **Anchor Edit** to put it in anchor edit mode.

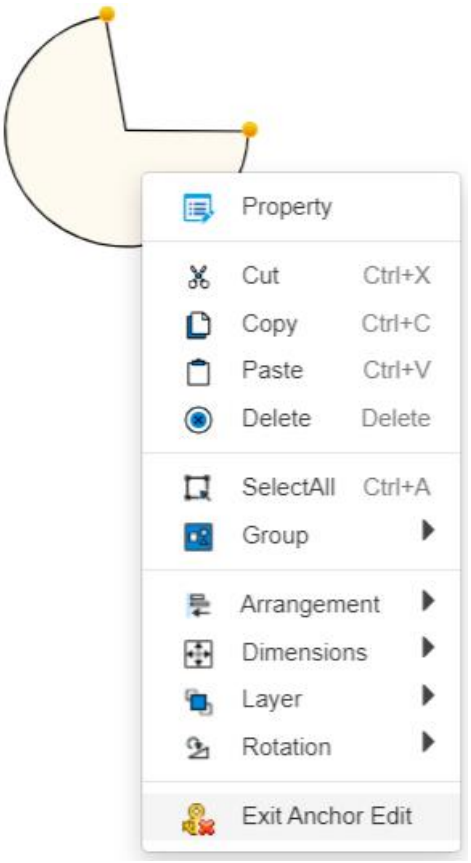




Points 1 and 2 are for angle adjustment.

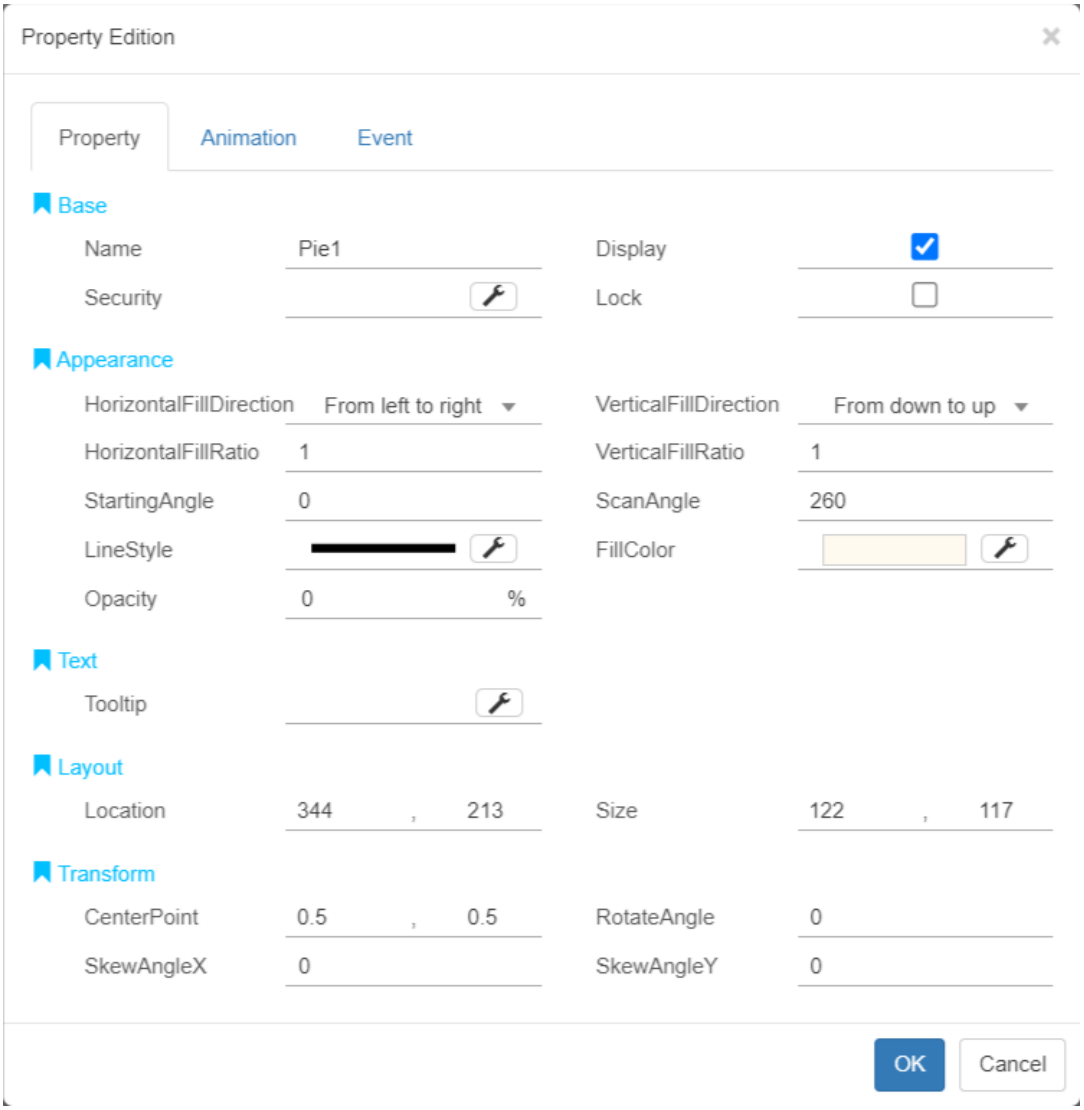
When you hover the mouse over the point, the cursor is changed into , which means you can move the point to change the angle of the graphic.

To exit anchor edit mode, right-click the pie and select **Exit Anchor Edit** as shown below. Then the graphic is back into edit mode.

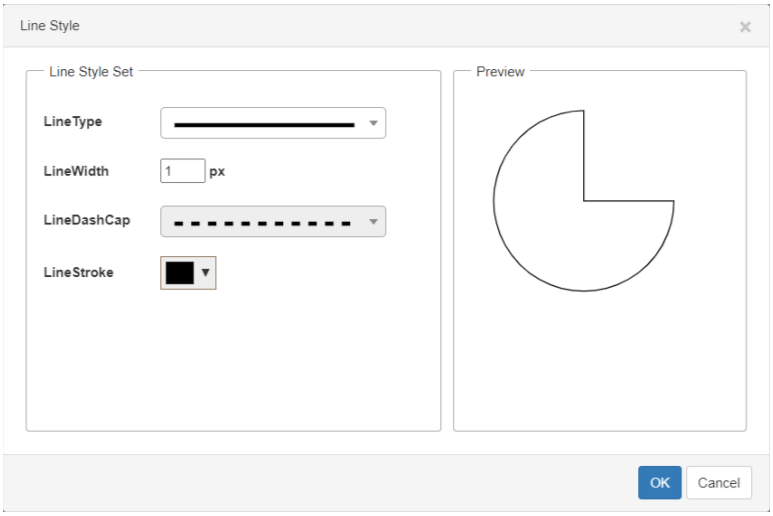

Property
Cut Ctrl+X
Copy Ctrl+C
Paste Ctrl+V
Delete Delete
SelectAll Ctrl+A
Group
Arrangement
Dimensions
Layer
Rotation
Exit Anchor Edit

- **Property**

The property of a pie consists of base, appearance, text, layout, and transform.



Item		Description
Base	**Name**	The name of the graphic in the web window. The naming rules are as follows: 1. Consists of letters, numbers, Chinese characters, or underscores; must begin with a letter or Chinese character. 2. Not case-sensitive. 3. Cannot contain spaces, periods, exclamation marks, or special characters such as @$#?*&. 4. Cannot exceed 200 characters, with no more than 25 Chinese characters. 5. Cannot share the same name with other objects in the same web window or with the web window where it is. 6. Only supports names in traditional Chinese, simplified Chinese, or English.
	Display	To decide whether the graphic is shown or hidden at runtime.

Item		Description
	Security	To set permissions for operation on the graphic. Assign the graphic to one or more securities for user access management.
	Lock	If the graphic is locked, mouse operations are invalid but users can still edit properties via the Property Edition dialog. A small lock will appear around the locked graphic.
Appearance	**Horizontal Fill Direction**	To select the direction when filling the graphic horizontally (from left to right / from right to left / from the middle to the edge).
	Vertical Fill Direction	To select the direction when filling the graphic vertically (from up to down / from down to up / from the middle to the edge).
	Horizontal Fill Ratio	To set the ratio of the width of the filled area to the width of the graphic. The field ranges from 0 to 1 and may contain two decimal places. The default value is 1.
	Vertical Fill Ratio	To set the ratio of the height of the filled area to the height of the graphic. The field ranges from 0 to 1 and may contain two decimal places. The default value is 1.
	Starting Angle	To set the starting angle. The field ranges from 0 to 359 and is kept as integer only. The default value is 0 (unit: degree).
	Scan Angle	To set the angle that the endpoints of the pie subtend at the circle's center. The field ranges from 0 to 359 and is kept as integer only. The default value is 260 (unit: degree).
	Line Style	To set the line style, including line type, width, dash style, color of line stroke and so on. The width field ranges from 0 to 256 and may contain two decimal places. As for the color setting, only monochrome is supported. 
	Fill Color	To set the fill color of the graphic. It supports styles such as monochrome, pattern, picture, gradient, and radiation.
	Opacity	To set the opacity of the graphic. The field ranges from 0% to 100% and is kept as integer only. The default value is 0%. 0% represents full opacity while 100% represents

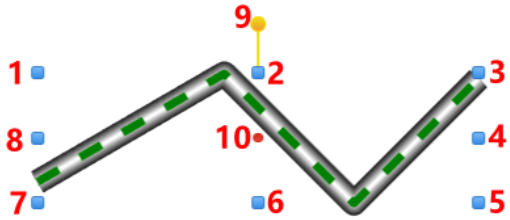
Item		Description
		full transparency.
Text	**Tooltip**	To edit the content of the tooltip. Multiple languages are supported.
Layout	**Location**	To set the X and Y coordinates of the graphic in the web window. The values are kept as integers only.
	Size	To set the width and height of the graphic. The values are kept as integers only (unit: pixels).
Transform	**Center Point**	To set the ratio of the X and Y coordinates of the graphic's center point relative to its width and height. The default value is 0.5, 0.5.
	Rotate Angle	To set the angle of rotation for the graphic (unit: degree).
	Skew Angle X	To set the angle of skewing in the horizontal direction. The field ranges from -80 to 80 and may contain two decimal places. The default value is 0 (unit: degree).
	Skew Angle Y	To set the angle of skewing in the vertical direction. The field ranges from -80 to 80 and may contain two decimal places. The default value is 0 (unit: degree).

6.3.12 Pipe

Open a web window, select **Basic Graphics > Pipe** on the **Toolbox** pane.

Place the cursor on the canvas. Select a starting point and click, then move the cursor to another point and click to draw a pipe. Pressing **Shift** key while moving allows drawing at angles in multiples of 15 degrees. Click once to create a vertex and double-click to finish drawing. Repeat the steps to draw another pipe.

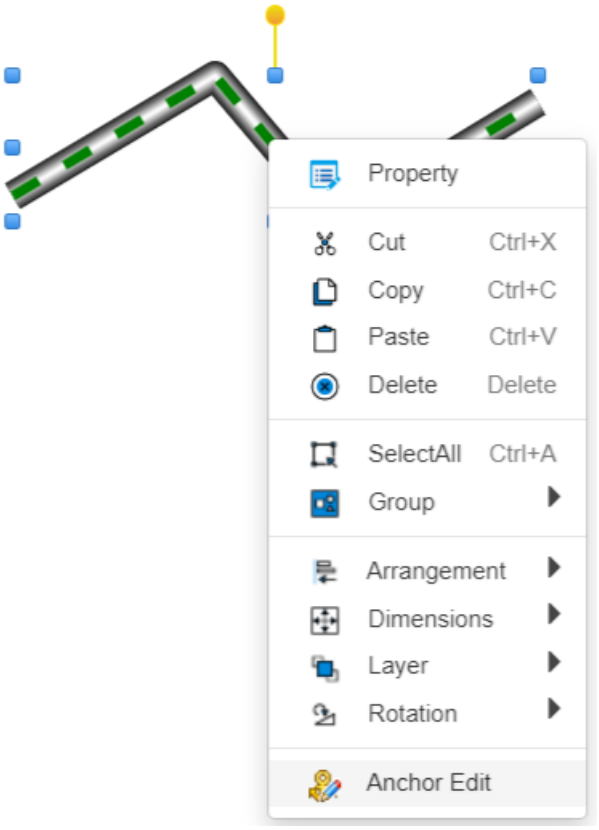
- **Introduction**

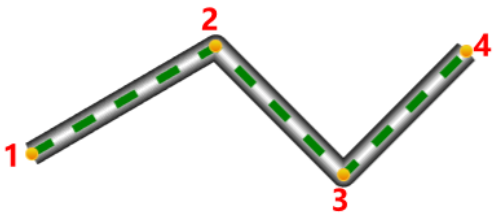


Users can click the pipe to put it in edit mode as in the image above.

Points 1 to 8 are for size adjustment, point 9 is for rotation, point 10 is the center point, and the space above point 2 is for horizontal skewing.

Right-click the pipe and select **Anchor Edit** to put it in anchor edit mode.

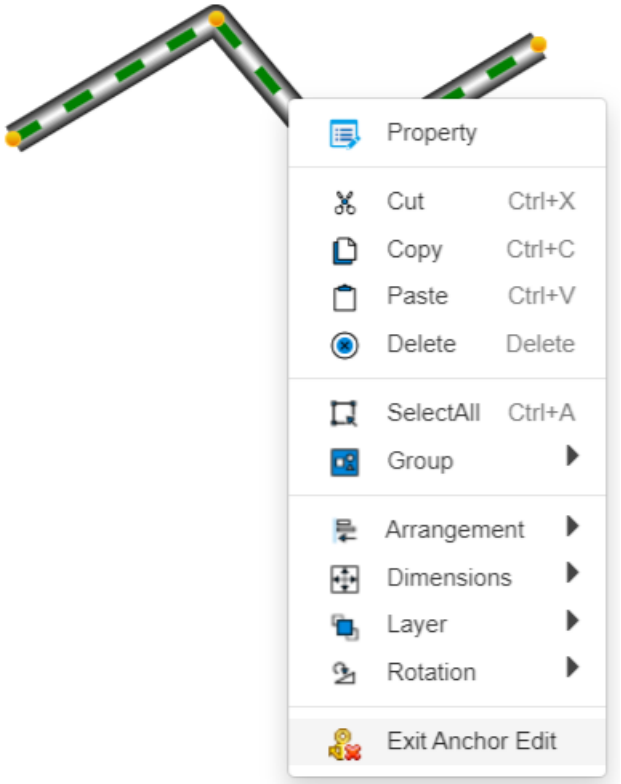




Point 1 is the starting point, points 2 and 3 are vertices of the pipe, and point 4 is the endpoint.

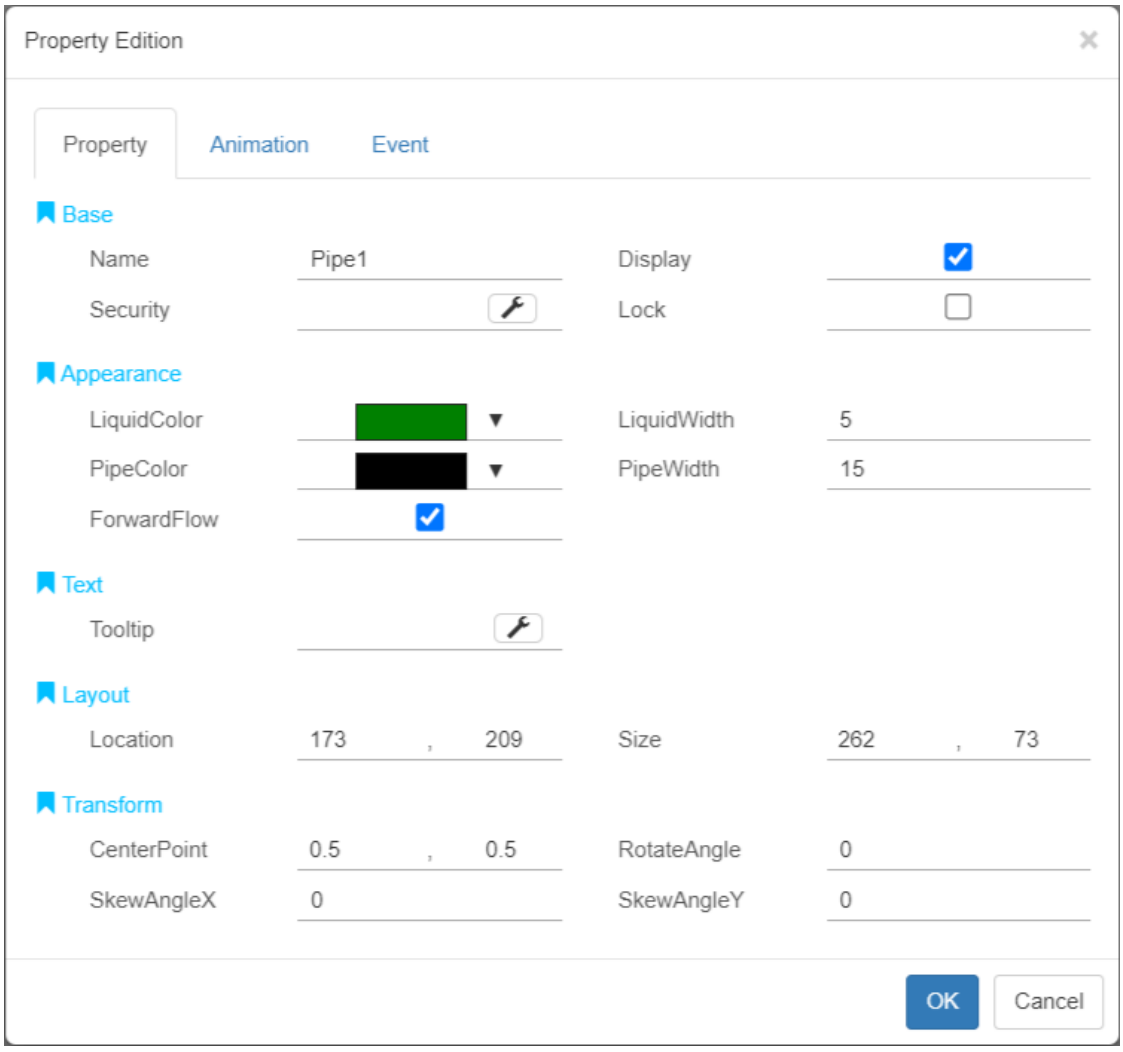
When you hover the mouse over the point, the cursor is changed into , which means you can move the point to change the shape of the pipe.

To exit anchor edit mode, right-click the pipe and select **Exit Anchor Edit** as shown below. Then the graphic is back into edit mode.



- **Property**

  The property of a pipe consists of base, appearance, text, layout, and transform.

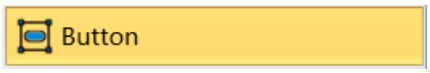


Item		Description
Base	**Name**	The name of the graphic in the web window. The naming rules are as follows: 1. Consists of letters, numbers, Chinese characters, or underscores; must begin with a letter or Chinese character. 2. Not case-sensitive. 3. Cannot contain spaces, periods, exclamation marks, or special characters such as @$#?*&. 4. Cannot exceed 200 characters, with no more than 25 Chinese characters. 5. Cannot share the same name with other objects in the same web window or with the web window where it is. 6. Only supports names in traditional Chinese, simplified Chinese, or English.
	Display	To decide whether the graphic is shown or hidden at runtime.

Item		Description
	Security	To set permissions for operation on the graphic. Assign the graphic to one or more securities for user access management.
	Lock	If the graphic is locked, mouse operations are invalid but users can still edit properties via the Property Edition dialog. A small lock will appear around the locked graphic.
Appearance	**Liquid Color**	To set the color of the liquid inside the pipe. Only monochrome is supported.
	Liquid Width	To set the width for the cross section of the liquid inside the pipe (i.e. the flow rate). The liquid width is always less than the width of the pipe.
	Pipe Color	To set the color of the pipe. Only monochrome is supported.
	Pipe Width	To set the width for the cross section of the pipe.
	Forward Flow	To set the direction in which the liquid flows through the pipe. Check this option for forward flow or leave it unchecked for reverse flow.
Text	**Tooltip**	To edit the content of the tooltip. Multiple languages are supported.
Layout	**Location**	To set the X and Y coordinates of the graphic in the web window. The values are kept as integers only.
	Size	To set the width and height of the graphic. The values are kept as integers only (unit: pixels).
Transform	**Center Point**	To set the ratio of the X and Y coordinates of the graphic's center point relative to its width and height. The default value is 0.5, 0.5.
	Rotate Angle	To set the angle of rotation for the graphic (unit: degree).
	Skew Angle X	To set the angle of skewing in the horizontal direction. The field ranges from -80 to 80 and may contain two decimal places. The default value is 0 (unit: degree).
	Skew Angle Y	To set the angle of skewing in the vertical direction. The field ranges from -80 to 80 and may contain two decimal places. The default value is 0 (unit: degree).

6.4 Introduction to Window Controls

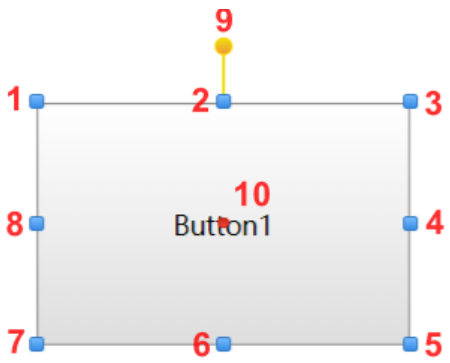
6.4.1 Button



Open a web window, select **Window Controls > Button** on the **Toolbox** pane.

Place the cursor on the canvas. Select a starting point, click and hold the mouse, then drag to the lower right and drop to create a button. Repeat the steps to create another one.

- **Introduction**

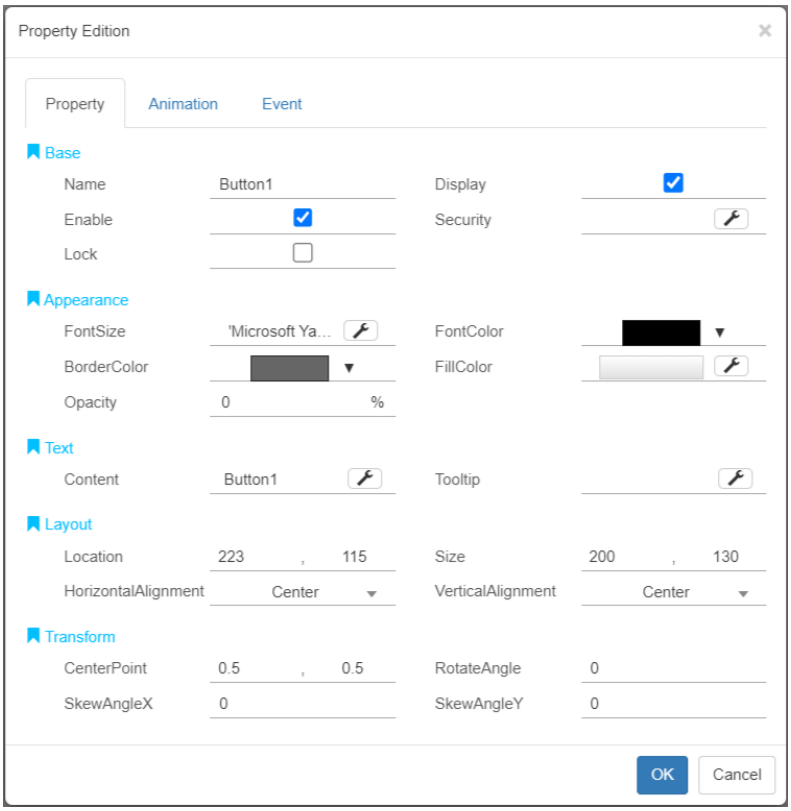


Users can click the button to put it in edit mode as in the image above.

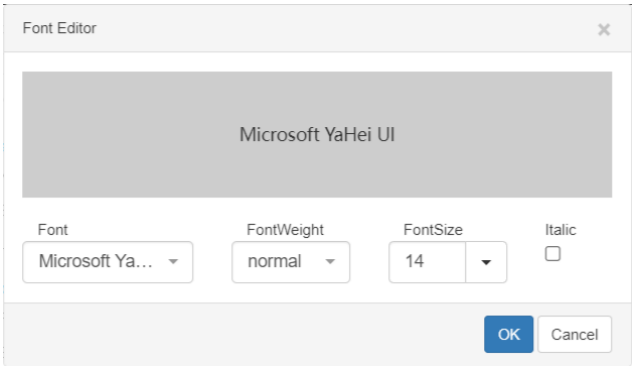
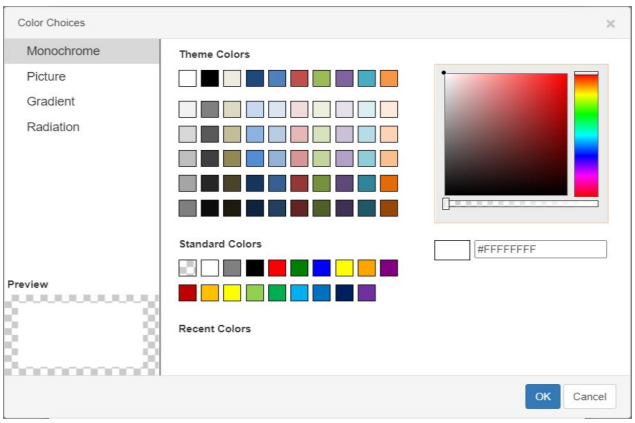
Points 1 to 8 are for size adjustment, point 9 is for rotation, point 10 is the center point, and the space above point 2 is for horizontal skewing.

- **Property**

The property of a button consists of base, appearance, text, layout, and transform.



Item		Description
Base	**Name**	The name of the control in the web window. The naming rules are as follows: 1. Consists of letters, numbers, Chinese characters, or underscores; must begin with a letter or Chinese character. 2. Not case-sensitive. 3. Cannot contain spaces, periods, exclamation marks, or special characters such as @$#?*&. 4. Cannot exceed 200 characters, with no more than 25 Chinese characters. 5. Cannot share the same name with other objects in the same web window or with the web window where it is. 6. Only supports names in traditional Chinese, simplified Chinese, or English.
	Display	To decide whether the control is shown or hidden at runtime.
	Enable	To enable or disable the control at runtime.
	Security	To set permissions for operation on the control. Assign the control to one or more securities for user access management.
	Lock	If the control is locked, mouse operations are invalid but users can still edit properties via the Property Edition dialog. A small lock will appear around the locked control.
Appearance	**Font Size**	To set the font style, font weight, font size, and italics for the content displayed on the control.

Item		Description
		
	Font Color	To set the font color. Only monochrome is supported.
	Border Color	To set the border color of the control. Only monochrome is supported.
	Fill Color	To set the fill color of the control. It supports styles such as monochrome, picture, gradient, and radiation. 
	Opacity	To set the opacity of the control. The field ranges from 0% to 100% and is kept as integer only. The default value is 0%. 0% represents full opacity while 100% represents full transparency.
Text	**Content**	To edit the content displayed on the control. Multiple languages are supported.
	Tooltip	To edit the content of the tooltip. Multiple languages are supported.
Layout	**Location**	To set the X and Y coordinates of the control in the web window. The values are kept as integers only.
	Size	To set the width and height of the control. The values are kept as integers only (unit: pixels).
	Horizontal Alignment	To horizontally align the content displayed on the control (left / center / right).
	Vertical Alignment	To vertically align the content displayed on the control (top / center / bottom).
Transform	**Center Point**	To set the ratio of the X and Y coordinates of the control's center point relative to its width and height. The default value is 0.5, 0.5.

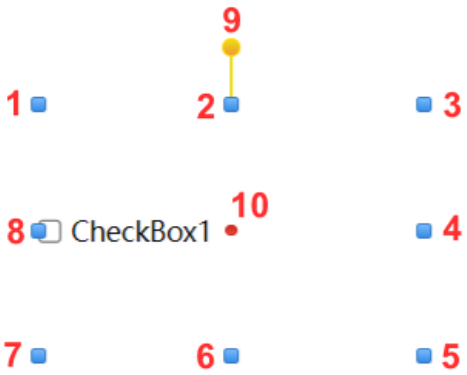
Item		Description
	Rotate Angle	To set the angle of rotation for the control (unit: degree).
	Skew Angle X	To set the angle of skewing in the horizontal direction. The field ranges from -80 to 80 and may contain two decimal places. The default value is 0 (unit: degree).
	Skew Angle Y	To set the angle of skewing in the vertical direction. The field ranges from -80 to 80 and may contain two decimal places. The default value is 0 (unit: degree).

6.4.2 Check Box

Open a web window, select **Window Controls > Check Box** on the **Toolbox** pane.

Place the cursor on the canvas. Select a starting point, click and hold the mouse, then drag to the lower right and drop to create a check box. Repeat the steps to create another one.

- **Introduction**

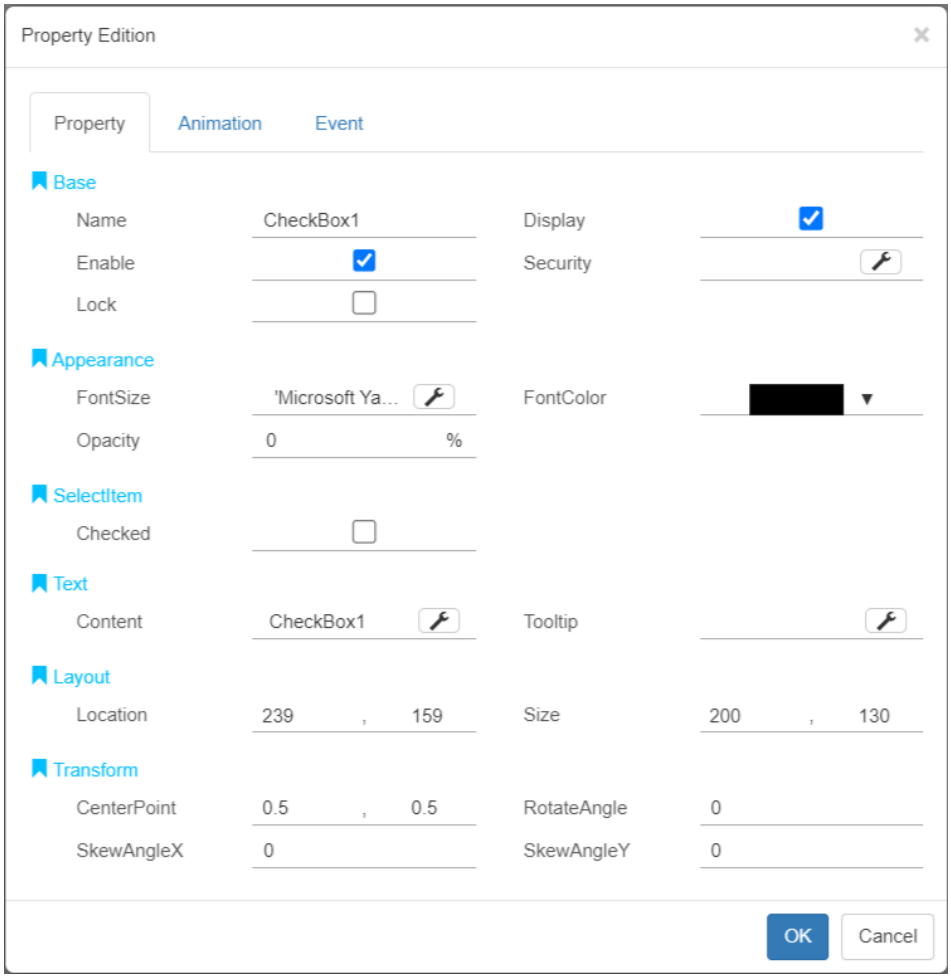


Users can click the check box to put it in edit mode as in the image above.

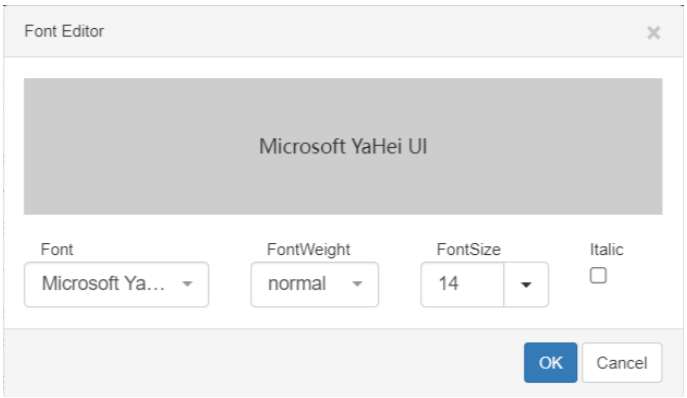
Points 1 to 8 are for size adjustment, point 9 is for rotation, point 10 is the center point, and the space above point 2 is for horizontal skewing.

- **Property**

The property of a check box consists of base, appearance, select item, text, layout, and transform.



Item		Description
Base	**Name**	The name of the control in the web window. The naming rules are as follows: 1. Consists of letters, numbers, Chinese characters, or underscores; must begin with a letter or Chinese character. 2. Not case-sensitive. 3. Cannot contain spaces, periods, exclamation marks, or special characters such as @$#?*&. 4. Cannot exceed 200 characters, with no more than 25 Chinese characters. 5. Cannot share the same name with other objects in the same web window or with the web window where it is. 6. Only supports names in traditional Chinese, simplified Chinese, or English.
	Display	To decide whether the control is shown or hidden at runtime.
	Enable	To enable or disable the control at runtime.
	Security	To set permissions for operation on the control. Assign the control to one or more

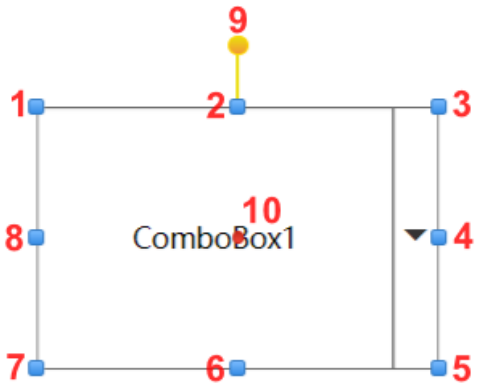
Item		Description
		securities for user access management.
	Lock	If the control is locked, mouse operations are invalid but users can still edit properties via the Property Edition dialog. A small lock will appear around the locked control.
Appearance	**Font Size**	To set the font style, font weight, font size, and italics for the content displayed on the control. 
	Font Color	To set the font color. Only monochrome is supported.
	Opacity	To set the opacity of the control. The field ranges from 0% to 100% and is kept as integer only. The default value is 0%. 0% represents full opacity while 100% represents full transparency.
Select Item	**Checked**	To set the default as checked or unchecked.
Text	**Content**	To edit the content displayed on the control. Multiple languages are supported.
	Tooltip	To edit the content of the tooltip. Multiple languages are supported.
Layout	**Location**	To set the X and Y coordinates of the control in the web window. The values are kept as integers only.
	Size	To set the width and height of the control. The values are kept as integers only (unit: pixels).
Transform	**Center Point**	To set the ratio of the X and Y coordinates of the control's center point relative to its width and height. The default value is 0.5, 0.5.
	Rotate Angle	To set the angle of rotation for the control (unit: degree).
	Skew Angle X	To set the angle of skewing in the horizontal direction. The field ranges from -80 to 80 and may contain two decimal places. The default value is 0 (unit: degree).
	Skew Angle Y	To set the angle of skewing in the vertical direction. The field ranges from -80 to 80 and may contain two decimal places. The default value is 0 (unit: degree).

6.4.3 Combo Box

Open a web window, select **Window Controls > Combo box** on the **Toolbox** pane.

Place the cursor on the canvas. Select a starting point, click and hold the mouse, then drag to the lower right and drop to create a combo box. Repeat the steps to create another one.

- **Introduction**

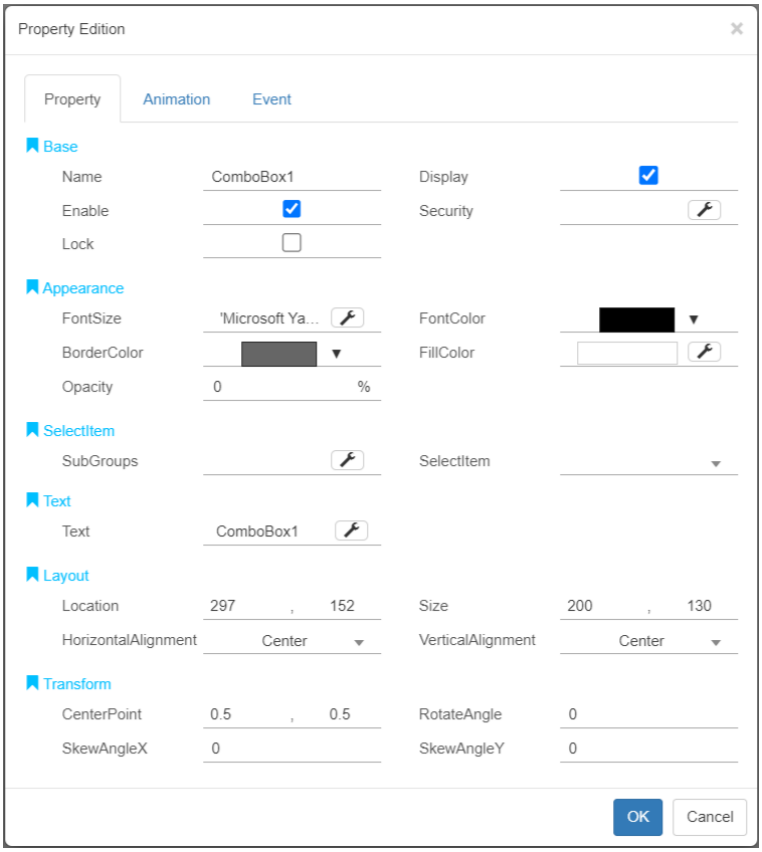


Users can click the combo box to put it in edit mode as in the image above.

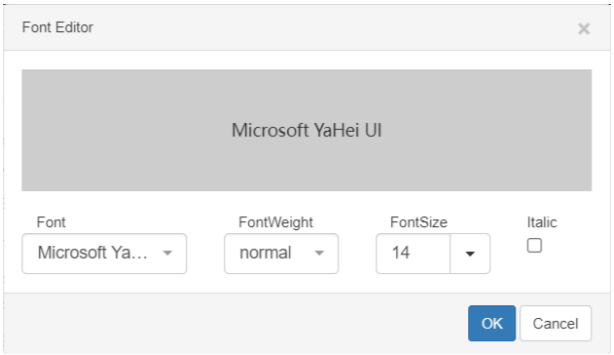
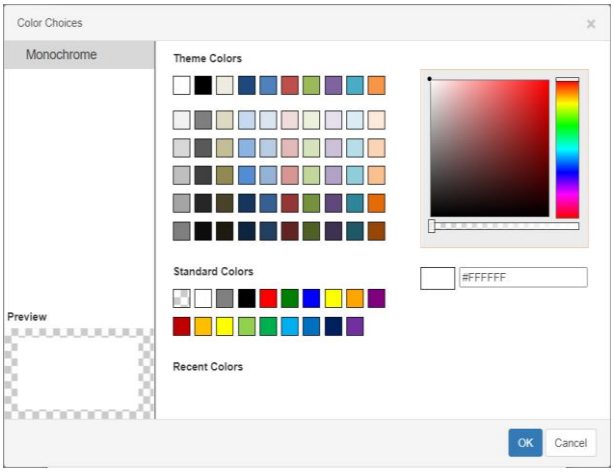
Points 1 to 8 are for size adjustment, point 9 is for rotation, point 10 is the center point, and the space above point 2 is for horizontal skewing.

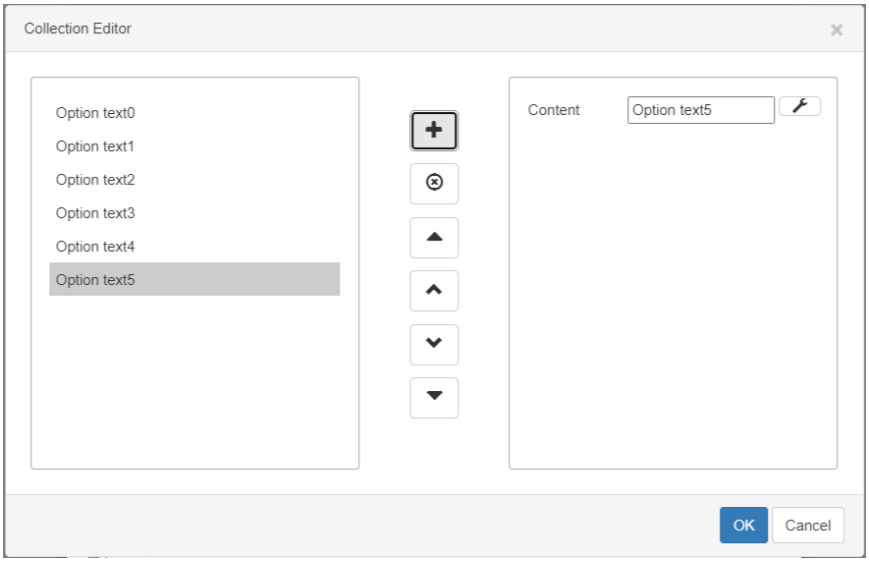
- **Property**

The property of a combo box consists of base, appearance, select item, text, layout, and transform.



Item		Description
Base	**Name**	The name of the control in the web window. The naming rules are as follows: 1. Consists of letters, numbers, Chinese characters, or underscores; must begin with a letter or Chinese character. 2. Not case-sensitive. 3. Cannot contain spaces, periods, exclamation marks, or special characters such as @$#?*&. 4. Cannot exceed 200 characters, with no more than 25 Chinese characters. 5. Cannot share the same name with other objects in the same web window or with the web window where it is. 6. Only supports names in traditional Chinese, simplified Chinese, or English.
	Display	To decide whether the control is shown or hidden at runtime.
	Enable	To enable or disable the control at runtime.
	Security	To set permissions for operation on the control. Assign the control to one or more securities for user access management.
	Lock	If the control is locked, mouse operations are invalid but users can still edit properties via the Property Edition dialog. A small lock will appear around the locked control.
Appearance	**Font Size**	To set the font style, font weight, font size, and italics for the content displayed on

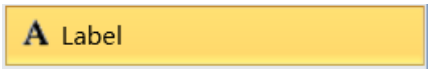
Item		Description
		the control. 
	Font Color	To set the font color. Only monochrome is supported.
	Border Color	To set the border color of the control. Only monochrome is supported.
	Fill Color	To set the fill color of the control. Only monochrome is supported. 
	Opacity	To set the opacity of the control. The field ranges from 0% to 100% and is kept as integer only. The default value is 0%. 0% represents full opacity while 100% represents full transparency.

<table>
<tr><th colspan="2">Item</th><th>Description</th></tr>
<tr><td rowspan="2">Select Item</td><td>Sub Groups</td><td>To edit the selectable items in the combo box. Click to open the Collection Editor dialog for editing.
 

<table>
<tr><th>Button</th><th>Description</th></tr>
<tr><td> </td><td>To add an option.</td></tr>
<tr><td> </td><td>To delete an option.</td></tr>
<tr><td> </td><td>To move the selected option to the top of the list.</td></tr>
<tr><td> </td><td>To move the selected option up.</td></tr>
<tr><td> </td><td>To move the selected option down.</td></tr>
<tr><td> </td><td>To move the selected option to the bottom of the list.</td></tr>
</table></td></tr>
<tr><td>Select Item</td><td>To select an item from the sub-groups as the header of the combo box. Multiple languages are supported.</td></tr>
<tr><td>Text</td><td>Text</td><td>To edit the text displayed when the combo box is closed without a selected item. Multiple languages are supported.</td></tr>
<tr><td rowspan="3">Layout</td><td>Location</td><td>To set the X and Y coordinates of the control in the web window. The values are kept as integers only.</td></tr>
<tr><td>Size</td><td>To set the width and height of the control. The values are kept as integers only (unit: pixels).</td></tr>
<tr><td>Horizontal Alignment</td><td>To horizontally align the content displayed on the control (left / center / right).</td></tr>
</table>

Item		Description
	Vertical Alignment	To vertically align the content displayed on the control (top / center / bottom).
Transform	**Center Point**	To set the ratio of the X and Y coordinates of the control's center point relative to its width and height. The default value is 0.5, 0.5.
	Rotate Angle	To set the angle of rotation for the control (unit: degree).
	Skew Angle X	To set the angle of skewing in the horizontal direction. The field ranges from -80 to 80 and may contain two decimal places. The default value is 0 (unit: degree).
	Skew Angle Y	To set the angle of skewing in the vertical direction. The field ranges from -80 to 80 and may contain two decimal places. The default value is 0 (unit: degree).

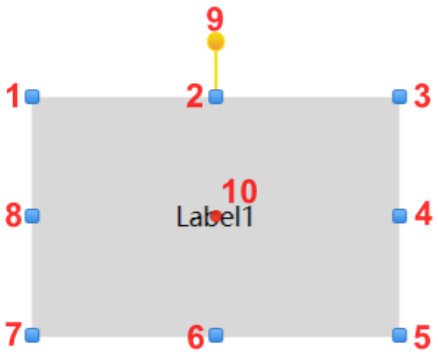
6.4.4 Label



Open a web window, select **Window Controls > Label** on the **Toolbox** pane.

Place the cursor on the canvas. Select a starting point, click and hold the mouse, then drag to the lower right and drop to create a label. Repeat the steps to create another one.

- **Introduction**

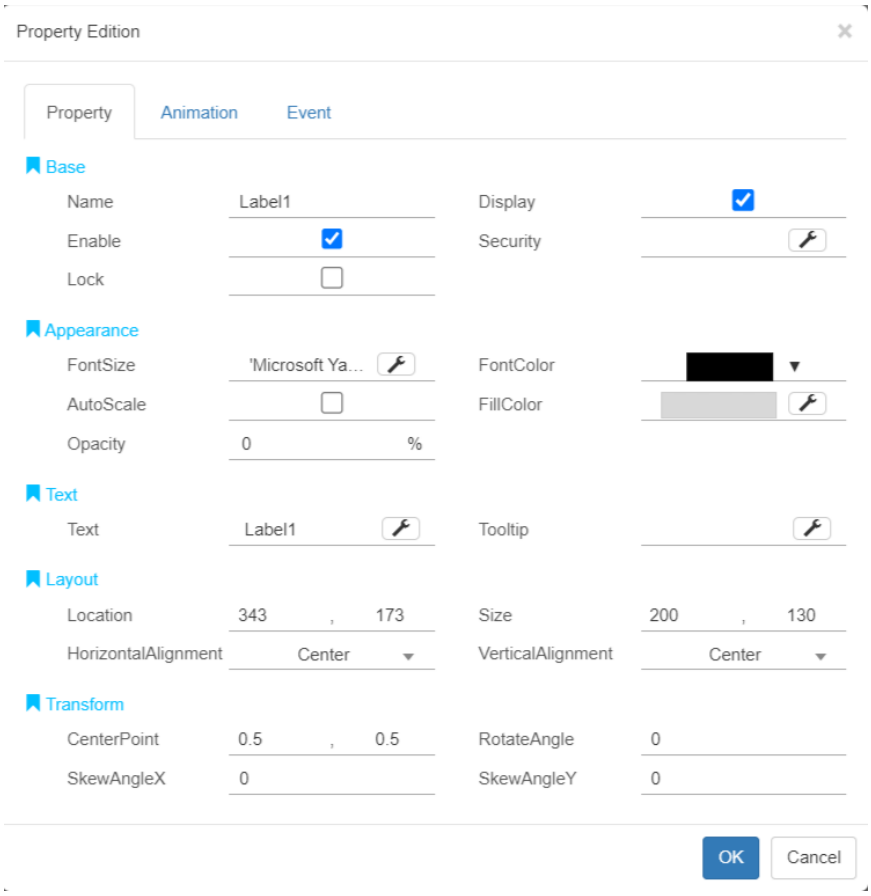


Users can click the label to put it in edit mode as in the image above.

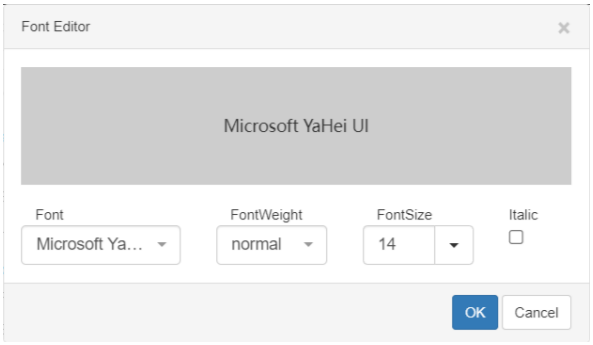
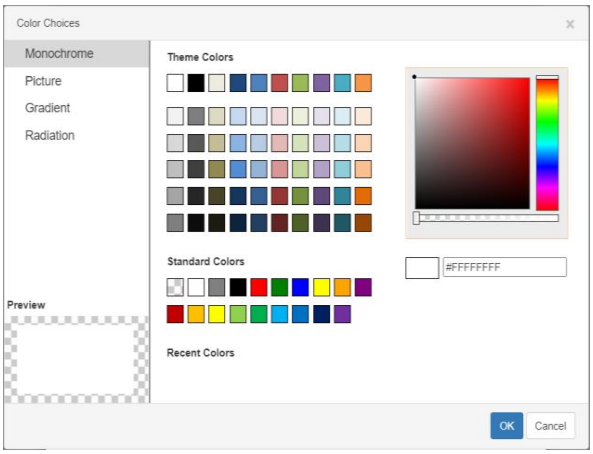
Points 1 to 8 are for size adjustment, point 9 is for rotation, point 10 is the center point, and the space above point 2 is for horizontal skewing.

- **Property**

The property of a label consists of base, appearance, text, layout, and transform.



Item		Description
Base	**Name**	The name of the control in the web window. The naming rules are as follows: 1. Consists of letters, numbers, Chinese characters, or underscores; must begin with a letter or Chinese character. 2. Not case-sensitive. 3. Cannot contain spaces, periods, exclamation marks, or special characters such as @$#?*&. 4. Cannot exceed 200 characters, with no more than 25 Chinese characters. 5. Cannot share the same name with other objects in the same web window or with the web window where it is. 6. Only supports names in traditional Chinese, simplified Chinese, or English.
	Display	To decide whether the control is shown or hidden at runtime.
	Enable	To enable or disable the control at runtime.
	Security	To set permissions for operation on the control. Assign the control to one or more securities for user access management.
	Lock	If the control is locked, mouse operations are invalid but users can still edit properties via the Property Edition dialog. A small lock will appear around the locked control.

Item		Description
Appearance	Font Size	To set the font style, font weight, font size, and italics for the content displayed on the control. 
	Font Color	To set the font color. Only monochrome is supported.
	Auto Scale	To set whether the content scales with the size of the label border.
	Fill Color	To set the fill color of the control. It supports styles such as monochrome, picture, gradient, and radiation. 
	Opacity	To set the opacity of the control. The field ranges from 0% to 100% and is kept as integer only. The default value is 0%. 0% represents full opacity while 100% represents full transparency.
Text	Text	To edit the content displayed on the control. Multiple languages are supported.
	Tooltip	To edit the content of the tooltip. Multiple languages are supported.
Layout	Location	To set the X and Y coordinates of the control in the web window. The values are kept as integers only.
	Size	To set the width and height of the control. The values are kept as integers only (unit: pixels).
	Horizontal Alignment	To horizontally align the content displayed on the control (left / center / right).

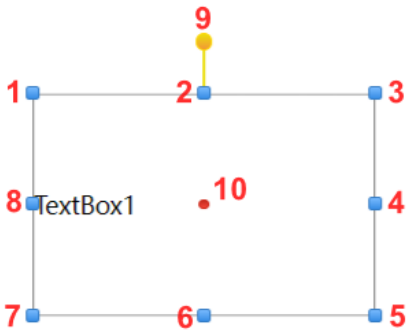
Item		Description
	Vertical Alignment	To vertically align the content displayed on the control (top / center / bottom).
Transform	**Center Point**	To set the ratio of the X and Y coordinates of the control's center point relative to its width and height. The default value is 0.5, 0.5.
	Rotate Angle	To set the angle of rotation for the control (unit: degree).
	Skew Angle X	To set the angle of skewing in the horizontal direction. The field ranges from -80 to 80 and may contain two decimal places. The default value is 0 (unit: degree).
	Skew Angle Y	To set the angle of skewing in the vertical direction. The field ranges from -80 to 80 and may contain two decimal places. The default value is 0 (unit: degree).

6.4.5 Text Box

Open a web window, select **Window Controls > Text Box** on the **Toolbox** pane.

Place the cursor on the canvas. Select a starting point, click and hold the mouse, then drag to the lower right and drop to create a text box. Repeat the steps to create another one.

- **Introduction**

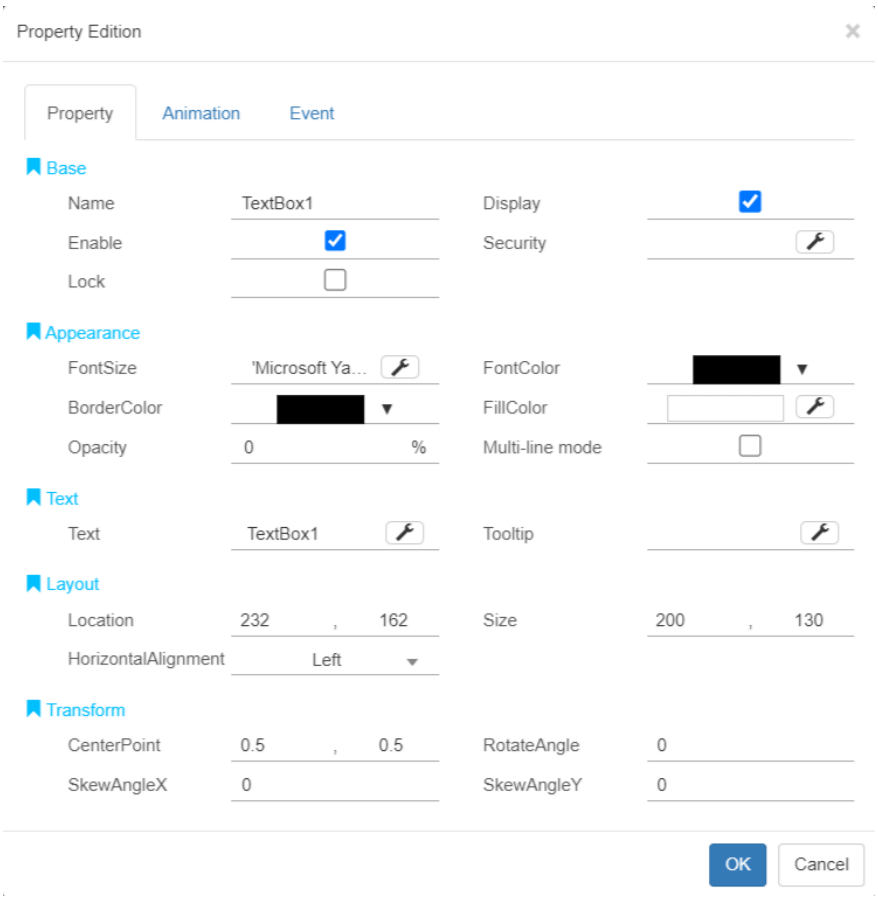


Users can click the text box to put it in edit mode as in the image above.

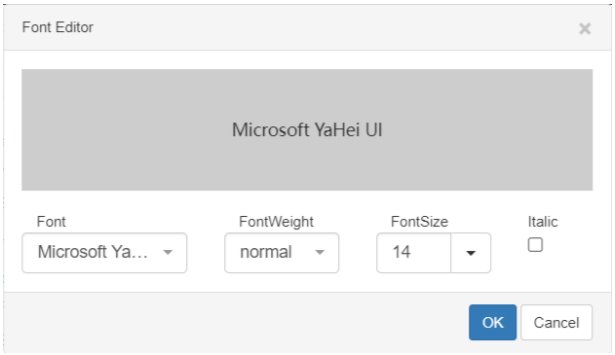
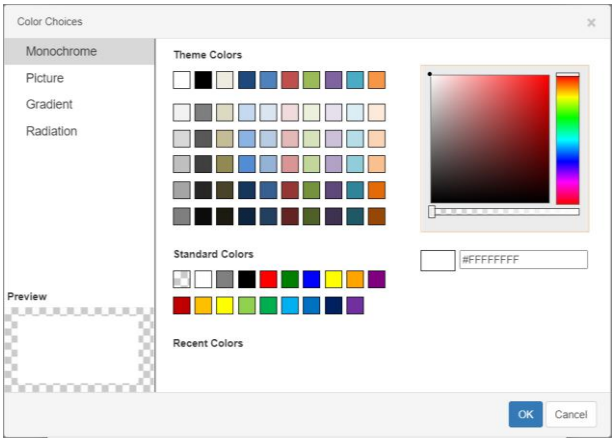
Points 1 to 8 are for size adjustment, point 9 is for rotation, point 10 is the center point, and the space above point 2 is for horizontal skewing.

- **Property**

The property of a text box consists of base, appearance, text, layout, and transform.



Item		Description
Base	**Name**	The name of the control in the web window. The naming rules are as follows: 1. Consists of letters, numbers, Chinese characters, or underscores; must begin with a letter or Chinese character. 2. Not case-sensitive. 3. Cannot contain spaces, periods, exclamation marks, or special characters such as @$#?*&. 4. Cannot exceed 200 characters, with no more than 25 Chinese characters. 5. Cannot share the same name with other objects in the same web window or with the web window where it is. 6. Only supports names in traditional Chinese, simplified Chinese, or English.
	Display	To decide whether the control is shown or hidden at runtime.
	Enable	To enable or disable the control at runtime.
	Security	To set permissions for operation on the control. Assign the control to one or more securities for user access management.
	Lock	If the control is locked, mouse operations are invalid but users can still edit properties via the Property Edition dialog. A small lock will appear around the locked control.

Item		Description
Appearance	Font Size	To set the font style, font weight, font size, and italics for the content displayed on the control. 
	Font Color	To set the font color. Only monochrome is supported.
	Border Color	To set the border color of the control. Only monochrome is supported.
	Fill Color	To set the fill color of the control. It supports styles such as monochrome, picture, gradient, and radiation. 
	Opacity	To set the opacity of the control. The field ranges from 0% to 100% and is kept as integer only. The default value is 0%. 0% represents full opacity while 100% represents full transparency.
	Multi-line mode	Check this option to wrap extra-long text into multiple lines. In multi-line mode, you can press **Enter** key to break a line; however, it is invalid to enter a line break by pressing **Enter** key when this option is not checked.
Text	Text	To edit the content displayed on the control. Multiple languages are supported.
	Tooltip	To edit the content of the tooltip. Multiple languages are supported.
Layout	Location	To set the X and Y coordinates of the control in the web window. The values are kept as integers only.
	Size	To set the width and height of the control. The values are kept as integers only (unit: pixels).

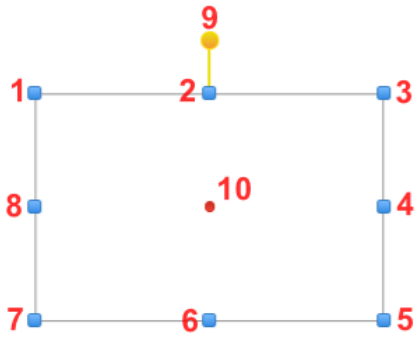
Item		Description
	Horizontal Alignment	To horizontally align the content displayed on the control (left / center / right).
Transform	**Center Point**	To set the ratio of the X and Y coordinates of the control's center point relative to its width and height. The default value is 0.5, 0.5.
	Rotate Angle	To set the angle of rotation for the control (unit: degree).
	Skew Angle X	To set the angle of skewing in the horizontal direction. The field ranges from -80 to 80 and may contain two decimal places. The default value is 0 (unit: degree).
	Skew Angle Y	To set the angle of skewing in the vertical direction. The field ranges from -80 to 80 and may contain two decimal places. The default value is 0 (unit: degree).

6.4.6 Password Box

Open a web window, select **Window Controls > Password Box** on the **Toolbox** pane.

Place the cursor on the canvas. Select a starting point, click and hold the mouse, then drag to the lower right and drop to create a password box. Repeat the steps to create another one.

- **Introduction**

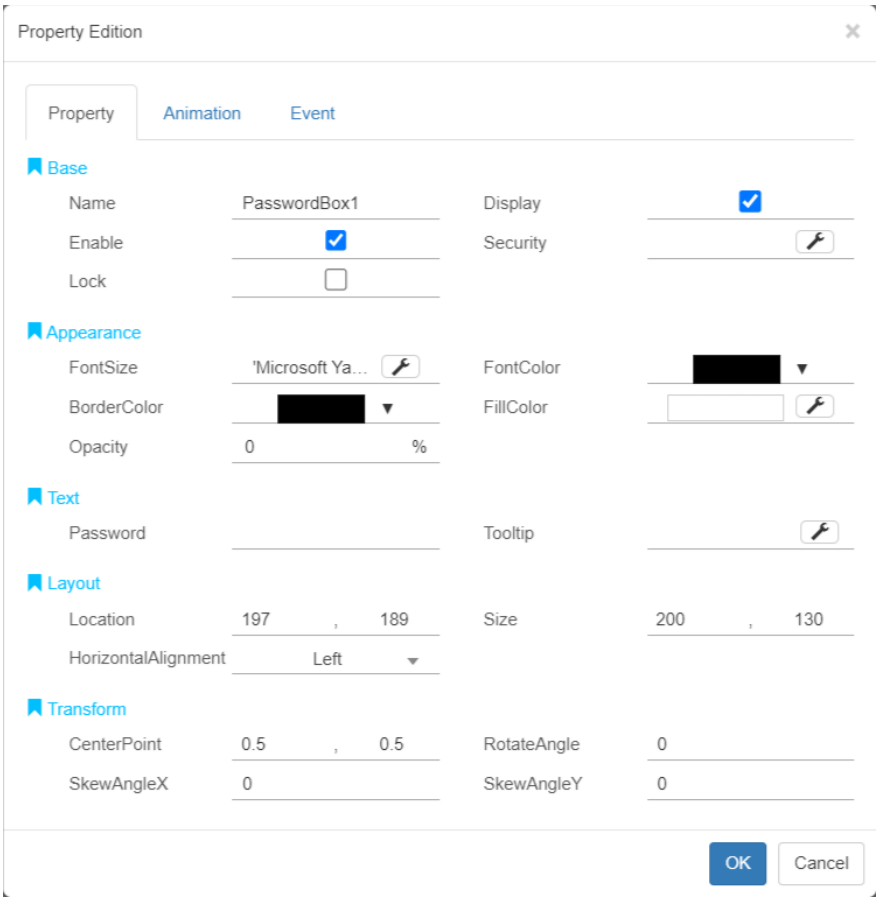


Users can click the password box to put it in edit mode as in the image above.

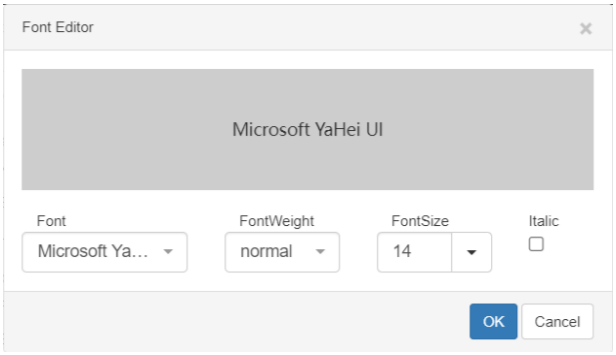
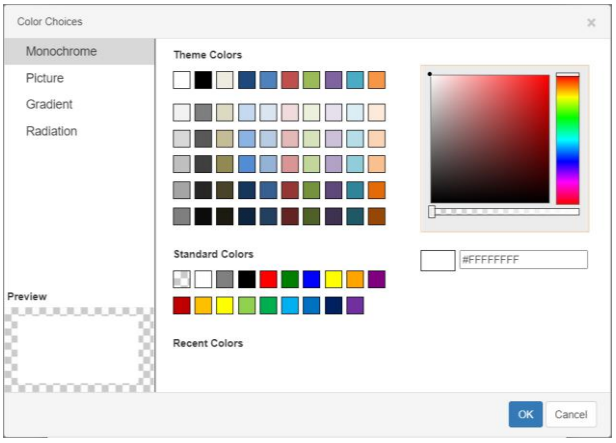
Points 1 to 8 are for size adjustment, point 9 is for rotation, point 10 is the center point, and the space above point 2 is for horizontal skewing.

- **Property**

The property of a password box consists of base, appearance, text, layout, and transform.



Item		Description
Base	**Name**	The name of the control in the web window. The naming rules are as follows: 1. Consists of letters, numbers, Chinese characters, or underscores; must begin with a letter or Chinese character. 2. Not case-sensitive. 3. Cannot contain spaces, periods, exclamation marks, or special characters such as @$#?*&. 4. Cannot exceed 200 characters, with no more than 25 Chinese characters. 5. Cannot share the same name with other objects in the same web window or with the web window where it is. 6. Only supports names in traditional Chinese, simplified Chinese, or English.
	Display	To decide whether the control is shown or hidden at runtime.
	Enable	To enable or disable the control at runtime.
	Security	To set permissions for operation on the control. Assign the control to one or more securities for user access management.
	Lock	If the control is locked, mouse operations are invalid but users can still edit properties via the Property Edition dialog. A small lock will appear around the locked control.

Item		Description
Appearance	Font Size	To set the font style, font weight, font size, and italics for the content displayed on the control. 
	Font Color	To set the font color. Only monochrome is supported.
	Border Color	To set the border color of the control. Only monochrome is supported.
	Fill Color	To set the fill color of the control. It supports styles such as monochrome, picture, gradient, and radiation. 
	Opacity	To set the opacity of the control. The field ranges from 0% to 100% and is kept as integer only. The default value is 0%. 0% represents full opacity while 100% represents full transparency.
Text	Password	To set the password.
	Tooltip	To edit the content of the tooltip. Multiple languages are supported.
Layout	Location	To set the X and Y coordinates of the control in the web window. The values are kept as integers only.
	Size	To set the width and height of the control. The values are kept as integers only (unit: pixels).
	Horizontal Alignment	To horizontally align the content displayed on the control (left / center / right).

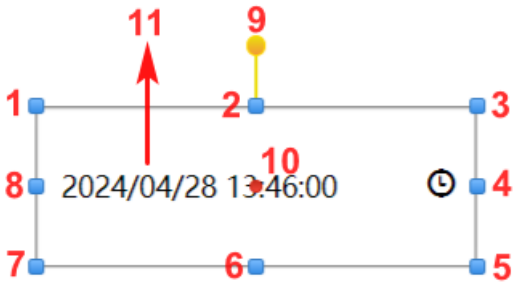
Item		Description
Transform	Center Point	To set the ratio of the X and Y coordinates of the control's center point relative to its width and height. The default value is 0.5, 0.5.
	Rotate Angle	To set the angle of rotation for the control (unit: degree).
	Skew Angle X	To set the angle of skewing in the horizontal direction. The field ranges from -80 to 80 and may contain two decimal places. The default value is 0 (unit: degree).
	Skew Angle Y	To set the angle of skewing in the vertical direction. The field ranges from -80 to 80 and may contain two decimal places. The default value is 0 (unit: degree).

6.4.7 Date Time Picker

Open a web window, select **Window Controls > Date Time Picker** on the **Toolbox** pane.

Place the cursor on the canvas. Select a starting point, click and hold the mouse, then drag to the lower right and drop to create a date time picker. Repeat the steps to create another one.

- **Introduction**

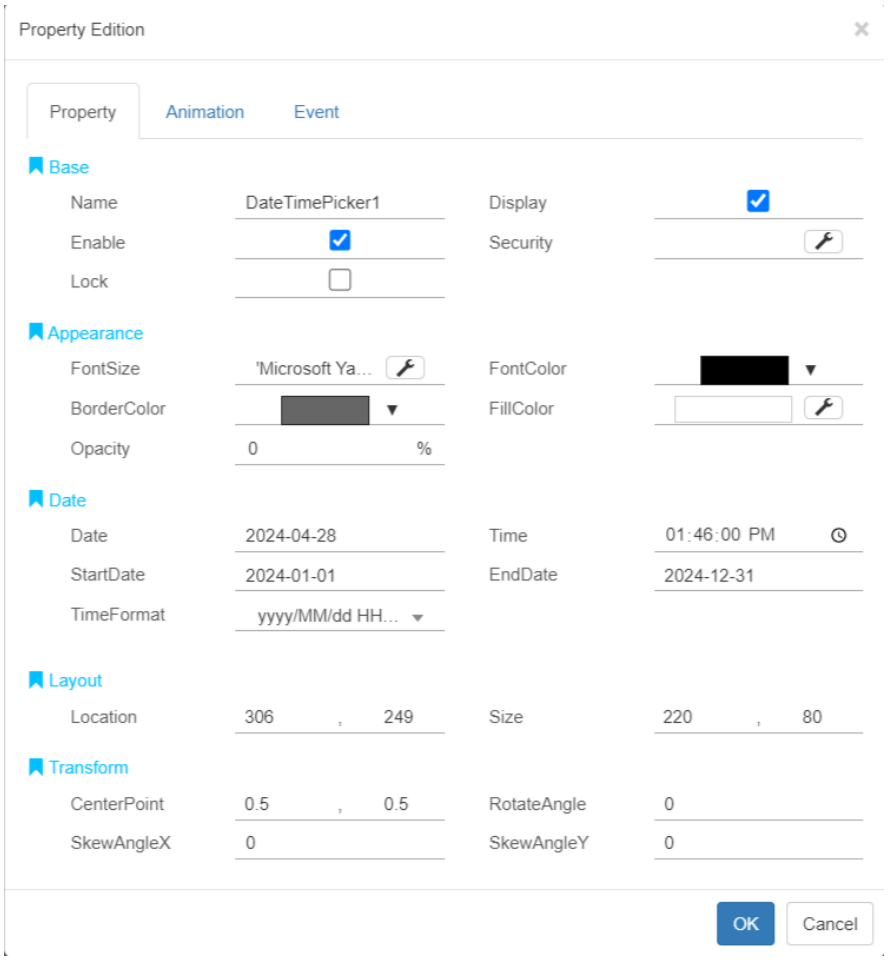


Users can click the date time picker to put it in edit mode as in the image above.

Points 1 to 8 are for size adjustment, point 9 is for rotation, point 10 is the center point, and the space above point 2 is for horizontal skewing. As for point 11, it is the place where the date and time are displayed.

- **Property**

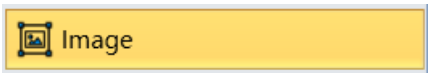
The property of a date time picker consists of base, appearance, date, layout, and transform.



Item		Description
Base	**Name**	The name of the control in the web window. The naming rules are as follows: 1. Consists of letters, numbers, Chinese characters, or underscores; must begin with a letter or Chinese character. 2. Not case-sensitive. 3. Cannot contain spaces, periods, exclamation marks, or special characters such as @$#?*&. 4. Cannot exceed 200 characters, with no more than 25 Chinese characters. 5. Cannot share the same name with other objects in the same web window or with the web window where it is. 6. Only supports names in traditional Chinese, simplified Chinese, or English.
	Display	To decide whether the control is shown or hidden at runtime.
	Enable	To enable or disable the control at runtime.
	Security	To set permissions for operation on the control. Assign the control to one or more securities for user access management.
	Lock	If the control is locked, mouse operations are invalid but users can still edit properties via the Property Edition dialog. A small lock will appear around the

Item		Description
		locked control.
Appearance	Font Size	To set the font style, font weight, font size, and italics for the content displayed on the control.
	Font Color	To set the font color. Only monochrome is supported.
	Border Color	To set the border color of the control. Only monochrome is supported.
	Fill Color	To set the fill color of the control. Only monochrome is supported.
	Opacity	To set the opacity of the control. The field ranges from 0% to 100% and is kept as integer only. The default value is 0%. 0% represents full opacity while 100% represents full transparency.
Date	Date	To set the initial date displayed.
	Time	To set the initial time displayed.
	Start Date	To set the minimum selectable date and time at runtime.
	End Date	To set the maximum selectable date and time at runtime.
	Time Format	To set the date and time format. There are six kinds of displays: yyyy/MM/dd HH:mm:ss yyyy-MM-dd HH:mm:ss yyyy/MM/dd yyyy-MM-dd HH:mm:ss HH:mm
Layout	Location	To set the X and Y coordinates of the control in the web window. The values are kept as integers only.
	Size	To set the width and height of the control. The values are kept as integers only (unit: pixels).
Transform	Center Point	To set the ratio of the X and Y coordinates of the control's center point relative to its width and height. The default value is 0.5, 0.5.
	Rotate Angle	To set the angle of rotation for the control (unit: degree).
	Skew Angle X	To set the angle of skewing in the horizontal direction. The field ranges from -80 to 80 and may contain two decimal places. The default value is 0 (unit: degree).
	Skew Angle Y	To set the angle of skewing in the vertical direction. The field ranges from -80 to 80 and may contain two decimal places. The default value is 0 (unit: degree).

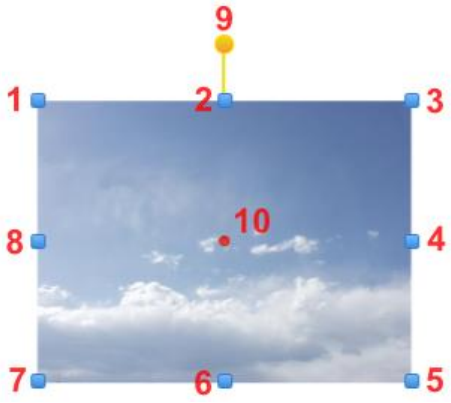
6.4.8 Image



Open a web window, select **Window Controls > Image** on the **Toolbox** pane.

Place the cursor on the canvas. Select a starting point, click and hold the mouse, then drag to the lower right and drop to create an image. Repeat the steps to create another one.

- **Introduction**

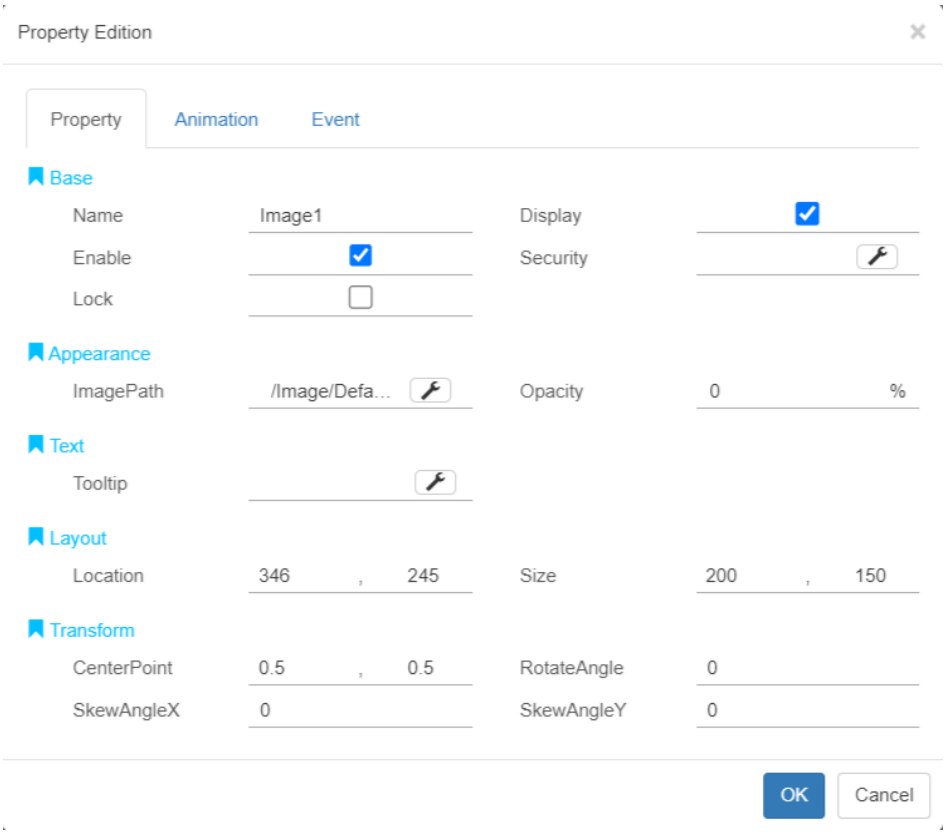


Users can click the image to put it in edit mode as in the image above.

Points 1 to 8 are for size adjustment, point 9 is for rotation, point 10 is the center point, and the space above point 2 is for horizontal skewing.

- **Property**

The property of an image consists of base, appearance, text, layout, and transform.



Item		Description
Base	**Name**	The name of the control in the web window. The naming rules are as follows: 1. Consists of letters, numbers, Chinese characters, or underscores; must begin with a letter or Chinese character. 2. Not case-sensitive. 3. Cannot contain spaces, periods, exclamation marks, or special characters such as @$#?*&. 4. Cannot exceed 200 characters, with no more than 25 Chinese characters. 5. Cannot share the same name with other objects in the same web window or with the web window where it is. 6. Only supports names in traditional Chinese, simplified Chinese, or English.
	Display	To decide whether the control is shown or hidden at runtime.
	Enable	To enable or disable the control at runtime.
	Security	To set permissions for operation on the control. Assign the control to one or more securities for user access management.
	Lock	If the control is locked, mouse operations are invalid but users can still edit properties via the Property Edition dialog. A small lock will appear around the locked control.
Appearance	**Image Path**	To specify the image path. Click to open the setting page. It supports various

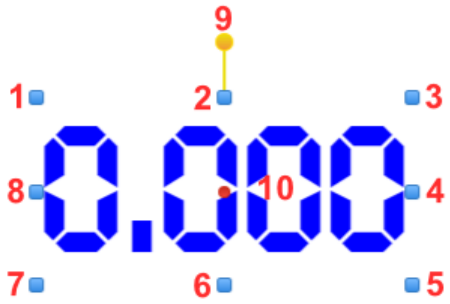
Item		Description
		image file formats such as jpg, jpeg, png, bmp, ico, wmf, emf, and so on.
	Opacity	To set the opacity of the control. The field ranges from 0% to 100% and is kept as integer only. The default value is 0%. 0% represents full opacity while 100% represents full transparency.
Text	**Tooltip**	To edit the content of the tooltip. Multiple languages are supported.
Layout	**Location**	To set the X and Y coordinates of the control in the web window. The values are kept as integers only.
	Size	To set the width and height of the control. The values are kept as integers only (unit: pixels).
Transform	**Center Point**	To set the ratio of the X and Y coordinates of the control's center point relative to its width and height. The default value is 0.5, 0.5.
	Rotate Angle	To set the angle of rotation for the control (unit: degree).
	Skew Angle X	To set the angle of skewing in the horizontal direction. The field ranges from -80 to 80 and may contain two decimal places. The default value is 0 (unit: degree).
	Skew Angle Y	To set the angle of skewing in the vertical direction. The field ranges from -80 to 80 and may contain two decimal places. The default value is 0 (unit: degree).

6.4.9 Nixie Tube

Open a web window, select **Window Controls > Nixie Tube** on the **Toolbox** pane.

Place the cursor on the canvas. Select a starting point, click and hold the mouse, then drag to the lower right and drop to create a nixie tube. Repeat the steps to create another one.

- **Introduction**

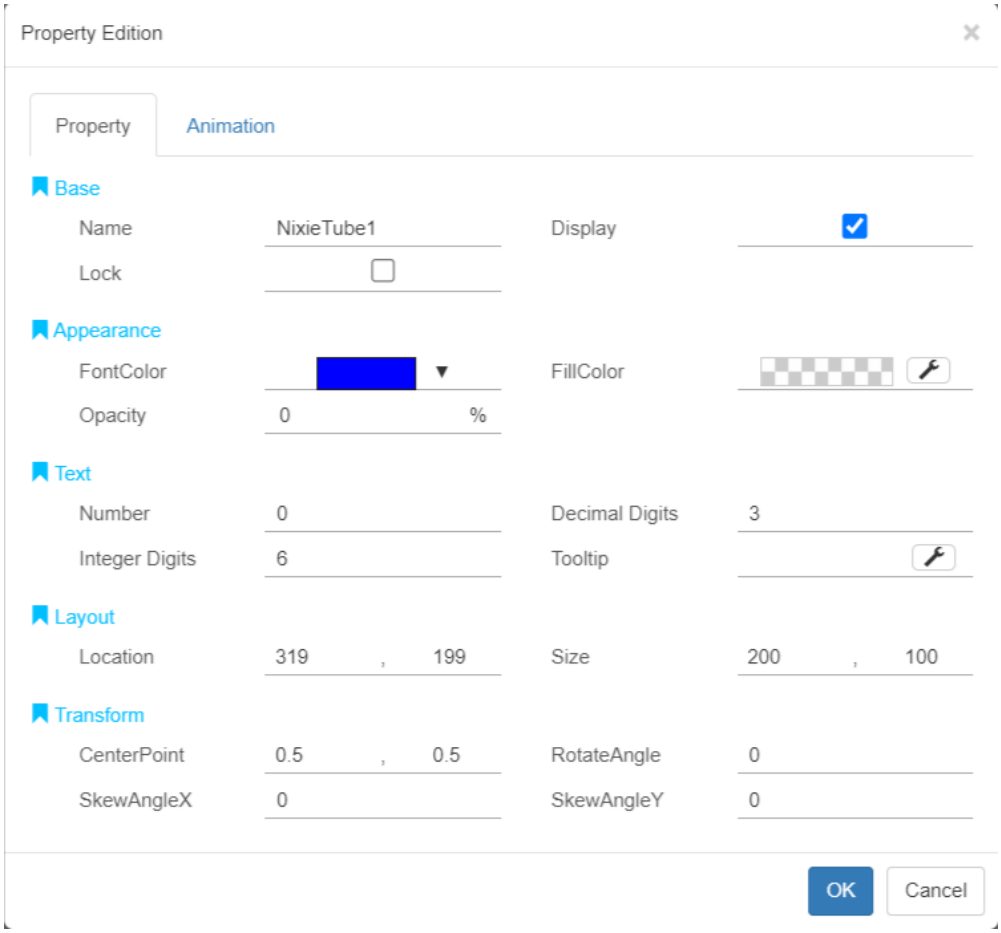


Users can click the nixie tube to put it in edit mode as in the image above.

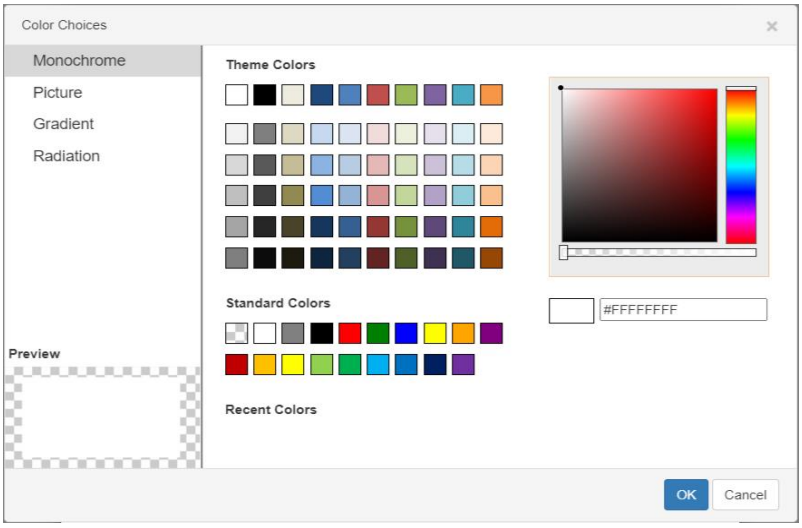
Points 1 to 8 are for size adjustment, point 9 is for rotation, point 10 is the center point, and the space above point 2 is for horizontal skewing.

- **Property**

The property of a nixie tube consists of base, appearance, text, layout, and transform.

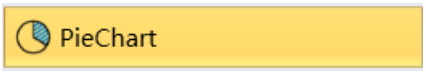


Item		Description
Base	**Name**	The name of the control in the web window. The naming rules are as follows: 1. Consists of letters, numbers, Chinese characters, or underscores; must begin with a letter or Chinese character. 2. Not case-sensitive. 3. Cannot contain spaces, periods, exclamation marks, or special characters such as @$#?*&. 4. Cannot exceed 200 characters, with no more than 25 Chinese characters. 5. Cannot share the same name with other objects in the same web window or with the web window where it is. 6. Only supports names in traditional Chinese, simplified Chinese, or English.
	Display	To decide whether the control is shown or hidden at runtime.
	Lock	If the control is locked, mouse operations are invalid but users can still edit properties via the Property Edition dialog. A small lock will appear around the locked control.
Appearance	**Font Color**	To set the font color. Only monochrome is supported.

Item		Description
	Fill Color	To set the fill color of the control. It supports styles such as monochrome, picture, gradient, and radiation. 
	Opacity	To set the opacity of the control. The field ranges from 0% to 100% and is kept as integer only. The default value is 0%. 0% represents full opacity while 100% represents full transparency.
Text	Number	To set the number displayed.
	Decimal places	To set the number of decimal places displayed.
	Integer Digits	To set the number of integer digits displayed.
	Tooltip	To edit the content of the tooltip. Multiple languages are supported.
Layout	Location	To set the X and Y coordinates of the control in the web window. The values are kept as integers only.
	Size	To set the width and height of the control. The values are kept as integers only (unit: pixels).
Transform	Center Point	To set the ratio of the X and Y coordinates of the control's center point relative to its width and height. The default value is 0.5, 0.5.
	Rotate Angle	To set the angle of rotation for the control (unit: degree).
	Skew Angle X	To set the angle of skewing in the horizontal direction. The field ranges from -80 to 80 and may contain two decimal places. The default value is 0 (unit: degree).
	Skew Angle Y	To set the angle of skewing in the vertical direction. The field ranges from -80 to 80 and may contain two decimal places. The default value is 0 (unit: degree).

6.5 Introduction to Extended Controls

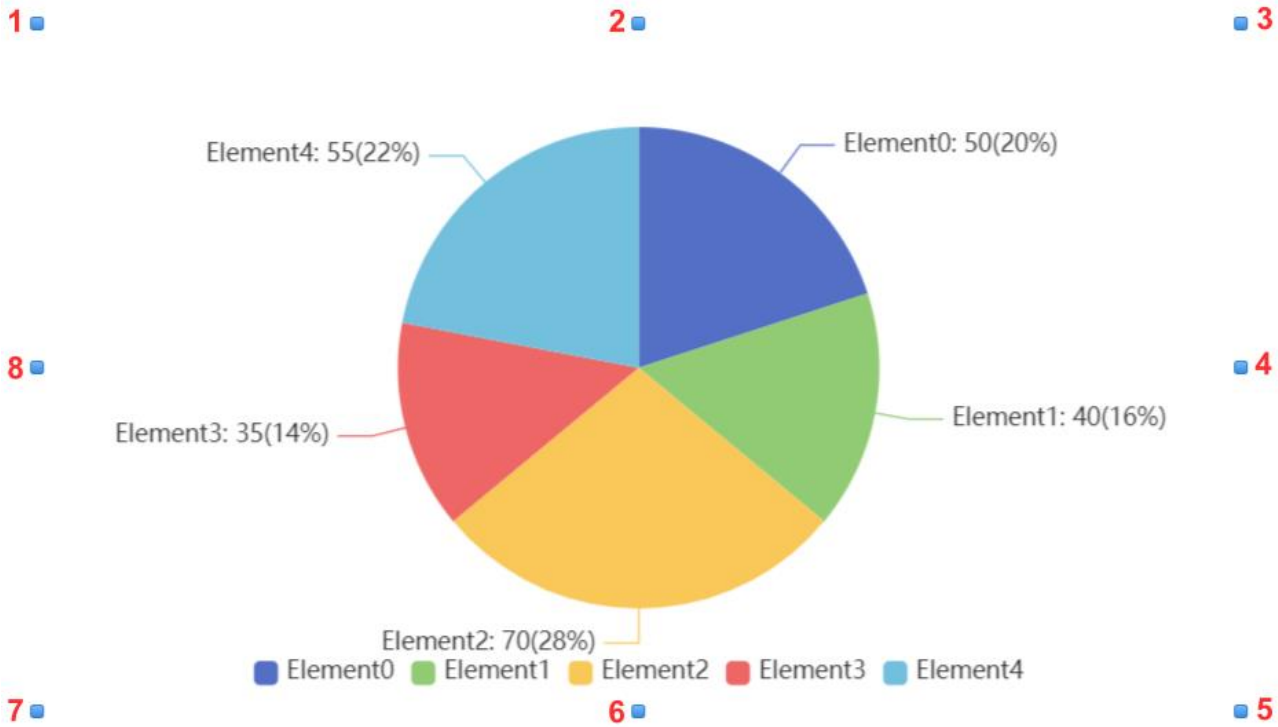
6.5.1 Pie Chart



Open a web window, select **Extended Controls > Pie Chart** on the **Toolbox** pane.

Place the cursor on the canvas. Select a starting point, click and hold the mouse, then drag to the lower right and drop to create a pie chart. Repeat the steps to create another one.

- **Introduction**

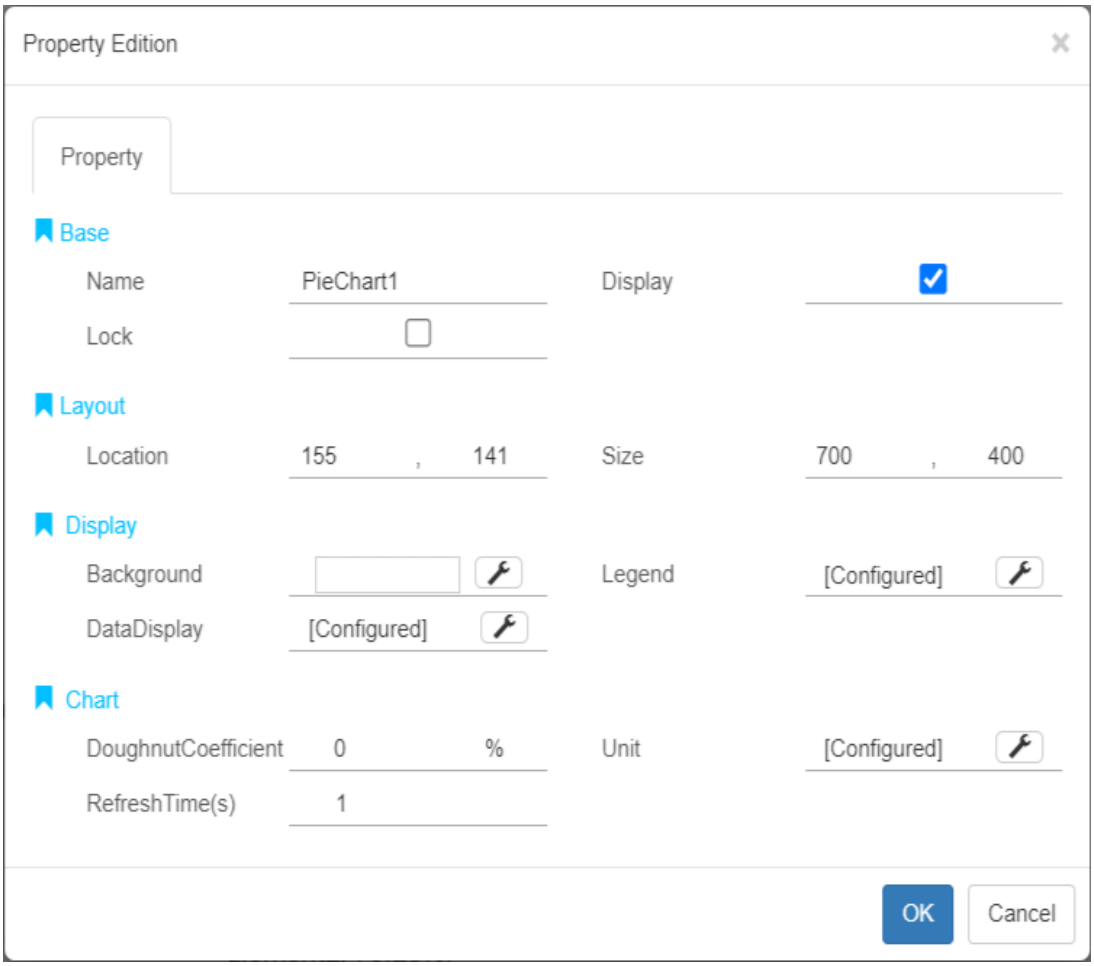


Users can click the pie chart to put it in edit mode as in the image above.

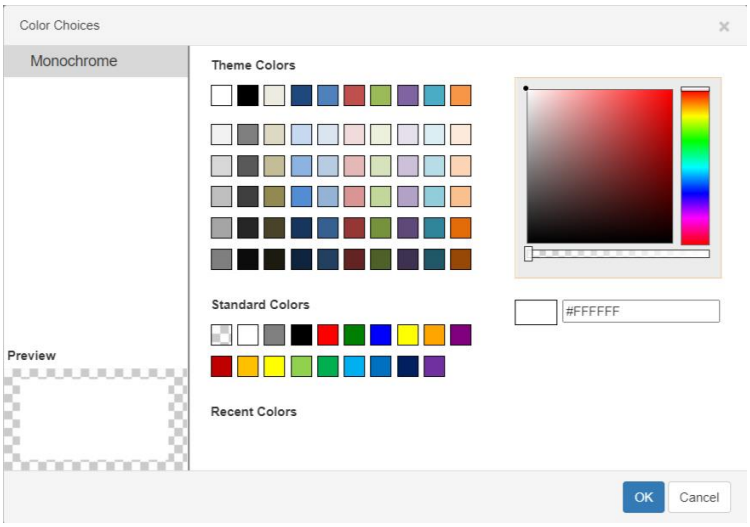
Points 1 to 8 are for size adjustment.

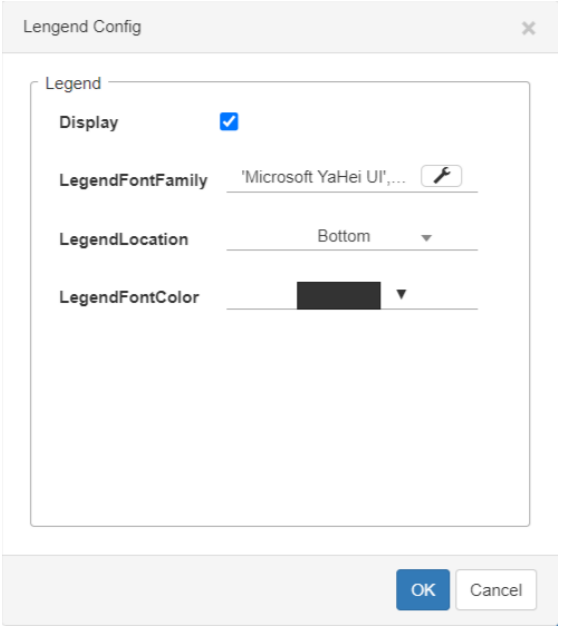
- **Property**

The property of a pie chart consists of base, layout, display, and chart.

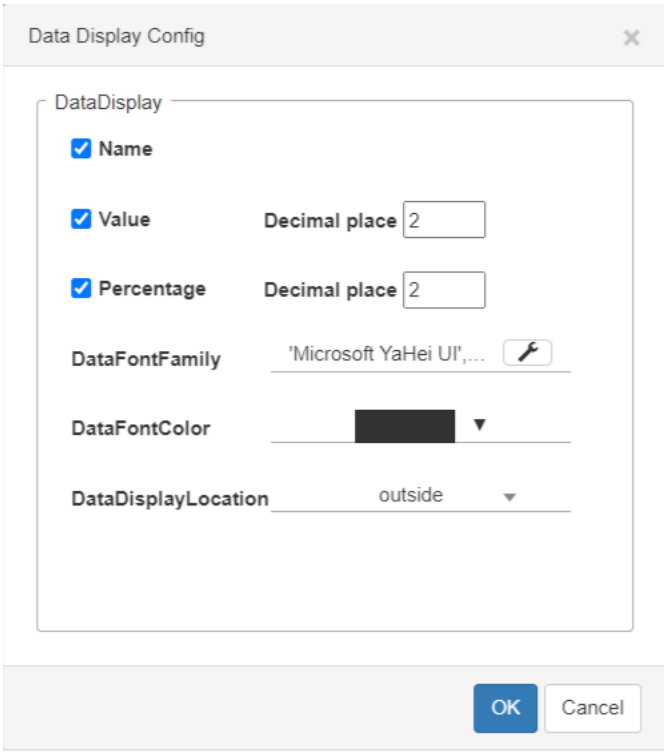


Item		Description
Base	**Name**	The name of the control in the web window. The naming rules are as follows: 1. Consists of letters, numbers, Chinese characters, or underscores; must begin with a letter or Chinese character. 2. Not case-sensitive. 3. Cannot contain spaces, periods, exclamation marks, or special characters such as @$#?*&. 4. Cannot exceed 200 characters, with no more than 25 Chinese characters. 5. Cannot share the same name with other objects in the same web window or with the web window where it is. 6. Only supports names in traditional Chinese, simplified Chinese, or English.
	Display	To decide whether the control is shown or hidden at runtime.
	Lock	If the control is locked, mouse operations are invalid but users can still edit properties via the Property Edition dialog. A small lock will appear around the locked control.

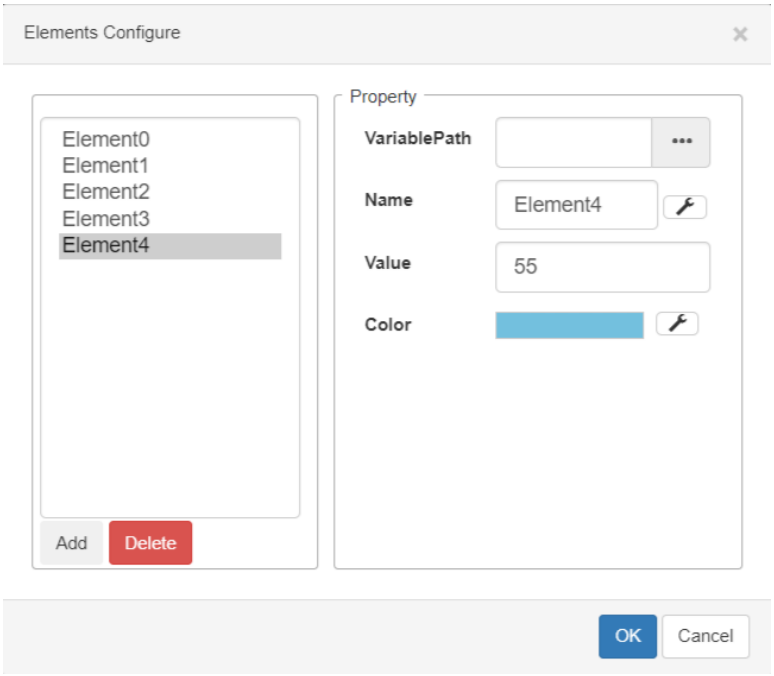
Item		Description
Layout	Location	To set the X and Y coordinates of the control in the web window. The values are kept as integers only.
	Size	To set the width and height of the control. The values are kept as integers only (unit: pixels).
Display	Background	To set the fill color outside the plot area of the chart. Only monochrome is supported. 

<table>
<tr><th colspan="2">Item</th><th>Description</th></tr>
<tr><td></td><td>Legend</td><td>To decide whether to show or hide the chart legend. Users can change the position of the legend and customize its font and color.
 

<table>
<tr><th>Property</th><th>Description</th></tr>
<tr><td>Display</td><td>To decide whether to show the legend.</td></tr>
<tr><td>Legend Font Family</td><td>To set the font style, font weight, font size, and italics.</td></tr>
<tr><td>Legend Location</td><td>To set the position of the legend: top, bottom, left, or right. The legend is arranged horizontally when at the top or bottom and is arranged vertically when on the left or right. The legend is placed at the bottom by default.</td></tr>
<tr><td>Legend Font Color</td><td>To set the font color. Only monochrome is supported.</td></tr>
</table></td></tr>
</table>

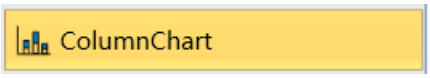
<table>
<tr><th colspan="2">Item</th><th>Description</th></tr>
<tr><td rowspan="2"></td><td>Data Display</td><td>To configure data display.
 

<table>
<tr><th>Property</th><th>Description</th></tr>
<tr><td>Name</td><td>Check this option to show the data name; or, leave it unchecked to hide the data name.</td></tr>
<tr><td>Value</td><td>Check this option to show the data value; or, leave it unchecked to hide the data value. The value of decimal places ranges from 0 to 12 and is 2 by default. It can be changed by users.</td></tr>
<tr><td>Percentage</td><td>Check this option to show the data percentage; or, leave it unchecked to hide the data percentage. The value of decimal places ranges from 0 to 12 and is 2 by default. It can be changed by users.</td></tr>
<tr><td>Data Font Family</td><td>To set the font style, font weight, font size, and italics.</td></tr>
<tr><td>Data Font Color</td><td>To set the font color. Only monochrome is supported.</td></tr>
<tr><td>Data Display Location</td><td>To set the position of the data: inside, outside or arrange. The data is placed outside the plot area by default.</td></tr>
</table></td></tr>
<tr><td>Chart</td><td>Doughnut Coefficient</td><td>To configure the pie chart as a doughnut chart. Set the proposition of the pie chart that is hollow. The value ranges from 0% to 99% and is kept as integer only. The default value is 0%.</td></tr>
</table>

<table>
<tr><th colspan="2">Item</th><th>Description</th></tr>
<tr><td></td><td>Unit</td><td>To configure the elements and relevant variables for the pie chart.
 

The left pane is for addition or deletion of elements while the right pane is for property configuration for the selected element.
<table>
<tr><th>Property</th><th>Description</th></tr>
<tr><td>Add</td><td>To add a new element.</td></tr>
<tr><td>Delete</td><td>To delete the selected element.</td></tr>
<tr><td>Variable Path</td><td>To set a variable for the element. It only supports readable analog variables. After setup, the value below is greyed out and locked. Right-click the variable and delete it to unlock and modify the value.</td></tr>
<tr><td>Name</td><td>To set the name of the element. Multiple languages are supported.</td></tr>
<tr><td>Value</td><td>To set the initial value of the element, which must be greater or equal 0.</td></tr>
<tr><td>Color</td><td>To set the fill color of the element. Only monochrome is supported.</td></tr>
</table></td></tr>
<tr><td></td><td>Refresh Time(s)</td><td>To set the data refresh interval. The value is kept as integer and is 1 by default (unit: second).</td></tr>
</table>

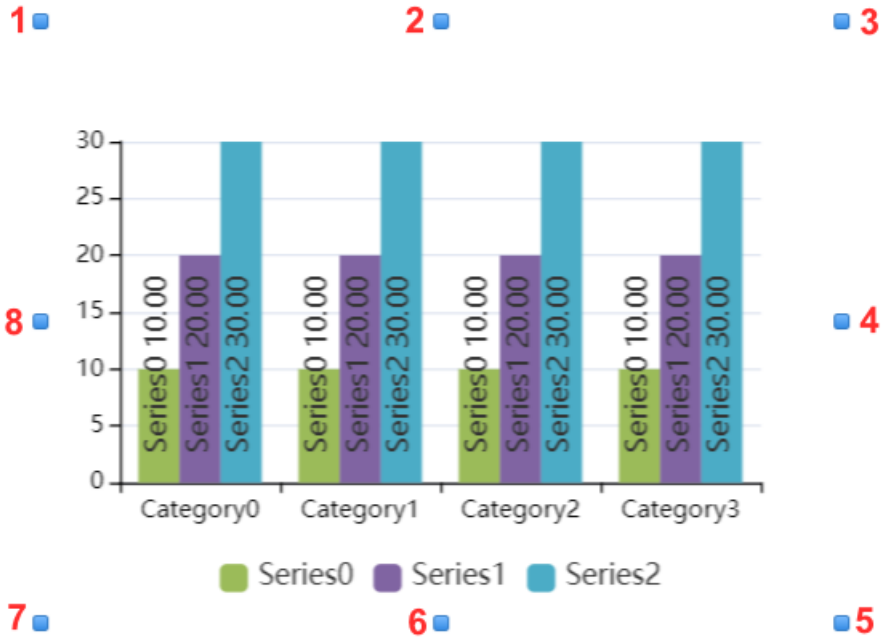
6.5.2 Column Chart



Open a web window, select **Extended Controls > Column Chart** on the **Toolbox** pane.

Place the cursor on the canvas. Select a starting point, click and hold the mouse, then drag to the lower right and drop to create a column chart. Repeat the steps to create another one.

- **Introduction**

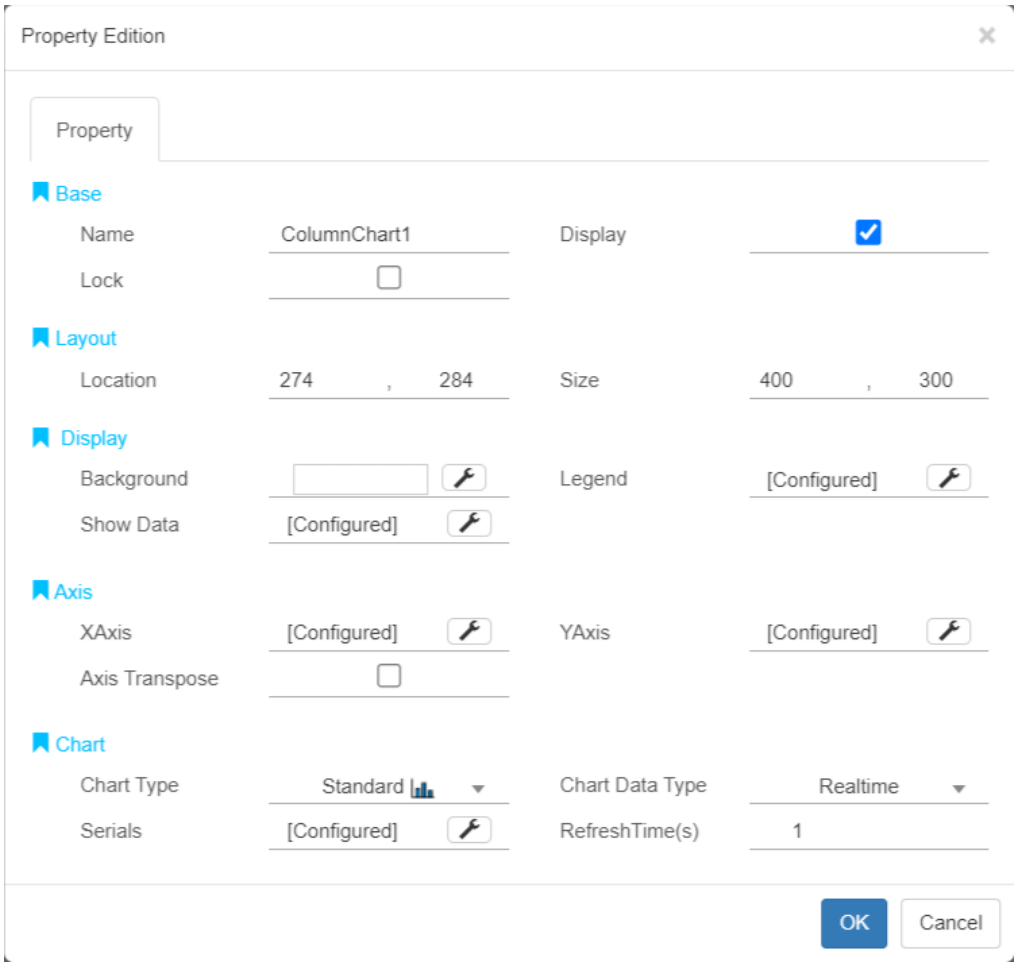


Users can click the column chart to put it in edit mode as in the image above.

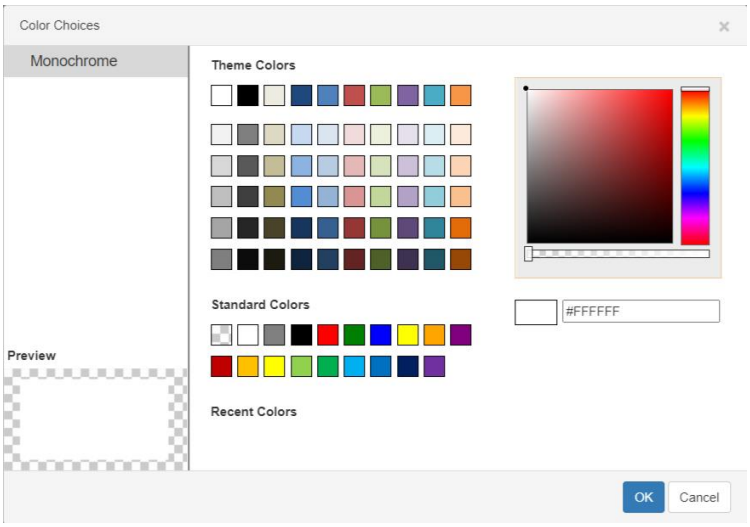
Points 1 to 8 are for size adjustment.

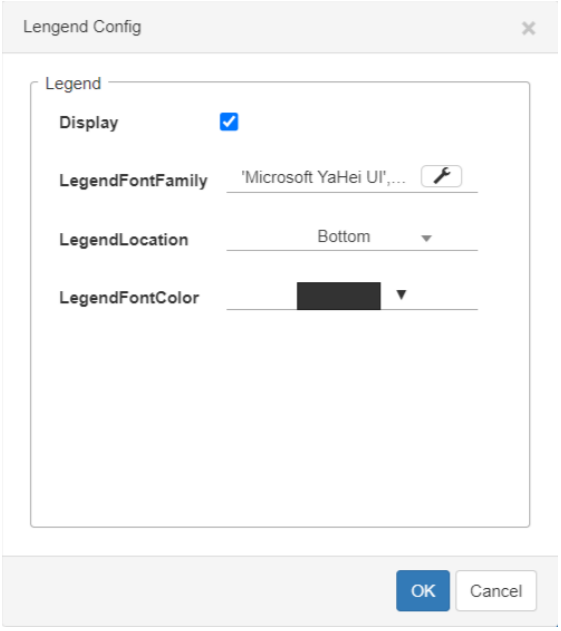
- **Property**

The property of a column chart consists of base, layout, display, axis, and chart.

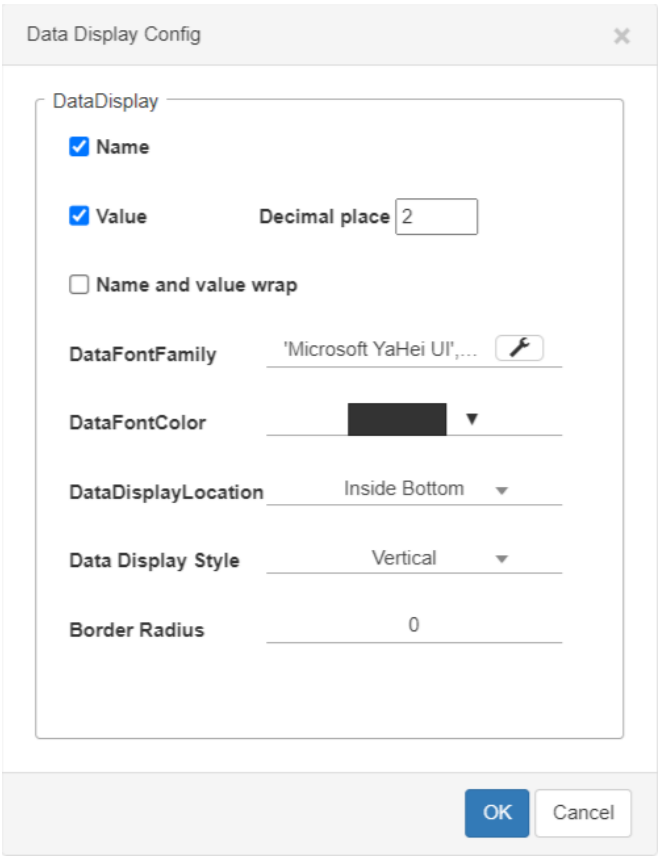


Item		Description
Base	**Name**	The name of the control in the web window. The naming rules are as follows: 1. Consists of letters, numbers, Chinese characters, or underscores; must begin with a letter or Chinese character. 2. Not case-sensitive. 3. Cannot contain spaces, periods, exclamation marks, or special characters such as @$#?*&. 4. Cannot exceed 200 characters, with no more than 25 Chinese characters. 5. Cannot share the same name with other objects in the same web window or with the web window where it is. 6. Only supports names in traditional Chinese, simplified Chinese, or English.
	Display	To decide whether the control is shown or hidden at runtime.
	Lock	If the control is locked, mouse operations are invalid but users can still edit properties via the Property Edition dialog. A small lock will appear around the locked control.

Item		Description
Layout	Location	To set the X and Y coordinates of the control in the web window. The values are kept as integers only.
	Size	To set the width and height of the control. The values are kept as integers only (unit: pixels).
Display	Background	To set the fill color outside the plot area of the chart. Only monochrome is supported. 

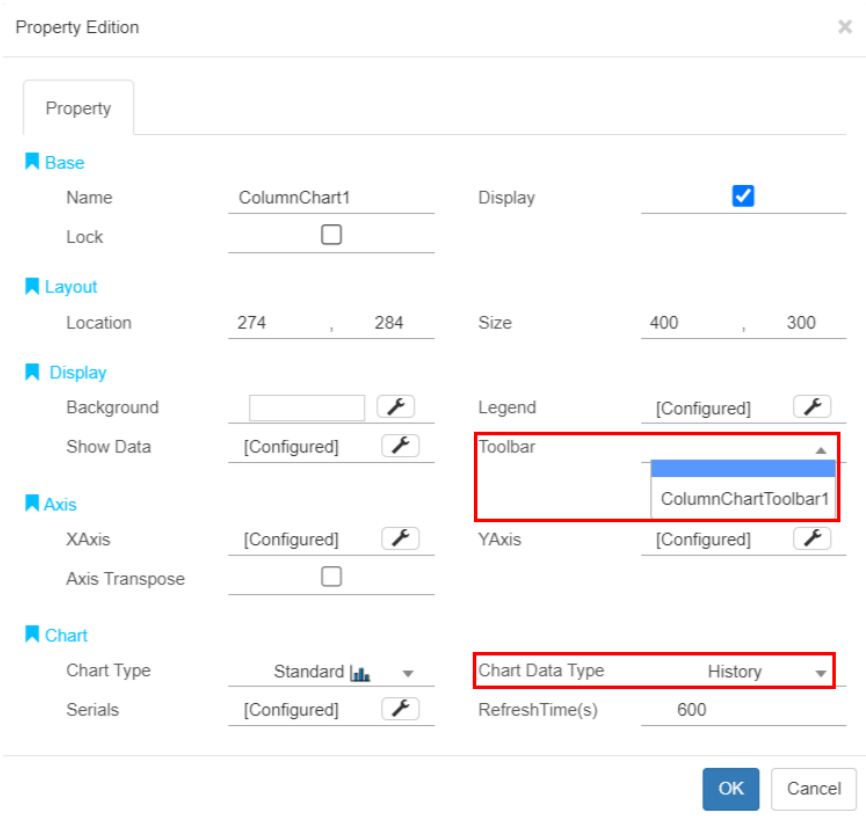
<table>
<tr><th colspan="2">Item</th><th>Description</th></tr>
<tr><td></td><td>Legend</td><td>To decide whether to show or hide the chart legend. Users can change the position of the legend and customize its font and color.
 

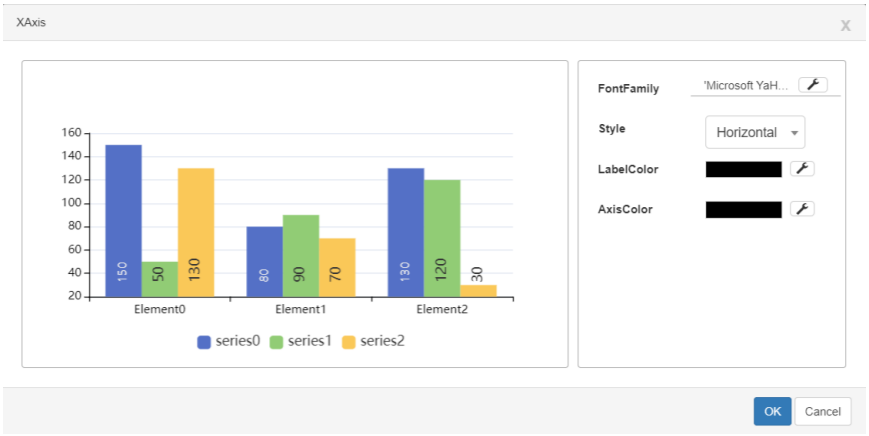
<table>
<tr><th>Property</th><th>Description</th></tr>
<tr><td>Display</td><td>To decide whether to show the legend.</td></tr>
<tr><td>Legend Font Family</td><td>To set the font style, font weight, font size, and italics.</td></tr>
<tr><td>Legend Location</td><td>To set the position of the legend: top, bottom, left, or right. The legend is arranged horizontally when at the top or bottom and is arranged vertically when on the left or right. The legend is placed at the bottom by default.</td></tr>
<tr><td>Legend Font Color</td><td>To set the font color. Only monochrome is supported.</td></tr>
</table></td></tr>
</table>

Item		Description
	Show Data	To configure data display. 

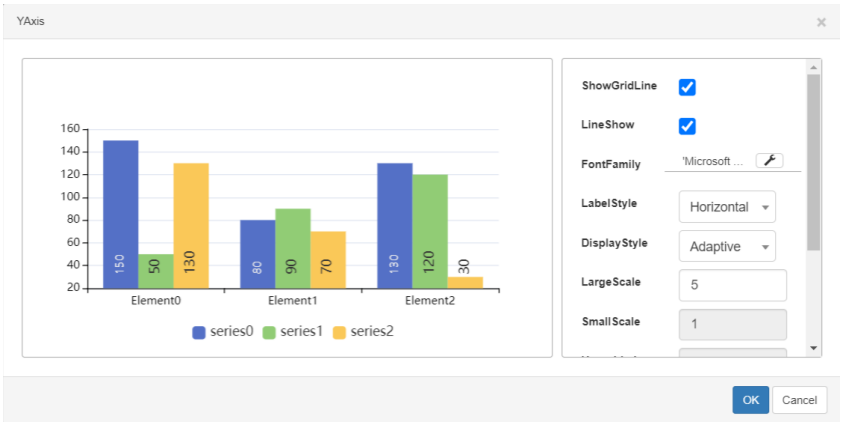
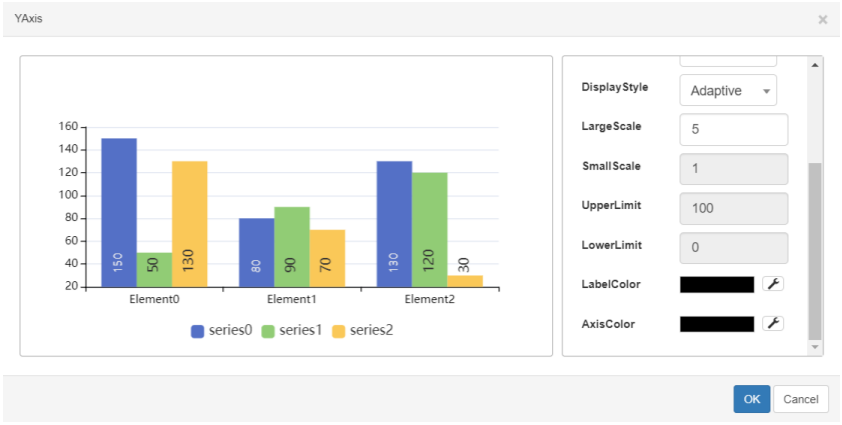
Property	Description
Name	Check this option to show the data name; or, leave it unchecked to hide the data name.
Value	Check this option to show the data value; or, leave it unchecked to hide the data value. The value of decimal places ranges from 0 to 12 and is 2 by default. It can be changed by users.
Name and value wrap	To set whether to wrap text when the name or value is too long.
Data Font Family	To set the font style, font weight, font size, and italics.
Data Font Color	To set the font color. Only monochrome is supported.
Data Display Location	To set the position of the data: inside bottom, inside center or outside. The data is placed inside bottom by default.
Data Display Style	To set the display style of the data: horizontal, tilt left, tilt right, or vertical. The data is displayed vertically by default.
Border Radius	To set the border radius of the data bars. The value ranges

Item		Description	
			from 0 to 90 and is 0 by default.

Item		Description
	Toolbor	The toolbar setting will appear when the chart data type is set as **History**. All the toolbars in the current web window is shown in the drop-down list with the selected one being greyed out. 

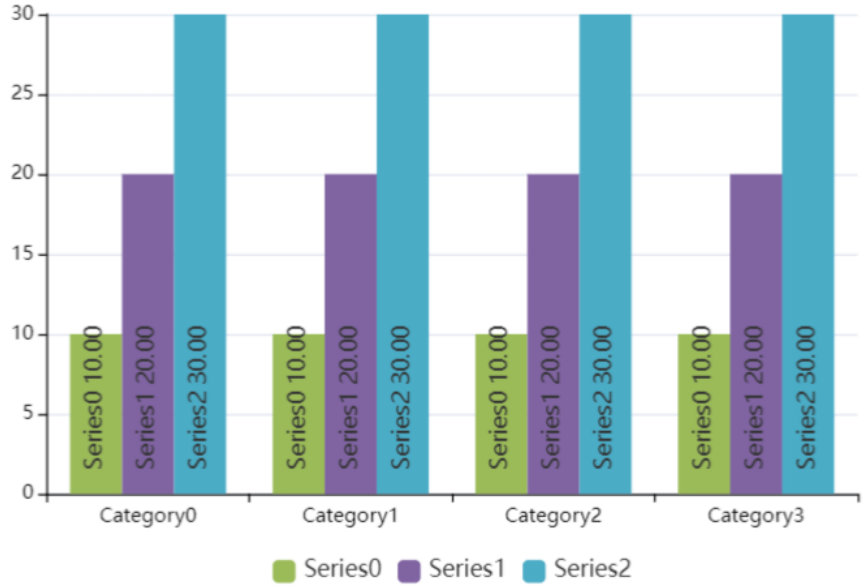
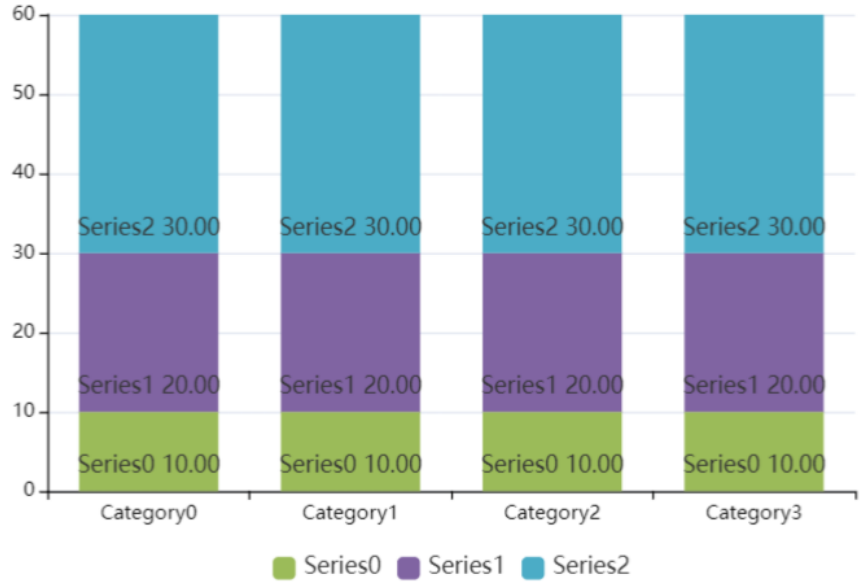
<table>
<tr><th colspan="2">Item</th><th>Description</th></tr>
<tr><td>Axis</td><td>X Axis</td><td>To set the font style, display style, label color, and axis color.
 

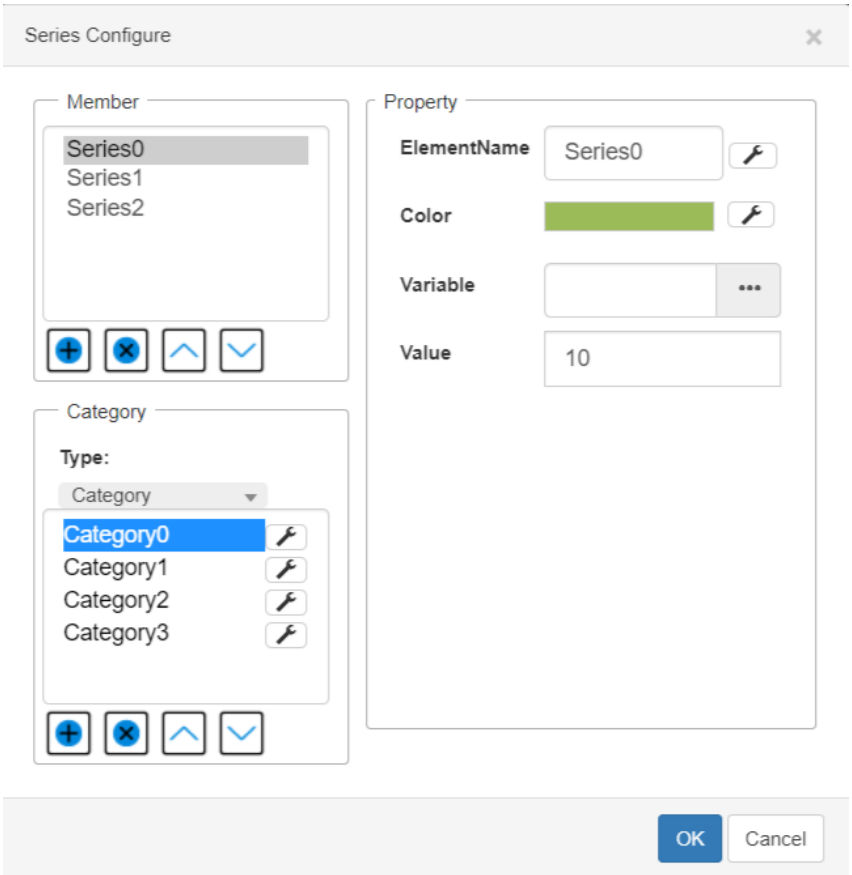
<table>
<tr><th>Property</th><th>Description</th></tr>
<tr><td>Font Family</td><td>To set the font style, font weight, font size, and italics for the axis labels.</td></tr>
<tr><td>Style</td><td>To set the display style of the axis labels: horizontal, tilt left, tilt right, or vertical.</td></tr>
<tr><td>Label Color</td><td>To set the label color. Only monochrome is supported.</td></tr>
<tr><td>Axis Color</td><td>To set the axis color. Only monochrome is supported.</td></tr>
</table>
</td></tr>
</table>

Item		Description
	Y Axis	To set the font style, display style, scale configuration, label color, axis color, etc.  

Property	Description
Show Grid Line	Check this option to show the grid line; or, leave it unchecked to hide the grid line.
Line Show	Check this option to show the line and labels of the Y axis; or, leave it unchecked to hide the line and labels.
Font Family	To set the font style, font weight, font size, and italics for the axis labels.
Label Style	To set the display style of the axis labels: horizontal, tilt left, tilt right, or vertical.
Display Style	To set the display style of the coordinates: adaptive or customize. Adaptive is selected by default with small scale, upper and lower limits fixed in grey. The display changes automatically based on the actual values.
Large Scale	To set the number of large scales.
Small Scale	To set the number of small scales.
Upper Limit	To set the upper limit of the Y axis coordinates, which must

Item		Description	
			be greater than the lower limit.
		Lower Limit	To set the lower limit of the Y axis coordinates, which must be less than the upper limit.
		Label Color	To set the label color. Only monochrome is supported.
		Axis Color	To set the axis color. Only monochrome is supported.

Item		Description
	Axis Transpose	Check this option to switch X axis to Y axis and vice versa, crossing at the origin (0,0). This option is unchecked by default.
Chart	**Chart Type**	There are two types available: standard chart or stack chart. **Standard Chart**  **Stack Chart** 
	Chart Data Type	To select the data type displayed: realtime or history data.

Item		Description
	Serials	To configure the data series: member and category. Members of different categories can be individually bound with variables.  In the Member section, users can add, delete and arrange the order of the members. The maximum number is 32. The members correspond to the chart legend. In the Category section, users can add, delete and arrange the order of the categories. The maximum number is 32. Click to modify the category name in which multiple languages are supported. There are two types of category: category and time. The latter type is available only in history charts.

Type of Category	Description
Category	To configure the categories in the development environment and the members are grouped by category at runtime. In each group, all members are displayed and can be bound with different variables.
Time	Configuration is not required in the development environment. The members are grouped based on the requested time interval divided by the data refresh interval. The maximum number of groups is 32. In each group, all members are displayed. Here, the X axis serves as the time

<table>
<tr><th colspan="2">Item</th><th>Description</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><td></td><td>axis.</td></tr>
</table>

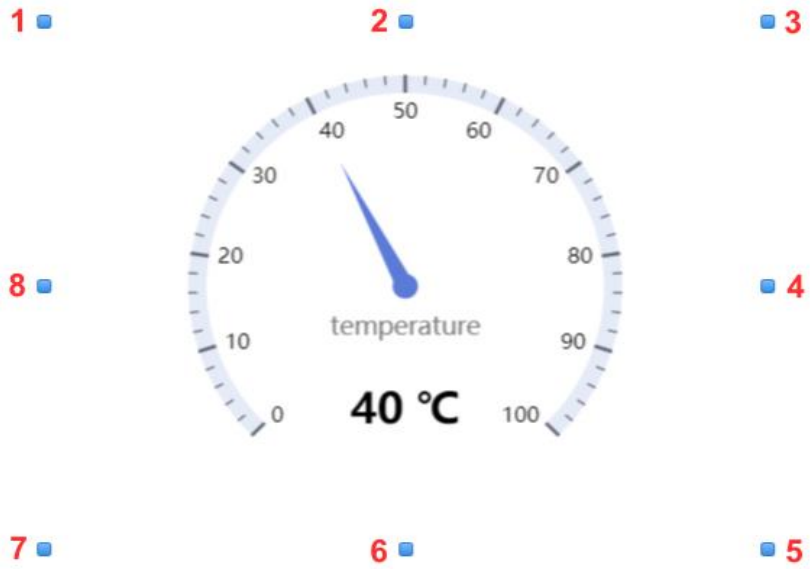
The Property section is for configuring the properties of the members.
<table>
<tr><th>Type of Category</th><th>Description</th></tr>
<tr><td>Element Name</td><td>To set the name of the member. Multiple languages are supported.</td></tr>
<tr><td>Color</td><td>To set the fill color of the member. It supports monochrome and gradient.</td></tr>
<tr><td>Variable</td><td>To set the variables for the member. It only supports readable analog variables. After setup, the value below is greyed out and locked. Right-click the variable and delete it to unlock and modify the value.</td></tr>
<tr><td>Value</td><td>To set the initial value of the member. This property is not available in history charts.</td></tr>
</table>
</td></tr>
<tr><td></td><td>Refresh Time(s)</td><td>
To set the data refresh interval. The value is kept as integer and must be greater than or equal 1. The default is 1.
<table>
<tr><th>Chart Data Type</th><th>Description</th></tr>
<tr><td>Realtime</td><td>The data refresh interval of a realtime chart is 1 by default. The value is kept as integer and must be greater than or equal 1.</td></tr>
<tr><td>History</td><td>The data refresh interval of a history chart is 600 by default. The value is kept as integer and must be greater than or equal 600. The historical data query function is disabled when the refresh interval is set as 0.</td></tr>
</table>
</td></tr>
</table>

6.5.3 Circle Gauge

Open a web window, select **Extended Controls > Circle Gauge** on the **Toolbox** pane.

Place the cursor on the canvas. Select a starting point, click and hold the mouse, then drag to the lower right and drop to create a circle gauge. Repeat the steps to create another one.

- **Introduction**

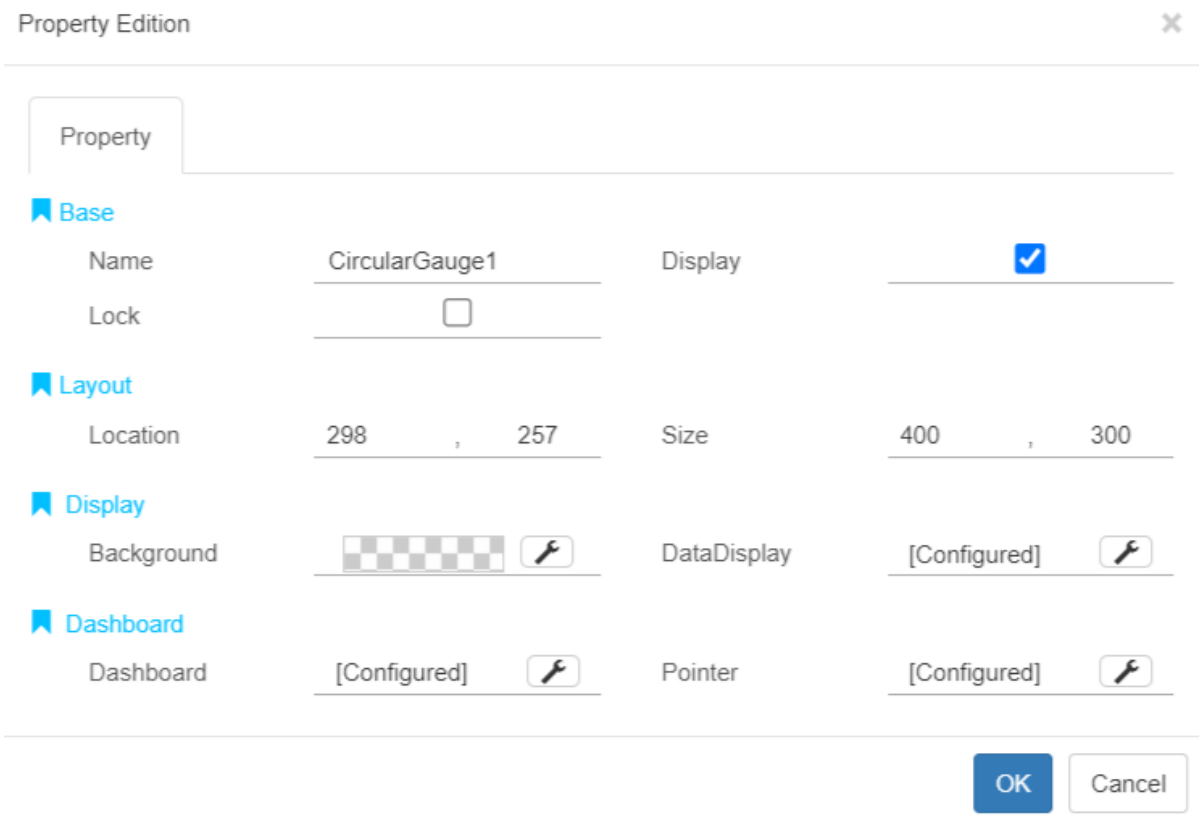


Users can click the circle gauge to put it in edit mode as in the image above.

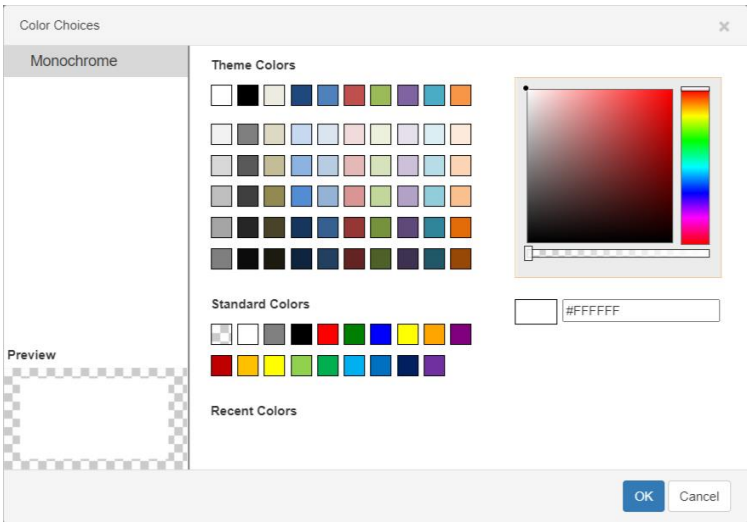
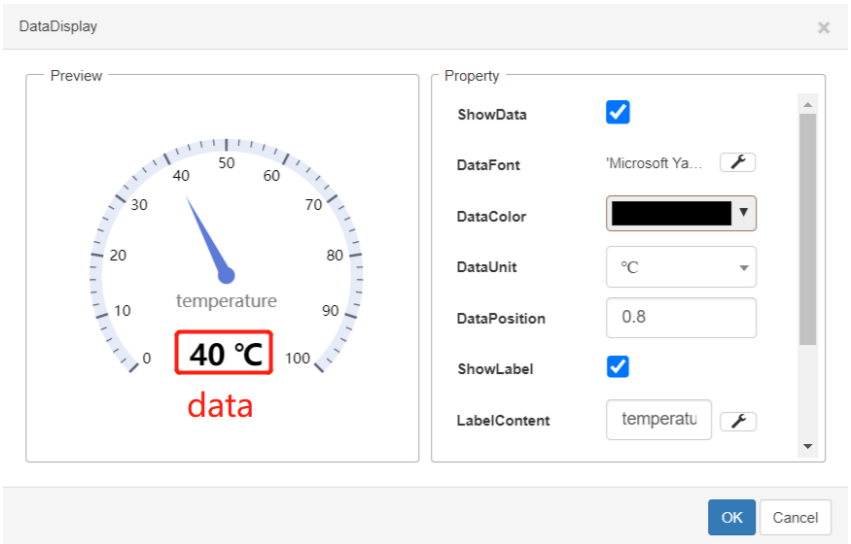
Points 1 to 8 are for size adjustment.

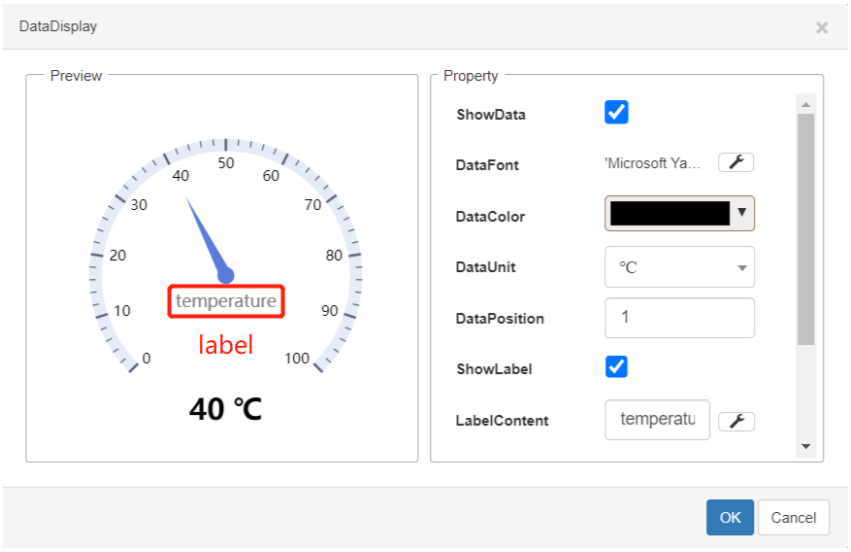
- **Property**

  The property of a circle gauge consists of base, layout, display and dashboard.

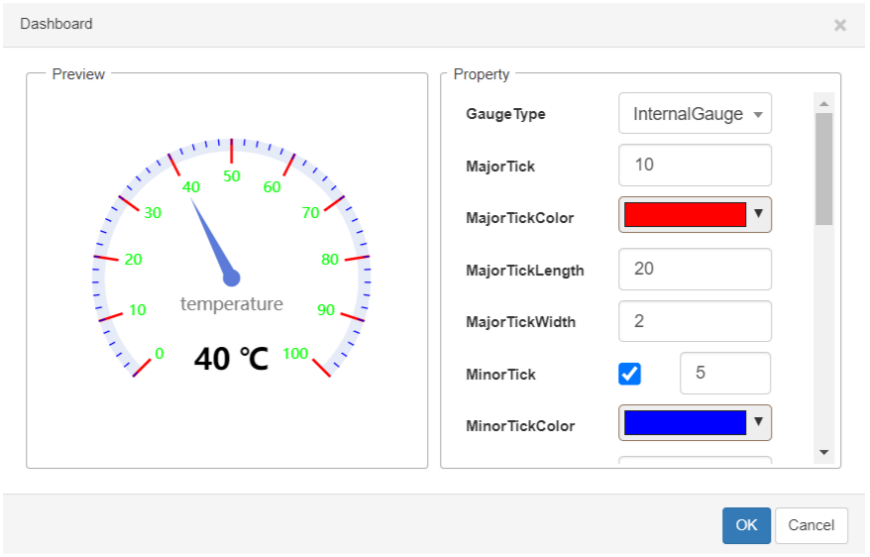
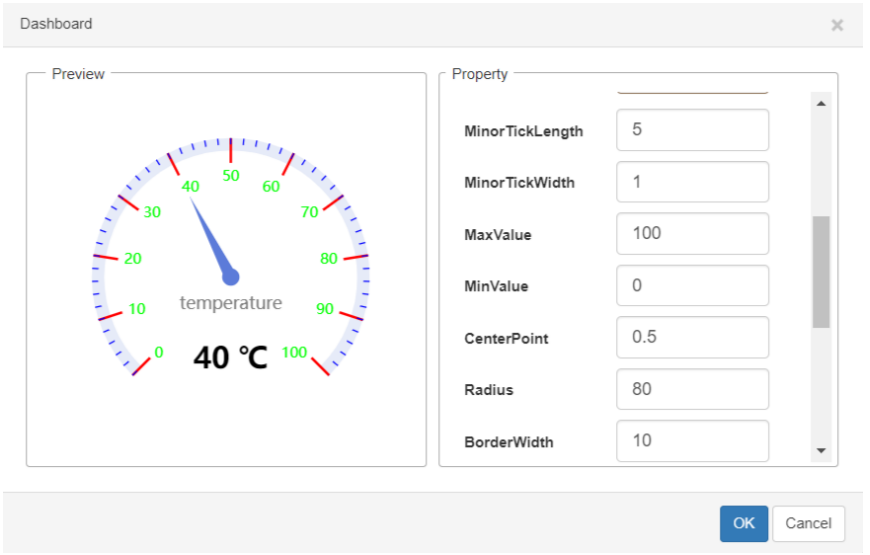


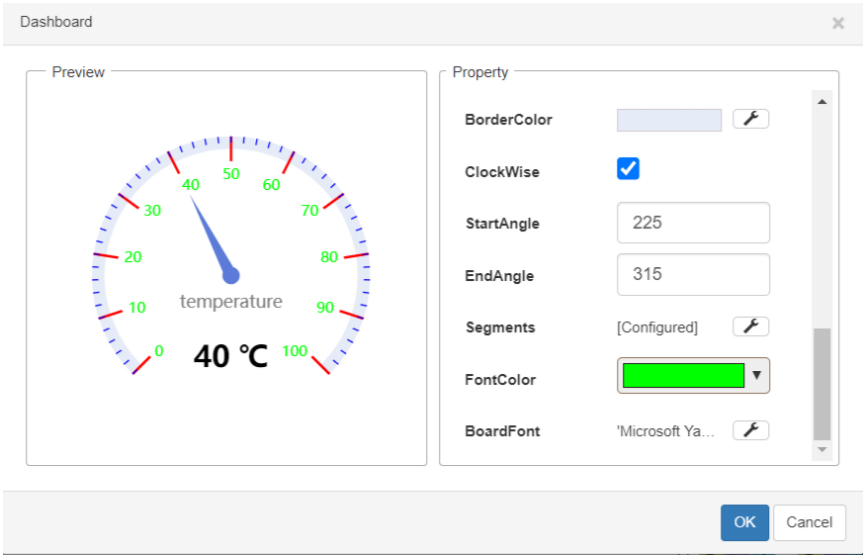
Item		Description
Base	**Name**	The name of the control in the web window. The naming rules are as follows: 1. Consists of letters, numbers, Chinese characters, or underscores; must begin with a letter or Chinese character. 2. Not case-sensitive. 3. Cannot contain spaces, periods, exclamation marks, or special characters such as @$#?*&. 4. Cannot exceed 200 characters, with no more than 25 Chinese characters. 5. Cannot share the same name with other objects in the same web window or with the web window where it is. 6. Only supports names in traditional Chinese, simplified Chinese, or English.
	Display	To decide whether the control is shown or hidden at runtime.
	Lock	If the control is locked, mouse operations are invalid but users can still edit properties via the Property Edition dialog. A small lock will appear around the locked control.
Layout	**Location**	To set the X and Y coordinates of the control in the web window. The values are kept as integers only.

Item		Description
	Size	To set the width and height of the control. The values are kept as integers only (unit: pixels).
Display	Background	To set the fill color of the circle gauge. Only monochrome is supported. 
	Data Display	To configure the display of data and label. 

Item		Description
		

Property	Description
Show Data	Check this option to show the data; or, leave it unchecked to hide the data.
Data Font	To set the font style, font weight, font size, and italics.
Data Color	To set the font color. Only monochrome is supported.
Data Unit	To select the unit for the data in the drop-down list. The options include °, ℃, $, ㎡, m³, sec, etc. It supports user-defined units, limited to 10 characters.
Data Position	The data is horizontally centered while its vertical position can be adjusted, ranging from 0 to 1, supporting two decimal places. The default value is 0.8.
Show Label	Check this option to show the label; or, leave it unchecked to hide the label.
Label Content	To edit the content of the label.
Label Font	To set the font style, font weight, font size, and italics.
Label Color	To set the font color. Only monochrome is supported.
Label Position	The label is horizontally centered while its vertical position can be adjusted, ranging from 0 to 1, supporting two decimal places. The default value is 0.6.

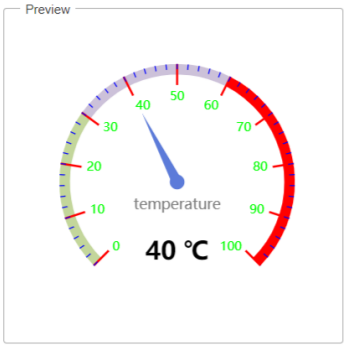
Item		Description
Dashboard	Dashboard	To configure the properties such as gauge type, major and minor ticks, maximum and minimum values, center point, radius, etc.  

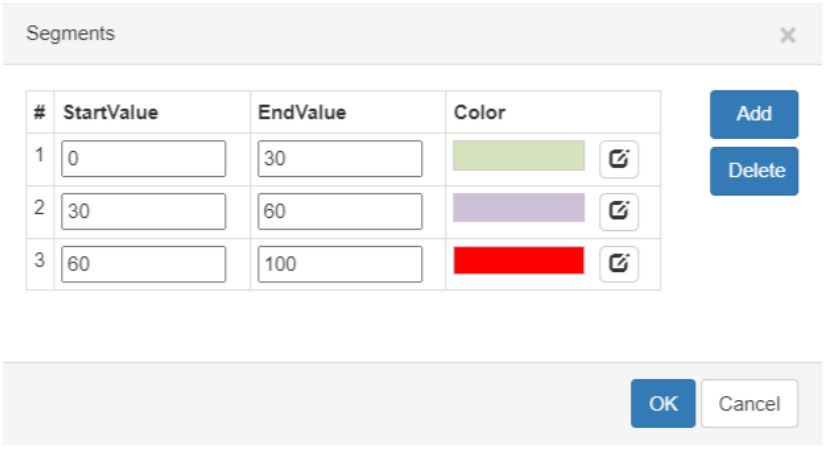
Item		Description
		

Property	Description
Gauge Type	There are two types available: internal gauge or external gauge.
Major Tick	To set the number of major ticks.
Major Tick Color	To set the color of major ticks. Only monochrome is supported.
Major Tick Length	To set the length of major ticks. The field ranges from 0 to 100. The default value is 10.
Major Tick Width	To set the width of major ticks. The field ranges from 0 to 10. The default value is 2.
Minor Tick	To set the number of minor ticks. The field ranges from 1 to 365. The default value is 5.
Minor Tick Color	To set the color of minor ticks. Only monochrome is supported.
Minor Tick Length	To set the length of minor ticks. The field ranges from 0 to 100. The default value is 5.
Minor Tick Width	To set the width of minor ticks. The field ranges from 0 to 10. The default value is 1.
Max Value	To set the maximum value of the gauge. It may contain two decimal places and the default value is 100.
Min Value	To set the minimum value of the gauge. It may contain two decimal places and the default value is 0.
Center Point	To set the position of the center point of the gauge. It is horizontally centered as 0.5 while the vertical position can be adjusted, ranging from 0 to 1, supporting two decimal places.

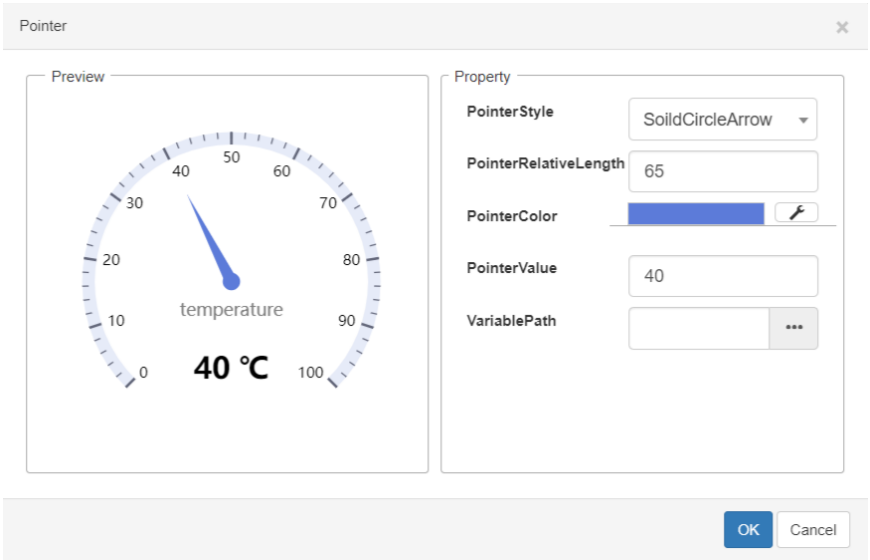
Item		Description	
			The default value is 0.5.
		Radius	To set the radius of the gauge. The field ranges from 1% to 100% and the default value is 80%.
		Border Width	To set the width of the border (unit: px).
		Border Color	To set the fill color of the border. Only monochrome is supported.
		Start Angle	To set the start angle of the gauge. The field ranges from 0 to 360 and the default value is 225.
		End Angle	To set the end angle of the gauge. The field ranges from 0 to 360 and the default value is 315.
		Segments*	To configure segments for the gauge. This property is not available when the pointer style is set as fill.
		Font Color	To set the font color for the gauge. Only monochrome is supported.
		Board Font	To set the font style, font weight, font size, and italics for the gauge.

*Configuration:



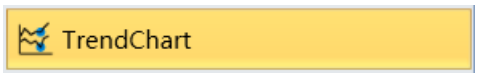


Property	Description

Item		Description	
		Start Value	To set the start value of the segment. Overlaps between segments are not allowed.
		End Value	To set the end value of the segment. Overlaps between segments are not allowed.
		Color	To set the color of the segment. Only monochrome is supported.
		Add	To add a segment.
		Delete	To delete the selected segment.
	Pointer	To configure the style, relative length, color, value and variable path for the pointer. 	

Property	Description
Pointer Style	There are six types available: solid circle arrow (default), hollow circle arrow, diamond arrow, arrow, line, or fill. The fill style is not available when there are segments in the gauge.
Pointer Relative Length	To set the distance from the pointer to the scale value.
Pointer Color	To set the color of the pointer. Only monochrome is supported.
Pointer Value	To set the default value for the gauge. This property is not available when the gauge is bound with variables.
Variable Path	It is required to set a variable for the pointer.

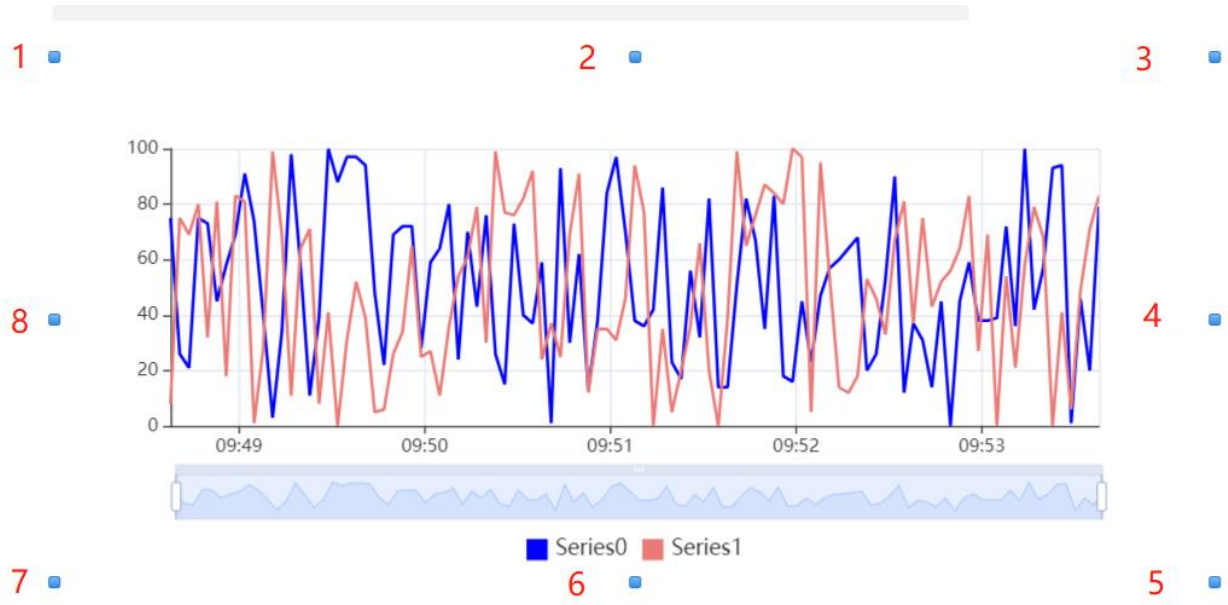
6.5.4 Trend Chart



Open a web window, select **Extended Controls > Trend Chart** on the **Toolbox** pane.

Place the cursor on the canvas. Select a starting point, click and hold the mouse, then drag to the lower right and drop to create a trend chart, accompanied by an adaptive toolbar. Repeat the steps to create another one.

- **Introduction**

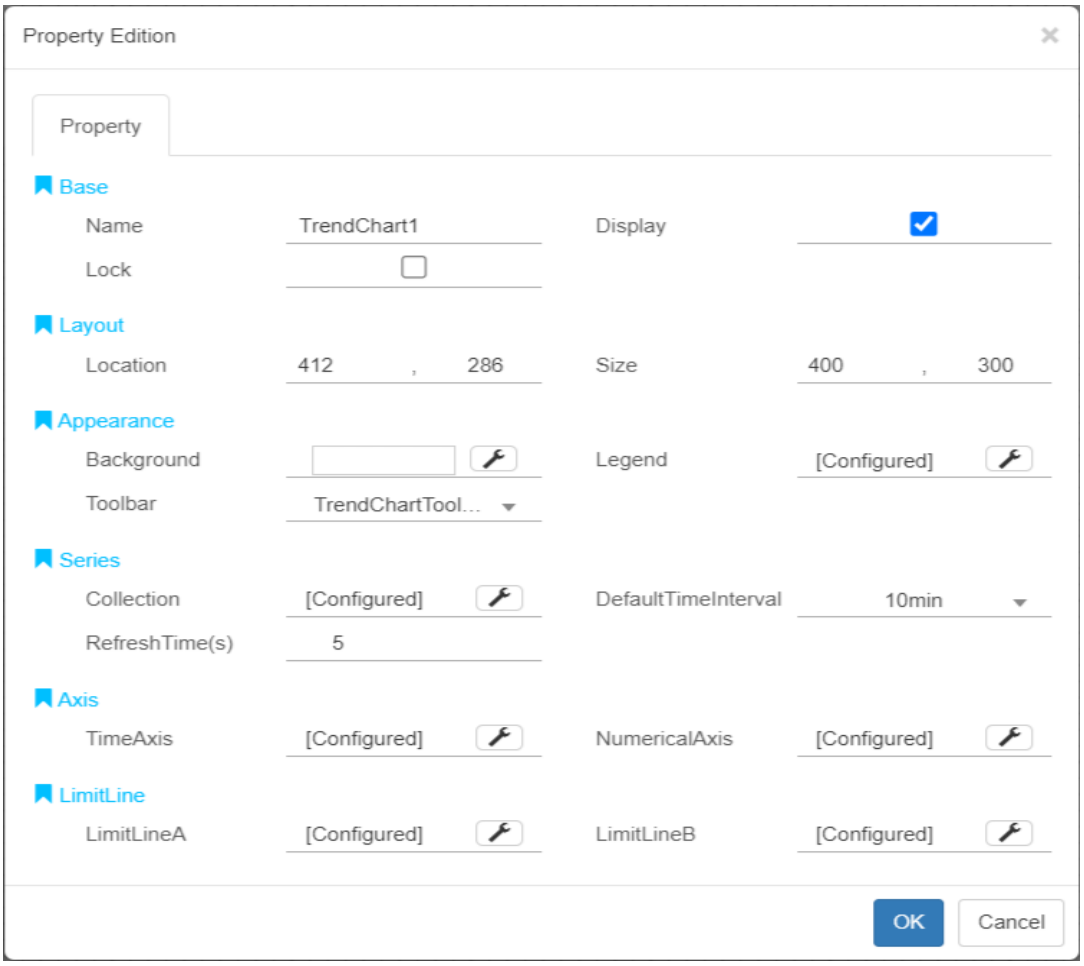


Users can click the trend chart to put it in edit mode as in the image above.

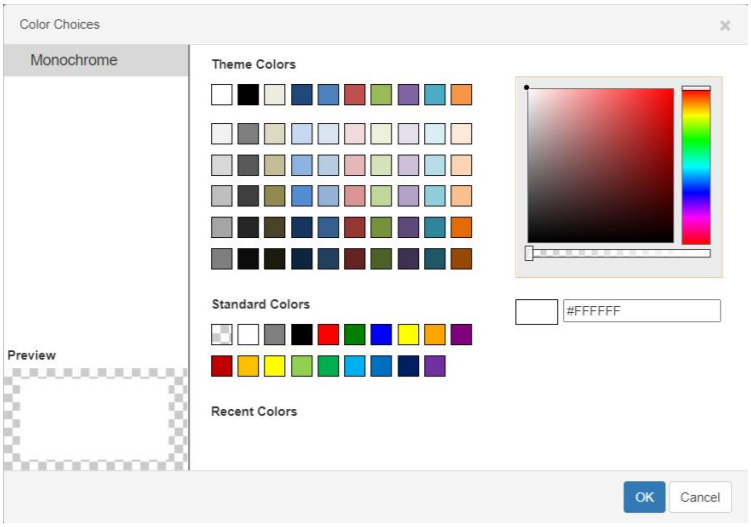
Points 1 to 8 are for size adjustment.

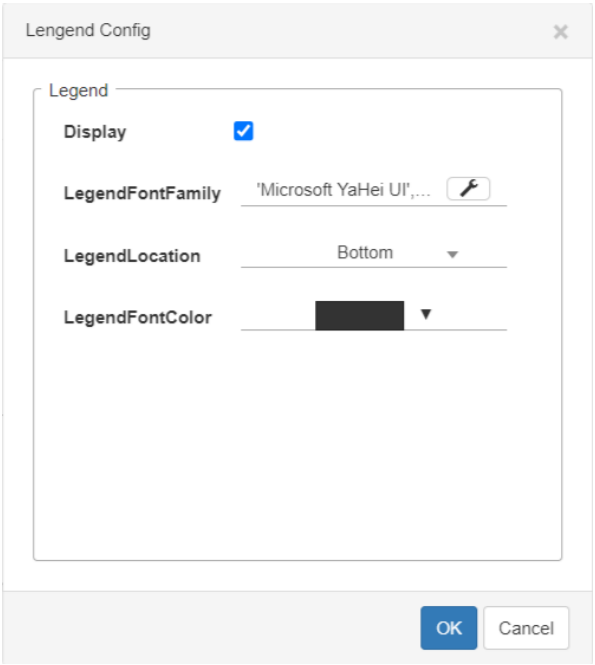
- **Property**

The property of a trend chart consists of base, layout, appearance, series, axis, and limit line.

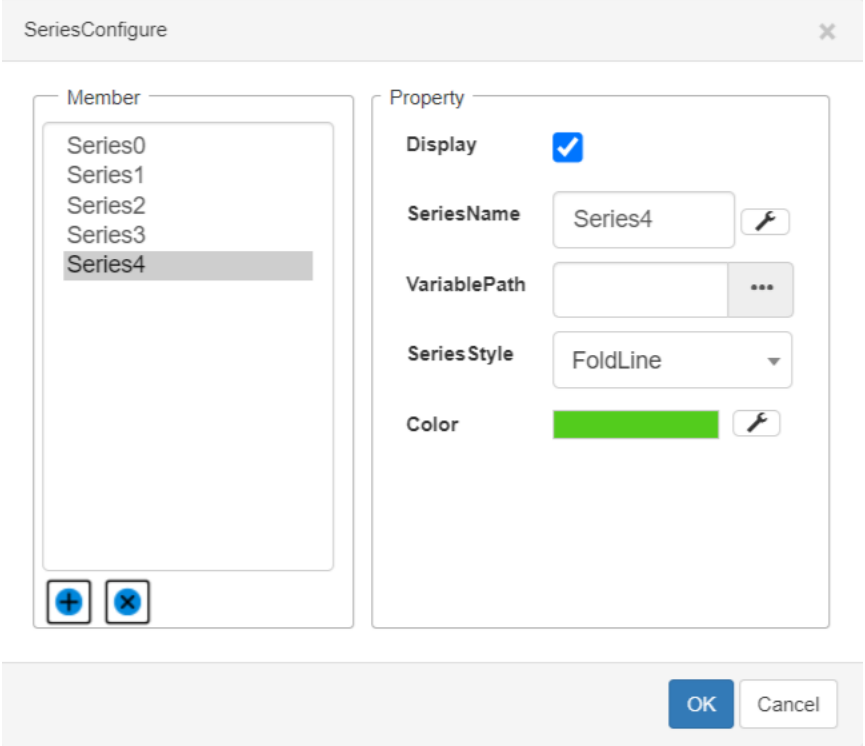


Item		Description
Base	**Name**	The name of the control in the web window. The naming rules are as follows: 1. Consists of letters, numbers, Chinese characters, or underscores; must begin with a letter or Chinese character. 2. Not case-sensitive. 3. Cannot contain spaces, periods, exclamation marks, or special characters such as @$#?*&. 4. Cannot exceed 200 characters, with no more than 25 Chinese characters. 5. Cannot share the same name with other objects in the same web window or with the web window where it is. 6. Only supports names in traditional Chinese, simplified Chinese, or English.
	Display	To decide whether the control is shown or hidden at runtime.
	Lock	If the control is locked, mouse operations are invalid but users can still edit properties via the Property Edition dialog. A small lock will appear around the locked control.

Item		Description
Layout	Location	To set the X and Y coordinates of the control in the web window. The values are kept as integers only.
	Size	To set the width and height of the control. The values are kept as integers only (unit: pixels).
Appearance	Background	To set the fill color outside the plot area of the chart. Only monochrome is supported. 

<table>
<tr><th colspan="2">Item</th><th>Description</th></tr>
<tr><td></td><td>Legend</td><td>To decide whether to show or hide the chart legend. Users can change the position of the legend and customize its font and color.
 

<table>
<tr><th>Property</th><th>Description</th></tr>
<tr><td>Display</td><td>To decide whether to show the legend.</td></tr>
<tr><td>Legend Font Family</td><td>To set the font style, font weight, font size, and italics.</td></tr>
<tr><td>Legend Location</td><td>To set the position of the legend: top, bottom, left, or right. The legend is arranged horizontally when at the top or bottom and is arranged vertically when on the left or right. The legend is placed at the bottom by default.</td></tr>
<tr><td>Legend Font Color</td><td>To set the font color. Only monochrome is supported.</td></tr>
</table></td></tr>
<tr><td></td><td>Toolbar</td><td>To select the desired toolbar from the drop-down list where it shows all available toolbars in the current web window. By default, it is bound with the toolbar that comes with the created trend chart.</td></tr>
</table>

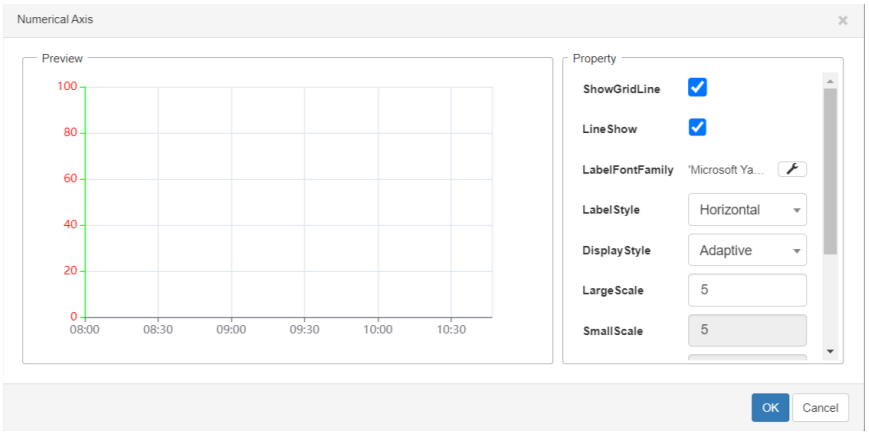
<table>
<tr><th colspan="2">Item</th><th>Description</th></tr>
<tr><td rowspan="3">Series</td><td>Collection</td><td>To configure the data series. The number of members ranges from 1 to 10.
 

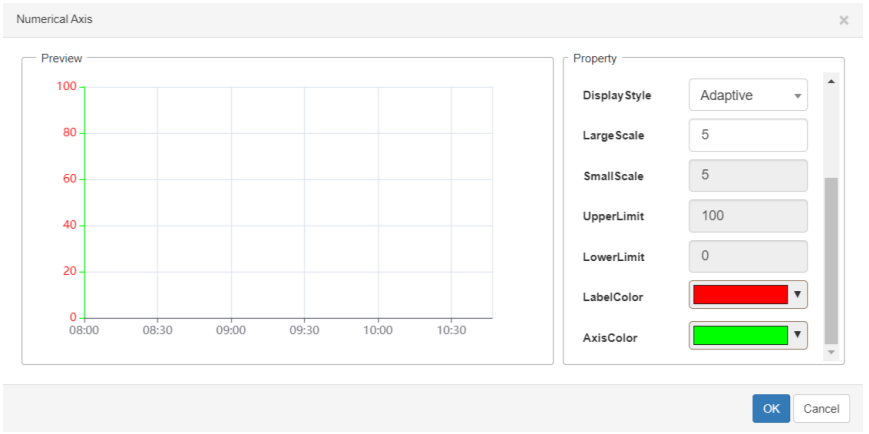
<table>
<tr><th>Property</th><th>Description</th></tr>
<tr><td>Display</td><td>To decide whether to show or hide the selected member.</td></tr>
<tr><td>Series Name</td><td>To set the name of the member.</td></tr>
<tr><td>Variable Path</td><td>To bind cloud variables with historical data for the member.</td></tr>
<tr><td>Series Style</td><td>To set the line style: fold line, smooth line, column, or area.</td></tr>
<tr><td>Color</td><td>To set the line color.</td></tr>
</table></td></tr>
<tr><td>Default Time Interval</td><td>To set the initial time interval. The default time is 10 minutes and can be set as 10min, 30min, 1h, 8h, 1day, 3day, 1week, 1month.</td></tr>
<tr><td>Refresh Time(s)</td><td>To set the data refresh interval. The default value is 300 seconds, which is also the minimum value.</td></tr>
</table>

<table>
<tr><th colspan="2">Item</th><th>Description</th></tr>
<tr><td rowspan="2">Axis</td><td>Time Axis</td><td>To configure the display of the time axis.

<table>
<tr><th>Property</th><th>Description</th></tr>
<tr><td>Show Time Range</td><td>Check this option to show the time range .
Drag left or right or scroll to view different time ranges in the development environment.</td></tr>
<tr><td>Show Grid Line</td><td>Check this option to show the grid line; or, leave it unchecked to hide the grid line.</td></tr>
<tr><td>Large Scale</td><td>To set the number of segments on the time axis. The field ranges from 1 to 15 and the default value is 5.</td></tr>
<tr><td>Label Style</td><td>To set the display style of the axis labels: horizontal, tilt left, tilt right, or vertical.</td></tr>
<tr><td>Label Font Family</td><td>To set the font style, font weight, font size, and italics for the axis labels. The default font style is Microsoft YaHei UI with a font size of 12.</td></tr>
<tr><td>Label Color</td><td>To set the label color. Only monochrome is supported.</td></tr>
<tr><td>Axis Color</td><td>To set the axis color. Only monochrome is supported.</td></tr>
</table></td></tr>
<tr><td>Numerical Axis</td><td>To configure the display of the numerical axis.</td></tr>
</table>

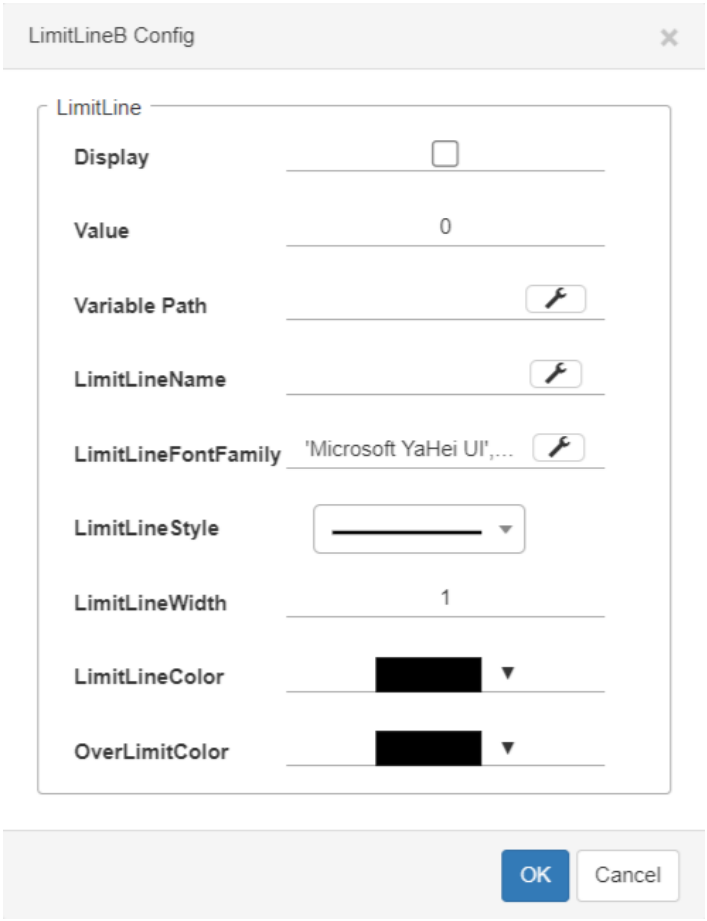
Item		Description





Property	Description
Show Grid Line	Check this option to show the grid line; or, leave it unchecked to hide the grid line.
Line Show	Check this option to show the line and labels of the Y axis; or, leave it unchecked to hide the line and labels.
Label Font Family	To set the font style, font weight, font size, and italics for the axis labels. The default font style is Microsoft YaHei UI with a font size of 12.
Label Style	To set the display style of the axis labels: horizontal, tilt left, tilt right, or vertical.
Display Style	To set the display style of the coordinates: adaptive or customize. Adaptive is selected by default with small scale, upper and lower limits fixed in grey. The display changes automatically based on the actual values.
Large Scale	To set the number of large scales. The field ranges from 1 to 15 and the default value is 5.
Small Scale	To set the number of small scales. Available only in customized display. The value is kept as integer and must be

Item		Description	
			greater than or equal 1
		Upper Limit	To set the upper limit of the Y axis coordinates, which must be greater than the lower limit. Available only in customized display.
		Lower Limit	To set the lower limit of the Y axis coordinates, which must be less than the upper limit. Available only in customized display.
		Label Color	To set the label color. Only monochrome is supported.
		Axis Color	To set the axis color. Only monochrome is supported.

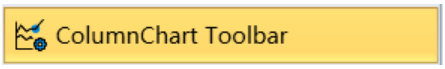
<table>
<tr><th colspan="2">Item</th><th>Description</th></tr>
<tr><td rowspan="2">Limit Line</td><td>Limit Line A
Limit Line B</td><td>To set up the configurations of the limit lines A and B. The upper and lower limit lines are differentiated based on the actual values.
 

<table>
<tr><th>Property</th><th>Description</th></tr>
<tr><td>Display</td><td>To decide whether to show or hide the selected limit line.</td></tr>
<tr><td>Value</td><td>To set a limit for the selected limit line to control the value of double data type.</td></tr>
<tr><td>Variable Path</td><td>To set variables for controlling the limit line at runtime.</td></tr>
<tr><td>Limit Line Name</td><td>To set the name of the limit line.</td></tr>
<tr><td>Limit Line Font Family</td><td>To set the font style, font weight, font size, and italics for the limit line name. The default font style is Microsoft YaHei UI with a font size of 12.</td></tr>
<tr><td>Limit Line Style</td><td>To set the display style of the limit line: solid line or dotted line.</td></tr>
<tr><td>Limit Line Width</td><td>To set the width of the limit line. The field is kept as integer and must be greater than 0.</td></tr>
</table></td></tr>
</table>

Item		Description	
		Limit Line Color	To set the color of the limit line. Only monochrome is supported.
		Over Limit Color	To set the line color of the part where the value exceeds the limit.

6.6 Introduction to Toolbar Designer

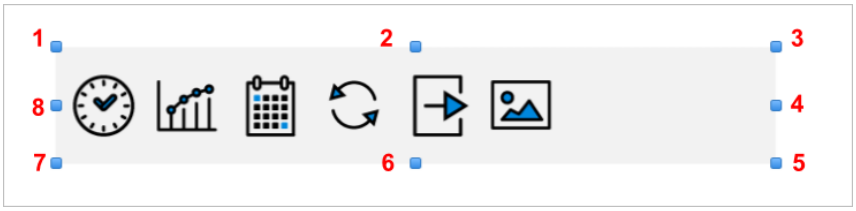
6.6.1 Column Chart Toolbar



Open a web window, select **Toolbar Designer > Column Chart Toolbar** on the **Toolbox** pane.

Place the cursor on the canvas. Select a starting point, click and hold the mouse, then drag to the lower right and drop to create a column chart toolbar. Repeat the steps to create another one.

- **Introduction**

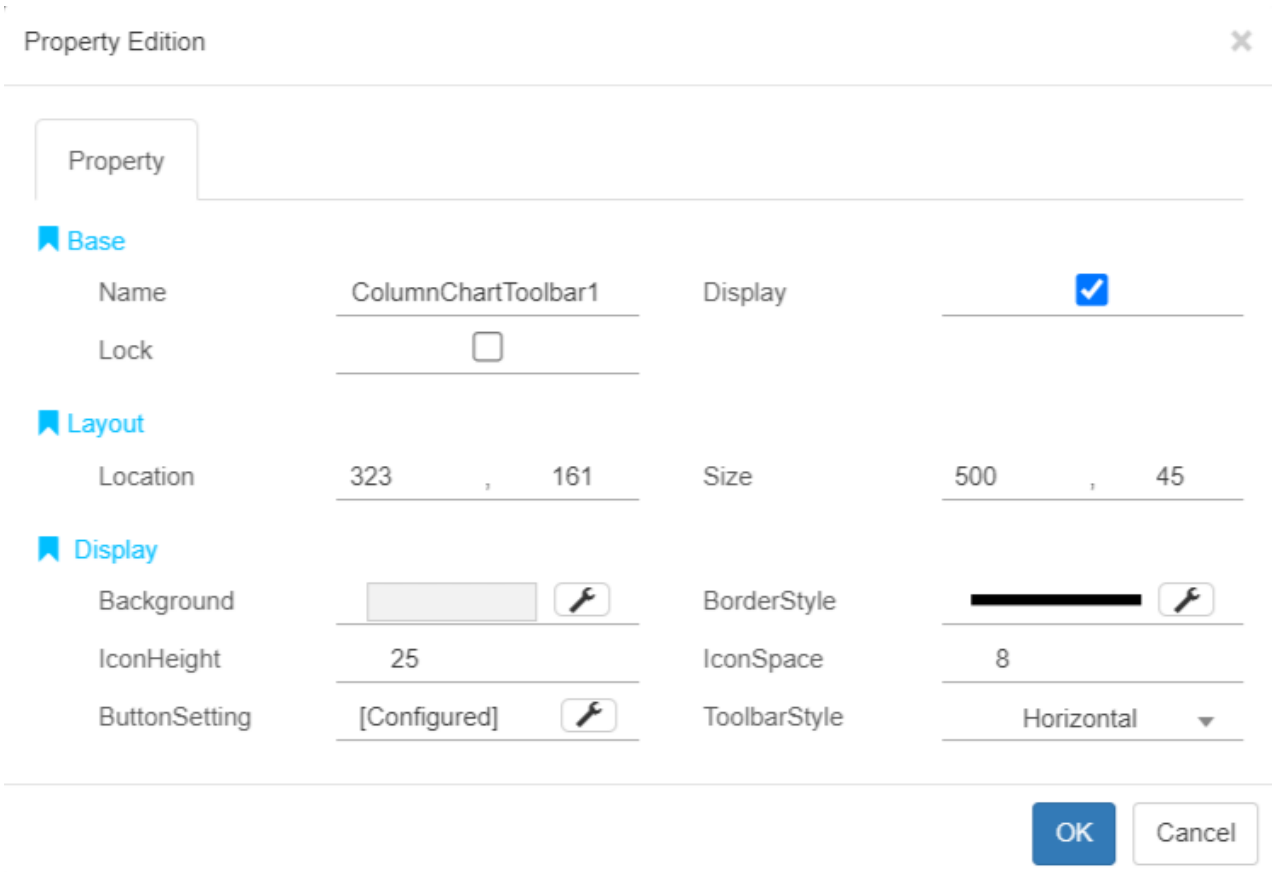


Users can click the toolbar to put it in edit mode as in the image above.

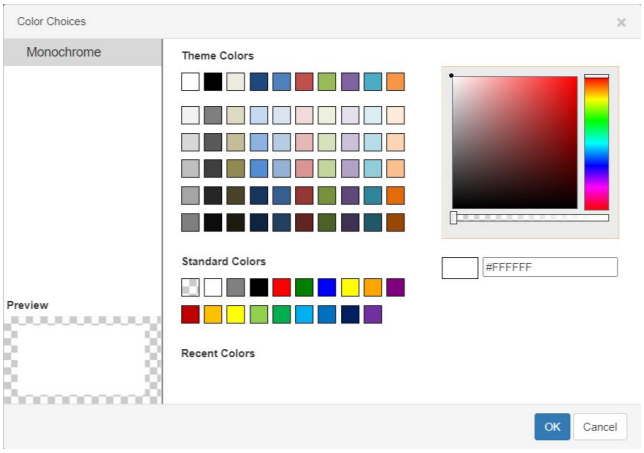
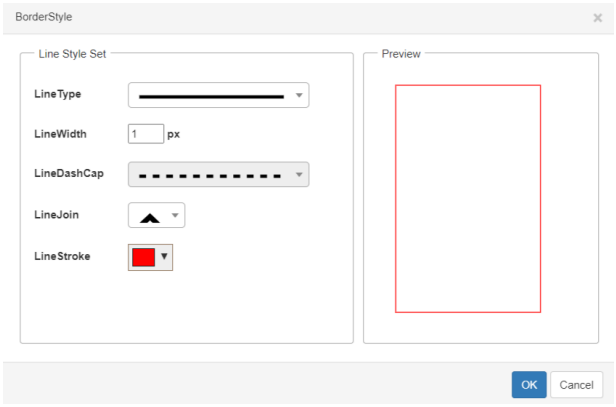
Points 1 to 8 are for size adjustment.

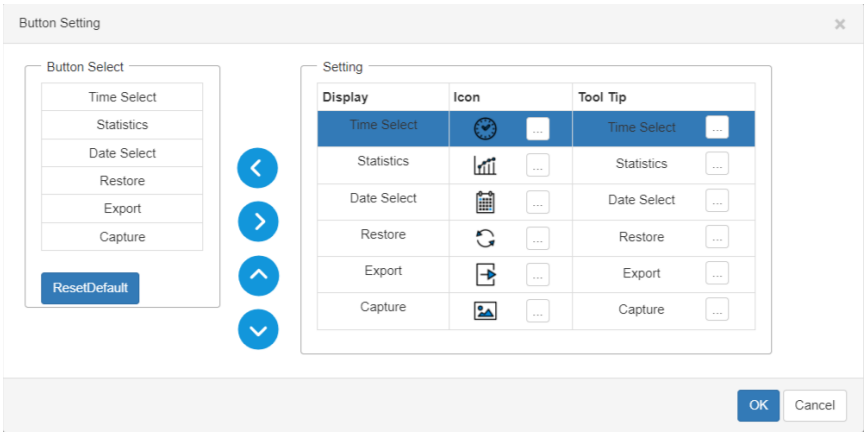
- **Property**

The property of a column chart toolbar consists of base, layout, and display.

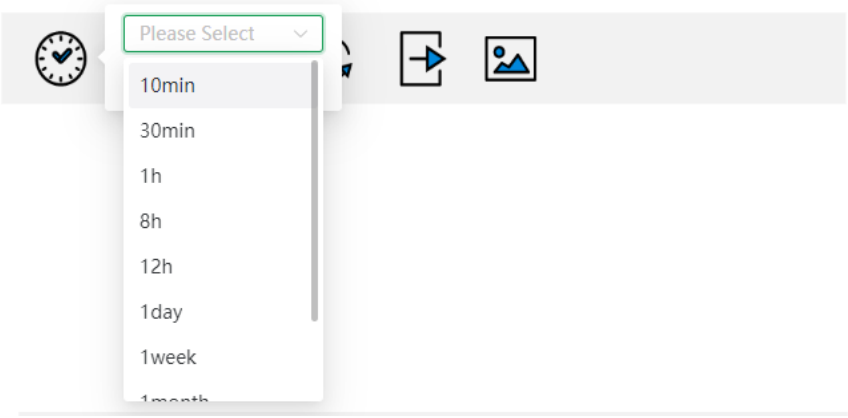
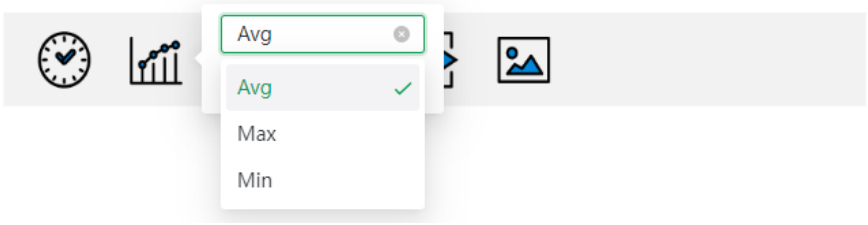


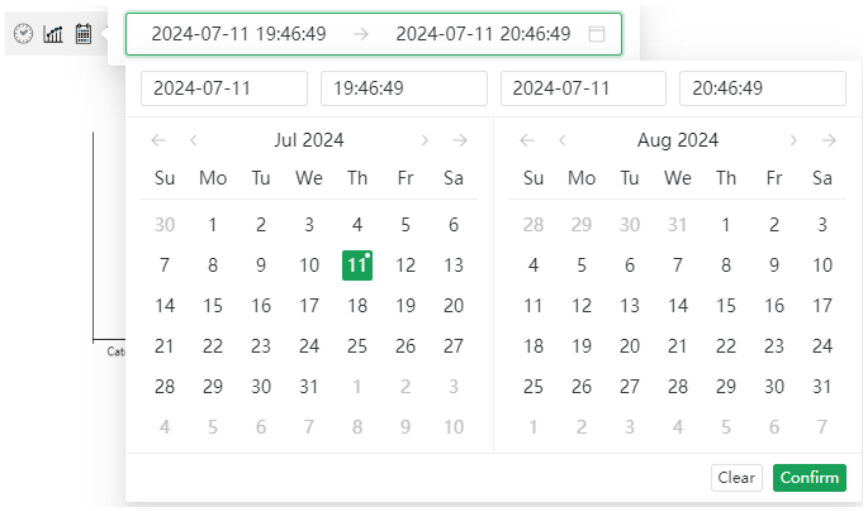
Item		Description
Base	**Name**	The name of the toolbar in the web window. The naming rules are as follows: 1. Consists of letters, numbers, Chinese characters, or underscores; must begin with a letter or Chinese character. 2. Not case-sensitive. 3. Cannot contain spaces, periods, exclamation marks, or special characters such as @$#?*&. 4. Cannot exceed 200 characters, with no more than 25 Chinese characters. 5. Cannot share the same name with other objects in the same web window or with the web window where it is. 6. Only supports names in traditional Chinese, simplified Chinese, or English.
	Display	To decide whether the toolbar is shown or hidden at runtime.
	Lock	If the toolbar is locked, mouse operations are invalid but users can still edit properties via the Property Edition dialog. A small lock will appear around the locked toolbar.
Layout	**Location**	To set the X and Y coordinates of the toolbar in the web window. The values are kept as integers only.
	Size	To set the width and height of the toolbar. The values are kept as integers only (unit: pixels).

Item		Description
Display	Fill	To set the fill color of the toolbar. Only monochrome is supported. 
	Border Style	To set the border line style, including line type, width, dash style, join, color of line stroke and so on. The width field ranges from 0 to 256 and may contain two decimal places (default:0). As for the color setting, only monochrome is supported. 
	Icon Height	To set the height of icons in the toolbar. The field ranges from 10 to 64 and is kept as integer only. The default value is 25.
	Icon Space	To set the space between icons in the toolbar. The field ranges from 0 to 100 and is kept as integer only. The default value is 8.
	Button Setting	To specify the button types to be shown in the toolbar, and to change the icons to be displayed and edit the contents of the tooltip.

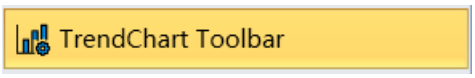
Item		Description
		 1. To add a button to the toolbar, select the target button in the Button Select section and click ›. If the button is already included in the toolbar, it cannot be added again. You can remove the selected button from the toolbar simply by clicking ‹. Additionally, click ^ or v to sort the buttons in the toolbar. 2. In the Setting section, click … next to the icon to replace the default icon of the selected button with a custom image. And, click … in the tooltip column to edit the contents of the tooltip as well as the display language. 3. Click **ResetDefault** button at the bottom of the Button Select section to reset the button types, icons, and tooltip contents to default.
	Toolbar Style	To set the layout of the column chart toolbar: Horizontal or Vertical.

- **Column Chart Toolbar in Use**

Button	Description
Time Select	Available only when the type of category in serials configuration of the column chart is set as “Time”. You can set up the time interval in the drop-down list. This option is greyed out and not available if the type is set as “Category”. 
Statistics	The statistical method used to display historical data in the column chart. For example:  1. The column chart type is “Category”: The time period for querying historical data is the past hour, and the statistical method is “average”. Each member in each category displays the average value in the last hour. 2. The column chart type is “Time”: The time period for querying historical data is the past hour, the time interval is “10 min”, and the statistical method is “average”. After clicking the query button, 6 categories are displayed and each member in each group shows the average value of the 10 minutes.
Data Select	Select the time interval for querying historical data in the column chart. Click **Confirm** to continue.

<table>
<tr><td></td><td> 
</td></tr>
<tr><th>Button</th><th>Description</th></tr>
<tr><td>Restore</td><td>Click the restore button to reset the column chart toolbar to its default configuration and performs a query. The default configuration is: time interval “10 minutes”; statistic “average value”; time period “the past hour”.
 </td></tr>
<tr><td>Export</td><td>Click the export button to save the data result as a .CSV file after query. The file is automatically named using the column chart name and the current time.
 </td></tr>
<tr><td>Capture</td><td>Click the capture button to take a screenshot of the current column chart. The screenshot does not include the column chart toolbar. The image is automatically named using the column chart name and the current time.
 </td></tr>
</table>

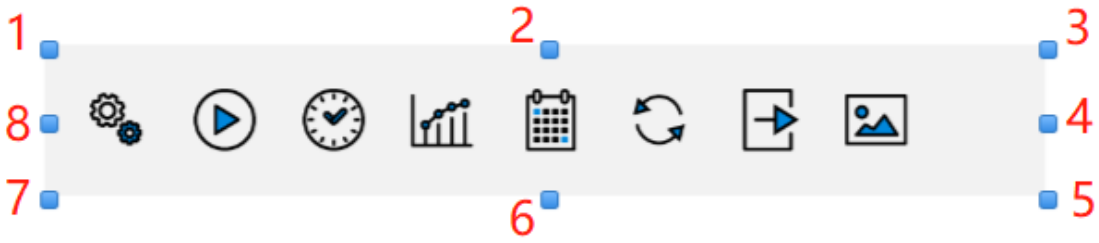
6.6.2 Trend Chart Toolbar



Open a web window, select **Toolbar Designer > Trend Chart Toolbar** on the **Toolbox** pane.

Place the cursor on the canvas. Select a starting point, click and hold the mouse, then drag to the lower right and drop to create a trend chart toolbar. Repeat the steps to create another one.

- **Introduction**

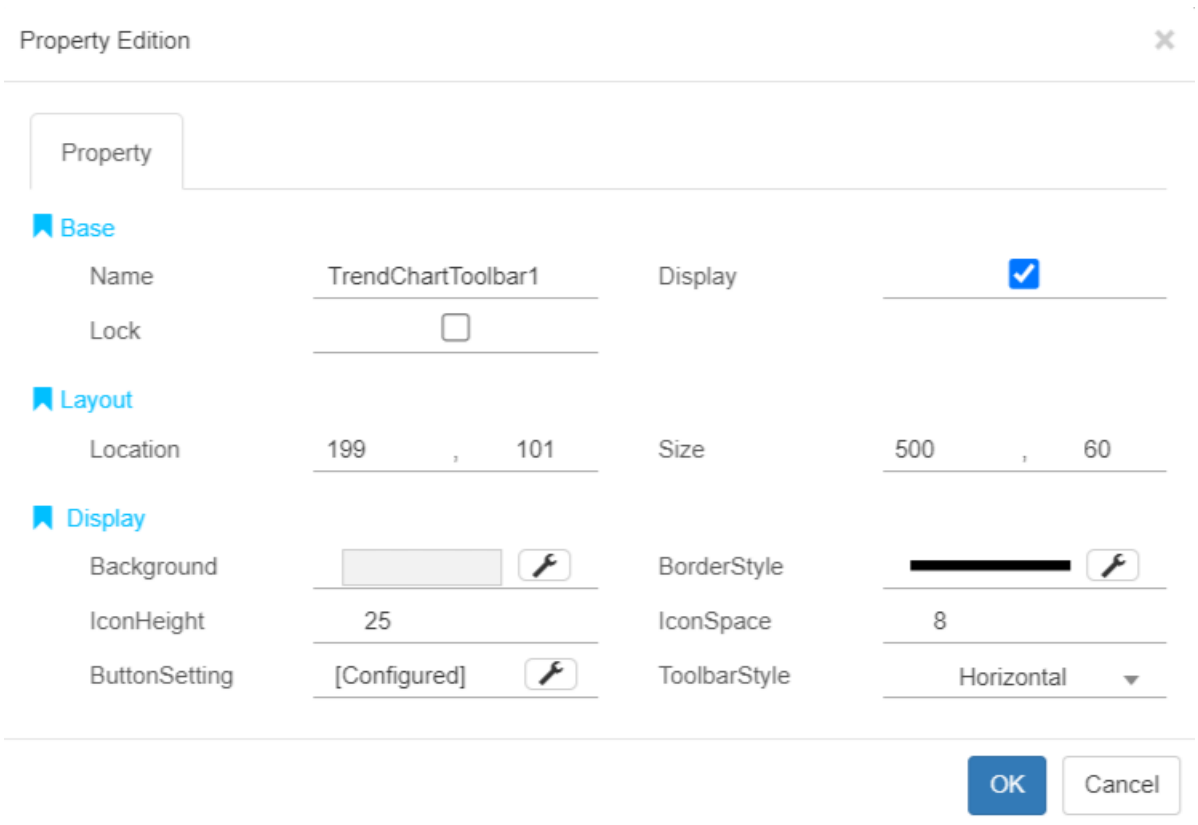


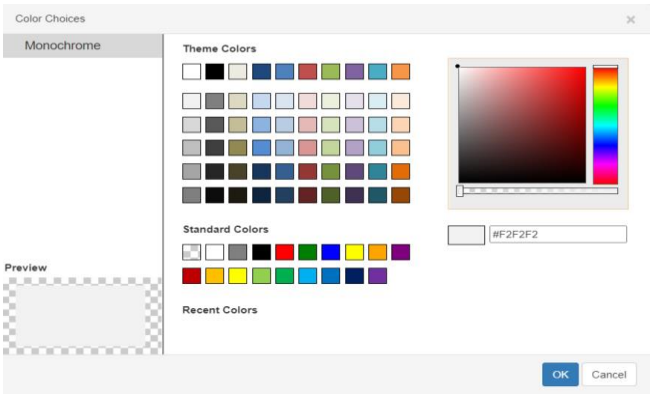
Users can click the toolbar to put it in edit mode as in the image above.

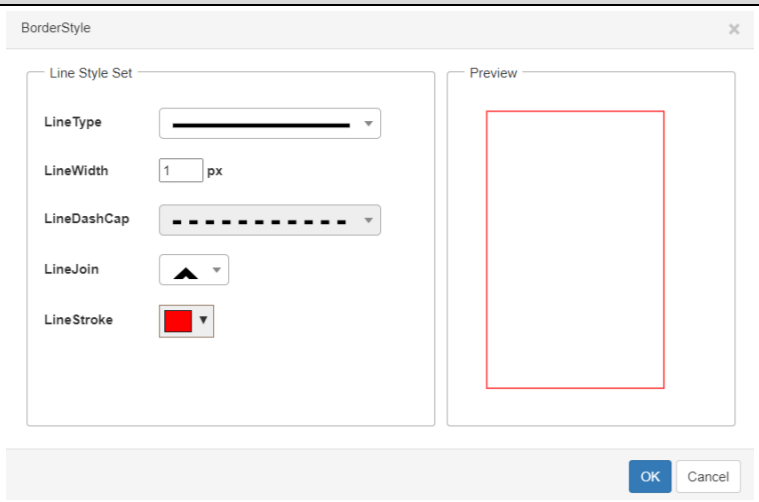
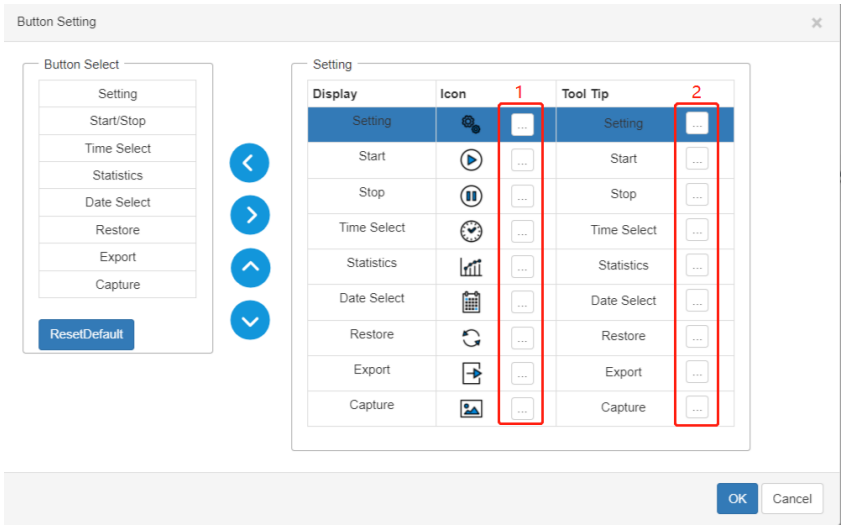
Points 1 to 8 are for size adjustment.

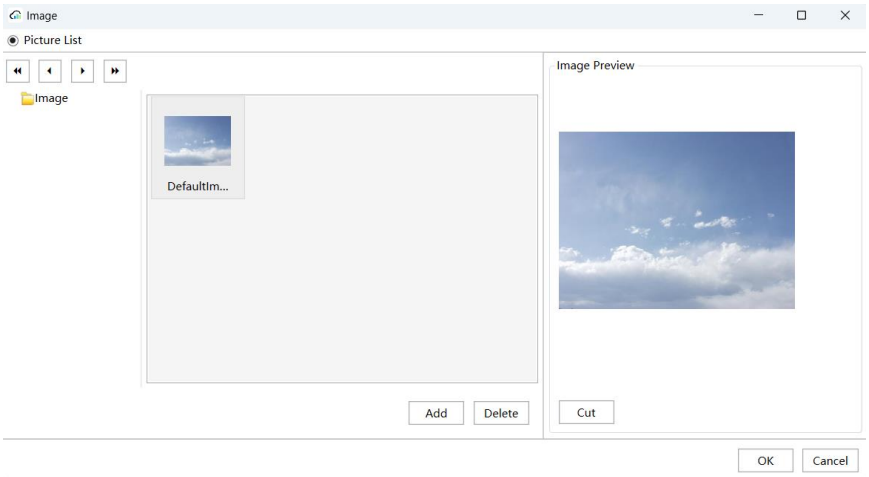
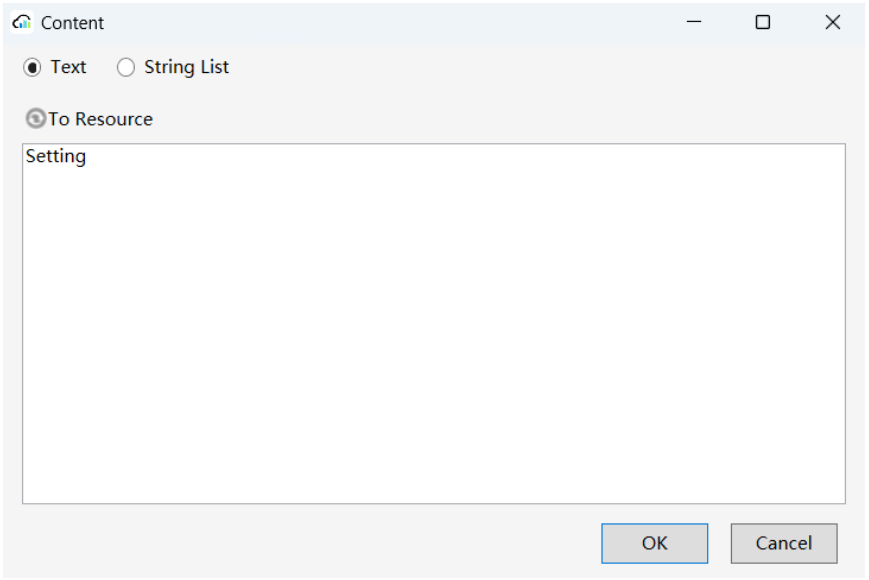
- **Property**

The property of a trend chart toolbar consists of base, layout, and display.



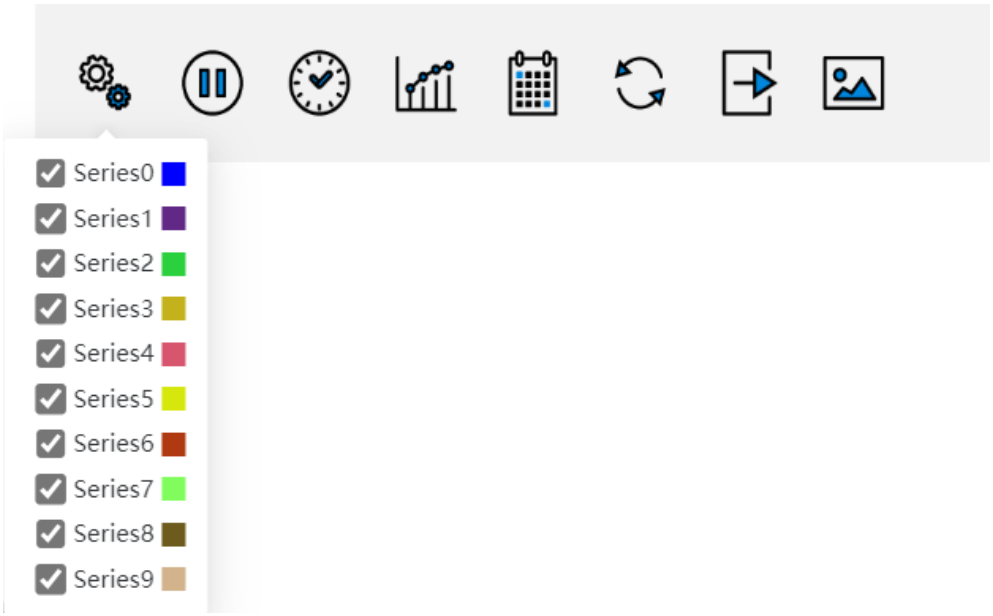
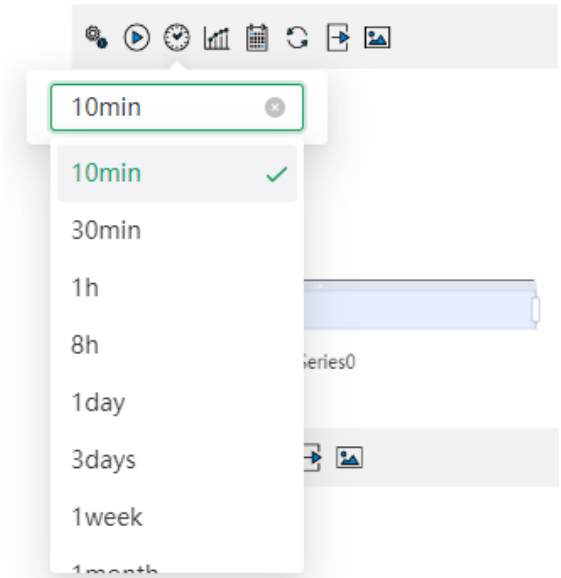
Item		Description
Base	Name	The name of the toolbar in the web window. The naming rules are as follows: 1. Consists of letters, numbers, Chinese characters, or underscores; must begin with a letter or Chinese character. 2. Not case-sensitive. 3. Cannot contain spaces, periods, exclamation marks, or special characters such as @$#?*&. 4. Cannot exceed 200 characters, with no more than 25 Chinese characters. 5. Cannot share the same name with other objects in the same web window or with the web window where it is. 6. Only supports names in traditional Chinese, simplified Chinese, or English.
	Display	To decide whether the toolbar is shown or hidden at runtime.
	Lock	If the toolbar is locked, mouse operations are invalid but users can still edit properties via the Property Edition dialog. A small lock will appear around the locked toolbar.
Layout	Location	To set the X and Y coordinates of the toolbar in the web window. The values are kept as integers only.
	Size	To set the width and height of the toolbar. The values are kept as integers only (unit: pixels).
Display	Background	To set the fill color of the toolbar. Only monochrome is supported. 
	Border Style	To set the border line style, including line type, width, dash style, join, color of line stroke and so on. The width field ranges from 0 to 256 and may contain two decimal places. As for the color setting, only monochrome is supported.

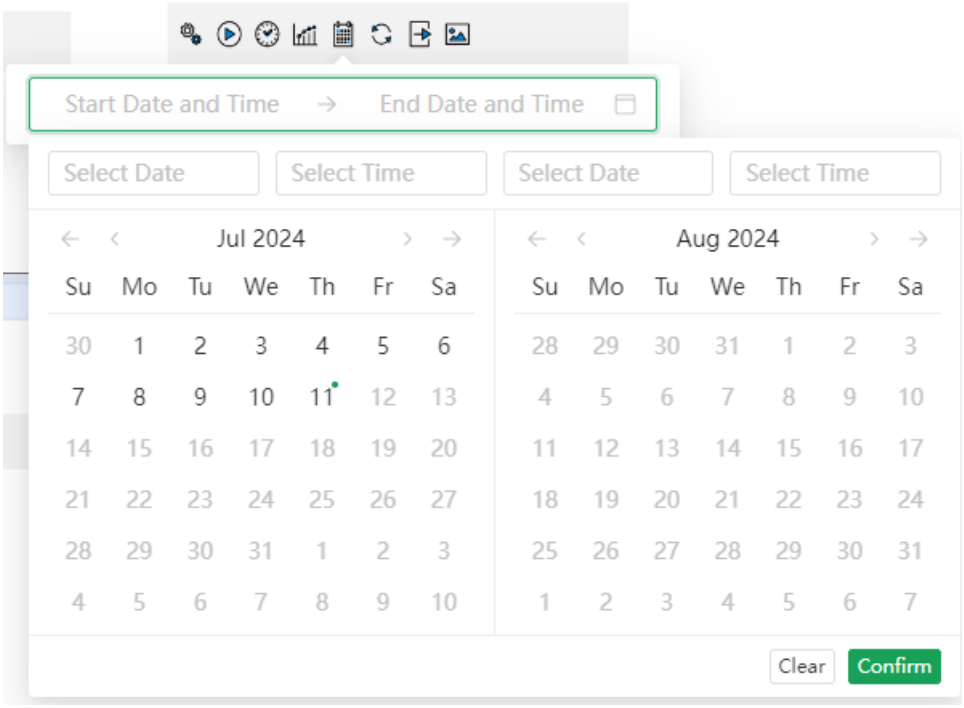
Item		Description
		
	Icon Height	To set the height of icons in the toolbar. The field ranges from 10 to 64.
	Icon Space	To set the space between icons in the toolbar. The field ranges from 0 to 100.
	Button Setting	To specify the button types to be shown in the toolbar.  1. Click or to add the selected button to be shown on the toolbar or remove the selected button from the toolbar. 2. Click or to sort the buttons in the toolbar. 3. In column 1 (red box), you can replace the default icon of the selected button with a custom image. Image file formats like SVG, PNG, JPG, and JPEG are supported and the maximum size is 64px.

Item		Description
		 4. In column 2 (red box), you can edit the tooltip contents and set up the display language. 
	Toolbar Style	To set the layout of the trend chart toolbar: Horizontal or Vertical.

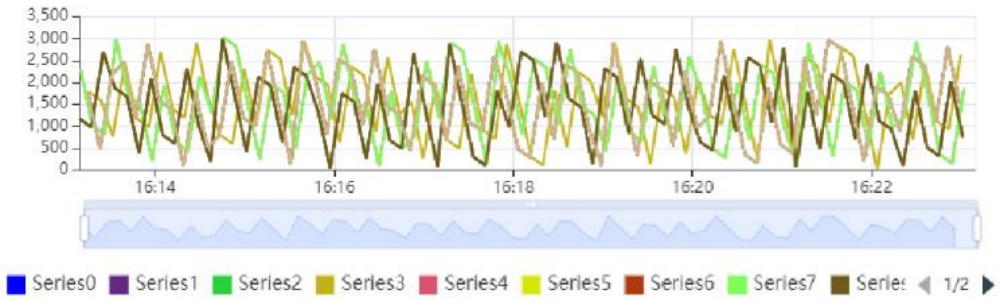
- **Trend Chart Toolbar in Use**

No.	Button	Description
1	**Setting**	Click the setting button to see the configured trend charts. You can then decide whetherto show the corresponding trend chart. The options are shown below.

		
2	**Start / Stop**	Click the start / stop button to start, stopo or refresh the trend charts in real time at runtime.
3	**Time Select**	The current real-time refresh time interval is set as 10 minutes by default. This setting can be modified at runtime. Options include 10 min, 30 min, 1h, 8h, 1 day, 3 days, 1 week, and 1 month. 
4	**Statistics**	Options are average value, instantaneous value, maximum value, and minimum value.
5	**Date Select**	Select the time period for querying historical data in the trend chart. The result is shown as below. Use the cursor to define a time and date range, then click **Confirm** to initiate the query.

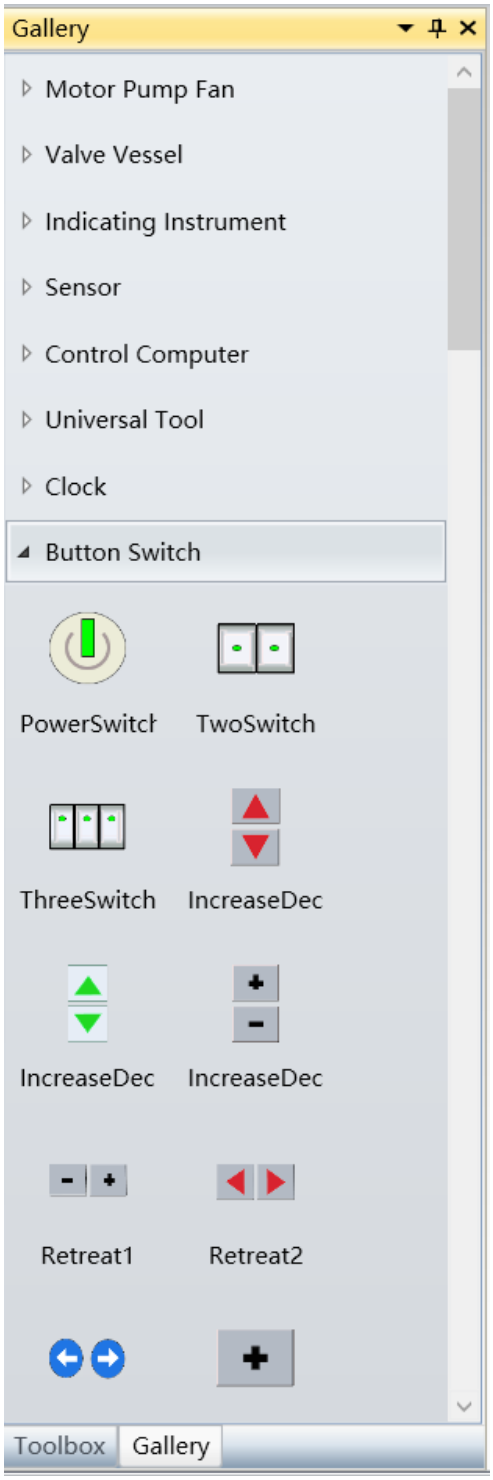
<table>
<tr><td></td><td></td><td> 
</td></tr>
<tr><td>7</td><td>Restore</td><td>Click the restore button to reset the trend chart toolbar to the settings in real time.</td></tr>
<tr><td>8</td><td>Export</td><td>Click the export button to save the data result as a .CSV file after query. The file is automatically named using the trend chart name and the current time. The format is time / trend curve. If the exported range exceeds the performance limit, a prompt will pop up. An example is shown below.

<table>
<tr><td colspan="7">Created time: 2024/07/08 16:41:12</td></tr>
<tr><td>Triggertime</td><td>Series0</td><td>Series1</td><td>Series2</td><td>Series3</td><td>Series4</td><td>Series5</td></tr>
<tr><td>2024/7/8 16:30</td><td>1841</td><td>1841</td><td>-</td><td>-</td><td>-</td><td>1841</td></tr>
<tr><td>2024/7/8 16:31</td><td>-</td><td>-</td><td>-</td><td>417</td><td>-</td><td>-</td></tr>
<tr><td>2024/7/8 16:31</td><td>-</td><td>-</td><td>1520</td><td>-</td><td>-</td><td>-</td></tr>
<tr><td>2024/7/8 16:31</td><td>-</td><td>-</td><td>-</td><td>-</td><td>2645</td><td>-</td></tr>
<tr><td>2024/7/8 16:31</td><td>2114</td><td>2114</td><td>-</td><td>-</td><td>-</td><td>2114</td></tr>
<tr><td>2024/7/8 16:31</td><td>-</td><td>-</td><td>-</td><td>2125</td><td>-</td><td>-</td></tr>
<tr><td>2024/7/8 16:31</td><td>-</td><td>-</td><td>1329</td><td>-</td><td>-</td><td>-</td></tr>
<tr><td>2024/7/8 16:31</td><td>-</td><td>-</td><td>-</td><td>-</td><td>1353</td><td>-</td></tr>
<tr><td>2024/7/8 16:31</td><td>822</td><td>822</td><td>-</td><td>-</td><td>-</td><td>822</td></tr>
<tr><td>2024/7/8 16:31</td><td>-</td><td>-</td><td>-</td><td>1934</td><td>-</td><td>-</td></tr>
<tr><td>2024/7/8 16:31</td><td>-</td><td>-</td><td>37</td><td>-</td><td>-</td><td>-</td></tr>
<tr><td>2024/7/8 16:31</td><td>-</td><td>-</td><td>-</td><td>-</td><td>1162</td><td>-</td></tr>
<tr><td>2024/7/8 16:31</td><td>2529</td><td>2529</td><td>-</td><td>-</td><td>-</td><td>2529</td></tr>
<tr><td>2024/7/8 16:31</td><td>-</td><td>-</td><td>-</td><td>641</td><td>-</td><td>-</td></tr>
</table></td></tr>
<tr><td>9</td><td>Capture</td><td>Click the capture button to take a screenshot of the current trend chart. The screenshot does not include the trend chart toolbar. The image is automatically named using the trend chart name and the current time in PNG file format.</td></tr>
</table>

		 3,500 3,000 2,500 2,000 1,500 1,000 500 0 16:14 16:16 16:18 16:20 16:22 Series0 Series1 Series2 Series3 Series4 Series5 Series6 Series7 Series 1/2

6.7 Gallery

The gallery in DIAWeb Designer contains a variety of frequently used graphic models as well as user-defined graphic collections such as motor pump fan, valve vessel, indicating instructment, button switch and more. You can create and add your own graphic models to the gallery. The models in the gallery are pre-assembled graphics, which you can easily add to the canvas for use.



6.7.1 Use the Gallery

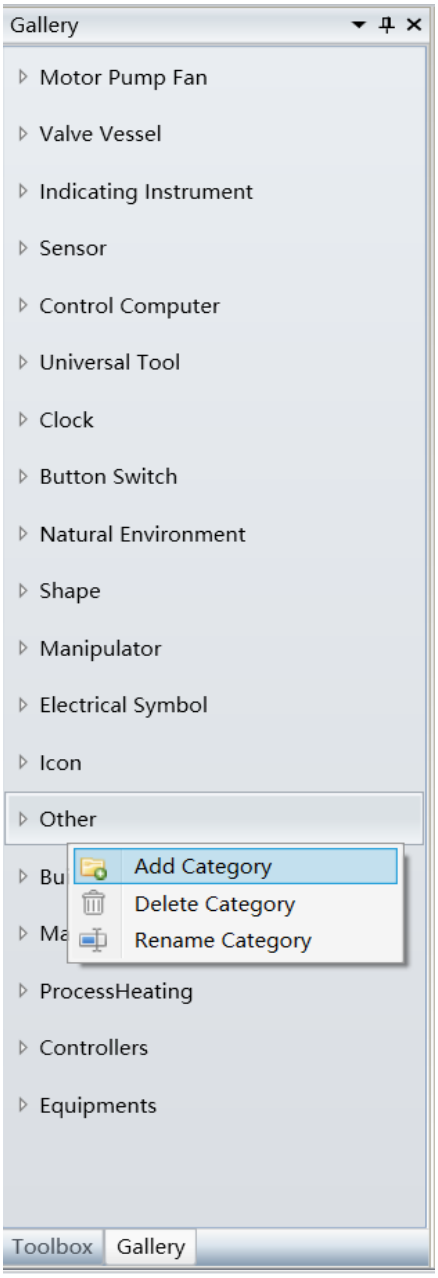
The gallery in DIAWeb Designer provides built-in grphic models and allows users to define and add their own graphic models to the the gallery

The graphic models are applied on the canvas in the same way as how the general graphics are used.

On the **Gallery** pane, find the category where the graphic model belongs to. Select the graphic you need then move your cursor to anywhere on the canvas and double-click to create one. After that, you can proceed with further adjustments to the graphic such as position, size, and so on.

- **Add a Category**

  Users can add their commonly used graphic models to the gallery. It is recommended to create custom library categories to make it easier for use and management.
  On the **Gallery** pane, right-click anywhere to open the context menu.



Click **Add Category** to add a new category in and its default name is **New Category** as in the image below. The newly established category name is editable. You can choose a category and then right-click it to access other options like **Delete Category** or **Rename Category** for that selected category.

Naming Rules: The system will generate a default name **New Category**, but you can also define a new name for the category. Self-defined names cannot be the same as other category names that have been established

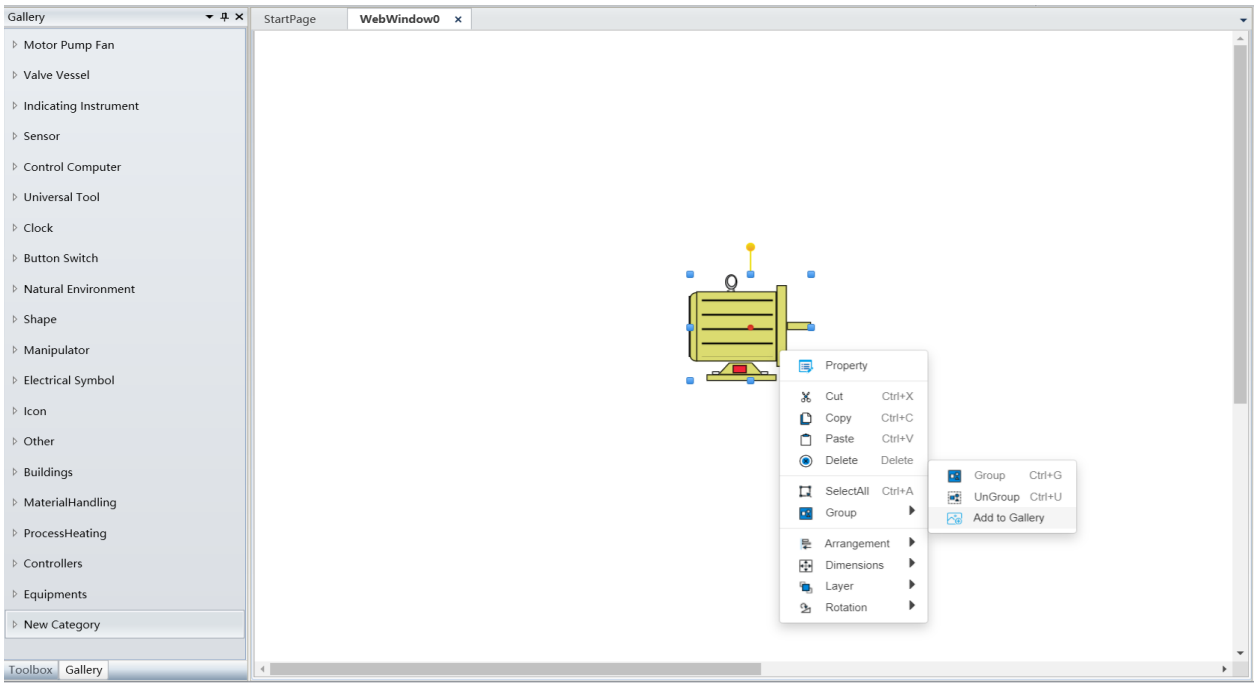
6.7.2 Expand the Gallery

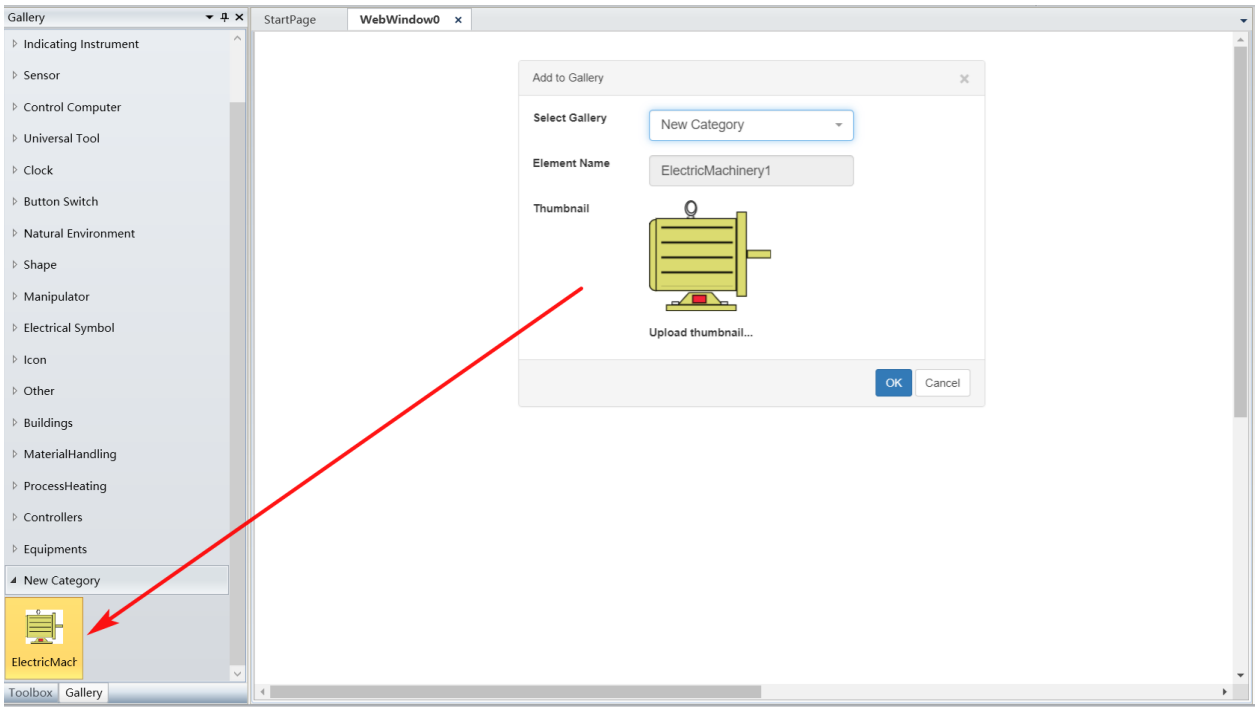
A graphic model is formed by a collection of graphics grouped on the canvas. Follow the steps below to create a model:

1. Create the sub-graphics.
2. Adjust the size, position, layers and other properties of the sub-graphics. And then group the graphics into an assembly.
3. Add the new assembly as a model to the gallery.

- **Add User-defined Models to the Gallery**

  Unfold the category where the model will be added in on the **Gallery** pane; select the assembly on the canvas and drag it to the unfolded category. See the images below for reference.





The system will automatically generate a default model name. Right-click on the model to access options like **Delete Group**, **Rename**, or **Export to Image**. a new name for the category.

Naming rules:

a. Consists of letters, numbers, Chinese characters, or underscores; must begin with a letter or Chinese character.

b. Not case-sensitive.

c. Cannot contain spaces, periods, exclamation marks, or special characters such as @$#?*&.

d. Cannot exceed 200 characters, with no more than 25 Chinese characters.

e. Cannot share the same name with other objects in the same web window or with the web window where it is.

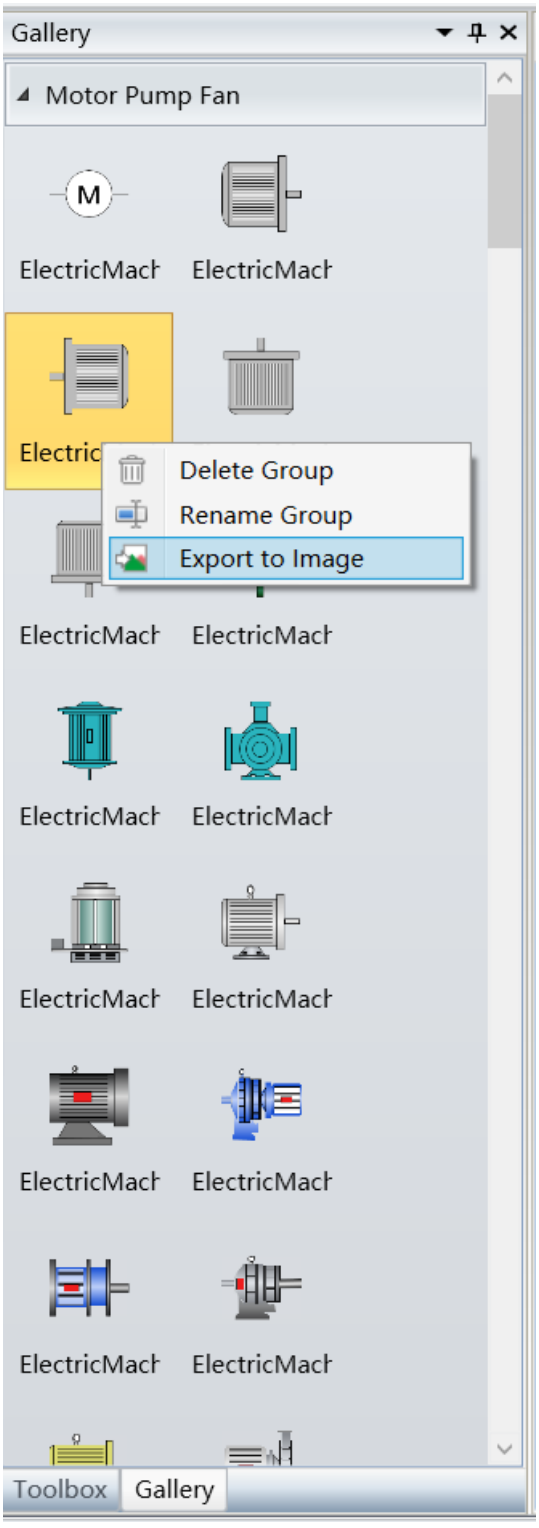
f. Only supports names in traditional Chinese, simplified Chinese, or English.

6.7.3 Export Models as Images

Follow the steps below to export models from the gallery as images.

1. Select and right-click on the graphic model you want to export.

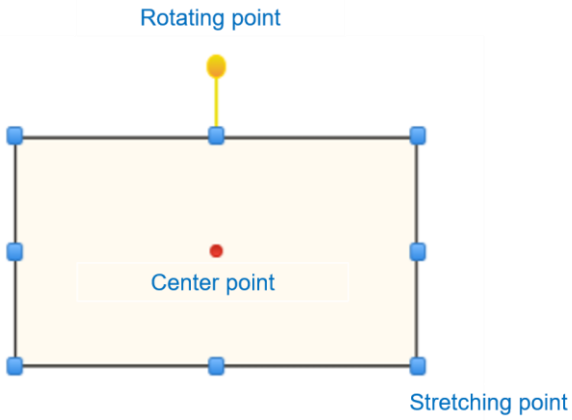
2. Select the option **Export to Image** on the context menu.



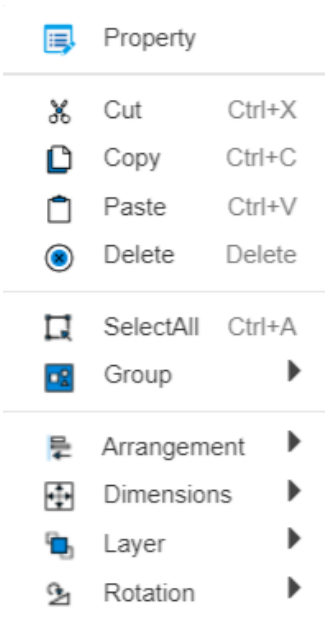
6.8 Graphic Operations

Graphic operations involve adjusting graphics by scaling, rotating, distorting, arranging, aligning, grouping, and other actions to alter the properties of the graphics to achieve the intended functionality and visual effects.

During project development, you have various approaches to modifying the properties of graphics. You can edit through the property edition dialog, using a mouse, right-clicking, keyboard shortcuts, or via quick access toolbar and menu bar. For instance, while drawing a graphic, you can rotate it by adjusting the rotation point or change the size by stretching the stretching points as the image shown below.



The DIAWeb Designer offers a user-friendly context menu to provide users an easier setting experience. Please refer to section 4.5 for more details.



To provide you with a convenient and efficient development environment, DIAWeb Designer offers shortcut buttons for frequently used commands in the software. Please refer to section 4.4.2 for more details.

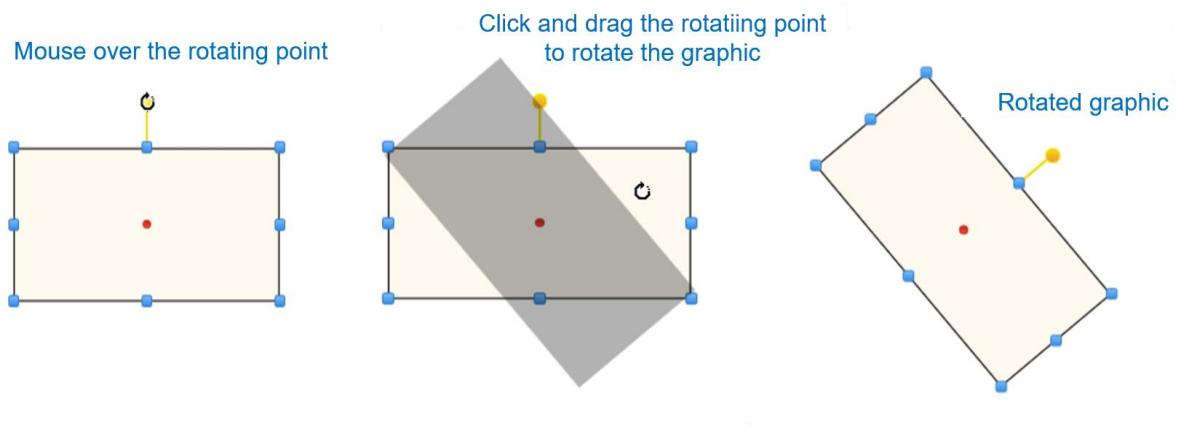
DIAWeb Designer
File
Start
View
IIoT
iotscada@163.com
New
Open
Preview
Project
Cut
Copy
Paste
Clipboard
Align Left
Align Center
Align Right
Align Top
Align Middle
Align Bottom
Distribute Vertical
Distribute Horizontal
Same Center
Arrangement
Same Width
Same Height
Same Size
Size
Group
Ungroup
Group
Bring to Front
Bring Forward
Send to Back
Send Backward
Layer
Rotation
Show Grid Line
Enable Pan
Show Ruler
100%
Enable Snap
Canvas
Find and Replace
Edit
Language Settings
Parameter Settings

6.8.1 Rotation

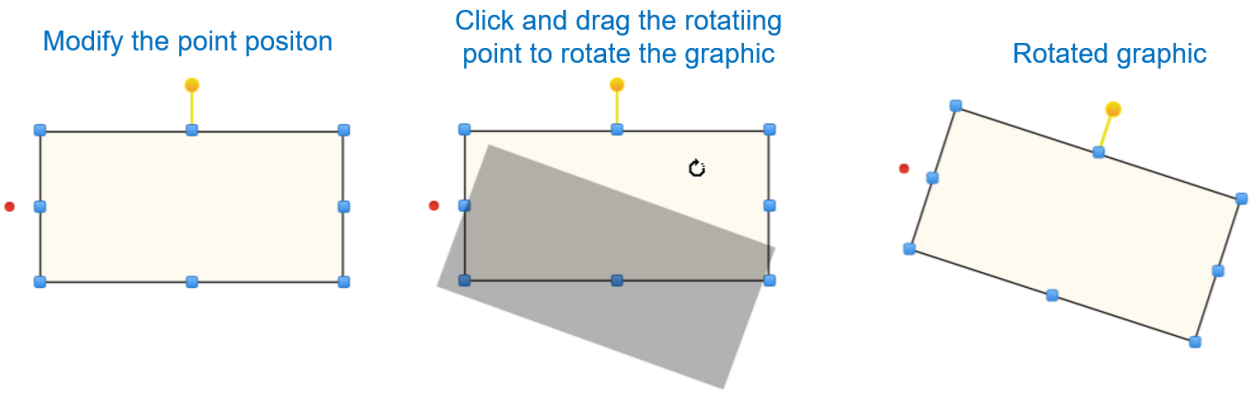
Rotating a graphic involves pivoting around a central point, which may be in the default position (the center of the graphic) or in a modified position prior to rotation.

To rotate a graphic, place the mouse over the rotatiing point and the cursor will change to . Then hold the left mouse button and drag the rotating point to rotate the graphic.

Below is an example of rotating a graphic with a default central point.



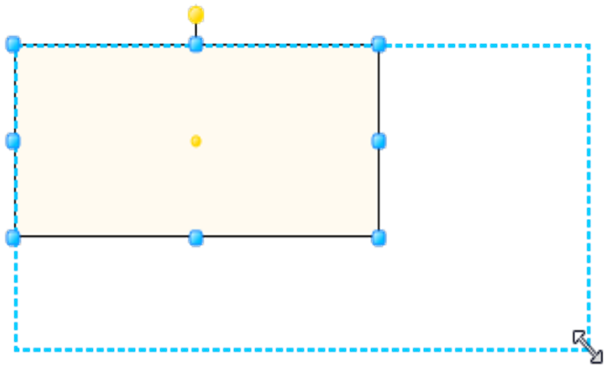
Below is an example of rotating a graphic with a modified central point.



The other approach to rotate a graphic is to specify a precise value of rotation angle (in degrees) in the Rotation property box in the Property Edition dialog.

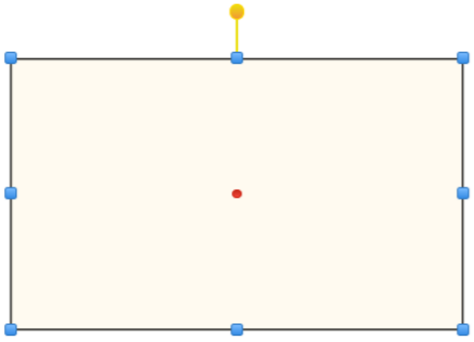
6.8.2 Stretch

To adjust the size of the seleted graphic, click the graphic to put it in edit mode first. Take a rectangle as an example, you can see 8 stretching points when the graphic is in edit mode as in the image below. Then place the cursor over any of the stretching points. When the cursor turns into or , click and drag the point to adjust the size of the graphic.



The dashed outline and the cursor

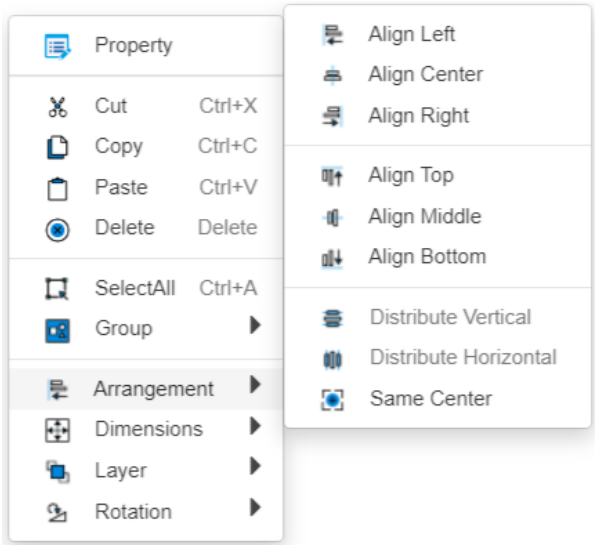
The graphic has been adjusted.



The other approach to adjust the graphic size is to specify precise values of height and width (in degrees) in the Size property box in the Property Edition dialog.

6.8.3 Arrangement

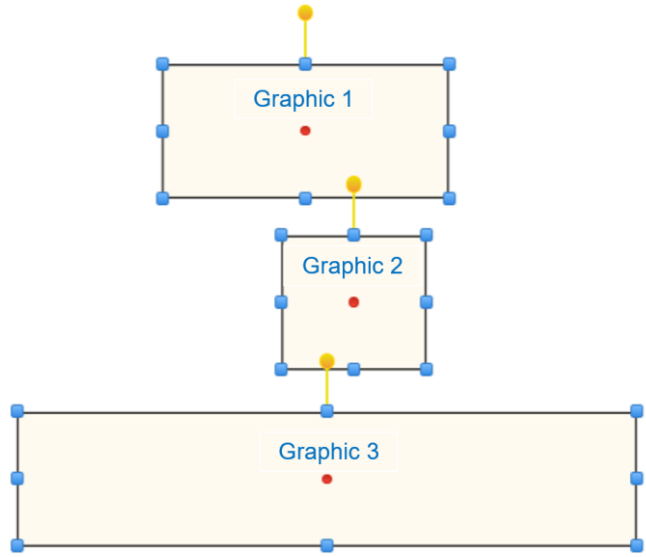
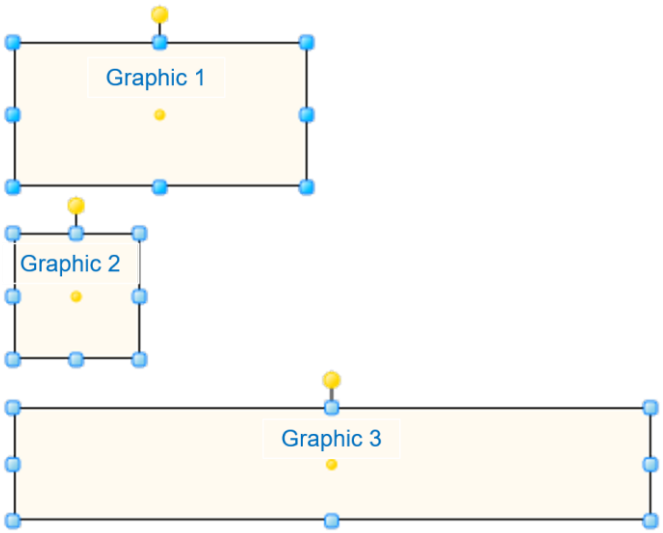
When there are multiple graphics on the canvas, sometimes it may be required to align or distribute them in certain ways. DIAWeb Designer offers 7 types of alignment along with 2 types of distribution commands. Most alignment commands are applicable only when there are two or more graphics selected.

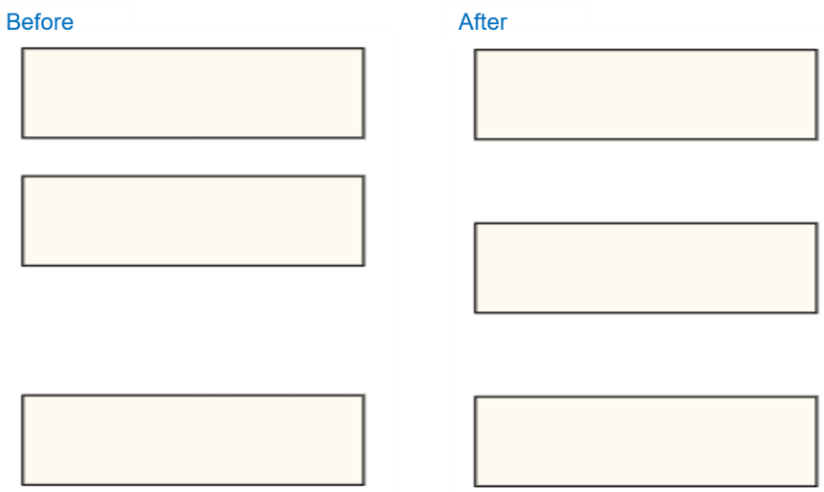
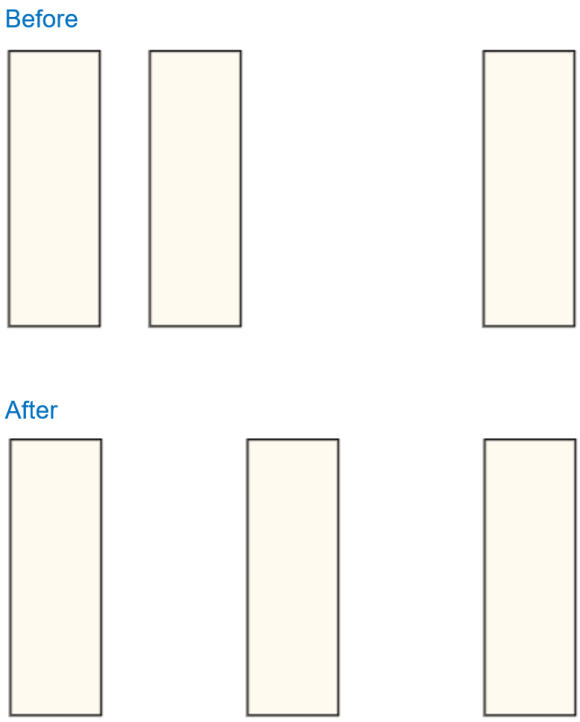


When multiple graphics are selected, you can use the following rules to have the selected graphic aligned.

1. When select by drawing a selection box to include multiple graphics on the canvas, the graphic which is first created will serve as the reference graphic with brighter stretching points.
2. When selecting multiple graphics by clicking them one by one, the first clicked graphic will serve as the reference graphic with brighter stretching points.

Command	Description
Align Left	The icon of this command in the Start tab is . To left align two or more selected graphics with the left edge of the reference graphic. For example: Select 3 graphics with Graphic 1 whose stretching points are brighter as the reference graphic. Then click the **Align Left** icon in the menu bar to make the other graphics align with the left edge of Graphic 1.

Command	Description
	 The graphics have been aligned left. 
Align Right	The icon of this command in the Start tab is . To right align the other selected graphics with the right edge of the reference graphic.
Align Top	The icon of this command in the Start tab is . To top align the other selected graphics with the top edge of the reference graphic.
Align Bottom	The icon of this command in the Start tab is . To align the bottom of the other selected graphics with the bottom edge of the first selected object.
Align Center	The icon of this command in the Start tab is . To vertically align the center of the other selected graphics with the center of the reference graphic.

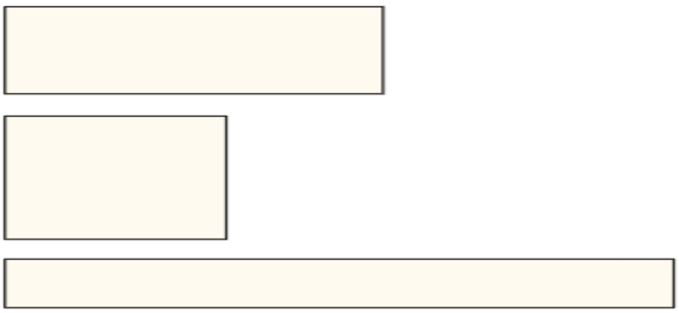
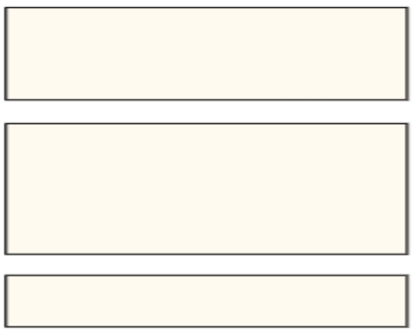
Command	Description
Align Middle	The icon of this command in the Start tab is . To horizontally align the center of the other selected graphics with the center of the reference graphic.
Same Center	The icon of this command in the Start tab is . To align the center point of the other selected graphics with the center point of the reference graphic.
Distribute Vertical	The icon of this command in the Start tab is . To align the vertical intervals between three or more selected graphics as shown below. 
Distribute Horizontal	The icon of this command in the Start tab is . To align the horizontal intervals between three or more selected graphics as shown below. 

6.8.4 Size

When there are multiple graphics on the canvas, it may be required to align their sizes in certain ways. DIAWeb Designer offers 3 types of commands to resize the graphics, which are applicable only when there are two or more graphics selected.

When multiple graphics are selected, you can use the following rules to have the selected graphic aligned.

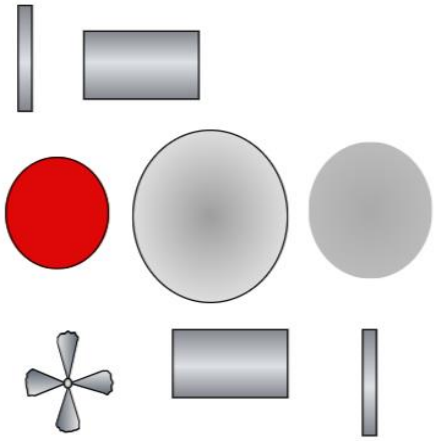
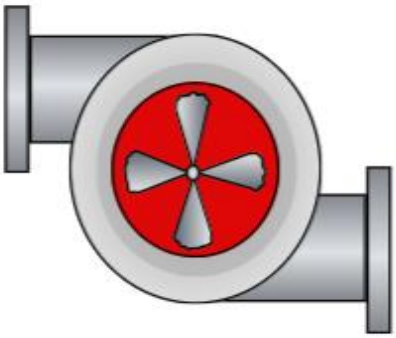
1. When select by drawing a selection box to include multiple graphics on the canvas, the graphic which is first created will serve as the reference graphic with brighter stretching points.
2. When selecting multiple graphics by clicking them one by one, the first clicked graphic will serve as the reference graphic with brighter stretching points.

Command	Description
Same Width	The icon of this command in the Start tab is . To make the width of the other selected graphics the same as the width of the reference graphic. Before  After 
Same Height	The icon of this command in the Start tab is . To make the height of the other selected graphics the same as the height of the reference graphic.
Same Size	The icon of this command in the Start tab is . To make the size of the other selected graphics the same as the size of the reference graphic.

6.8.5 Group

Grouping refers to combining two or more graphics to form an assembly, creating a new graphic such as fans, motors, water tanks, and so on for practical purposes. The grouped graphic can be added to the library, making it easily accessible for future use.

The grouped graphic is regarded as a new graphic and is subject to adjustments as other graphics. It can also be ungrouped at any time as required.

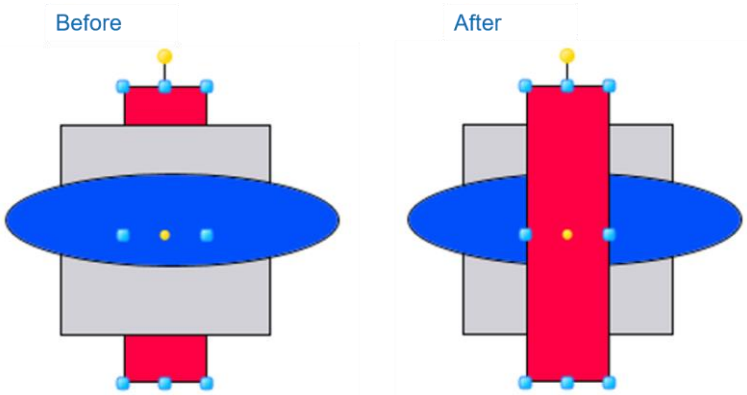
Command	Description
Group	The icon of this command in the Start tab is . Draw the individual graphics that make up the composite graphic fist. For example, if you are drawing a water pump, start by creating its components.  Adjust the size, position, and layer of the components then group them together to form a water pump as shown below. 
Ungroup	The icon of this command in the Start tab is . Select the composite graphic (in the example, the water pump) and click the **Ungroup** icon. The sub-graphics become independent on the canvas.

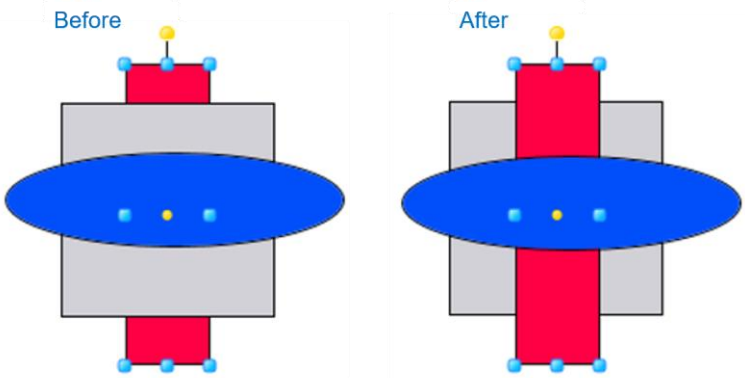
6.8.6 Layer

Layering is used to arrange the display order on the canvas. In DIAWeb Designer, the graphics drawn first are placed at the back, whereas those drawn later are placed in front of the first drawn graphics.

When there are multiple graphics overlapped, you can use this function to move them backward or forward.

DIAWeb Designer offers 4 types of layering commands:

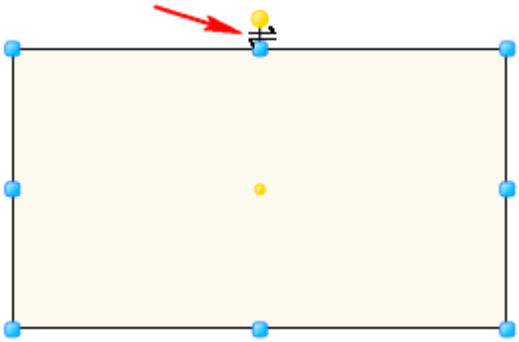
Command	Description
Bring to Front	The icon of this command in the Start tab is . When there are multiple graphics overlapped, click to move the selected graphic in front of all other graphics. For example, select the red graphic as shown below. Then click **Bring to Front** icon and the red graphic is brought in front of all other graphics. 
Send to Back	The icon of this command in the Start tab is . When there are multiple graphics overlapped, click to move the selected graphic behind all other graphics.
Bring Forward	The icon of this command in the Start tab is . When there are multiple graphics overlapped, click to move the selected graphic forward one layer. For example, the red graphic is selected and moved in front of the grey graphic.

Command	Description
	
Send Backward	The icon of this command in the Start tab is . When there are multiple graphics overlapped, click to move the selected graphic back one layer.

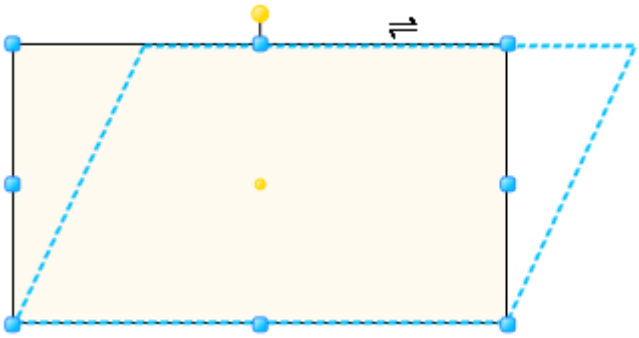
6.8.7 Skew

Skewing is used to tilt a graphic.

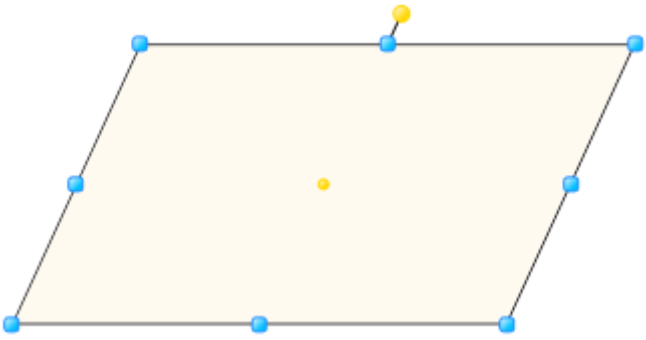
To skew a graphic, place the mouse over the skewing point. When the cursor turns into ⇌, click and drag the skewing point to change the shape of the graphic as illustrated below.



You can move the graphic horizontally.



The graphic has been skewed to the right.



The other approach to skew the graphic is to specify precise values in the Skew Angle X property box in the Property Edition dialog. The field ranges from -80 to 80 and may contain two decimal places.

Chape 7 Animation

7.1 Introduction

Animation refers to establishing a correspondence between graphic elements and variables, allowing the properties of these elements to dynamically change based on real-time data collection, thereby presenting dynamic scenes from industrial environments realistically. For example, this can involve simulating fluid flow in pipelines, real-time changes in device data, motor rotation, blinking alarm lights, and so on.

To configure animations to dynamically change the properties of graphic objects on the screen, it is necessary to link them to corresponding variables and configure related properties based on real-time variable data collection. Therefore, animations are driven by data.

The animation configuration features of DIAWeb Designer are powerful, including Visibility, Appearance, Text, Value View, Skew, Rotation, Fill, Zoom, Move, Flow. Only one animation of the same type can be configured for the same graphic object.

7.2 Visibility

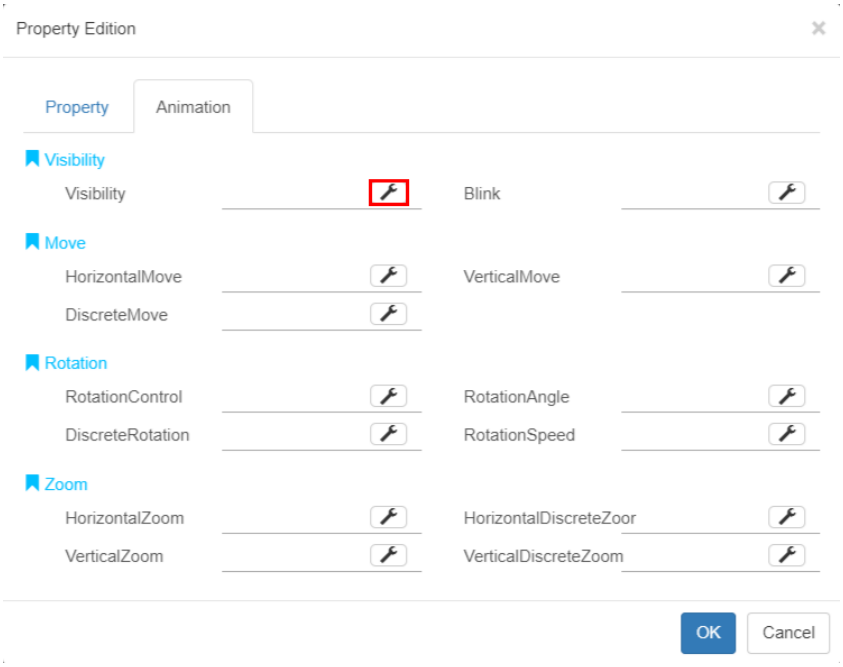
Visibility animation involves controlling the graphic object visibility by using variables or the values of expressions to change the “show/hide” property of these objects.

Based on the visibility effect, visibility animations are divided into two types: “Visibility” and “Blink”. Visibility refers to changing the display status of a graphic from visible to hidden or vice versa on conditions, which is a single action. On the other hand, blink refers to having the graphic alternatively hide/show at a certain frequency, creating a blinking effect.

7.2.1 Visibility

Here are the setup steps for Visibility animation:

Step 1: Open the DIAWeb Designer software, click the window where animation needs to be configured in the project. Select the graphic object > double-click to open **Property Edition** > **Animation** > **Visibility**, as shown in the image below.



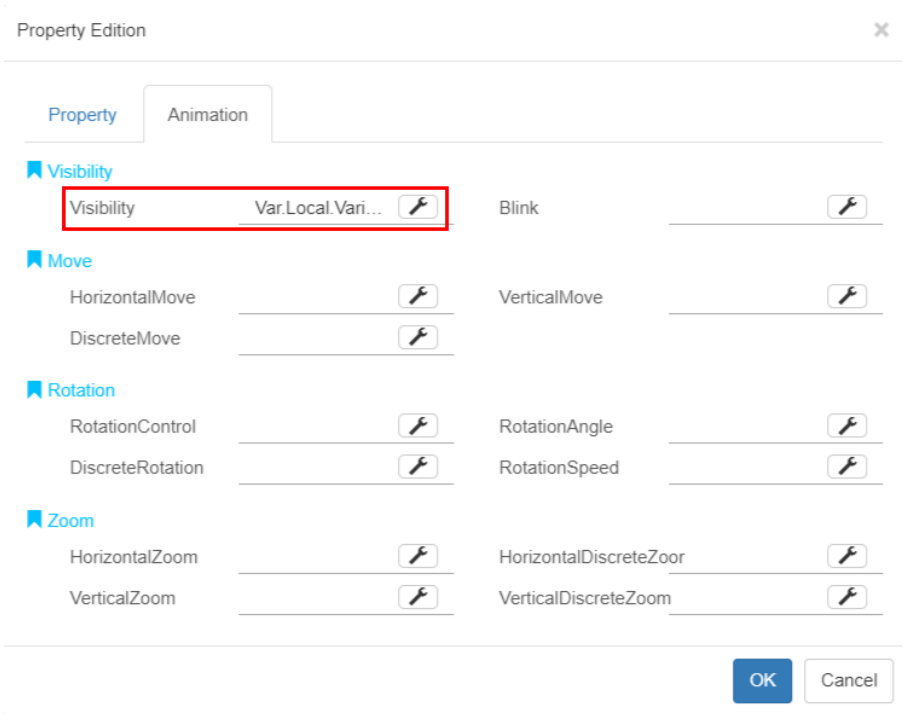
Step 2: **Visibility** animation configuration window will pop up.

The meanings of each setting in the configuration window are as follows:

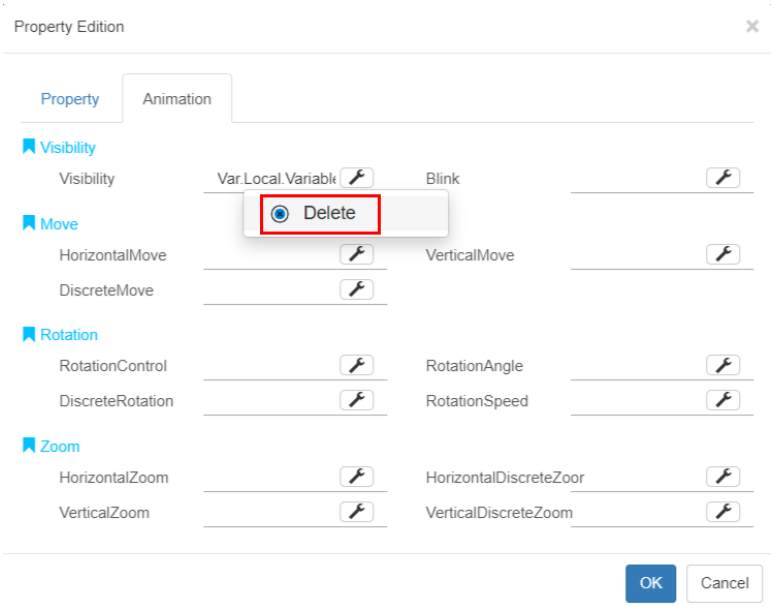
Expression: Click ... to open the variables browser to select variables.

Clear: Clear the related variables.

Step 3: After finishing the configuration, click **OK**. The animation window will display the configured information for this graphic.



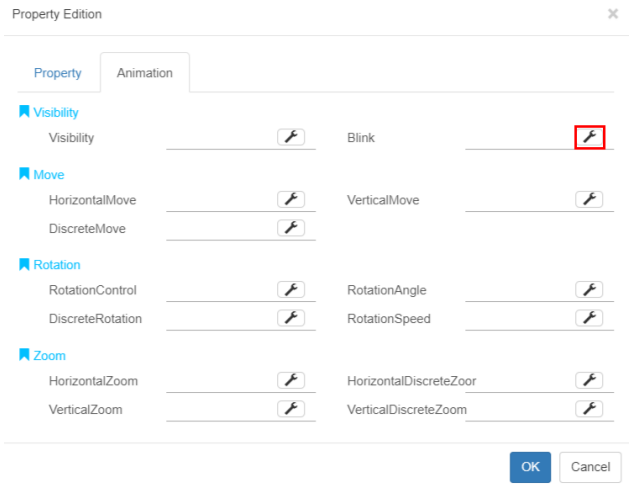
To delete an animation, select the animation from the list, then right-click and choose **Delete.**



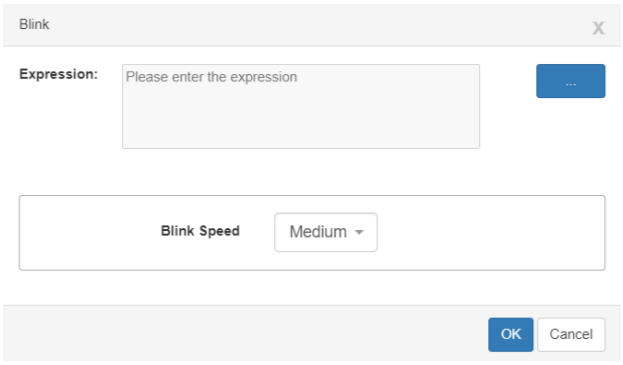
7.2.2 Blink

Here are the setup steps for Blink animation:

Step 1: Open the DIAWeb Designer software, click the window where animation needs to be configured in the project. Select the graphic object > double-click to open **Property Edition** > **Animation** > **Blink**, as shown in the image below:



Step 2: Blink animation configuration window will pop up.

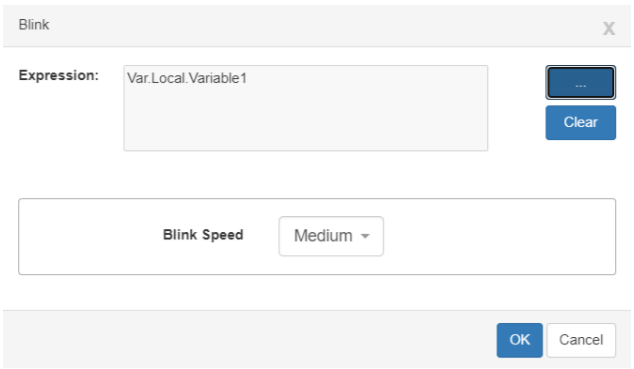


The meanings of each setting in the configuration window are as follows:

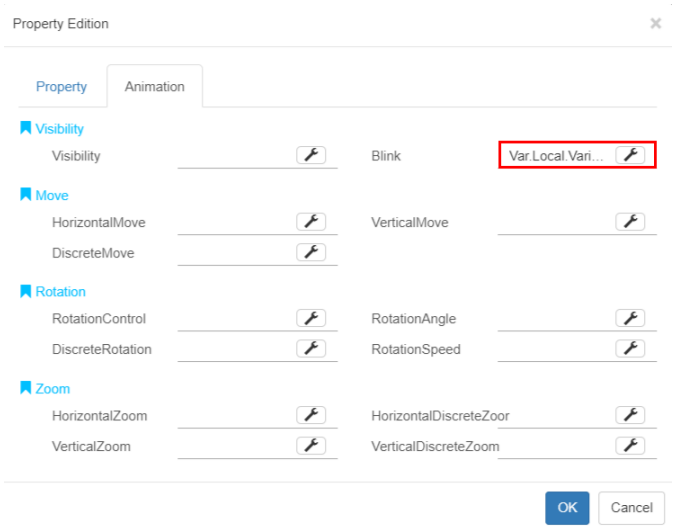
Expression: Click to open the variables browser to select variables.

Clear: Clear the related variables.

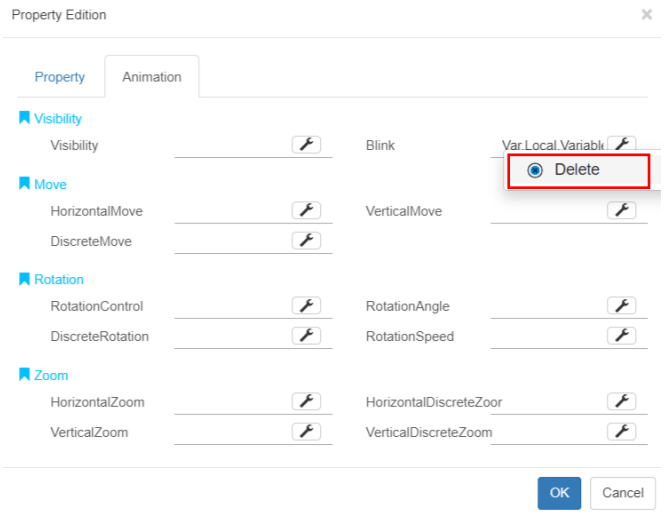
Blink Speed: Setting the blinking frequency, which is a drop-down list with 3 options: Slow, Medium, and Fast.



Step 3: After finishing the configuration, click **OK**. The animation window will display the configured information for this graphic.



To delete an animation, select the animation from the list, then right-click and choose **Delete**.



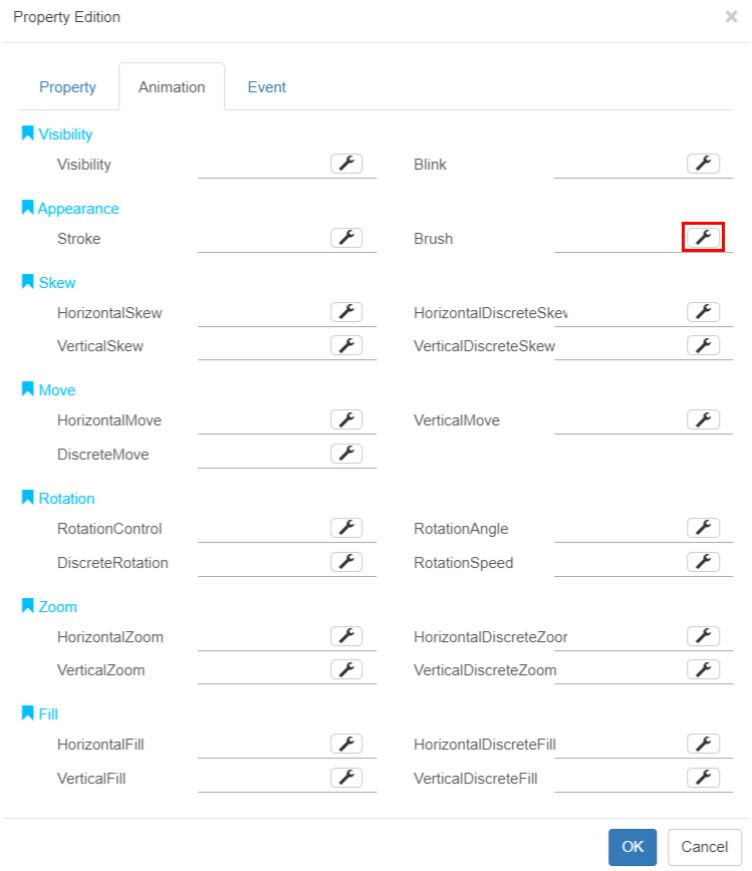
7.3 Appearance

Appearance animation involves changing stroke and brush of a graphic.

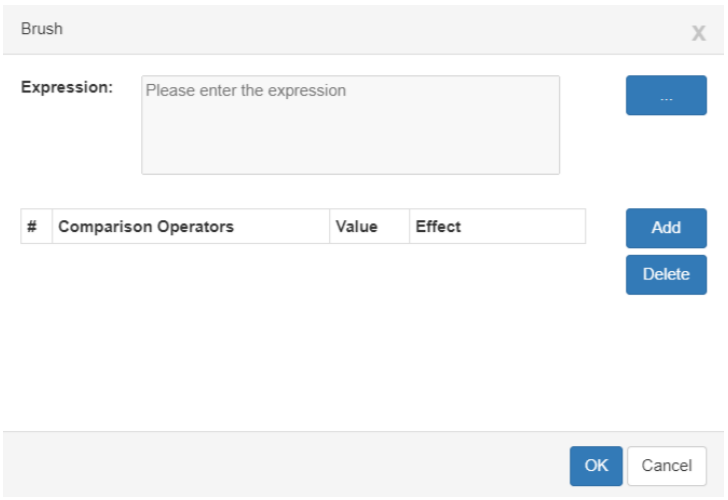
Appearance animation includes two animations: Stroke and Brush, the configuration steps for both are the same.

Taking Brush as an example, here are the configuration steps:

Step 1: Open the DIAWeb Designer software, click the window where animation needs to be configured in the project. Select the graphic object > double-click to open **Property Edition** > **Animation** > **Brush**, as shown in the image below.



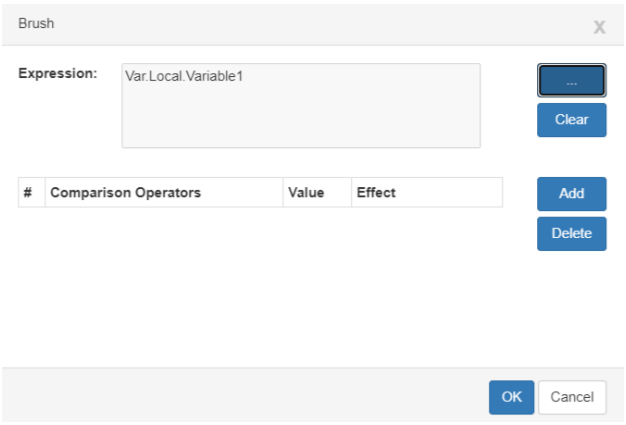
Step 2: Brush animation configuration window will pop up.


Brush
X
Expression:
Please enter the expression
...
Comparison Operators Value Effect
Add
Delete
OK
Cancel

The meanings of each setting in the configuration window are as follows:

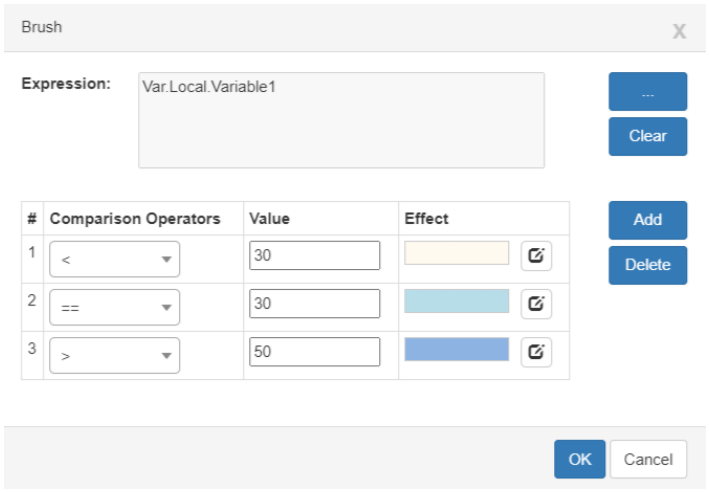
Expression: Click to open the variables browser to select variables.

Clear: Clear the related variables.

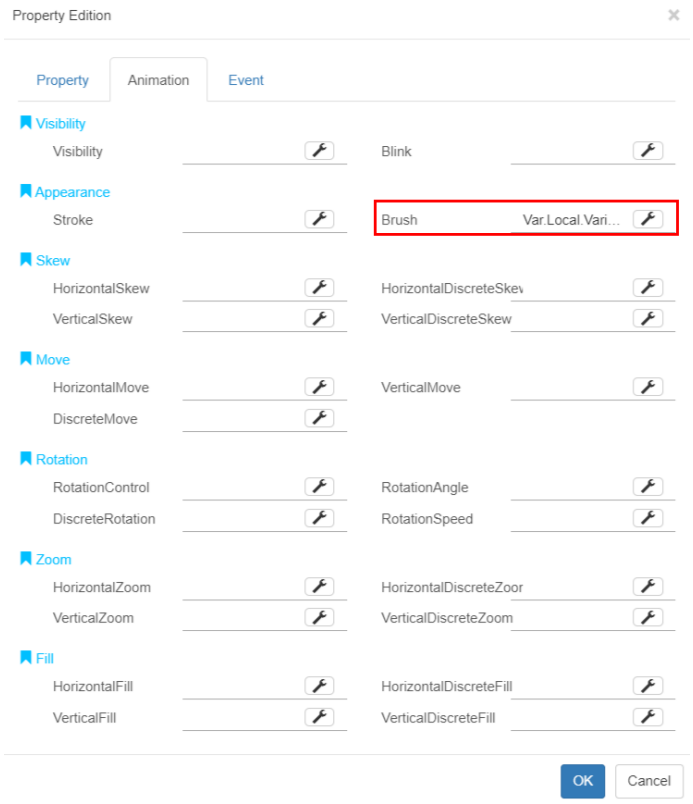


Brush configuration:

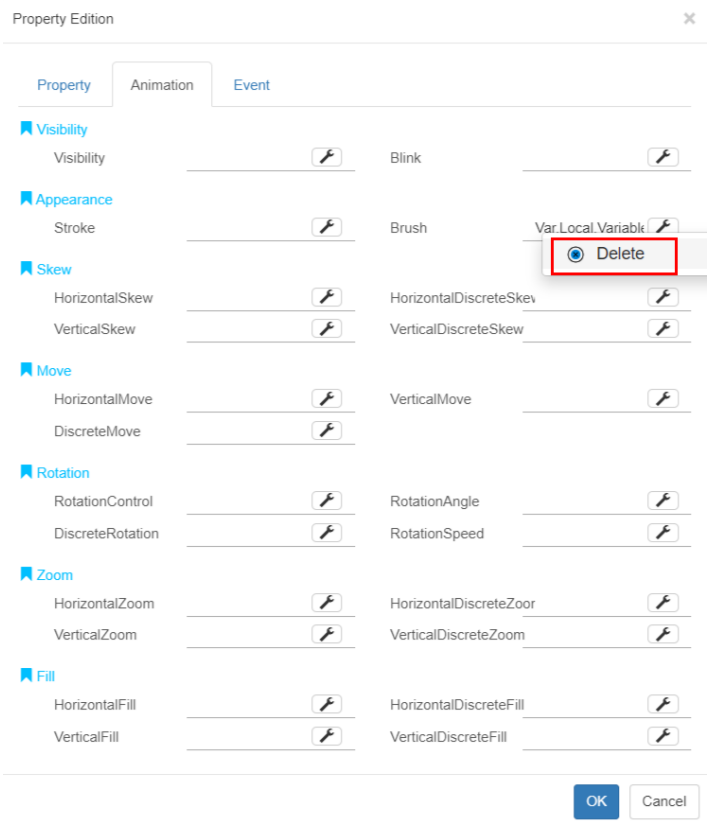
- **Comparison Operators:** Setting the symbol for comparing the expression and value, which is a drop-down list with 6 options:
  1. =: Equal to (default)
  2. !=: Not equal to
  3. <: Less than
  4. >: Greater than
  5. <=: Less than / equal to
  6. >=: Greater than / equal to
- **Value:** Setting the reference value for “expression” comparison. It can be an integer or a decimal (up to two decimal places).
- **Effect:** Setting the fill color.
- **Add:** Click the button to add a configuration item, as shown in the image below.
- **Delete:** Select a fill configuration item and click this button to delete it.



Step 3: After finishing the configuration, click **OK**. The animation window will display the configured information for this graphic.



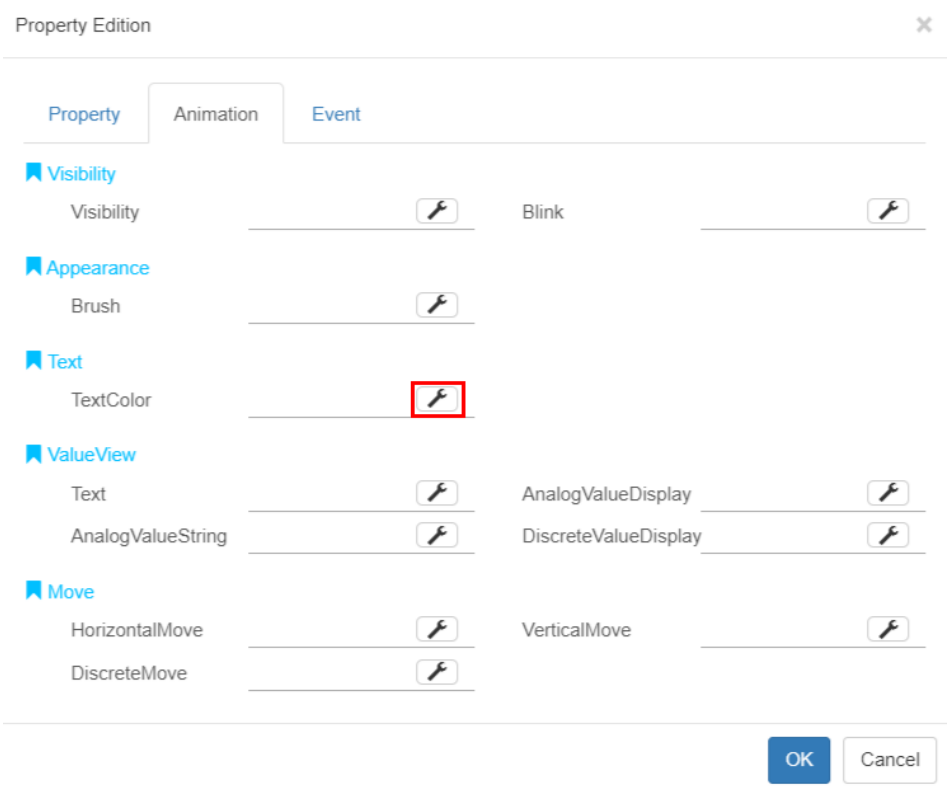
To delete an animation, select the animation from the list, then right-click and choose **Delete**.



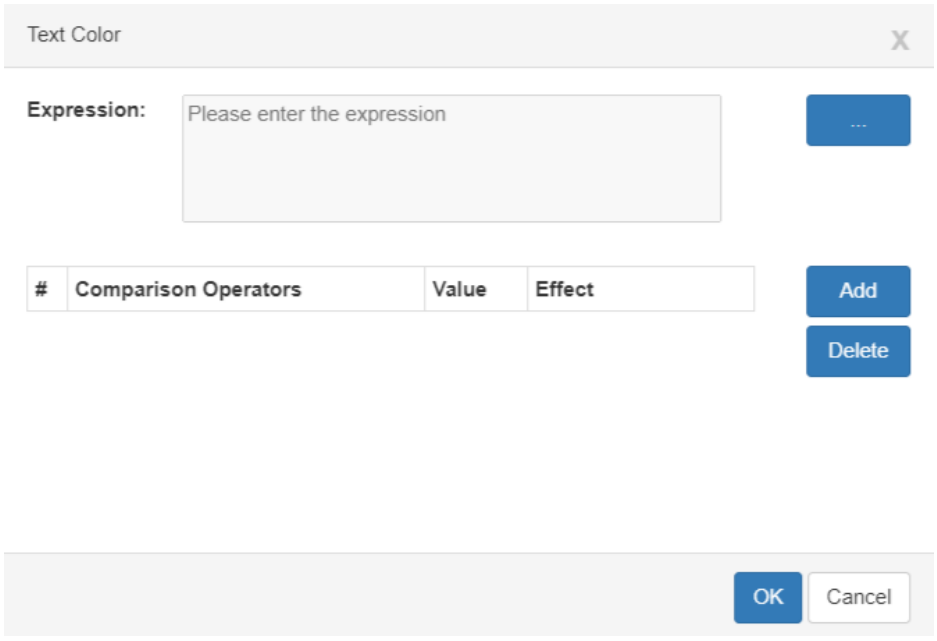
7.4 Text

Text animation involves controlling the foreground color of a text through variables or the value of expression, making the text color alternately blinking. Here are the setup steps:

Step 1: Open the DIAWeb Designer software, click the window where animation needs to be configured in the project. Select the graphic object > double-click to open **Property Edition** > **Animation** > **Text Color**, as shown in the image below.



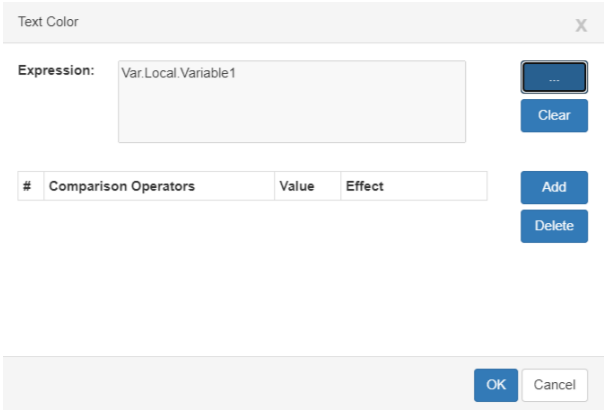
Step 2: **Text Color** animation configuration window will pop up.



The meanings of each setting in the configuration window are as follows:

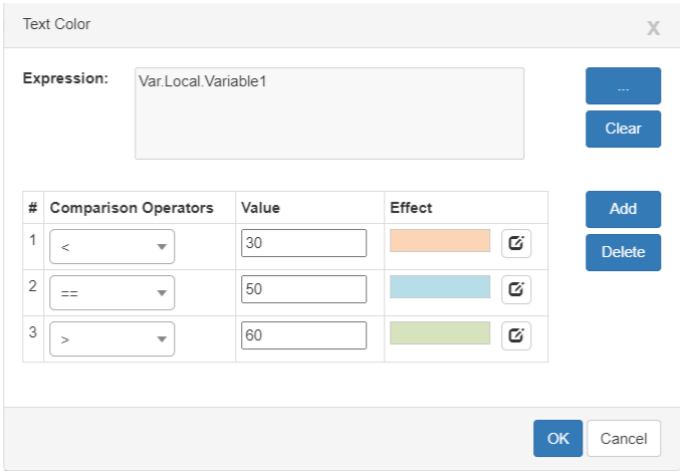
Expression: Click to open the variables browser to select variables.

Clear: Clear the related variables.

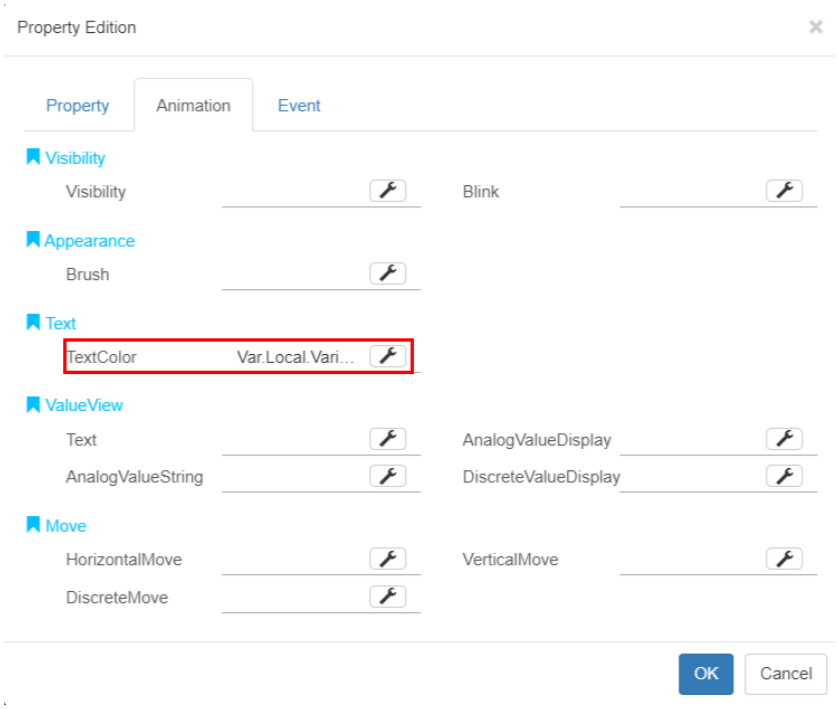


Text Color configuration:

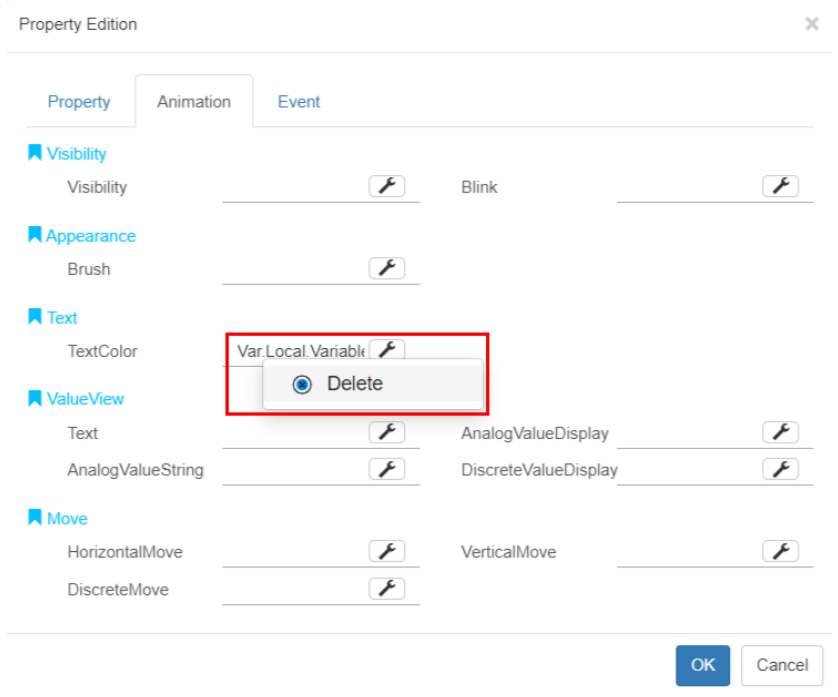
- **Comparison Operators:** Setting the symbol for comparing the expression and value, which is a drop-down list with 6 options:
  1. =: Equal to (default)
  2. !=: Not equal to
  3. <: Less than
  4. >: Greater than
  5. <=: Less than / equal to
  6. >=: Greater than / equal to
- **Value:** Setting the reference value for “expression” comparison. It can be an integer or a decimal (up to two decimal places).
- **Effect:** Setting the text color.
- **Add:** Click the button to add a configuration item, as shown in the image below.
- **Delete:** Select a configuration item and click this button to delete it.


Text Color
X
Expression:
Var.Local.Variable1
...
Clear
Comparison Operators Value Effect
1 < 30
2 == 50
3 > 60
Add
Delete
OK
Cancel

Step 3: After finishing the configuration, click **OK**. The animation window will display the configured information for this graphic.



To delete an animation, select the animation from the list, then right-click and choose **Delete**.



7.5 Value View

Value View animation can only be configured for graphic objects such as button, text box, label, and Nixie tube. It changes their "Content" property, meaning their displayed text will change according to the variations in the associated variable values and the set conditions.

Value View animation is divided into 4 types: Analog Value String, Analog Value Display, Discrete Value Display, Text. These cannot be configured at the same time.

Analog Value String works by associating a digital or analog signal (integer or real). It compares the variable value with the set value, and when the comparison condition is met, the graphical object displays the specified string value.

Analog Value Display works by associating an analog signal (integer or real), it sets the display format so that the variable value is displayed in the graphical object according to the specified format.

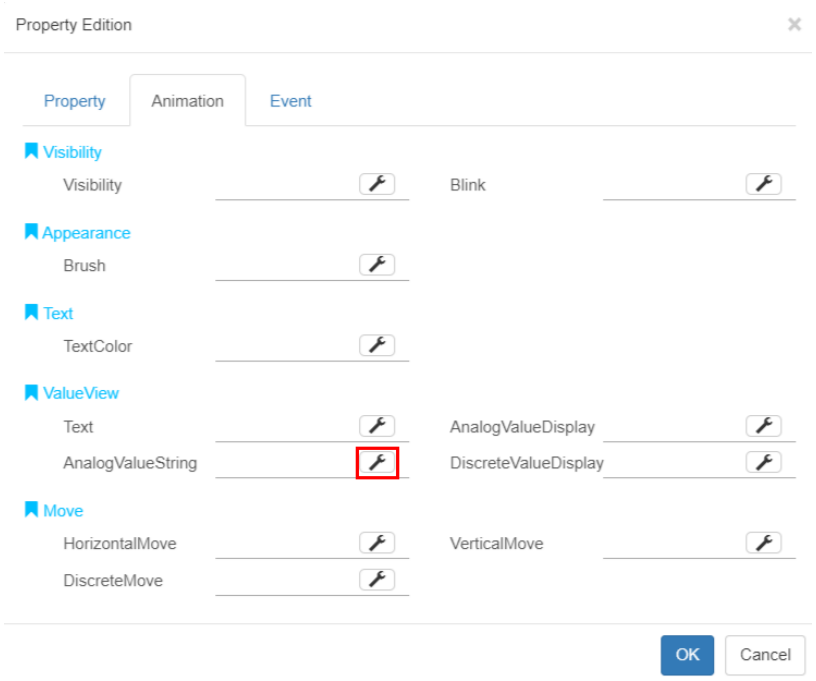
Discrete Value Display is associated with a digital signal (bool). It sets different display content based on whether the variable value is True or False.

Text is associated with a variable or a set string, displaying the content of the graphical object as either the related variable value or the specified string.

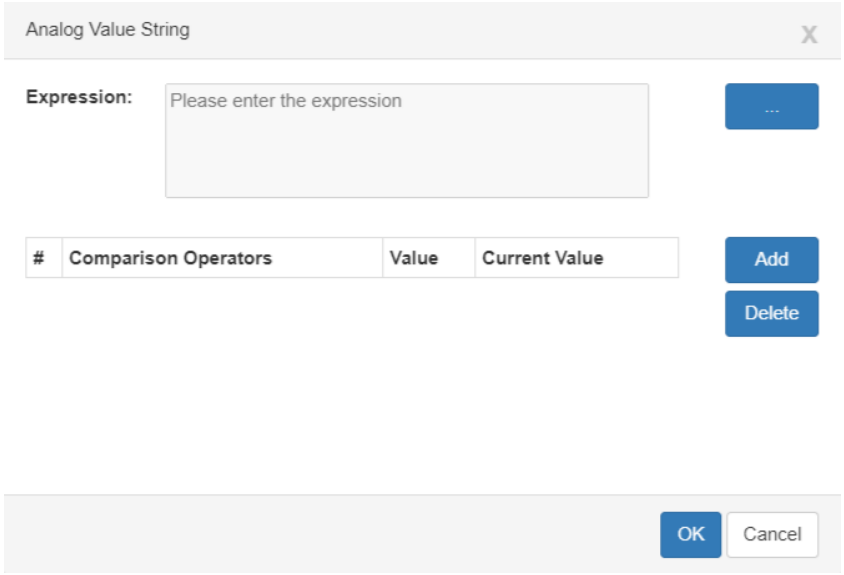
7.5.1 Analog Value String

Here are the setup steps for Analog Value String animation:

Step 1: Open the DIAWeb Designer software, click the window where animation needs to be configured in the project. Select the graphic object > double-click to open **Property Edition** > **Animation** > **Analog Value String**, as shown in the image below.



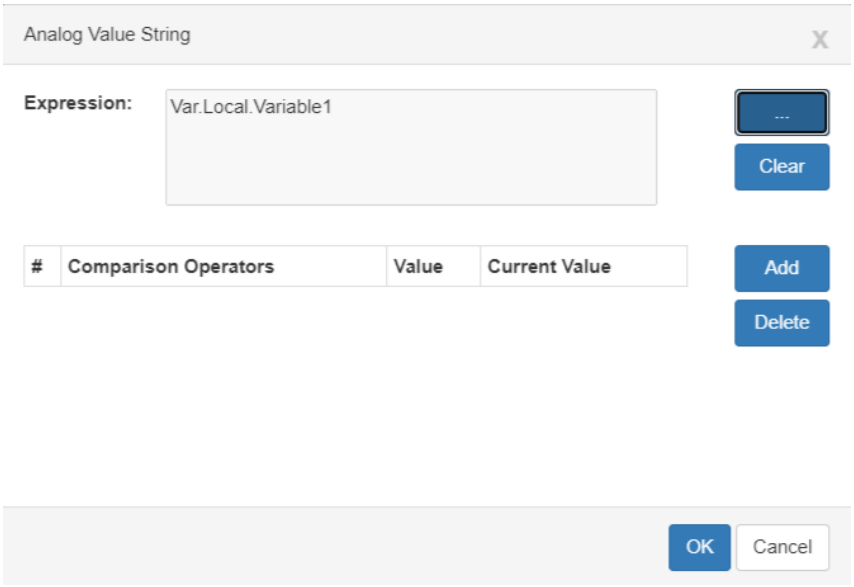
Step 2: Analog Value String animation configuration window will pop up.



The meanings of each setting in the configuration window are as follows:

Expression: Click ... to open the variables browser to select variables

Clear: Clear the related variables.



Analog Value String configuration:

- **Comparison Operators:** Setting the symbol for comparing the expression and value, which is a drop-down list with 6 options:

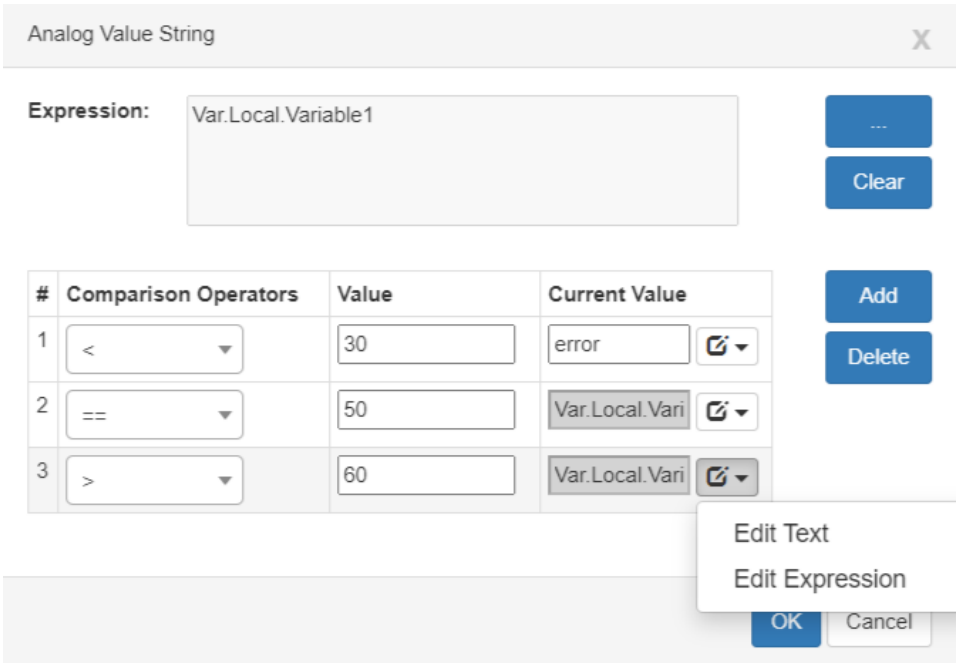
  1. =: Equal to (default)
  2. !=: Not equal to
  3. <: Less than
  4. >: Greater than
  5. <=: Less than / equal to
  6. >=: Greater than / equal to

- **Value:** Setting the reference value for “expression” comparison. It can be an integer or a decimal (up to two decimal places).

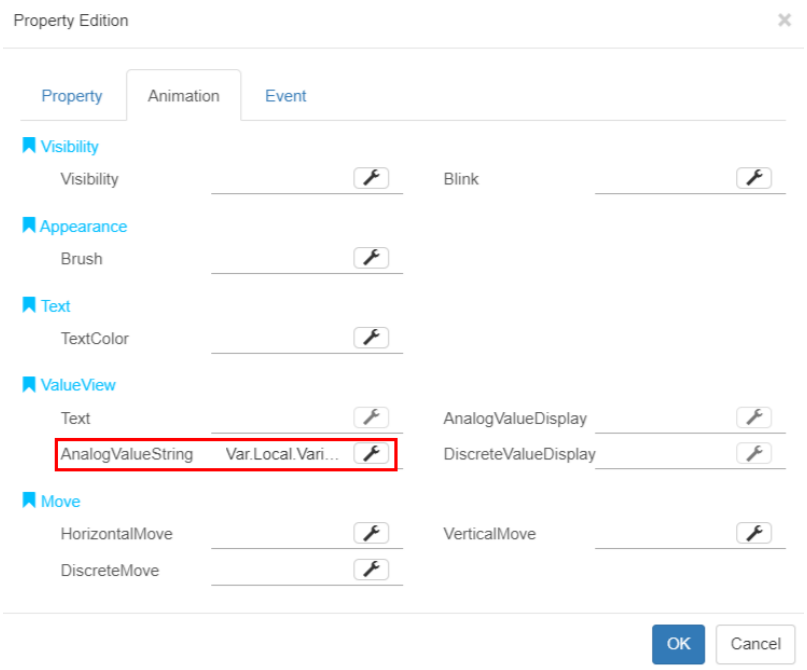
- **Current Value:** Setting the content of text (supports conversion to multiple languages) or expression, the value will be displayed in the graphic when the configured comparison conditions are met.

- **Add:** Click the button to add a configuration item, as shown in the image below.

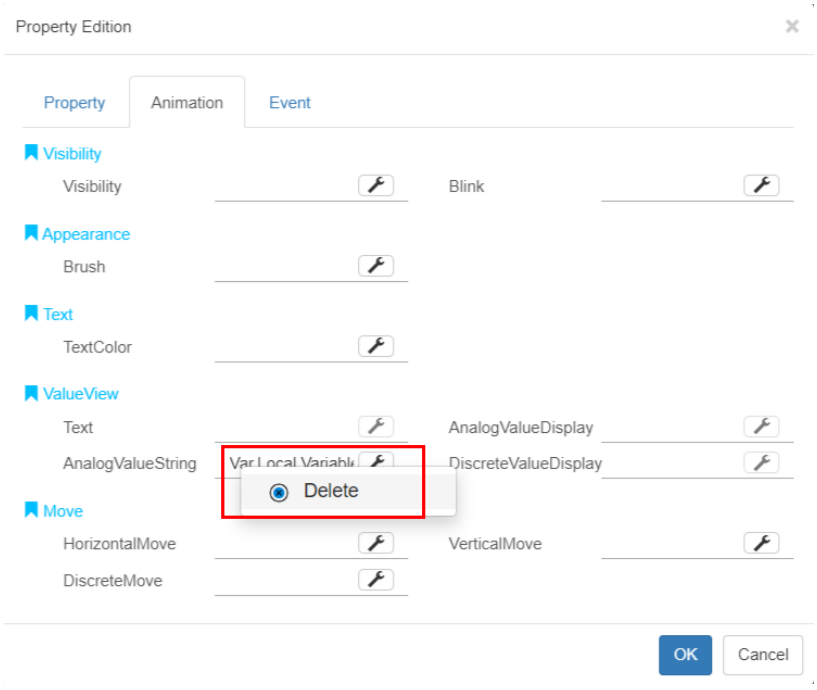
- **Delete:** Select a configuration item and click this button to delete it.



Step 3: After finishing the configuration, click **OK**. The animation window will display the configured information for this graphic.



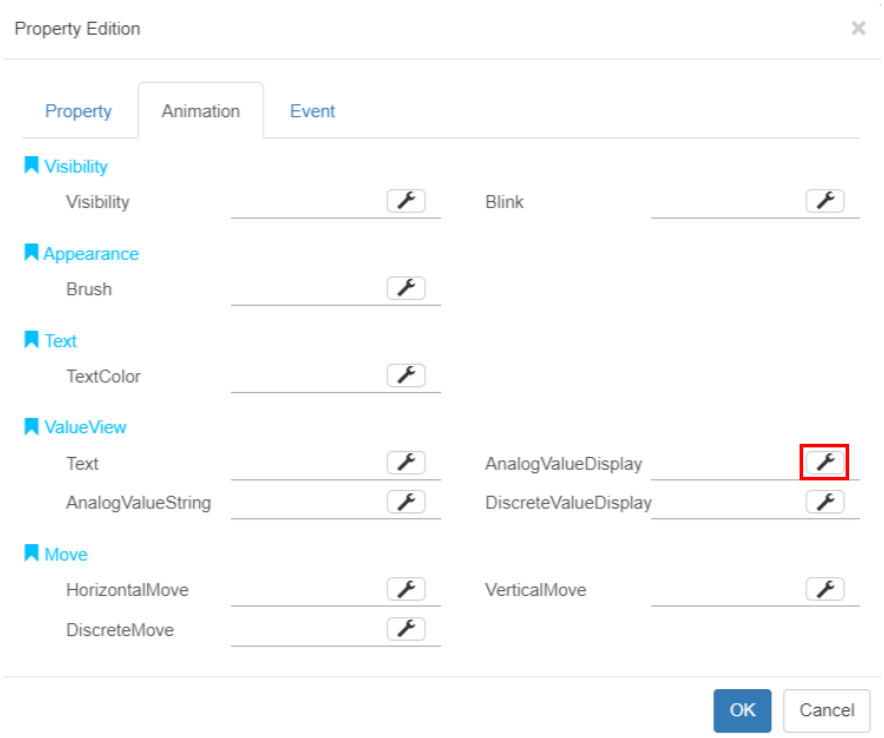
To delete an animation, select the animation from the list, then right-click and choose **Delete**.



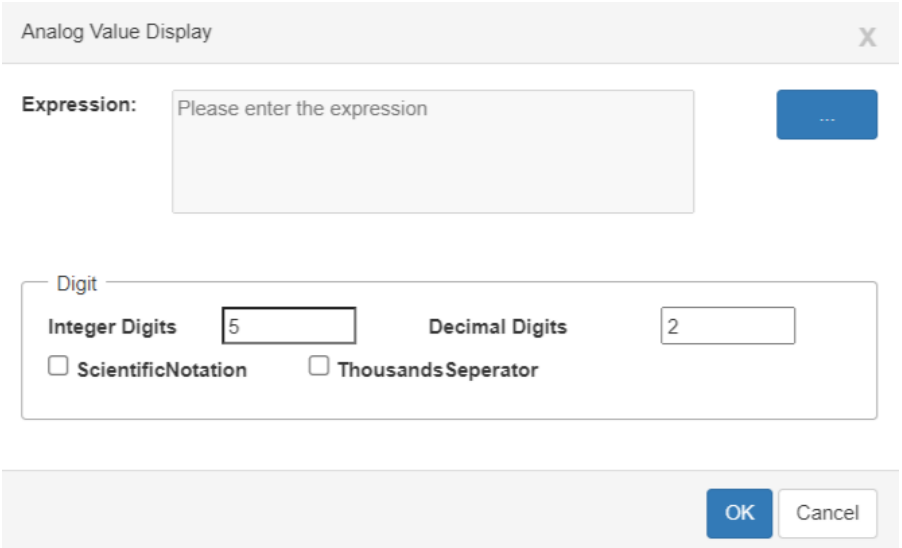
7.5.2 Analog Value Display

Here are the setup steps for Analog Value Display animation:

Step 1: Open the DIAWeb Designer software, click the window where animation needs to be configured in the project. Select the graphic object > double-click to open **Property Edition** > **Animation** > **Analog Value Display**, as shown in the image below.



Step 2: Analog Value Display animation configuration window will pop up.



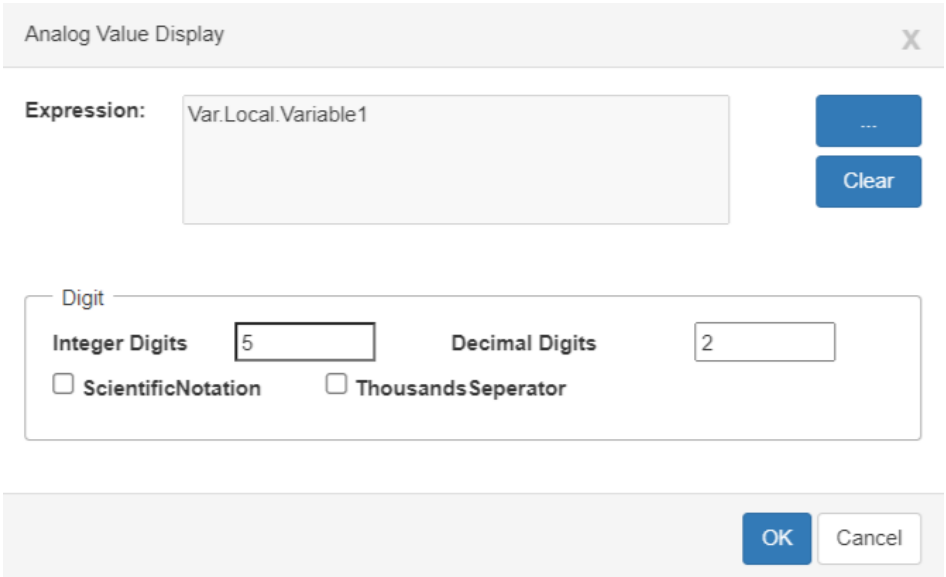
The meanings of each setting in the configuration window are as follows:

Expression: Click to open the variables browser to select variables.

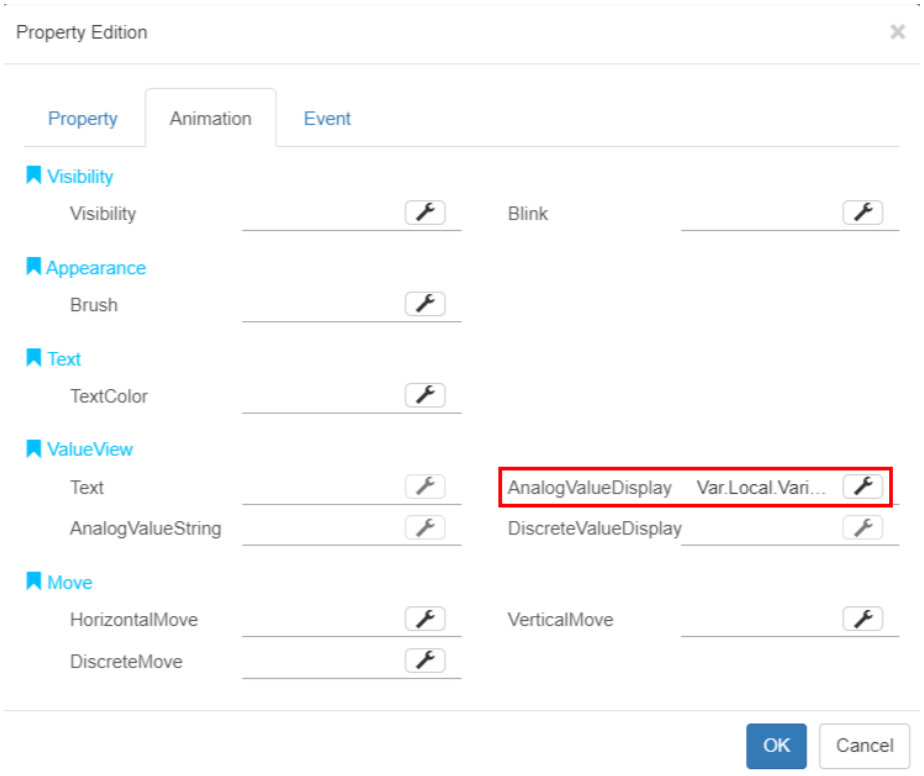
Clear: Clear the related variables.

Digit configuration:

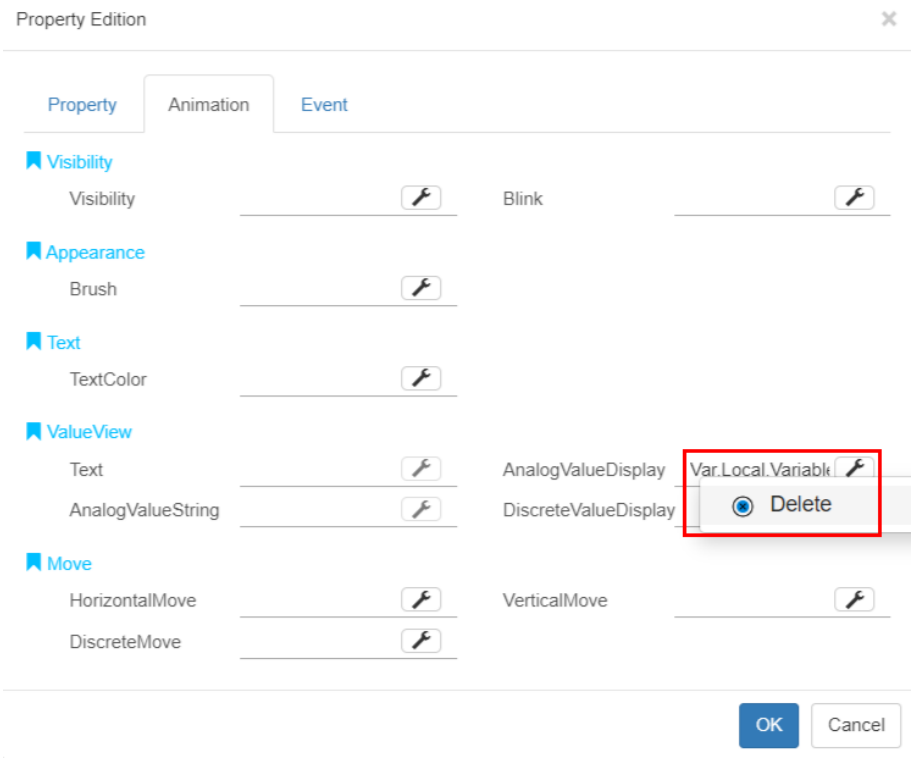
- **Digit:** Only the format of the digit count for labels and text is supported; the digital display does not support setting the digit count format.
- **Integer Digits:** Setting the number of integer digits, with a default of 5. If the number of integer digits in the output value is less than the set value, leading zeros will be added; if it exceeds the set value, it will be displayed according to the actual number of digits. If set to 0, the output value will be displayed without adding leading zeros. Example: if the integer digit count is set to 3 and the output value is 10, it will display as 010; if the output value is 165, it will display as 165.
- **Decimal Digits:** Setting the number of decimal places, with a default of 2. If the number of decimal places in the output value is less than the set value, trailing zeros will be added; if it exceeds the set value, it will be rounded to the set number of decimal places. If set to 0, no decimal places will be displayed. Example: if the decimal place count is set to 2 and the output value is 2.3, it will display as 2.30; if the output value is 0.125, it will display as 0.12; if the output value is 0.126, it will display as 0.13.
- **Scientific Notation:** Setting whether to display the variables value in scientific notation.
- **Thousands Separator:** Setting whether to use thousands separator.



Step 3: After finishing the configuration, click **OK**. The animation window will display the configured information for this graphic.



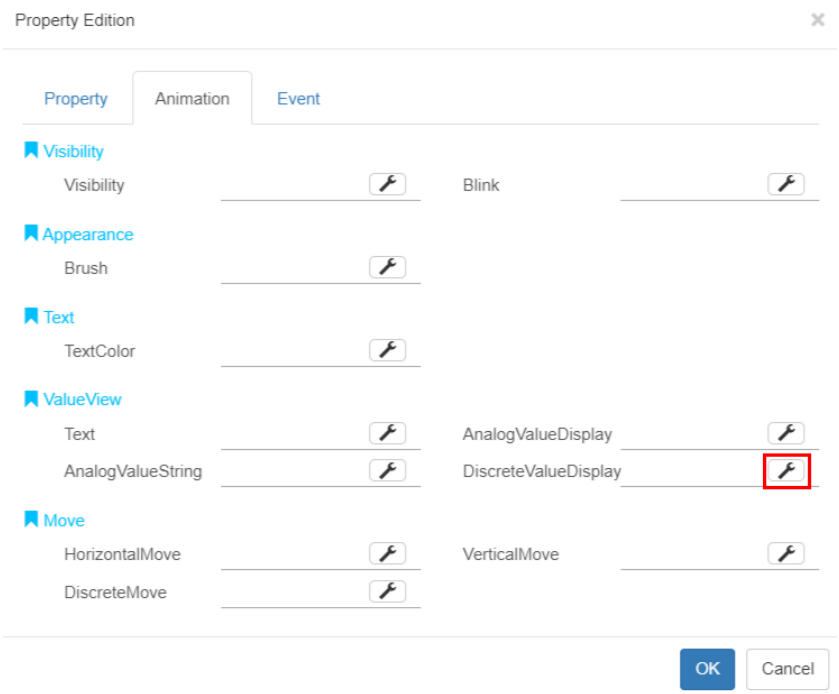
To delete an animation, select the animation from the list, then right-click and choose **Delete**.



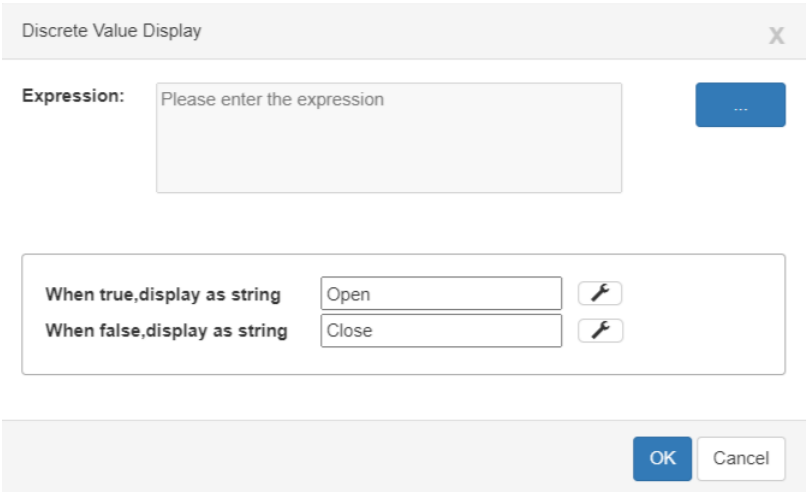
7.5.3 Discrete Value Display

Here are the setup steps for Discrete Value Display animation:

Step 1: Open the DIAWeb Designer software, click the window where animation needs to be configured in the project. Select the graphic object > double-click to open **Property Edition** > **Animation** > **Discrete Value Display**, as shown in the image below.



Step 2: Discrete Value Display animation configuration window will pop up.



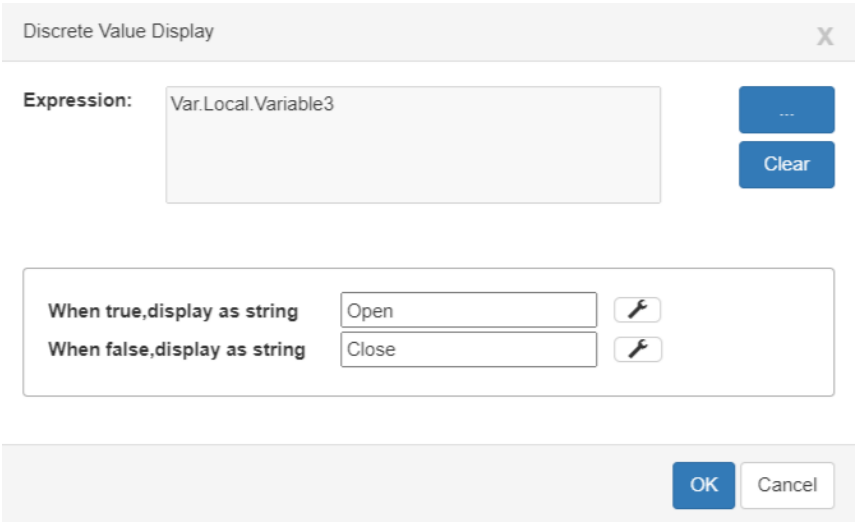
The meanings of each setting in the configuration window are as follows:

Expression: Click to open the variables browser to select variables

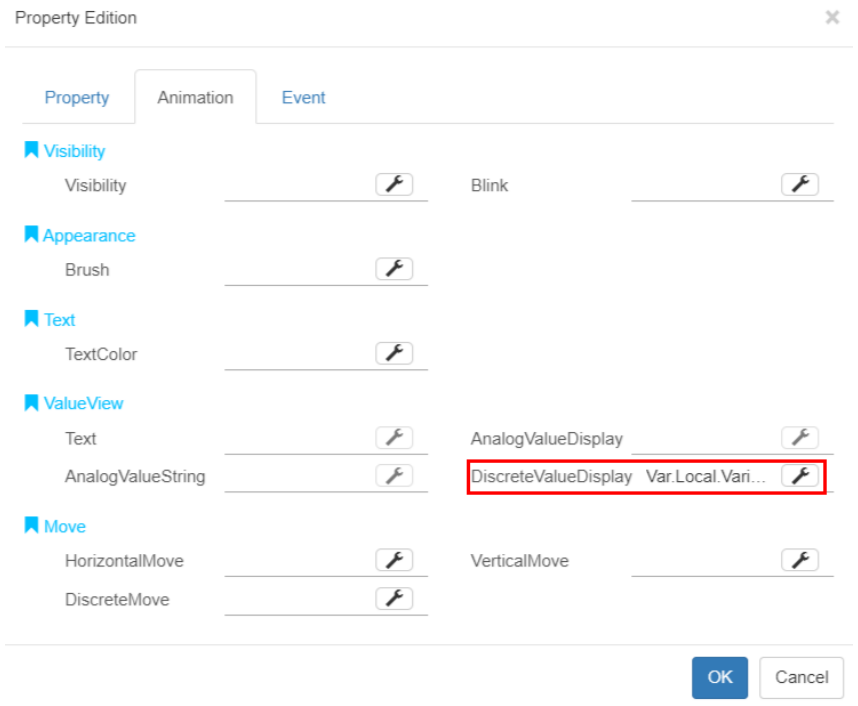
Clear: Clear the related variables.

When true, display as string: Setting the display content of the graphic when the expression is true, supporting multiple languages.

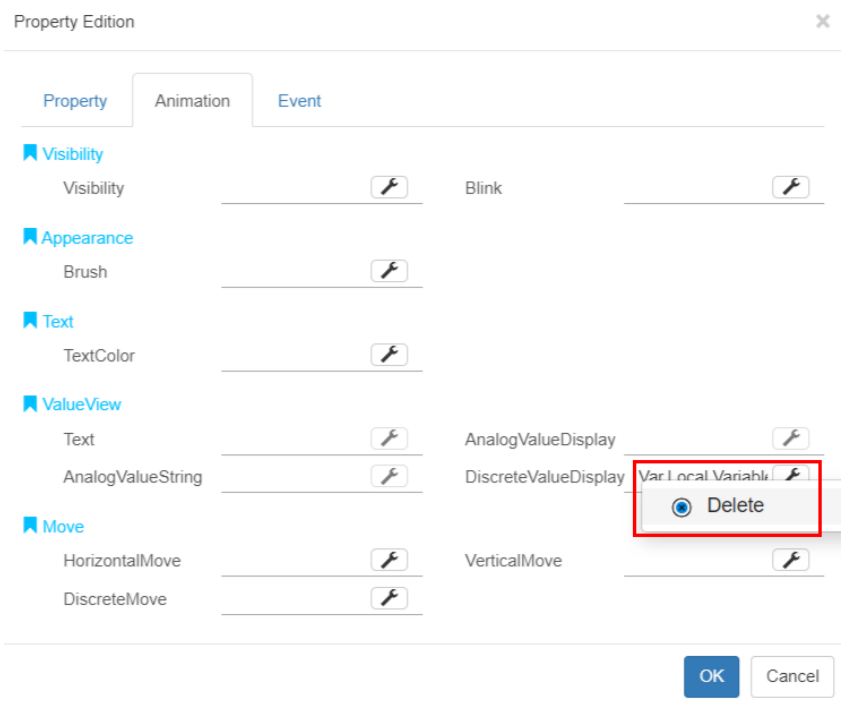
When false, display as string: Setting the display content of the graphic when the expression is false, supporting multiple languages.



Step 3: After finishing the configuration, click **OK**. The animation window will display the configured information for this graphic.



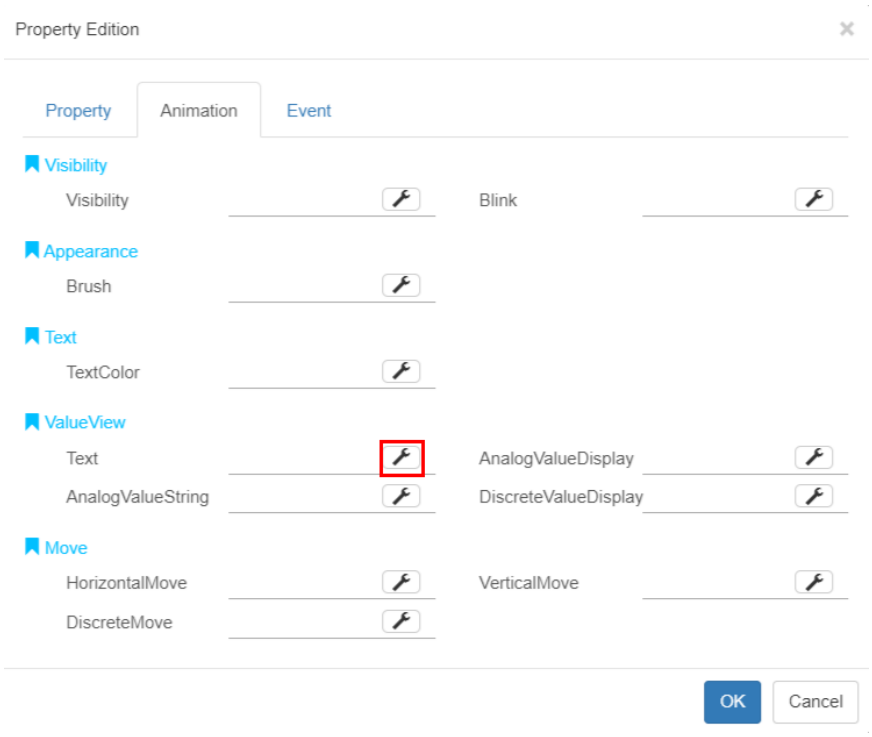
To delete an animation, select the animation from the list, then right-click and choose **Delete**.



7.5.4 Text

Here are the setup steps for Text animation:

Step 1: Open the DIAWeb Designer software, click the window where animation needs to be configured in the project. Select the graphic object > double-click to open **Property Edition** > **Animation** > **Text**, as shown in the image below.



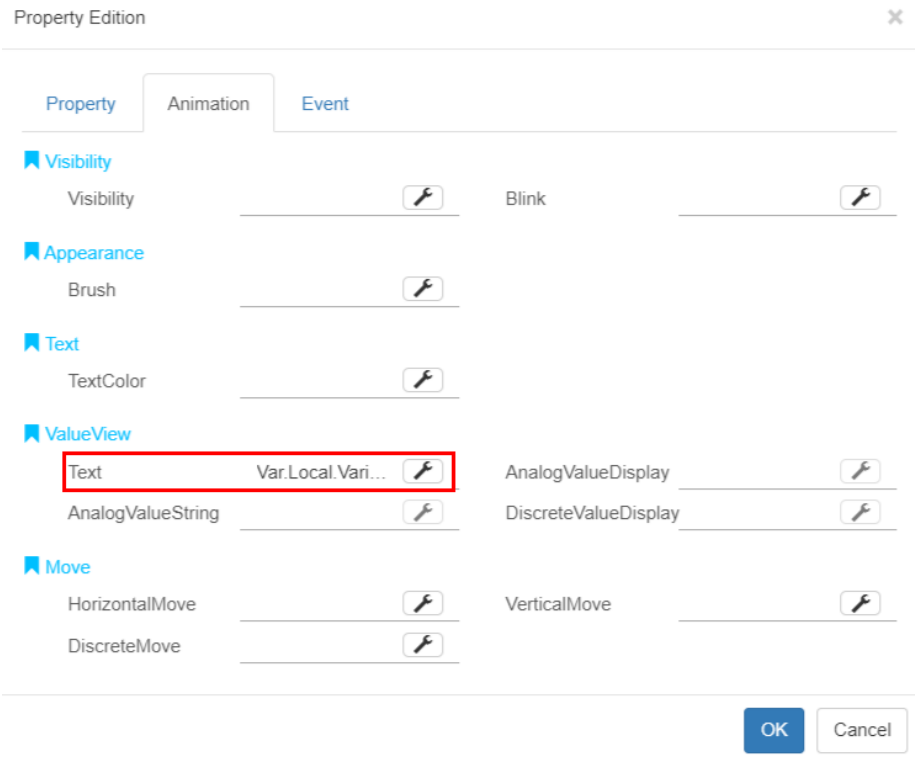
Step 2: Text animation configuration window will pop up.

The meanings of each setting in the configuration window are as follows:

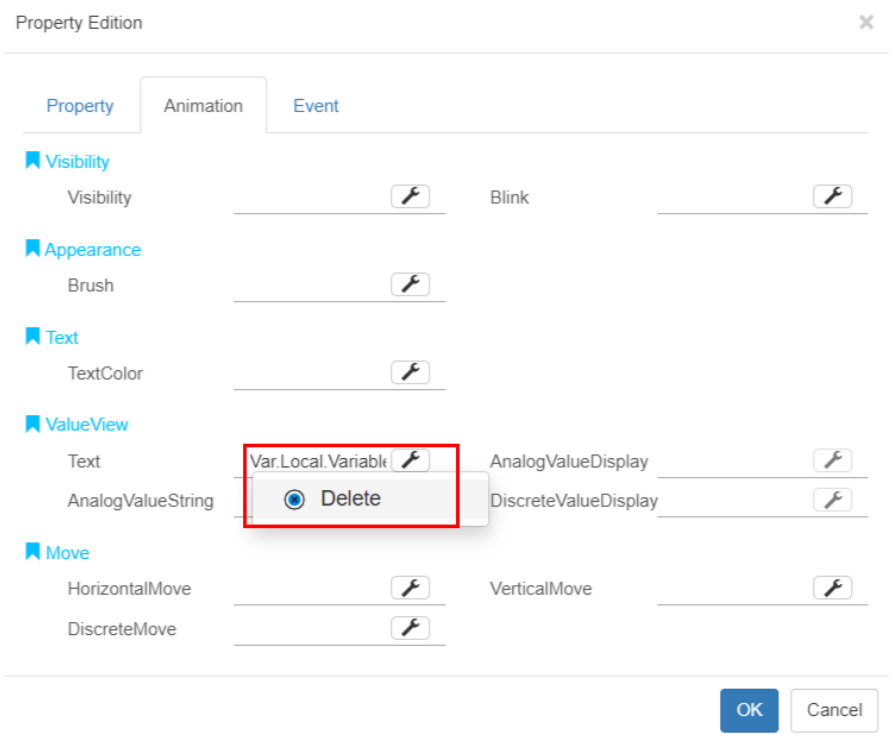
Expression: Click to open the variables browser to select variables.

Clear: Clear the related variables.

Step 3: After finishing the configuration, click OK. The animation window will display the configured information for this graphic.



To delete an animation, select the animation from the list, then right-click and choose **Delete**.


Property Edition
Property
Animation
Event
Visibility
Visibility
Blink
Appearance
Brush
Text
TextColor
ValueView
Text
Var.Local.Variabl
AnalogValueDisplay
AnalogValueString
Delete
DiscreteValueDisplay
Move
HorizontalMove
VerticalMove
DiscreteMove
OK
Cancel

7.6 Skew

Skew animation adjusts the tilt degree of a graphical object based on the value of a variable or an expression, thereby changing the object's "skew" property.

Skew animation is divided into 4 types: Horizontal Skew, Horizontal Discrete Skew, Vertical Skew, Vertical Discrete Skew.

Horizontal Skew refers to the tilt degree in the horizontal direction of a graphical objects.

Horizontal Discrete Skew refers to the correlation between the horizontal tilt angle of a graphical object and a discrete variable.

Vertical Skew refers to the tilt degree in the vertical direction of a graphical objects.

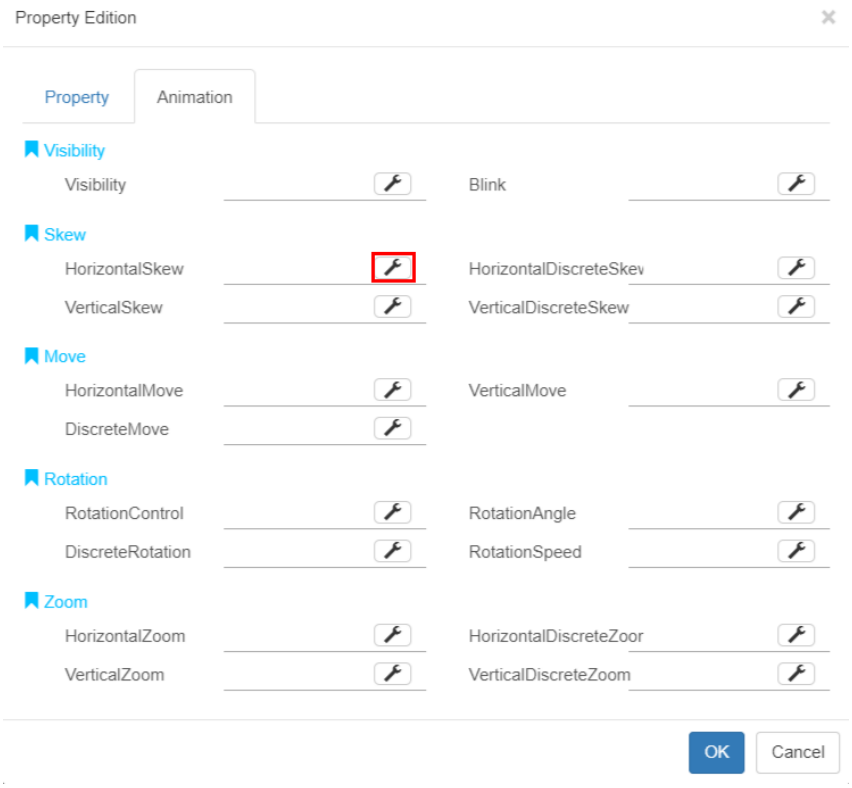
Vertical Discrete Skew refers to the correlation between the vertical tilt angle of a graphical object and a discrete variable.

7.6.1 Horizontal / Vertical Skew

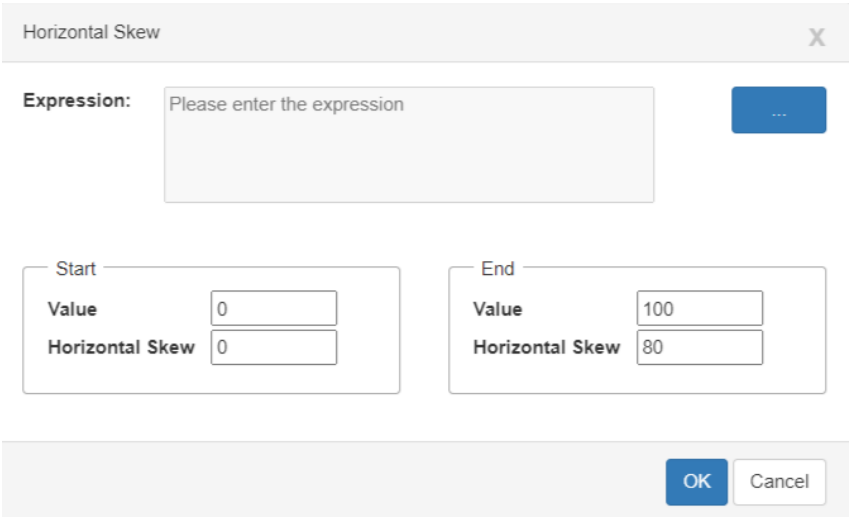
The configuration steps for “Horizontal Skew” and “Vertical Skew” are the same.

Here are the setup steps for Horizontal Skew animation:

Step 1: Open the DIAWeb Designer software, click the window where animation needs to be configured in the project. Select the graphic object > double-click to open **Property Edition** > **Animation** > **Horizontal Skew**, as shown in the image below.



Step 2: **Horizontal Skew** animation configuration window will pop up.



The meanings of each setting in the configuration window are as follows:

Expression: Click to open the variables browser to select variables.

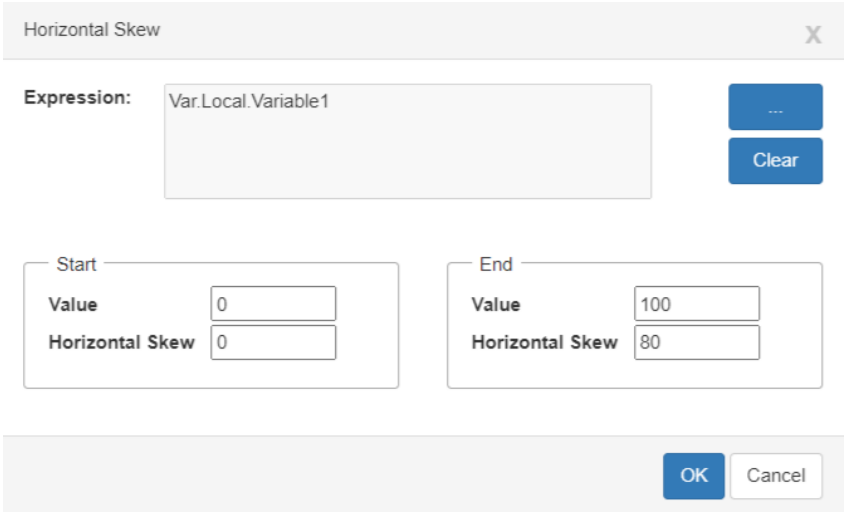
Clear: Clear the related variables.

Start configuration:

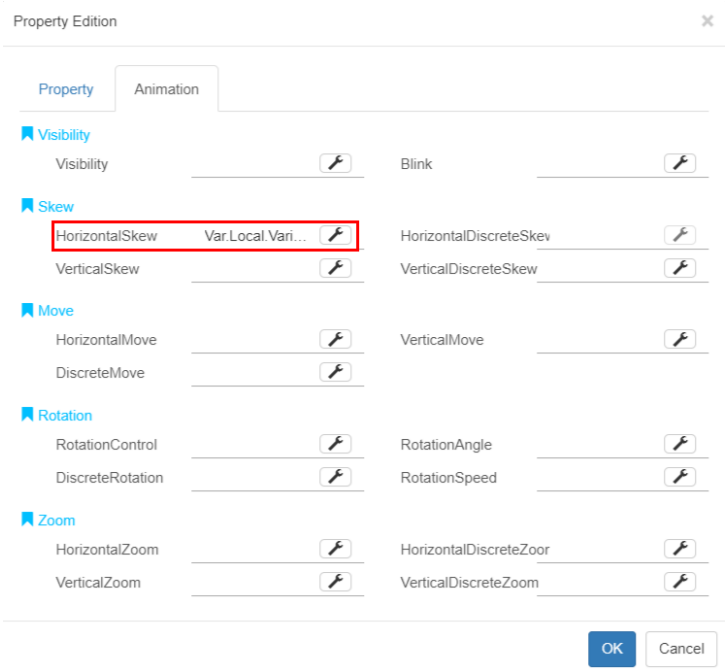
- **Value:** Setting the minimum value of the expression.
- **Horizontal Skew:** Setting the minimum value for horizontal skew, range is -80 to 80, with a default of 0.

End configuration:

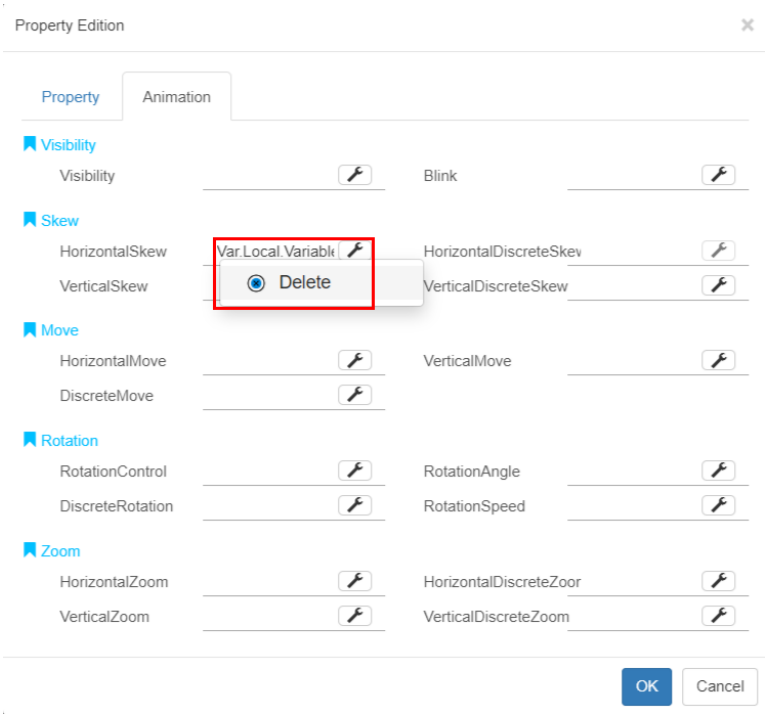
- **Value:** Setting the maximum value of the expression.
- **Horizontal Skew:** Setting the maximum value for horizontal skew, range is -80 to 80, with a default of 80.



Step 3: After finishing the configuration, click **OK**. The animation window will display the configured information for this graphic.



To delete an animation, select the animation from the list, then right-click and choose **Delete**.

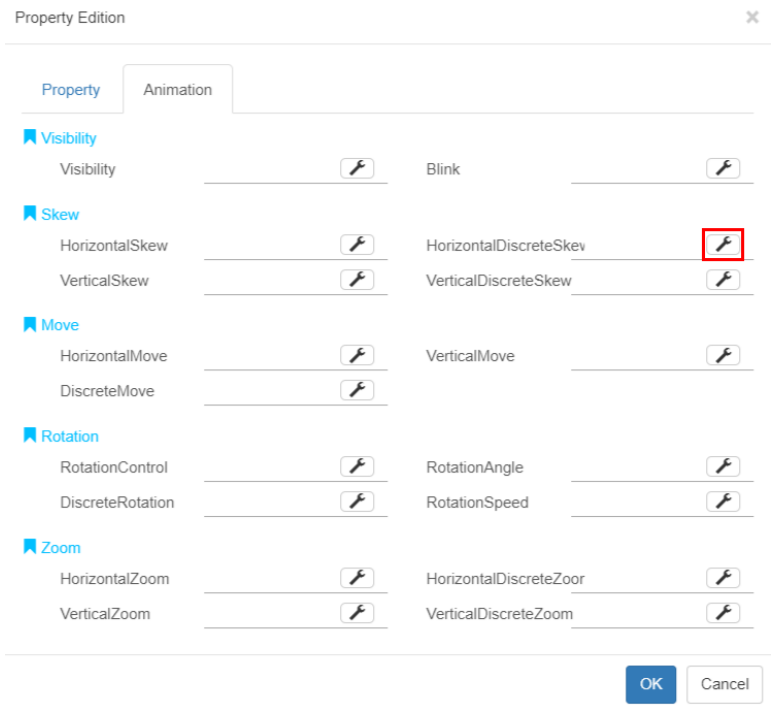


7.6.2 Horizontal / Vertical Discrete Skew

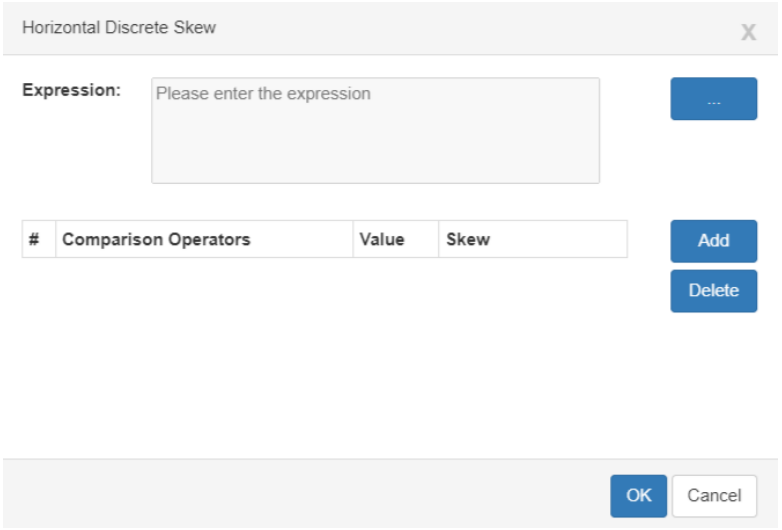
The configuration steps for “Horizontal Discrete Skew” and “Vertical Discrete Skew” are the same.

Here are the setup steps for Horizontal Discrete Skew animation:

Step 1: Open the DIAWeb Designer software, click the window where animation needs to be configured in the project. Select the graphic object > double-click to open **Property Edition** > **Animation** > **Horizontal Discrete Skew**, as shown in the image below.



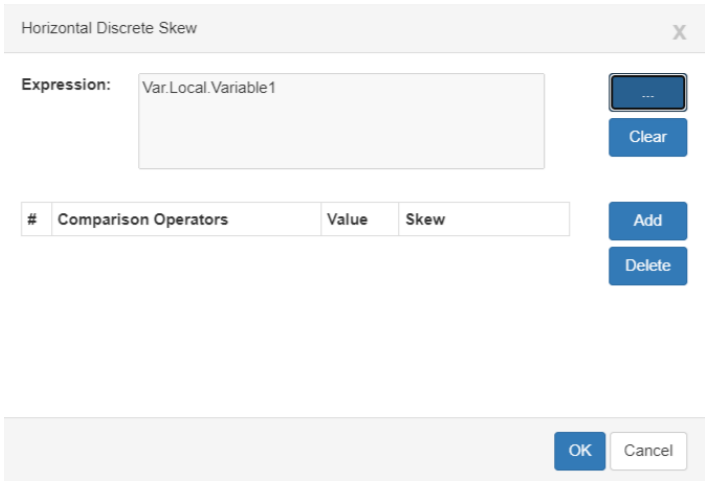
Step 2: Horizontal Discrete Skew animation configuration window will pop up.



The meanings of each setting in the configuration window are as follows:

Expression: Click to open the variables browser to select variables.

Clear: Clear the related variables.

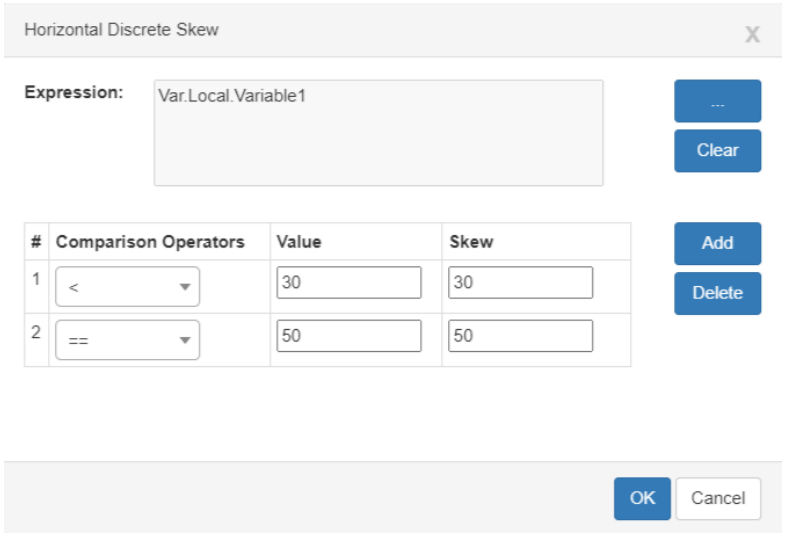


Horizontal Discrete Skew configuration:

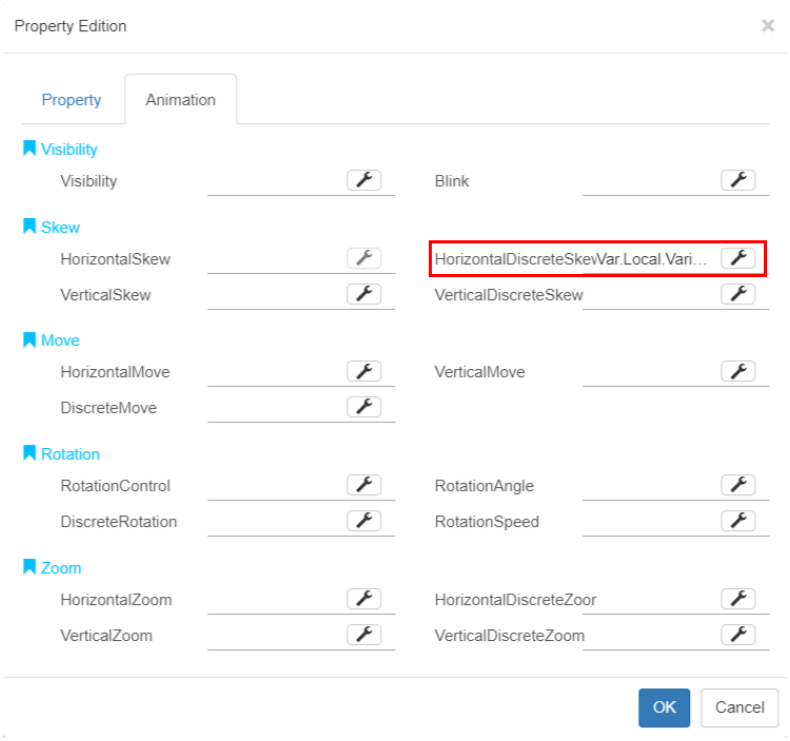
- **Comparison Operators:** Setting the symbol for comparing the expression and value, which is a drop-down list with 6 options:

  1. = : Equal to (default)
  2. != : Not equal to
  3. < : Less than
  4. > : Greater than
  5. <= : Less than / equal to
  6. >= : Greater than / equal to

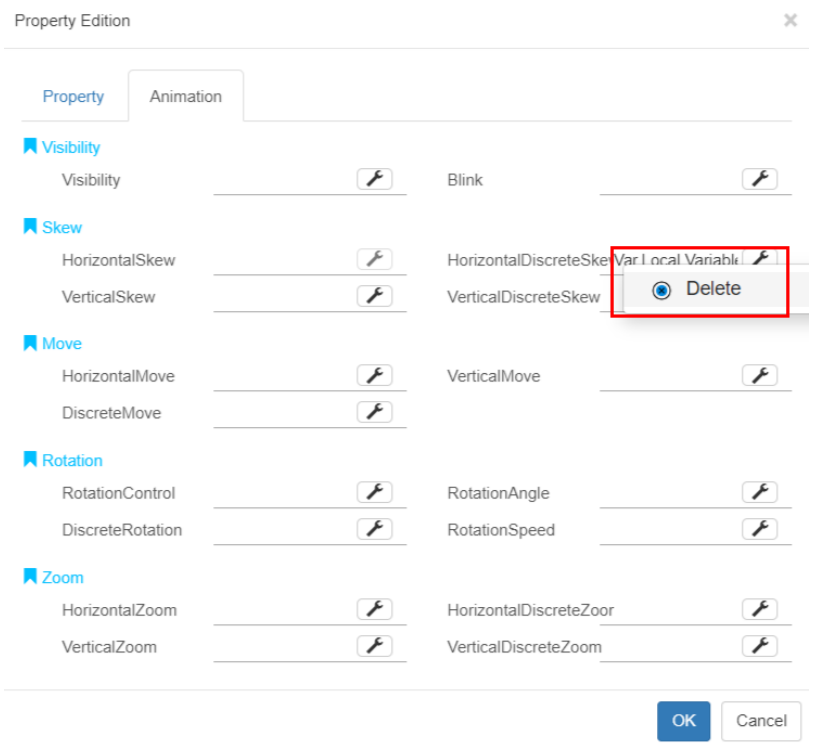
- **Value:** Setting the reference value for “expression” comparison. It can be an integer or a decimal (up to two decimal places).
- **Skew:** Setting the corresponding skew degree, ranging from -80 to 80. It can be an integer or a decimal (up to two decimal places).
- **Add:** Click the button to add a configuration item, as shown in the image below.
- **Delete:** Select a configuration item and click this button to delete it.



Step 3: After finishing the configuration, click **OK**. The animation window will display the configured information for this graphic.



To delete an animation, select the animation from the list, then right-click and choose **Delete**.



7.7 Rotation

Rotation animation allows a graphical object to rotate around its center point, changing the object's "rotation angle" and "rotation speed" properties.

Rotation animation is divided into 4 types: Rotation Speed, Rotation Angle, Rotation Control, Discrete Rotation.

Rotation Speed refers to the rotation speed of the graphical objects being bound to variables.

Rotation Angle refers to the rotation angle of the graphical objects change linearly based on the variables or the value of expression.

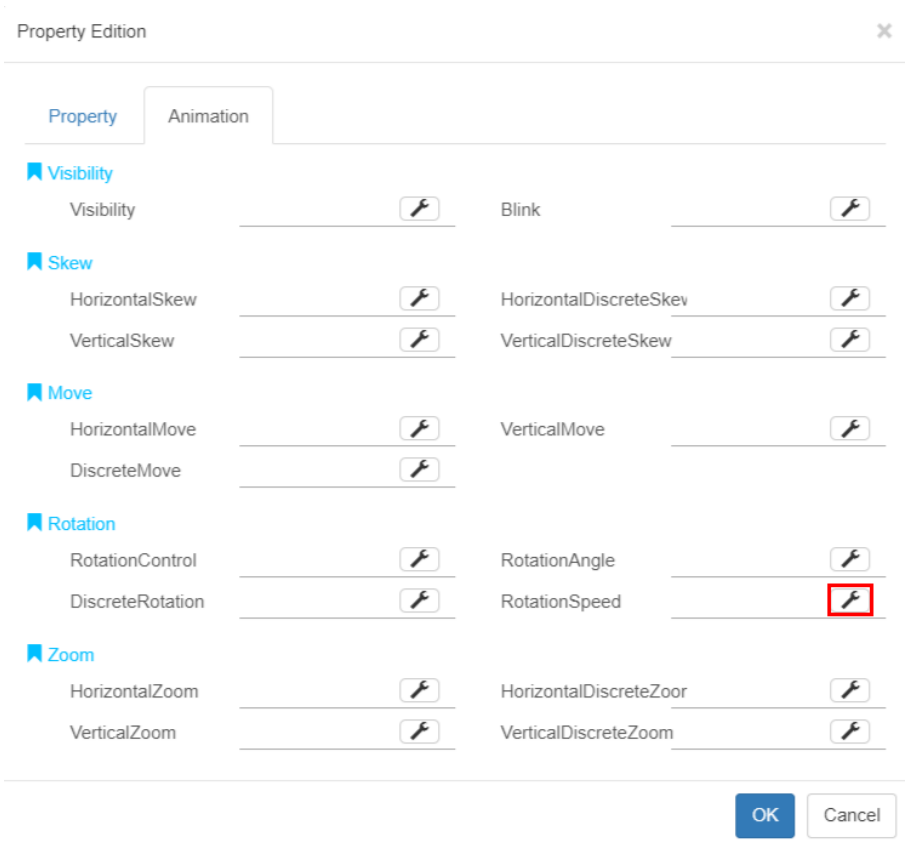
Rotation Control refers to the animation that controls whether a graphical object rotates around its center point based on whether the variables or the value of expression is True or False.

Discrete Rotation refers to the correlation between the rotation angle of a graphical object and a discrete variable.

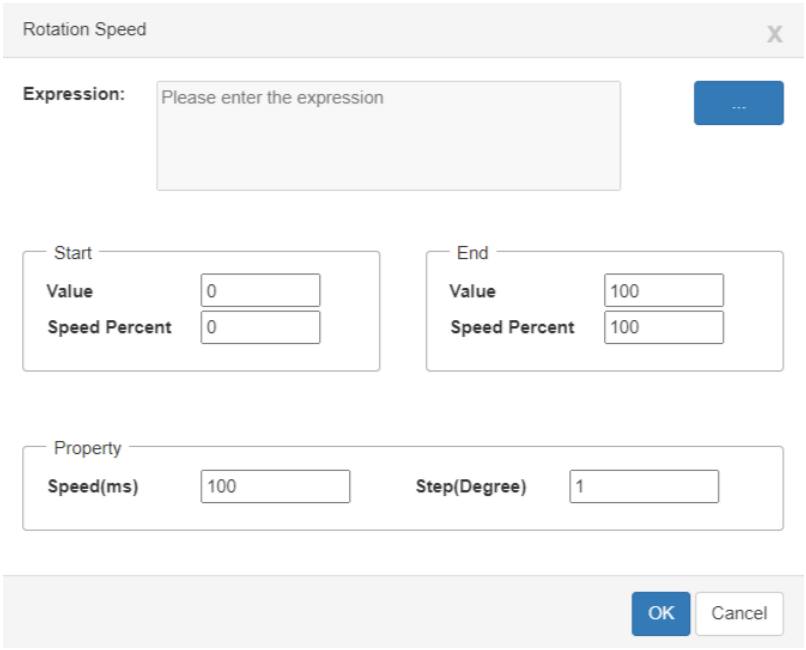
7.7.1 Rotation Speed

Here are the setup steps for Rotation Speed animation:

Step 1: Open the DIAWeb Designer software, click the window where animation needs to be configured in the project. Select the graphic object > double-click to open **Property Edition** > **Animation** > **Rotation Speed**, as shown in the image below.


Property Edition
Property
Animation
Visibility
Visibility
Blink
Skew
HorizontalSkew
HorizontalDiscreteSkev
VerticalSkew
VerticalDiscreteSkew
Move
HorizontalMove
VerticalMove
DiscreteMove
Rotation
RotationControl
RotationAngle
DiscreteRotation
RotationSpeed
Zoom
HorizontalZoom
HorizontalDiscreteZoor
VerticalZoom
VerticalDiscreteZoom
OK
Cancel

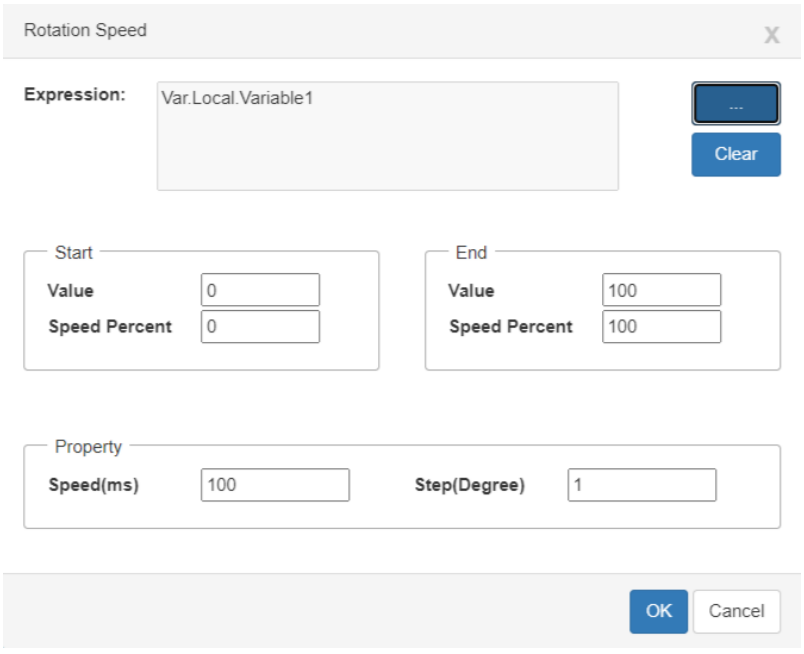
Step 2: Rotation Speed animation configuration window will pop up.



The meanings of each setting in the configuration window are as follows:

Expression: Click to open the variables browser to select variables.

Clear: Clear the related variables.



Start configuration:

- **Value:** Setting the minimum value for “expression”. It can be an integer or a decimal (up to two decimal places).
- **Speed Percent:** Setting the minimum value for speed percent, ranging from -100 to 100. It can be an integer or a decimal (up to two decimal places).

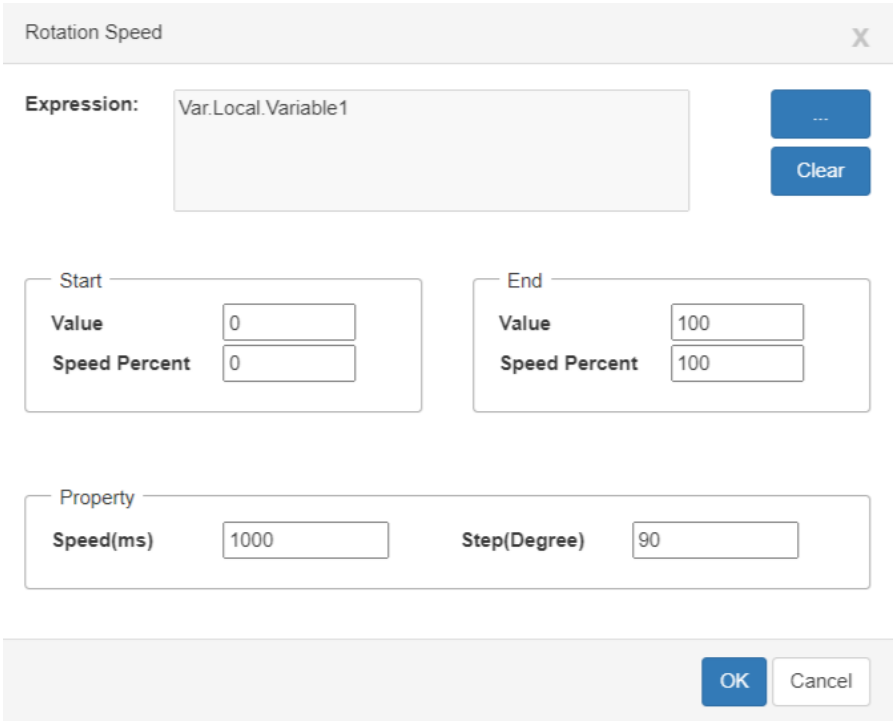
End configuration:

- **Value:** Setting the maximum value for “expression”. It can be an integer or a decimal (up to two decimal places).
- **Speed Percent:** Setting the maximum value for speed percent, ranging from -100 to 100. It can be an integer or a decimal (up to two decimal places).

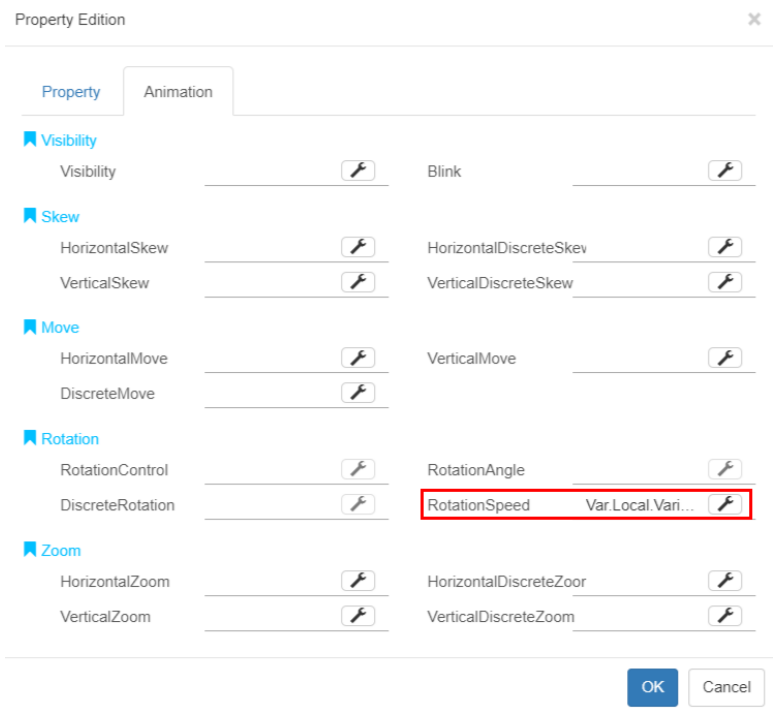
Property configuration:

- **Speed (ms):** Set the time required for each rotation step of the object (unit: milliseconds).
- **Step (Degree):** Set the angle by which the object rotates one step (unit: degree).

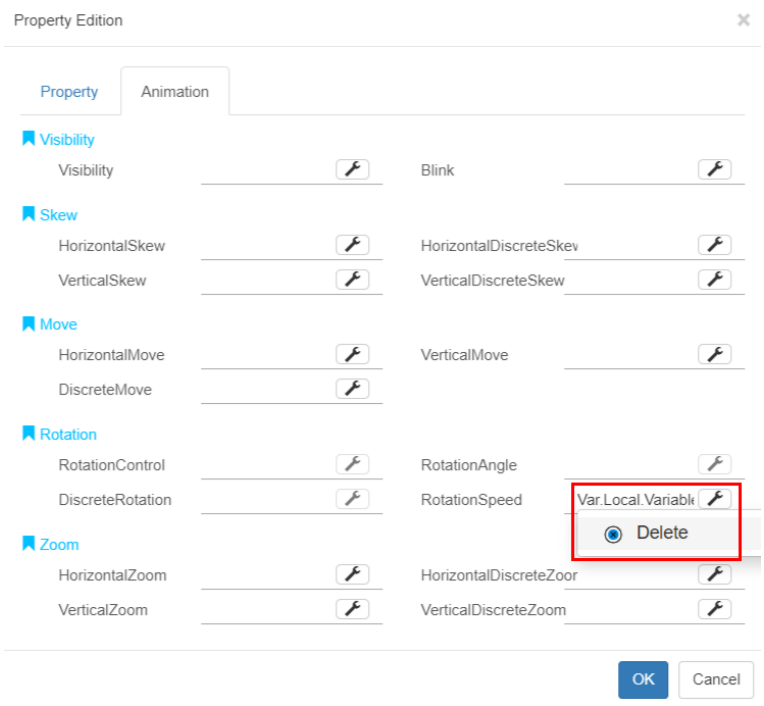
Example: As the image shown below, when the expression value is 10, the object rotates clockwise at 9 degrees per second; when the expression value is 100, the object rotates clockwise at 90 degrees per second.



Step 3: After finishing the configuration, click **OK**. The animation window will display the configured information for this graphic.



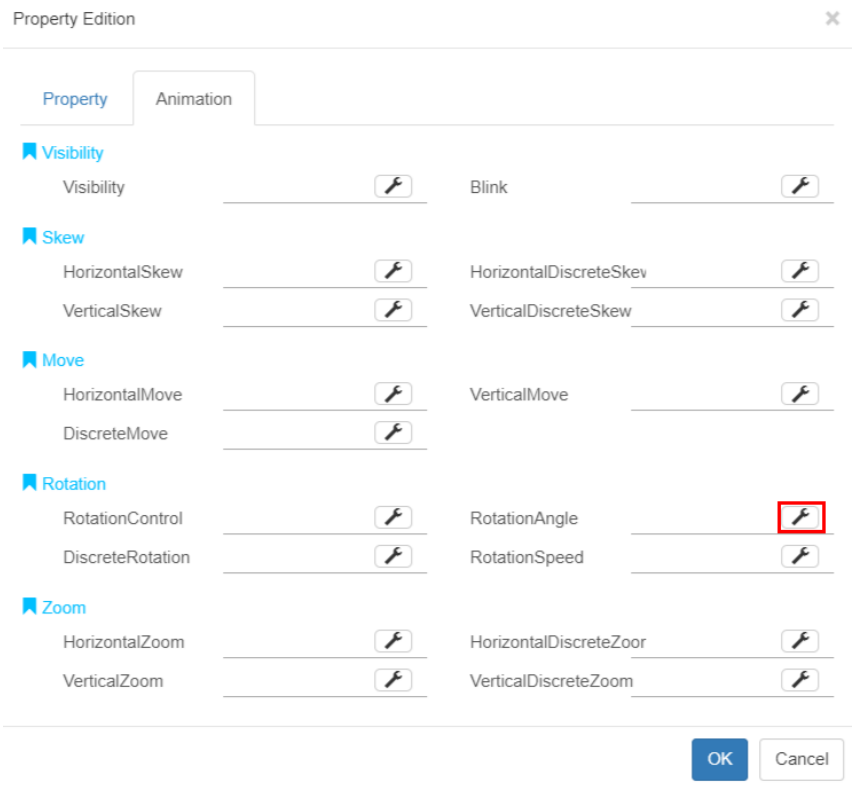
To delete an animation, select the animation from the list, then right-click and choose **Delete**.



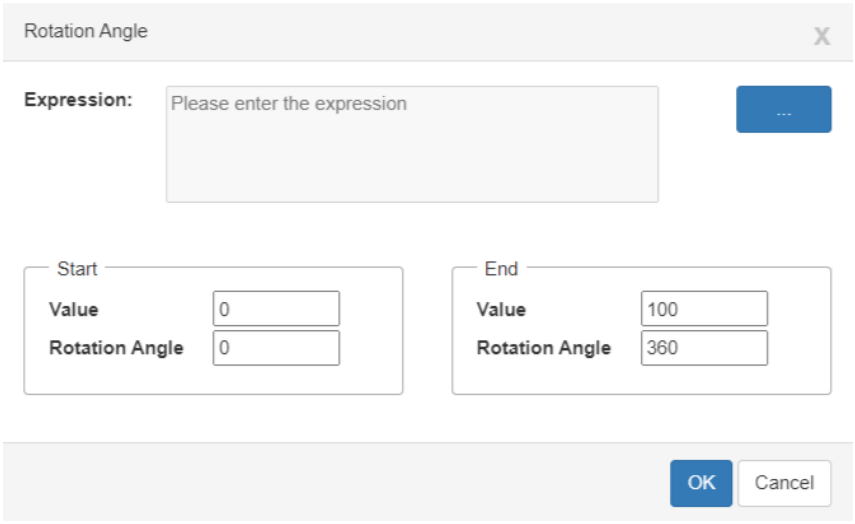
7.7.2 Rotation Angle

Here are the setup steps for Rotation Angle animation:

Step 1: Open the DIAWeb Designer software, click the window where animation needs to be configured in the project. Select the graphic object > double-click to open **Property Edition** > **Animation** > **Rotation Angle**, as shown in the image below.



Step 2: Rotation Angle animation configuration window will pop up.



The meanings of each setting in the configuration window are as follows:

Expression: Click to open the variables browser to select variables.

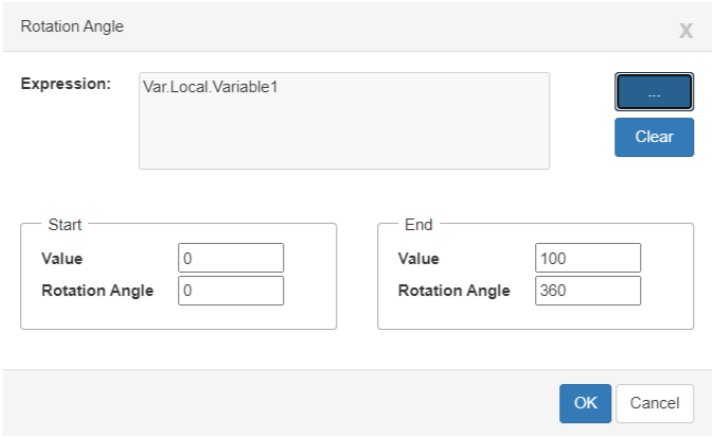
Clear: Clear the related variables.

Start configuration:

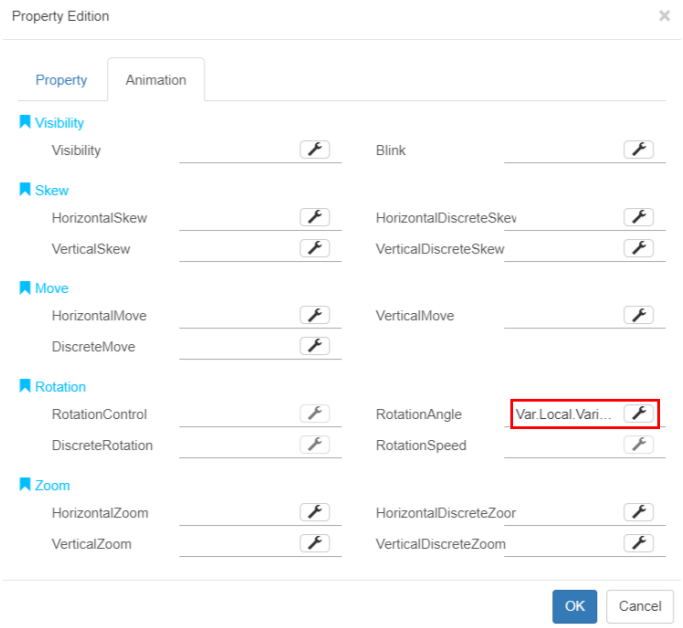
- **Value:** Setting the minimum value for “expression”. It can be an integer or a decimal (up to two decimal places).
- **Rotation Angle:** Setting the minimum value for rotation angle, ranging from -360 to 300. It can be an integer or a decimal (up to two decimal places).

End configuration:

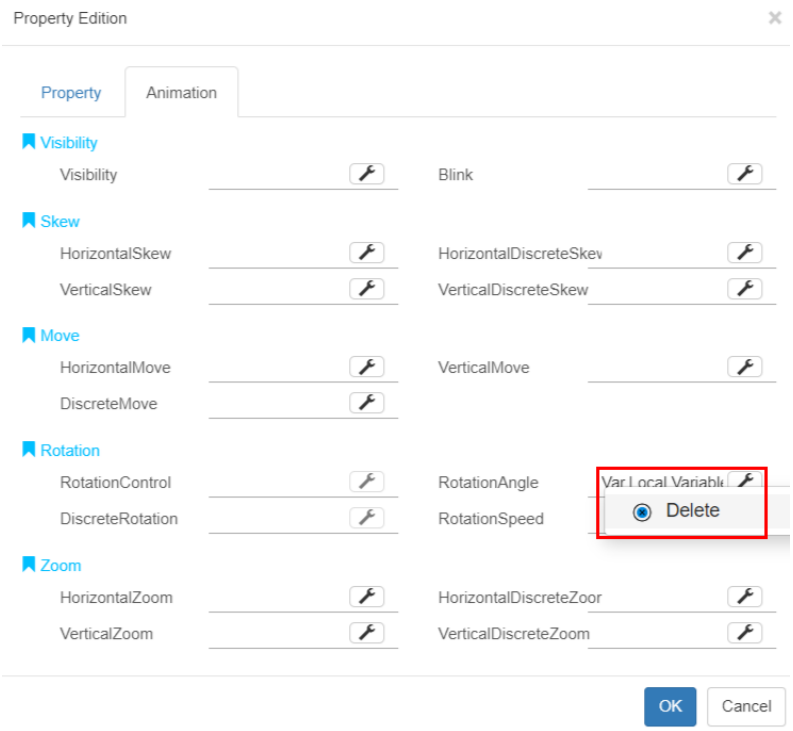
- **Value:** Setting the maximum value for “expression”. It can be an integer or a decimal (up to two decimal places).
- **Rotation Angle:** Setting the maximum value for rotation angle, ranging from -360 to 300. It can be an integer or a decimal (up to two decimal places).



Step 3: After finishing the configuration, click **OK**. The animation window will display the configured information for this graphic.



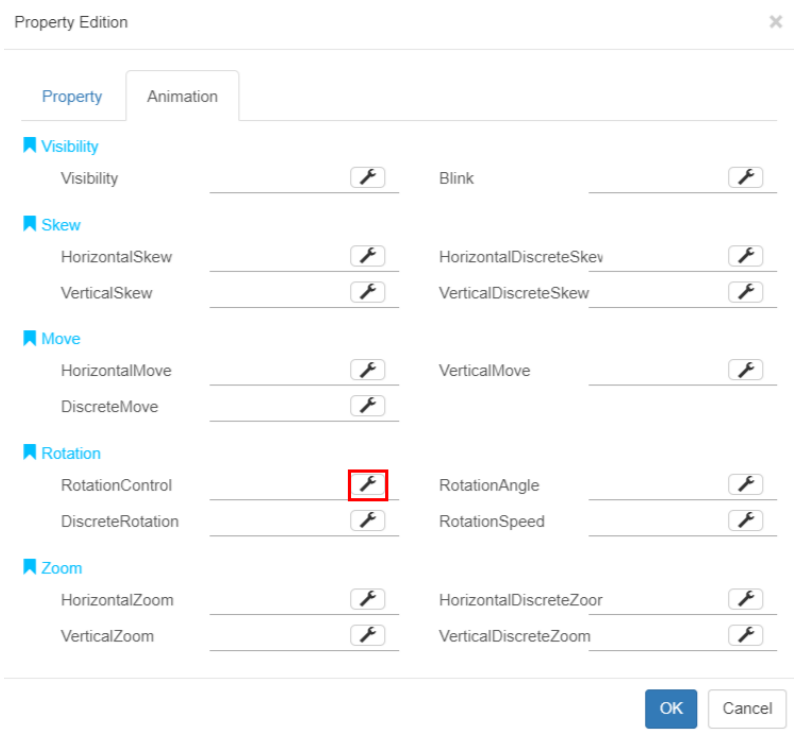
To delete an animation, select the animation from the list, then right-click and choose **Delete**.



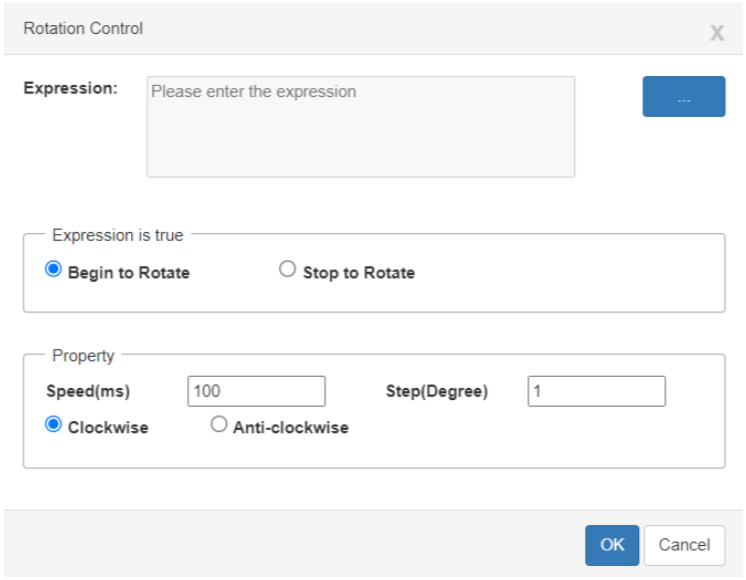
7.7.3 Rotation Control

Here are the setup steps for Rotation Control animation:

Step 1: Open the DIAWeb Designer software, click the window where animation needs to be configured in the project. Select the graphic object > double-click to open **Property Edition** > **Animation** > **Rotation Control**, as shown in the image below.


Property Edition
Property
Animation
Visibility
Visibility
Blink
Skew
HorizontalSkew
HorizontalDiscreteSkev
VerticalSkew
VerticalDiscreteSkew
Move
HorizontalMove
VerticalMove
DiscreteMove
Rotation
RotationControl
RotationAngle
DiscreteRotation
RotationSpeed
Zoom
HorizontalZoom
HorizontalDiscreteZoor
VerticalZoom
VerticalDiscreteZoom
OK
Cancel

Step 2: Rotation Control animation configuration window will pop up.



The meanings of each setting in the configuration window are as follows:

Expression: Click to open the variables browser to select variables.

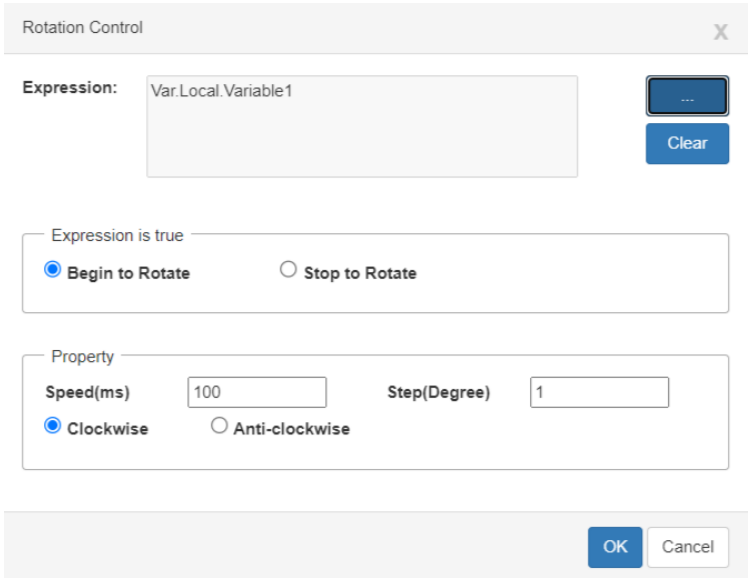
Clear: Clear the related variables.

Expression is true configuration: Set to begin or stop to rotate when expression is true.

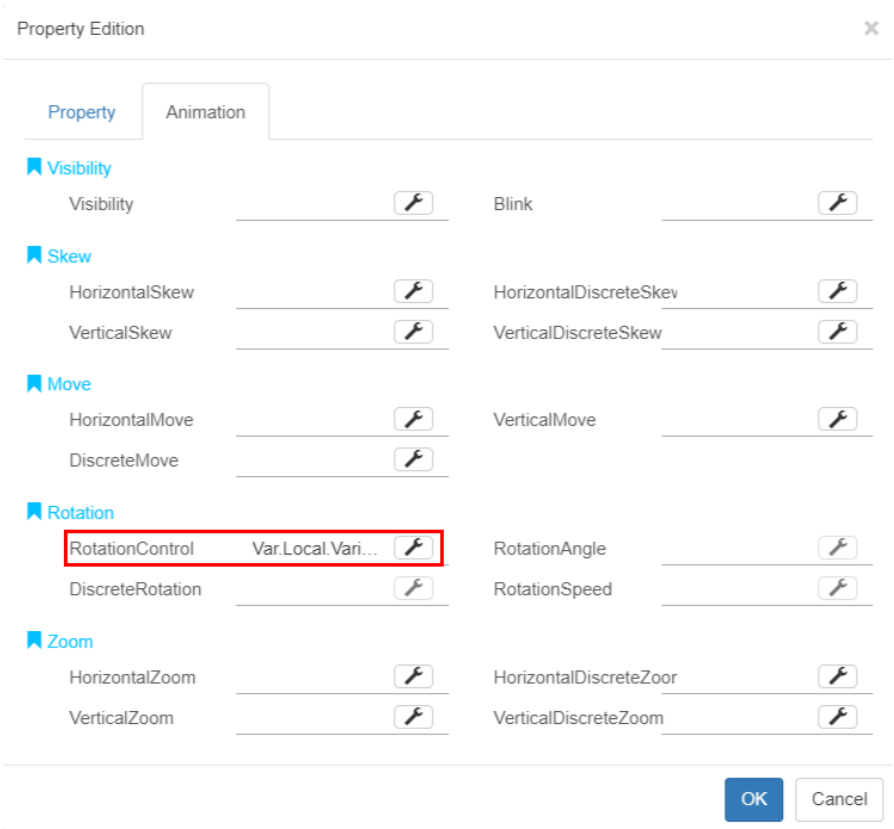
- **Begin to Rotate:** If selected, the graphic begins to rotate when the expression is true.
- **Stop to Rotate:** If selected, the graphic stops to rotate when the expression is true.

Property configuration:

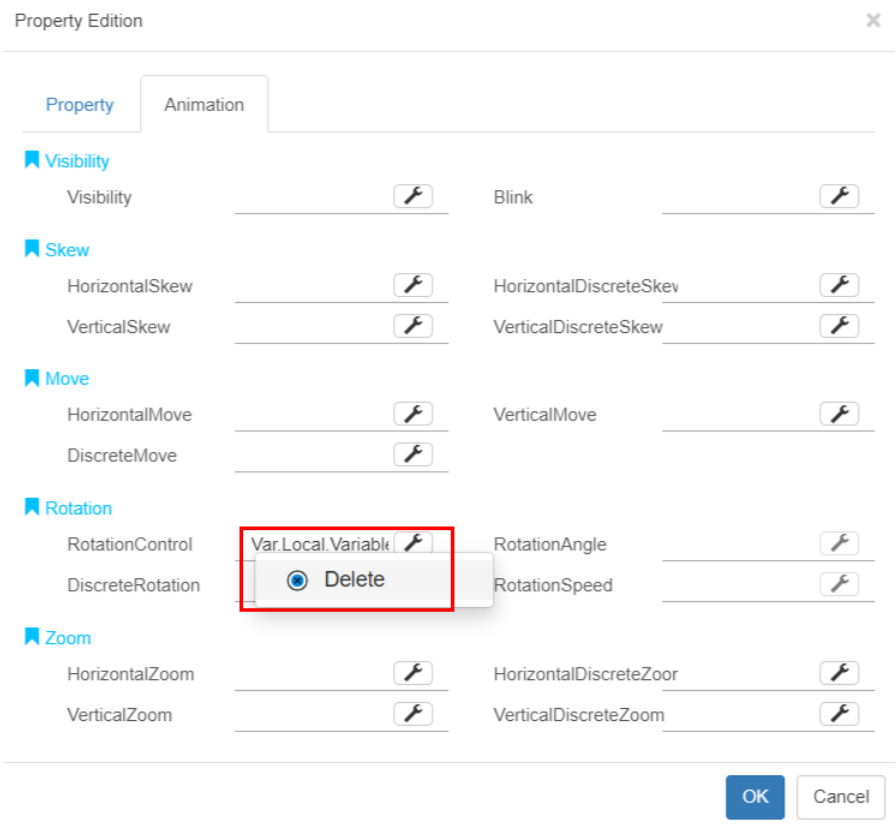
- **Speed (ms):** Set the time required for each rotation step of the object (unit: milliseconds).
- **Step (Degree):** Set the angle by which the object rotates one step (unit: degree).
- **Clockwise / Anti-clockwise:** Set the rotation direction. Default setting is clockwise, indicating that the graphic rotates in a clockwise direction.



Step 3: After finishing the configuration, click **OK**. The animation window will display the configured information for this graphic.



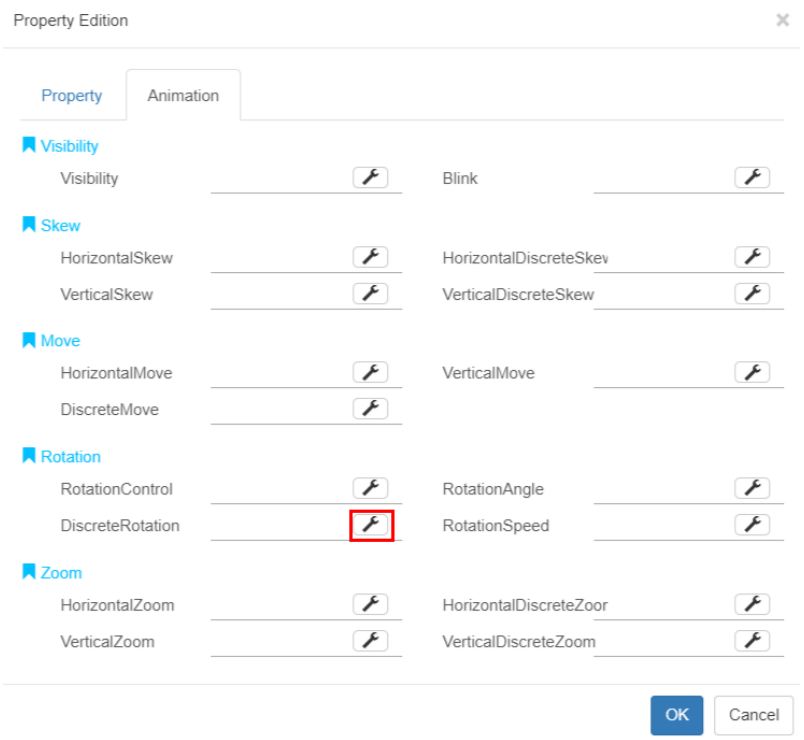
To delete an animation, select the animation from the list, then right-click and choose **Delete**.



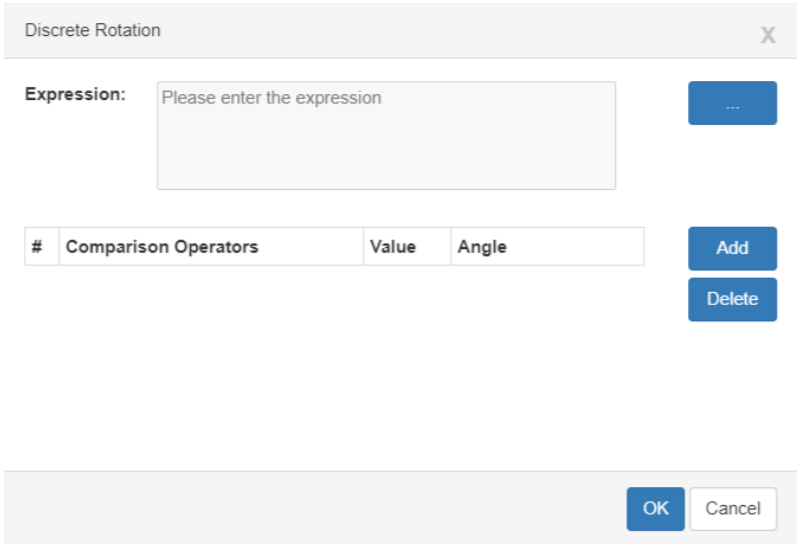
7.7.4 Discrete Rotation

Here are the setup steps for Discrete Rotation animation:

Step 1: Open the DIAWeb Designer software, click the window where animation needs to be configured in the project. Select the graphic object > double-click to open **Property Edition** > **Animation** > **Discrete Rotation**, as shown in the image below.



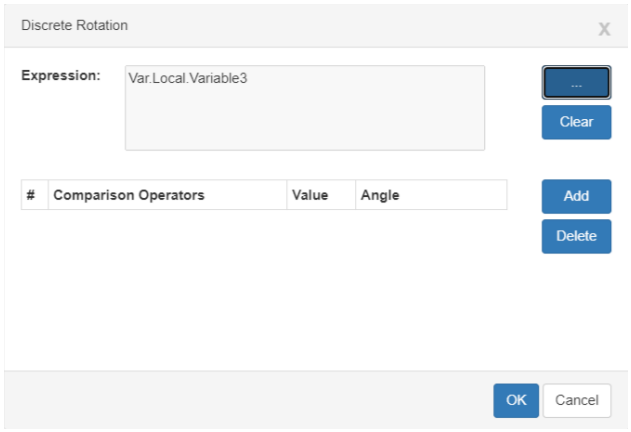
Step 2: Discrete Rotation animation configuration window will pop up.



The meanings of each setting in the configuration window are as follows:

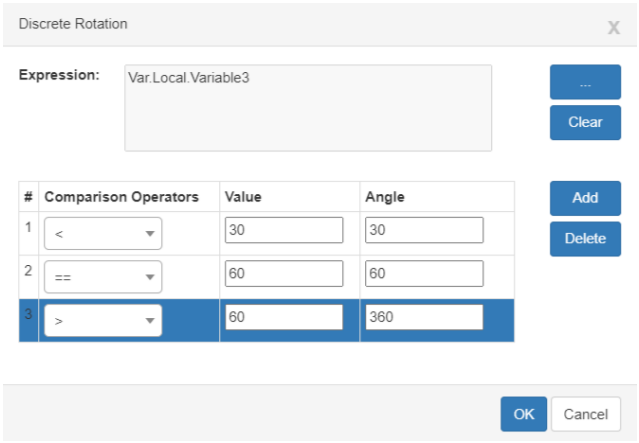
Expression: Click to open the variables browser to select variables.

Clear: Clear the related variables.

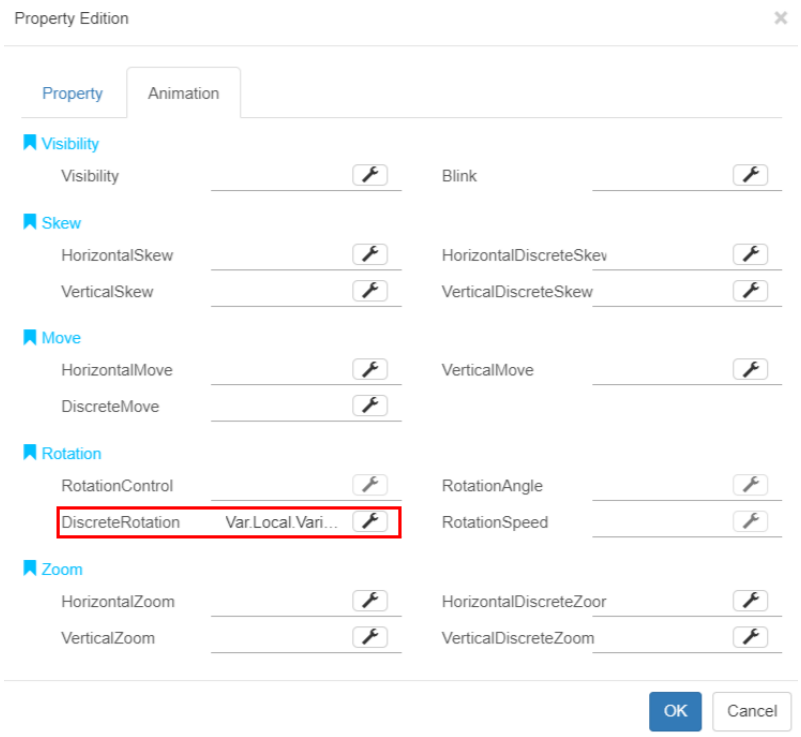


Discrete Rotation configuration:

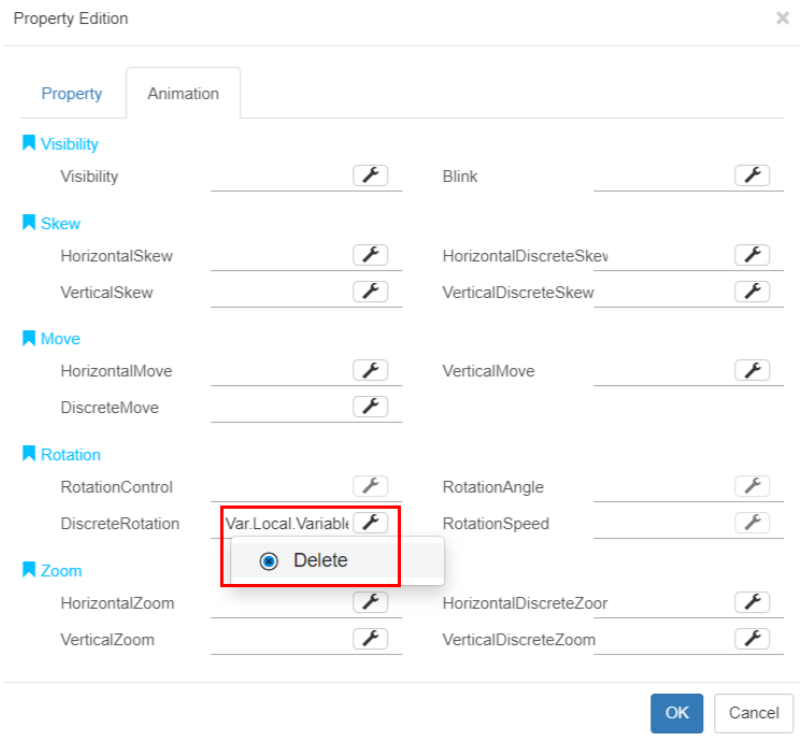
- **Comparison Operators:** Set the symbol for comparing the expression and value, which is a drop-down list with 6 options:
  1. =: Equal to (default)
  2. !=: Not equal to
  3. <: Less than
  4. >: Greater than
  5. <=: Less than / equal to
  6. >=: Greater than / equal to
- **Value:** Set the reference value for “expression” comparison. It can be an integer or a decimal (up to two decimal places).
- **Angle:** Set the corresponding rotation angle, ranging from 0 to 360. It can be an integer or a decimal (up to two decimal places).
- **Add:** Click the button to add a configuration item, as shown in the image below.
- **Delete:** Select a configuration item and click this button to delete it.



Step 3: After finishing the configuration, click **OK**. The animation window will display the configured information for this graphic.



To delete an animation, select the animation from the list, then right-click and choose **Delete**.



7.8 Fill

Fill animation controls the fill effect of a graphical object based on the value of a variable or an expression, thereby changing the object's "fill ratio" and "fill direction" properties.

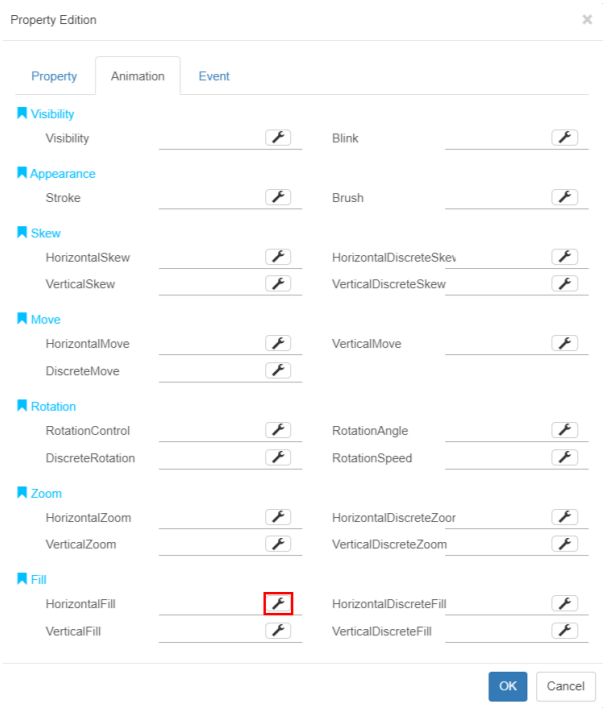
Fill animation is divided into 4 types based on the fill direction: Horizontal Fill, Horizontal Discrete Fill, Vertical Fill, Vertical Discrete Fill.

7.8.1 Horizontal / Vertical Fill

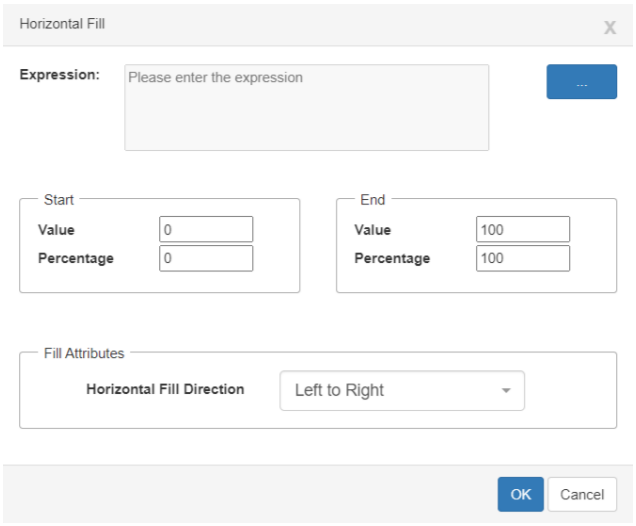
The configuration steps for "Horizontal Fill" and "Vertical Fill" are the same.

Here are the setup steps for Horizontal Fill animation:

Step 1: Open the DIAWeb Designer software, click the window where animation needs to be configured in the project. Select the graphic object > double-click to open **Property Edition** > **Animation** > **Horizontal Fill**, as shown in the image below.



Step 2: **Horizontal Fill** animation configuration window will pop up.



The meanings of each setting in the configuration window are as follows:

Expression: Click to open the variables browser to select variables

Clear: Clear the related variables.

Start configuration:

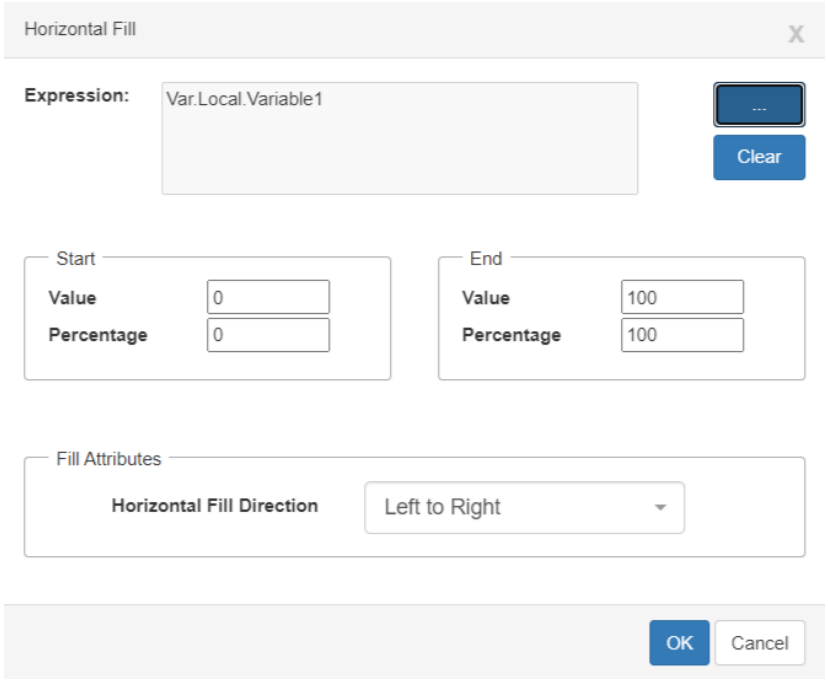
- **Value:** Set the minimum value for “expression”. It can be an integer or a decimal (up to two decimal places).
- **Percentage:** Set the minimum value for fill percentage, ranging from 0 to 100. It can be an integer or a decimal (up to two decimal places).

End configuration:

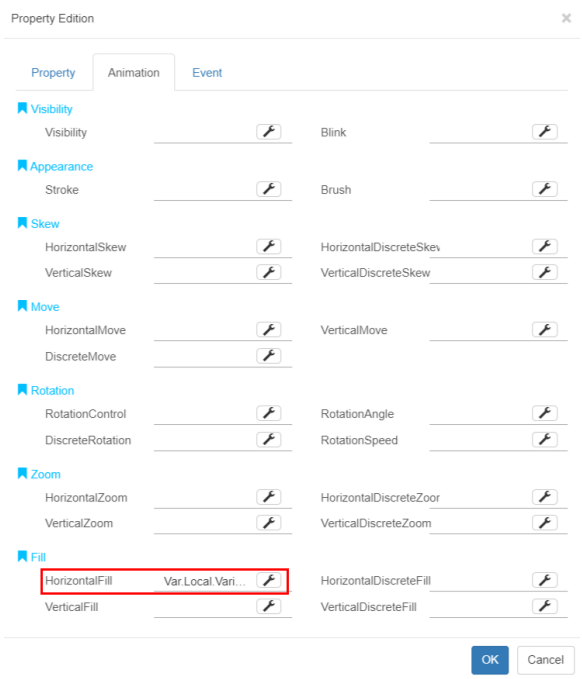
- **Value:** Set the maximum value for “expression”. It can be an integer or a decimal (up to two decimal places).
- **Percentage:** Set the maximum value for fill percentage, ranging from 0 to 100. It can be an integer or a decimal (up to two decimal places).

Fill Attributes configuration:

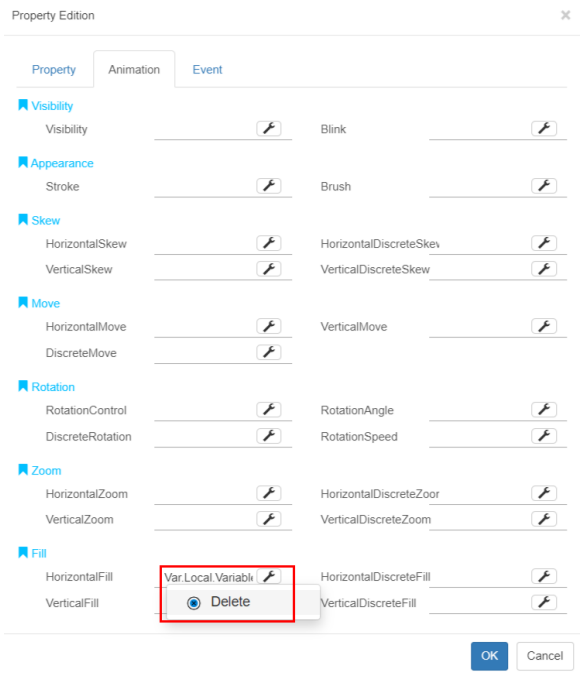
- **Horizontal Fill Direction:** Set the filling direction, which is a drop-down list with 3 options:
  1. Left to Right
  2. Right to Left
  3. Center to Edges



Step 3: After finishing the configuration, click **OK**. The animation window will display the configured information for this graphic.



To delete an animation, select the animation from the list, then right-click and choose **Delete**.



The difference between “Horizontal Fill” animation and “Vertical Fill” animation configurations:

Fill Attributes:

- **Vertical Fill Direction**: Set the filling direction, which is a drop-down list with 3 options:

  1. Top to Bottom

2. Bottom to Top

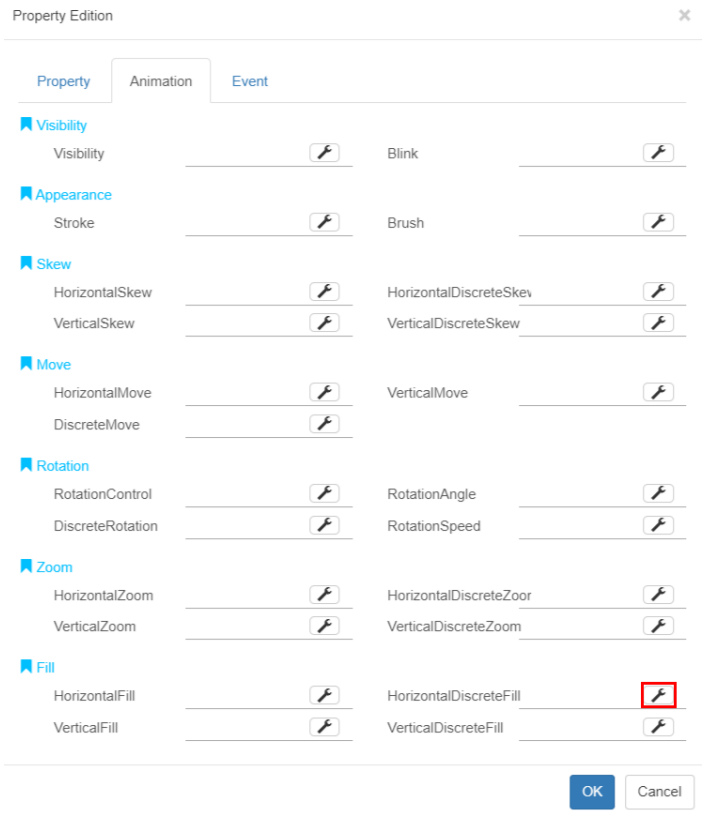
3. Center to Edges

7.8.2 Horizontal / Vertical Discrete Fill

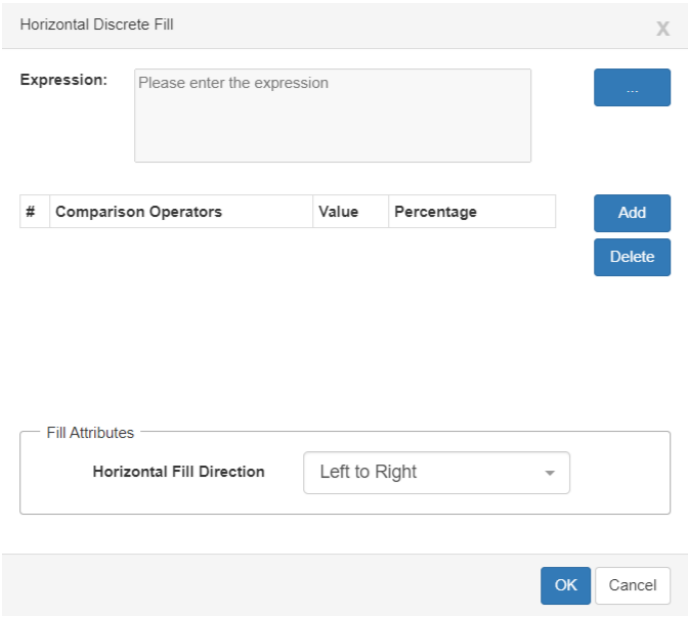
The configuration steps for “Horizontal Discrete Fill” and “Vertical Discrete Fill” are the same.

Here are the setup steps for Horizontal Discrete Fill animation:

Step 1: Open the DIAWeb Designer software, click the window where animation needs to be configured in the project. Select the graphic object > double-click to open **Property Edition** > **Animation** > **Horizontal Discrete Fill**, as shown in the image below.



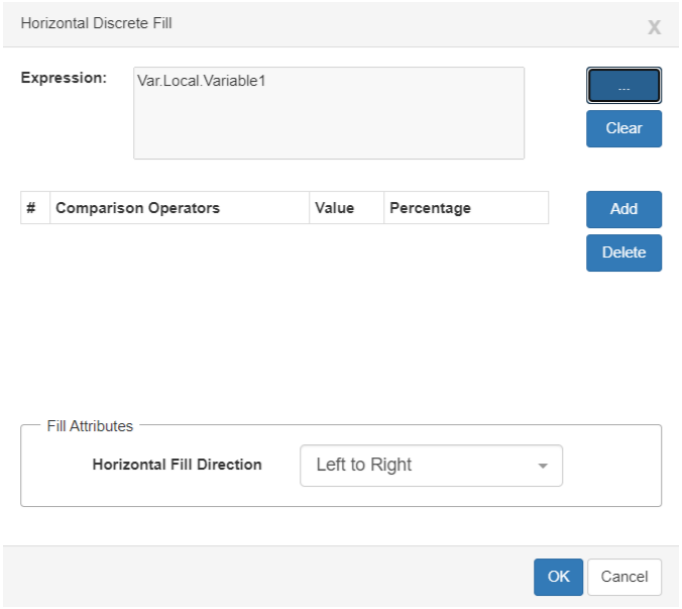
Step 2: **Horizontal Discrete Fill** animation configuration window will pop up.



The meanings of each setting in the configuration window are as follows:

Expression: Click to open the variables browser to select variables.

Clear: Clear the related variables.



Horizontal Discrete Fill configuration:

- **Comparison Operators:** Set the symbol for comparing the expression and value, which is a drop-down list with 6 options:

  1. =: Equal to (default)
  2. !=: Not equal to
  3. <: Less than

4. >: Greater than

5. <=: Less than / equal to

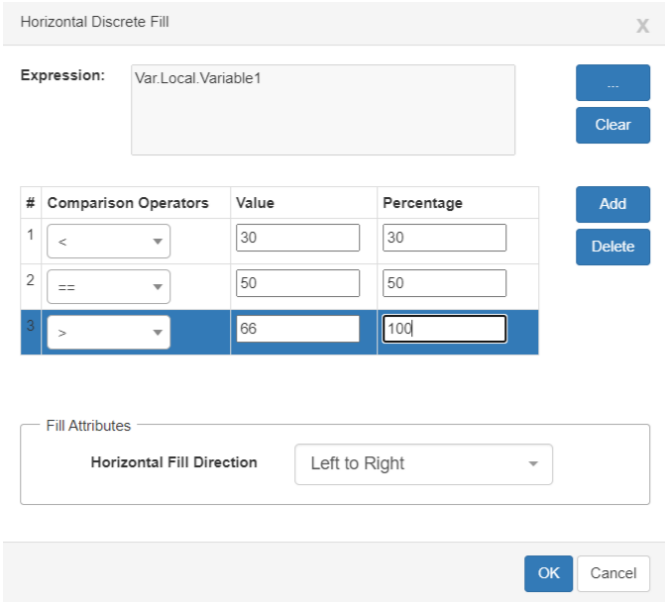
6. >=: Greater than / equal to

- **Value:** Set the reference value for “expression” comparison. It can be an integer or a decimal (up to two decimal places).
- **Percentage:** Set the corresponding fill percentage, ranging from 0 to 100. It can be an integer or a decimal (up to two decimal places).
- **Add:** Click the button to add a configuration item, as shown in the image below.
- **Delete:** Select a configuration item and click this button to delete it.

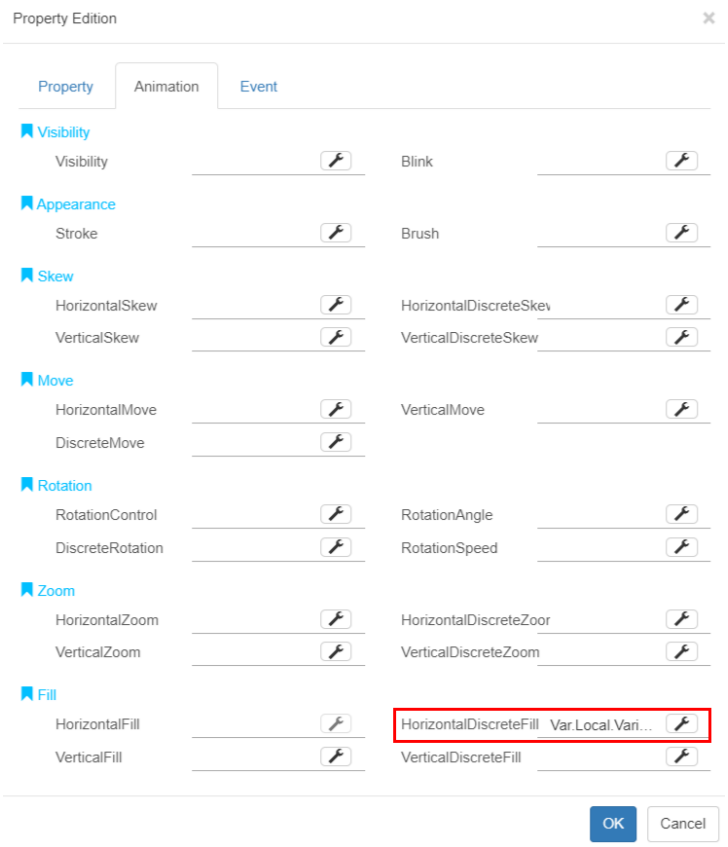
Fill Attributes configuration:

- **Horizontal Fill Direction:** Set the filling direction, which is a drop-down list with 3 options:

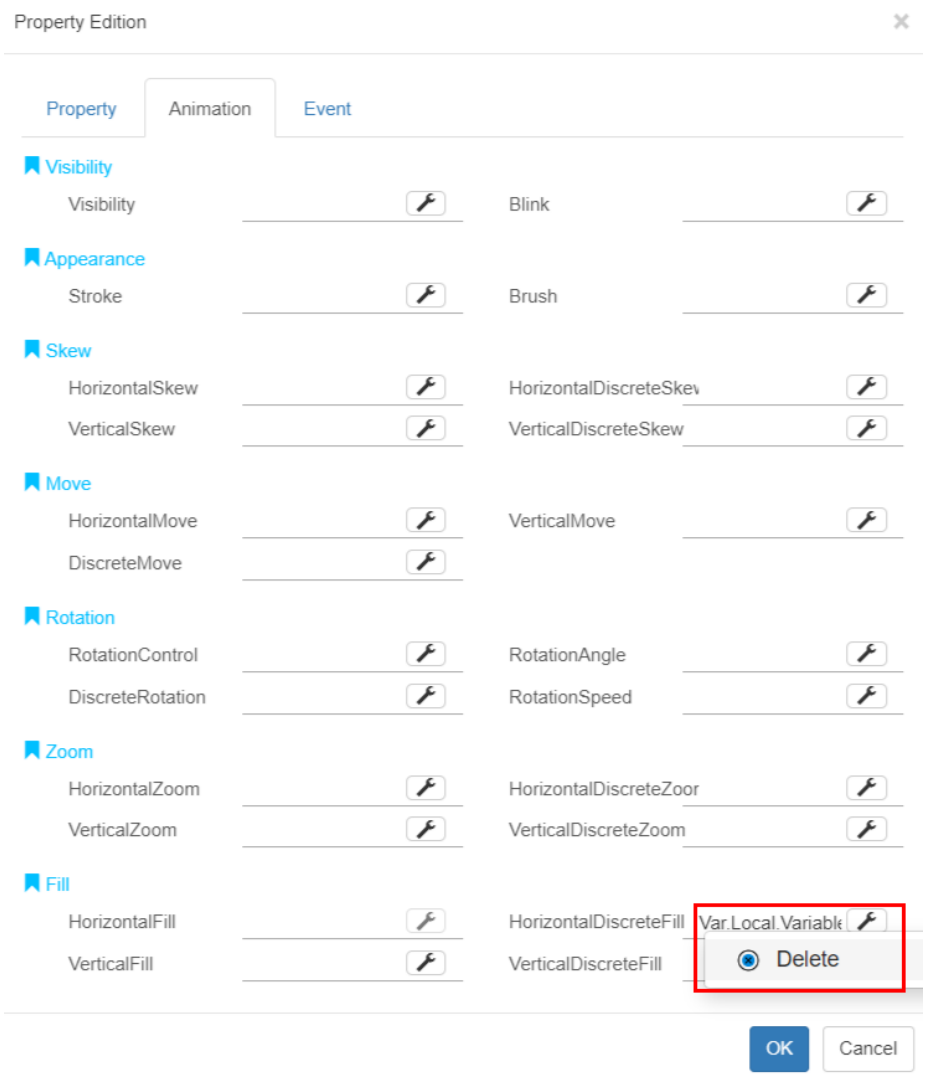
  1. Left to Right
  2. Right to Left
  3. Center to Edges



Step 3: After finishing the configuration, click **OK**. The animation window will display the configured information for this graphic.



To delete an animation, select the animation from the list, then right-click and choose **Delete**.



The difference between “Horizontal Discrete Fill” animation and “Vertical Discrete Fill” animation configurations:

Fill Attributes configuration:

- **Vertical Discrete Fill Direction:** Set the filling direction, which is a drop-down list with 3 options:

  1. Top to Bottom
  2. Bottom to Top
  3. Center to Edges

7.9 Zoom

Zoom animation controls the size of a graphical object based on the value of a variable or an expression, thereby changing the object's "size" properties.

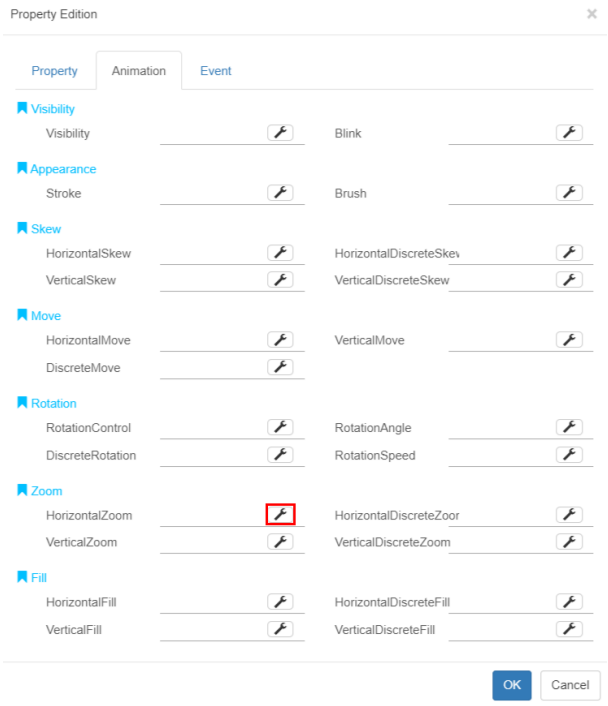
Zoom animation is divided into 4 types based on the zoom direction: Horizontal Zoom, Horizontal Discrete Zoom, Vertical Zoom, Vertical Discrete Zoom.

7.9.1 Horizontal / Vertical Zoom

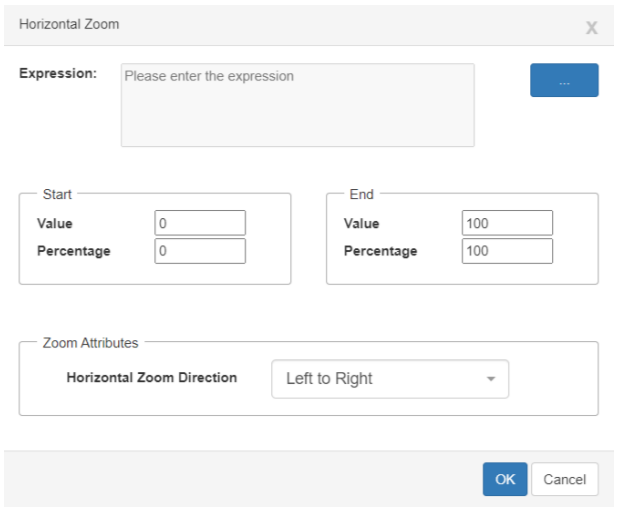
The configuration steps for “Horizontal Zoom” and “Vertical Zoom” are the same.

Here are the setup steps for Horizontal Zoom animation:

Step 1: Open the DIAWeb Designer software, click the window where animation needs to be configured in the project. Select the graphic object > double-click to open **Property Edition** > **Animation** > **Horizontal Zoom**, as shown in the image below.



Step 2: **Horizontal Zoom** animation configuration window will pop up.



The meanings of each setting in the configuration window are as follows:

Expression: Click to open the variables browser to select variables.

Clear: Clear the related variables.

Start configuration:

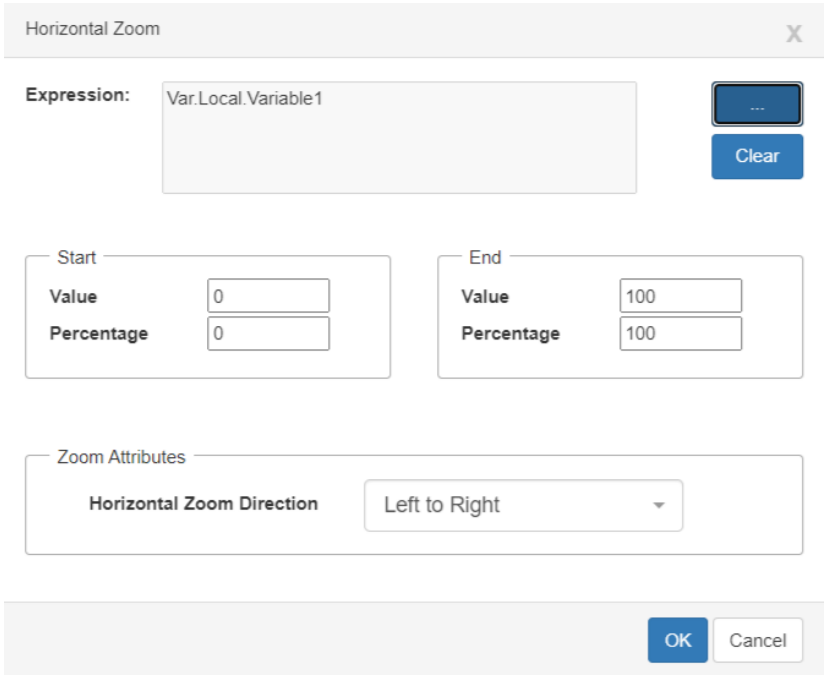
- **Value:** Set the minimum value for “expression”. It can be an integer or a decimal (up to two decimal places).
- **Percent:** Set the minimum value for horizontal zoom percent, ranging from 0 to 100. It can be an integer or a decimal (up to two decimal places).

End configuration:

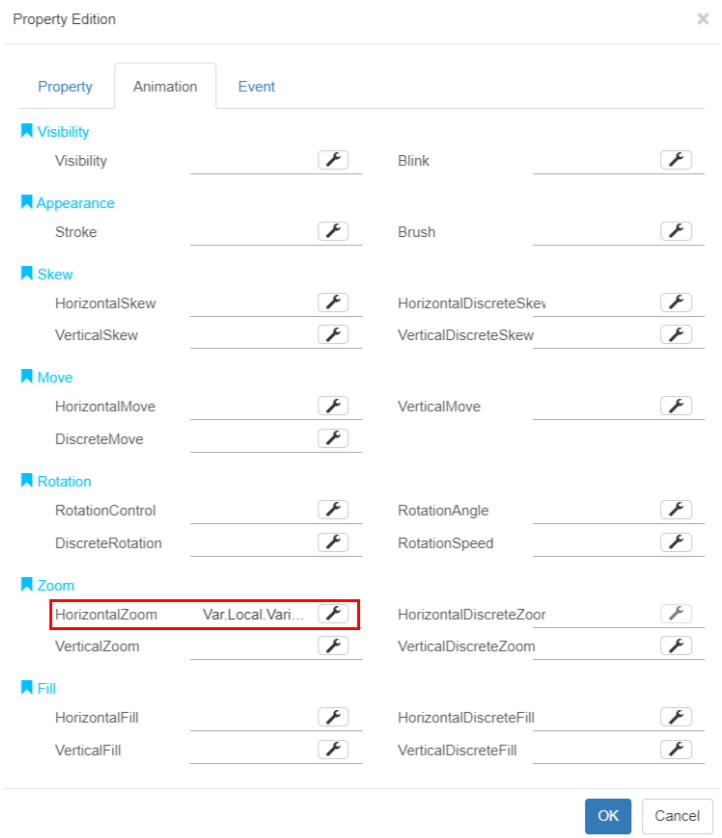
- **Value:** Set the maximum value for “expression”. It can be an integer or a decimal (up to two decimal places).
- **Percent:** Set the maximum value for horizontal zoom percent, ranging from 0 to 100. It can be an integer or a decimal (up to two decimal places).

Zoom Attributes configuration:

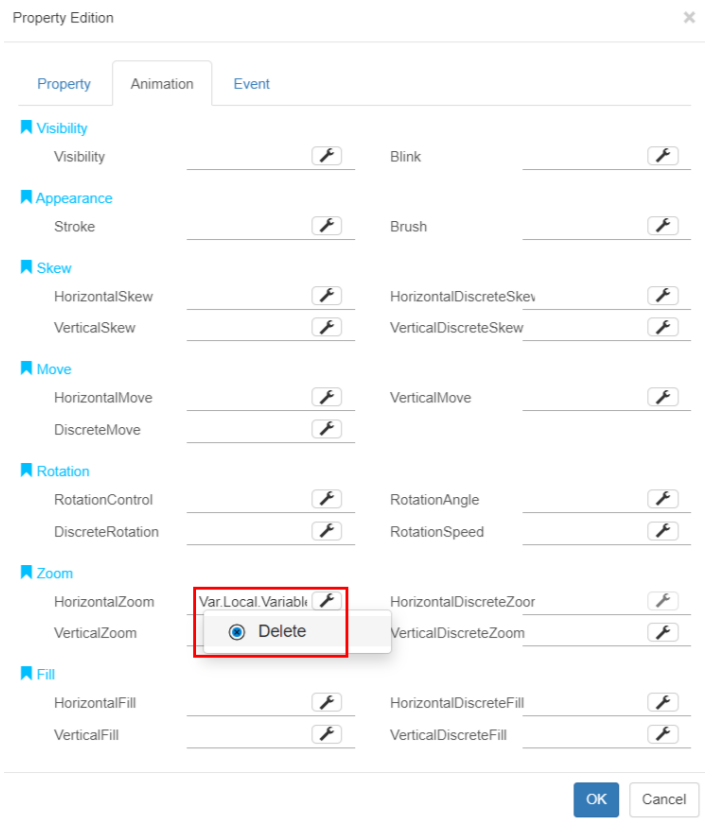
- **Horizontal Zoom Direction:** Set the zoom direction, which is a drop-down list with 3 options:
  1. Left to Right
  2. Right to Left
  3. Center to Edges


Horizontal Zoom
Expression:
Var.Local.Variable1
...
Clear
Start
Value
0
Percentage
0
End
Value
100
Percentage
100
Zoom Attributes
Horizontal Zoom Direction
Left to Right
OK
Cancel

Step 3: After finishing the configuration, click **OK**. The animation window will display the configured information for this graphic.



To delete an animation, select the animation from the list, then right-click and choose **Delete**.



The difference between setting “Horizontal Zoom” animation and “Vertical Zoom” animation:

Zoom Attributes configuration:

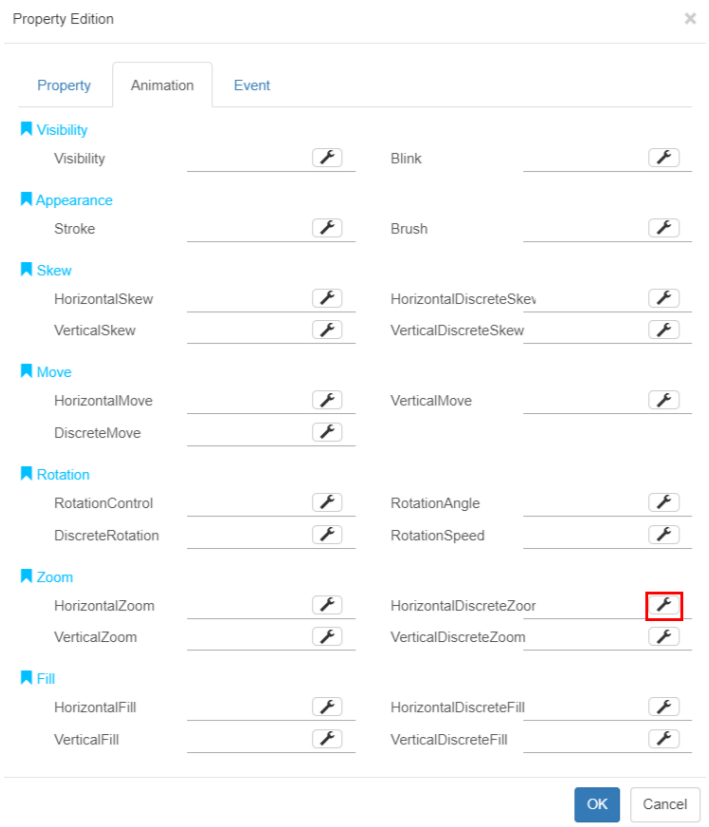
- **Vertical Zoom Direction:** Set the zoom direction, which is a drop-down list with 3 options:
  1. Top to Bottom
  2. Bottom to Top
  3. Center to Edges

7.9.2 Horizontal / Vertical Discrete Zoom

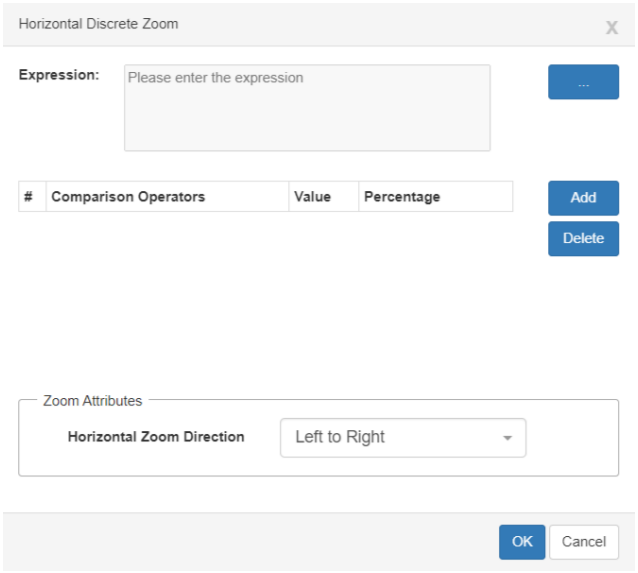
The configuration steps for “Horizontal Discrete Zoom” and “Vertical Discrete Zoom” are the same.

Here are the setup steps for Horizontal Discrete Zoom animation:

Step 1: Open the DIAWeb Designer software, click the window where animation needs to be configured in the project. Select the graphic object > double-click to open **Property Edition** > **Animation** > **Horizontal Discrete Zoom**, as shown in the image below.


Property Edition
Property
Animation
Event
Visibility
Visibility
Blink
Appearance
Stroke
Brush
Skew
HorizontalSkew
HorizontalDiscreteSkew
VerticalSkew
VerticalDiscreteSkew
Move
HorizontalMove
VerticalMove
DiscreteMove
Rotation
RotationControl
RotationAngle
DiscreteRotation
RotationSpeed
Zoom
HorizontalZoom
HorizontalDiscreteZoom
VerticalZoom
VerticalDiscreteZoom
Fill
HorizontalFill
HorizontalDiscreteFill
VerticalFill
VerticalDiscreteFill
OK
Cancel

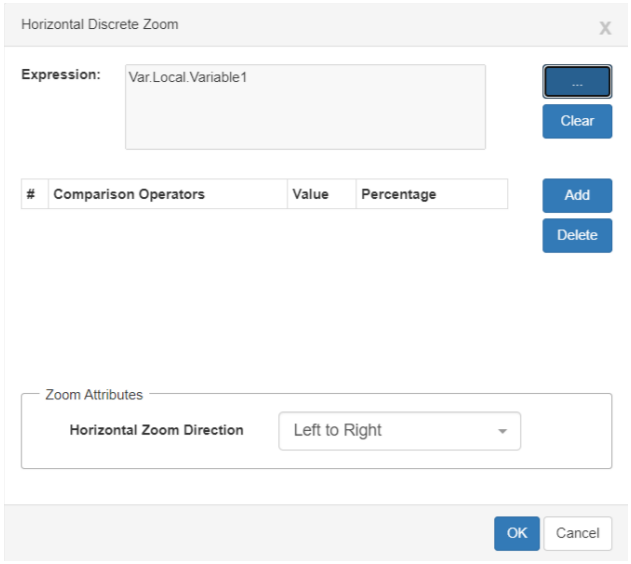
Step 2: **Horizontal Discrete Zoom** animation configuration window will pop up.



The meanings of each setting in the configuration window are as follows:

Expression: Click to open the variables browser to select variables.

Clear: Clear the related variables.



Horizontal Discrete Zoom configuration:

- **Comparison Operators:** Set the symbol for comparing the expression and value, which is a drop-down list with 6 options:

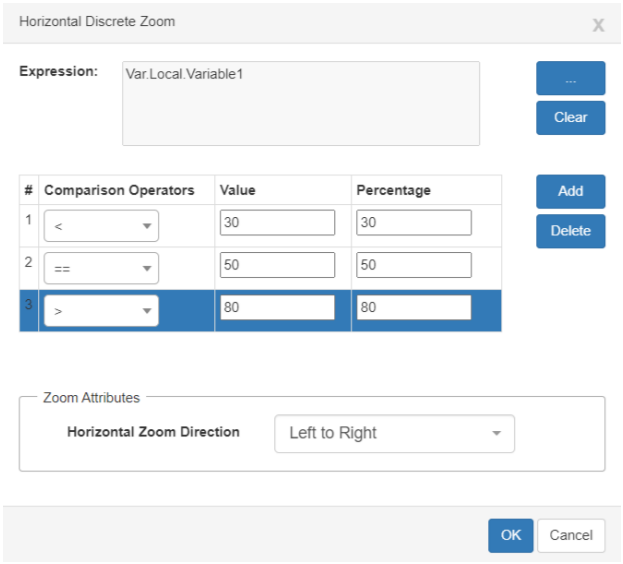
  1. =: Equal to (default)
  2. !=: Not equal to
  3. <: Less than

4. >: Greater than
5. <=: Less than / equal to
6. >=: Greater than / equal to

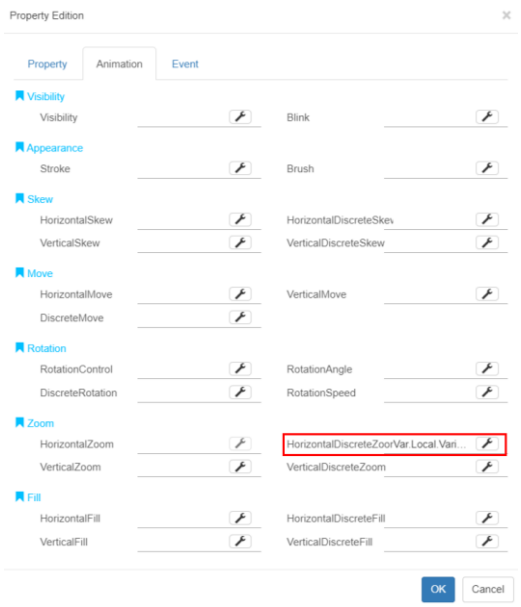
- **Value:** Set the reference value for “expression” comparison. It can be an integer or a decimal (up to two decimal places).
- **Percentage:** Set the corresponding horizontal discrete zoom percentage, ranging from 0 to 100. It can be an integer or a decimal (up to two decimal places).
- **Add:** Click the button to add a configuration item, as shown in the image below.
- **Delete:** Select a configuration item and click this button to delete it.

Zoom Attributes configuration:

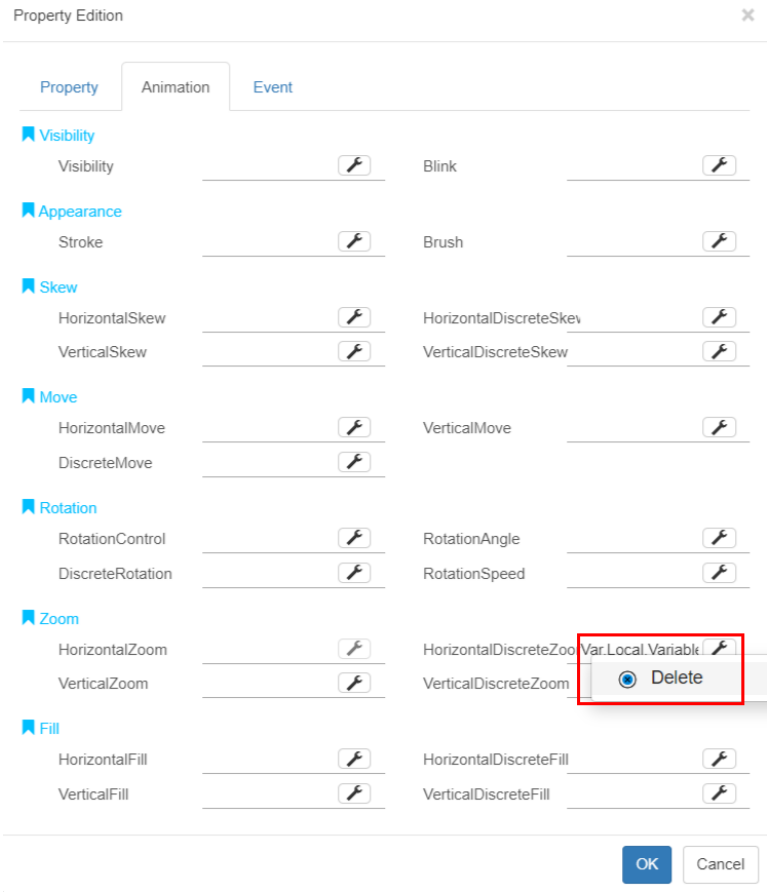
- **Horizontal Zoom Direction:** Set the zoom direction, which is a drop-down list with 3 options:
  1. Left to Right
  2. Right to Left
  3. Center to Edge



Step 3: After finishing the configuration, click **OK**. The animation window will display the configured information for this graphic.



To delete an animation, select the animation from the list, then right-click and choose **Delete**.



The difference between setting “Horizontal Discrete Zoom” animation and “Vertical Discrete Zoom” animation:

Zoom Attributes configuration:

- **Vertical Discrete Zoom Direction:** Set the zoom direction, which is a drop-down list with 3 options:

1. Top to Bottom
2. Bottom to Top
3. Center to Edge

7.10 Move

Move animation controls the position of a graphical object based on the value of a variable or an expression, thereby changing the object's "coordinates" properties.

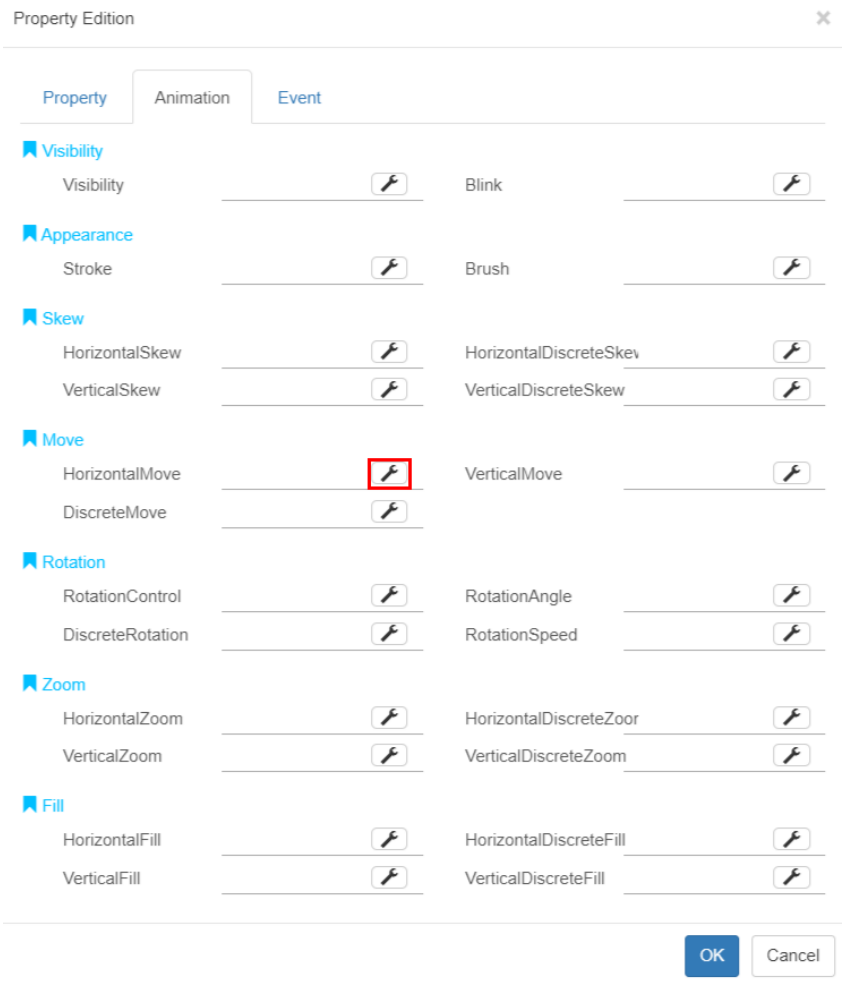
Move animation is divided into 3 types: Horizontal Move, Vertical Zoom, Discrete Zoom.

7.10.1 Horizontal / Vertical Move

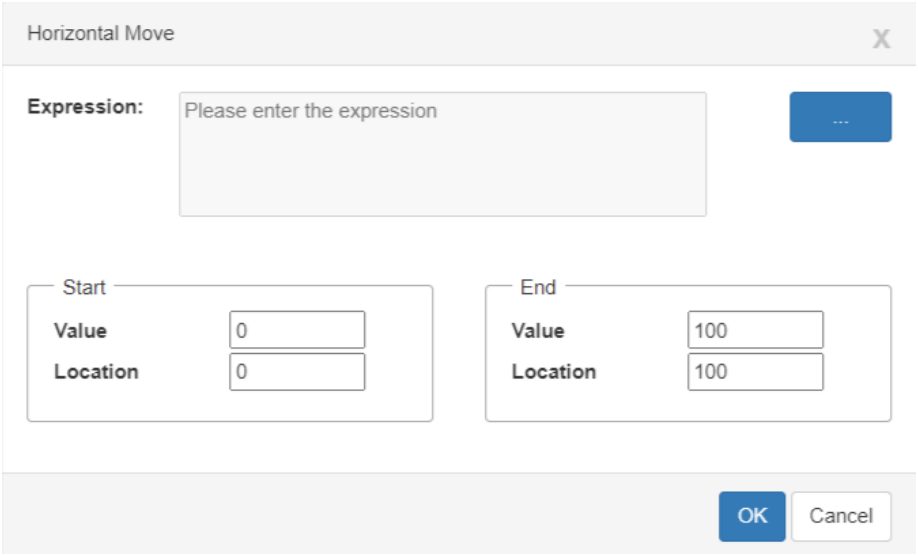
The configuration steps for “Horizontal Move” and “Vertical Move” are the same.

Here are the setup steps for Horizontal Move animation:

Step 1: Open the DIAWeb Designer software, click the window where animation needs to be configured in the project. Select the graphic object > double-click to open **Property Edition** > **Animation** > **Horizontal Move**, as shown in the image below.



Step 2: **Horizontal Move** animation configuration window will pop up.



The meanings of each setting in the configuration window are as follows:

Expression: Click ... to open the variables browser to select variables

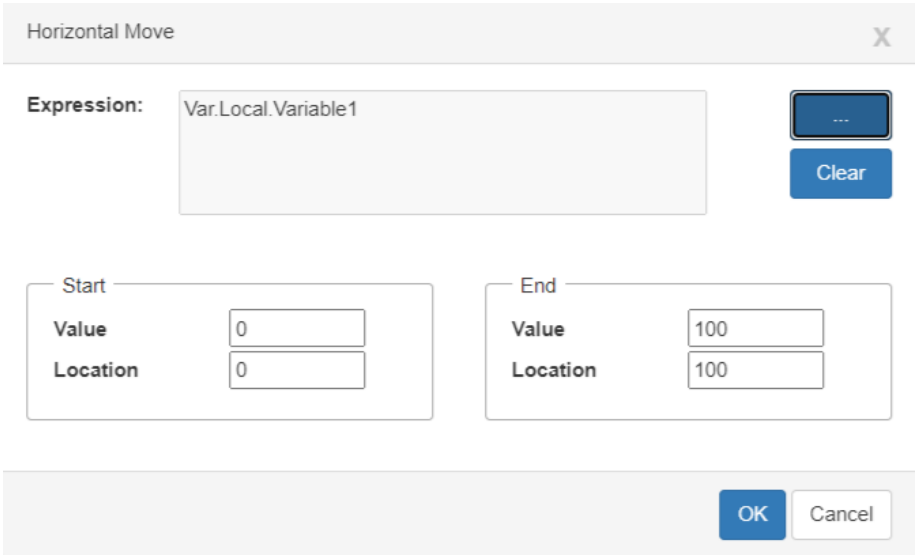
Clear: Clear the related variables.

Start configuration:

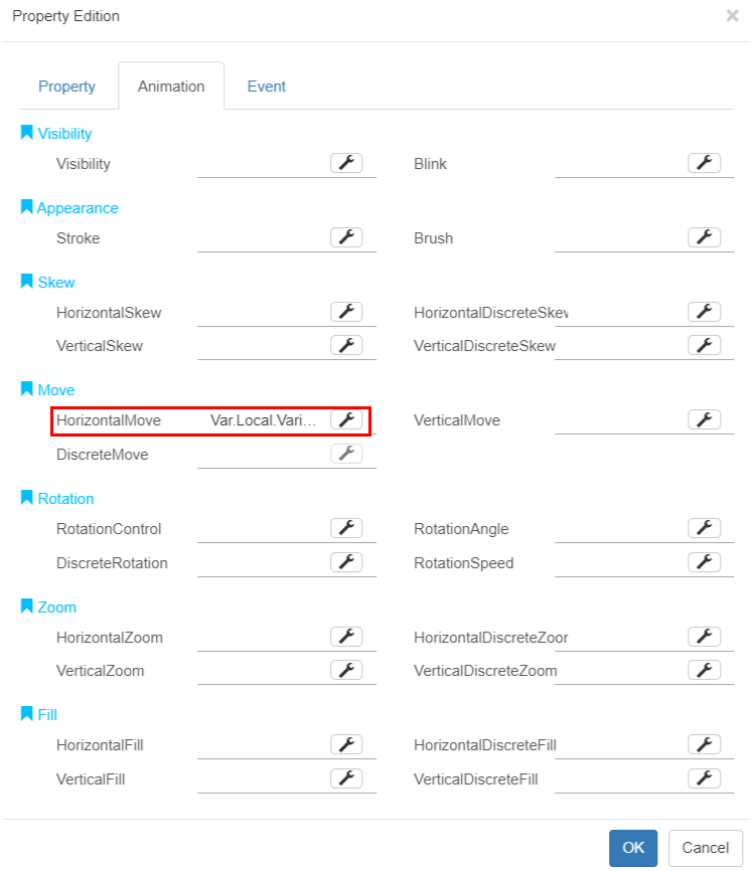
- **Value:** Set the minimum value for “expression”. It can be an integer or a decimal (up to two decimal places).
- **Location:** Set the leftmost coordinates that can be reached when moving horizontally. It can be an integer or a decimal (up to two decimal places).

End configuration:

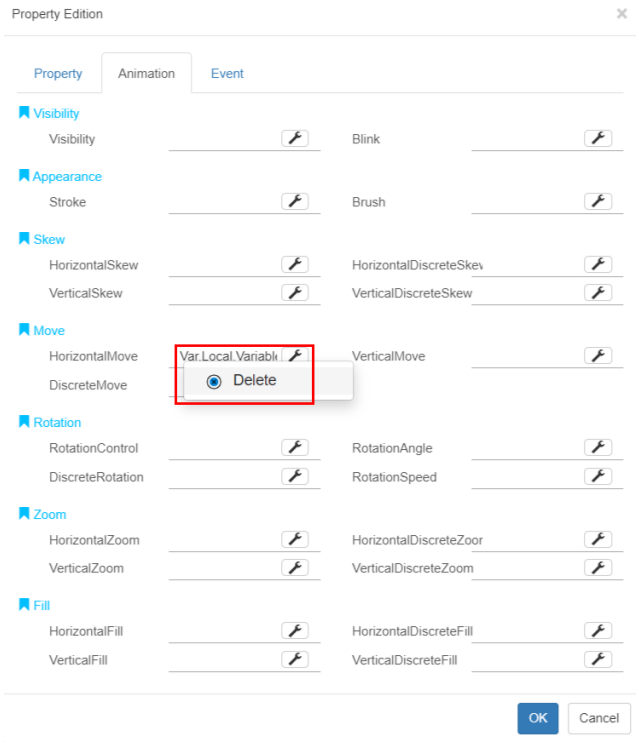
- **Value:** Set the maximum value for “expression”. It can be an integer or a decimal (up to two decimal places).
- **Location:** Set the rightmost coordinates that can be reached when moving horizontally. It can be an integer or a decimal (up to two decimal places).


Horizontal Move
X
Expression:
Var.Local.Variable1
...
Clear
Start
Value
0
Location
0
End
Value
100
Location
100
OK
Cancel

Step 3: After finishing the configuration, click **OK**. The animation window will display the configured information for this graphic.



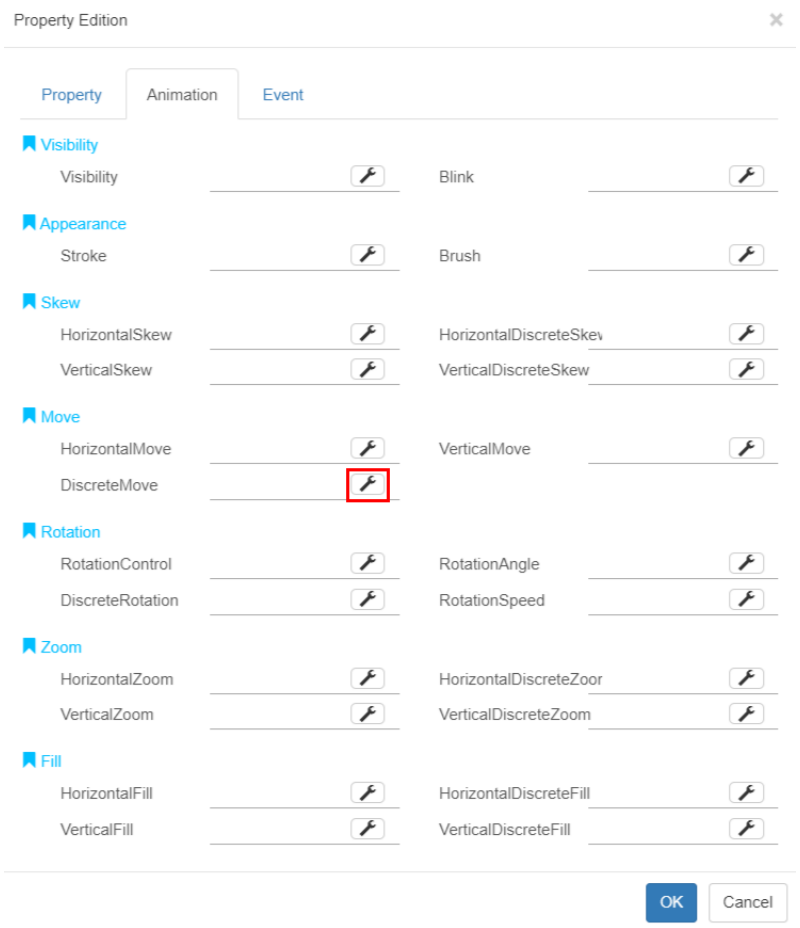
To delete an animation, select the animation from the list, then right-click and choose **Delete**.



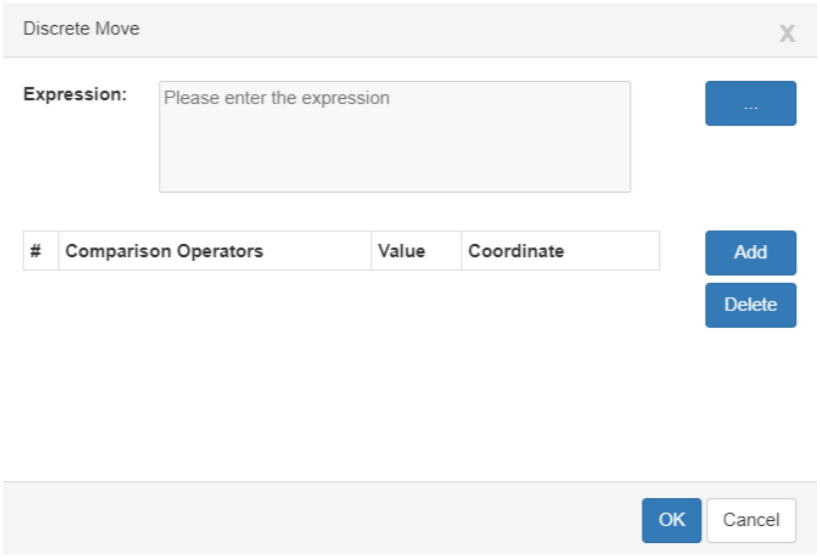
7.10.2 Discrete Move

Here are the setup steps for Discrete Move animation:

Step 1: Open the DIAWeb Designer software, click the window where animation needs to be configured in the project. Select the graphic object > double-click to open **Property Edition** > **Animation** > **Discrete Move**, as shown in the image below.



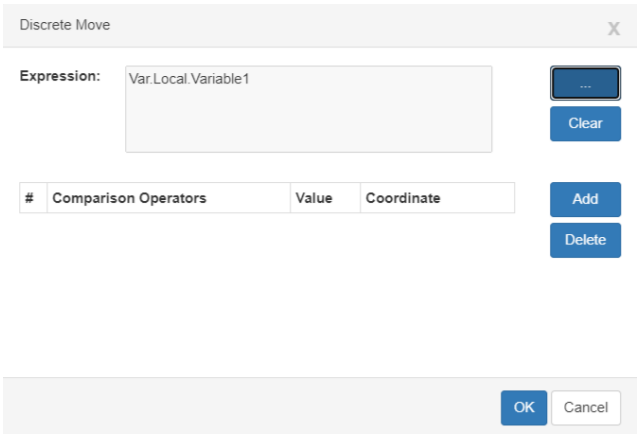
Step 2: Discrete Move animation configuration window will pop up.


Discrete Move
X
Expression:
Please enter the expression
...
Comparison Operators Value Coordinate
Add
Delete
OK
Cancel

The meanings of each setting in the configuration window are as follows:

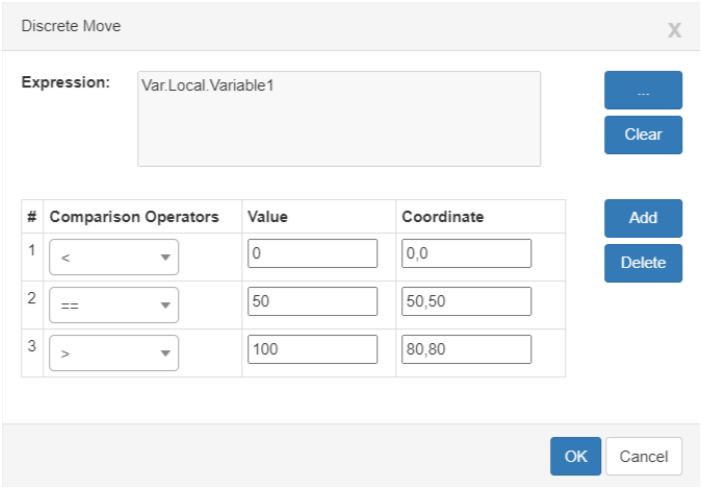
Expression: Click to open the variables browser to select variables.

Clear: Clear the related variables.

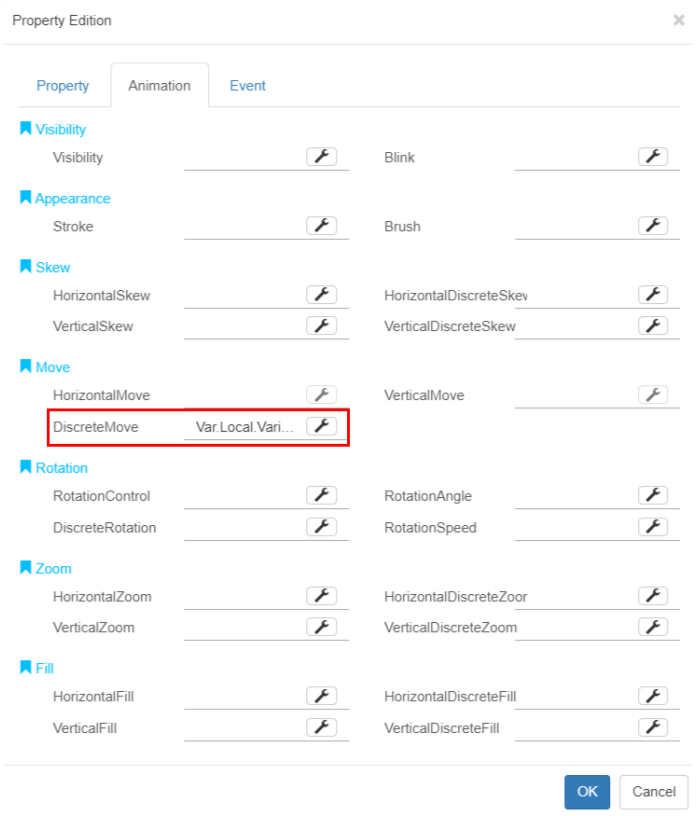


Discrete Move configuration:

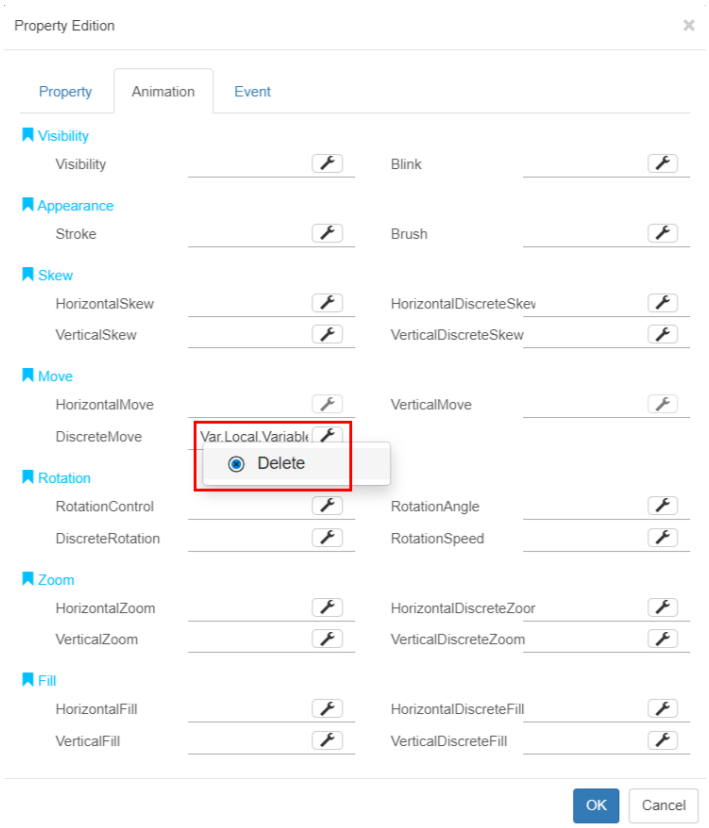
- **Comparison Operators:** Setting the symbol for comparing the expression and value, which is a drop-down list with 6 options:
  1. =: Equal to (default)
  2. !=: Not equal to
  3. <: Less than
  4. >: Greater than
  5. <=: Less than / equal to
  6. >=: Greater than / equal to
- **Value:** Set the reference value for “expression” comparison. It can be an integer or a decimal (up to two decimal places).
- **Coordinate:** Set the relative coordinates with the control objects as the origin.
- **Add:** Click the button to add a configuration item, as shown in the image below.
- **Delete:** Select a configuration item and click this button to delete it.



Step 3: After finishing the configuration, click **OK**. The animation window will display the configured information for this graphic.



To delete an animation, select the animation from the list, then right-click and choose **Delete**.



7.11 Flow

Flow animation can only be configured for the graphical object, pipe, changing its "liquid flow" property.

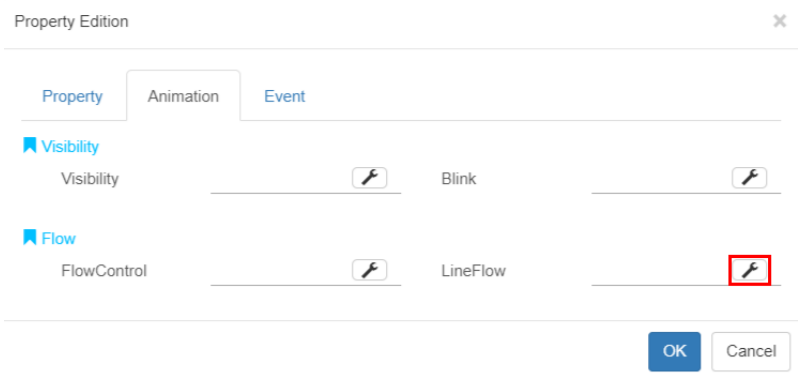
Flow animation is divided into 2 types: Line Flow and Flow Control. These cannot be configured at the same time.

Line Flow animation involves setting a variable or expression and comparing it to a preset value. When the comparison condition is met, the pipe liquid flows at the specified flow speed. On the other hand, **Flow Control** animation controls whether the pipe liquid flows based on the true / false value of a discrete variable or an expression, and it also allows setting the flow speed.

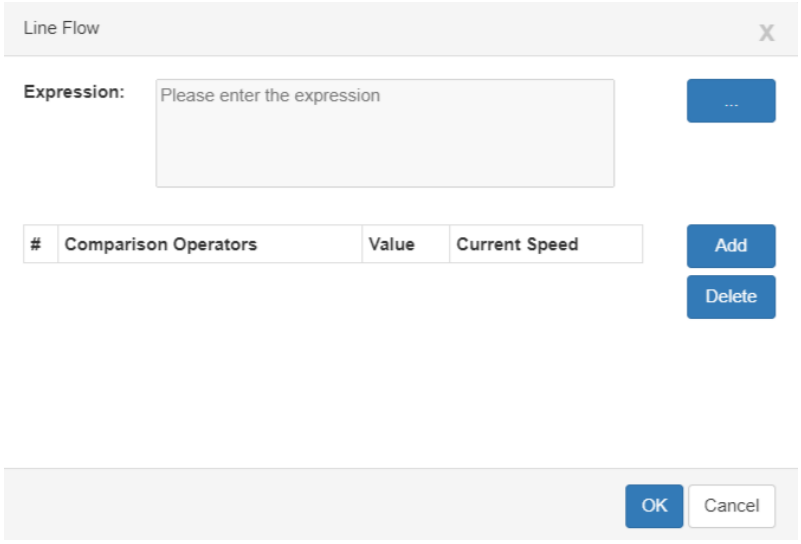
7.11.1 Line Flow

Here are the setup steps for Line Flow animation:

Step 1: Open the DIAWeb Designer software, click the window where animation needs to be configured in the project. Select the graphic object > double-click to open **Property Edition** > **Animation** > **Line Flow**, as shown in the image below.



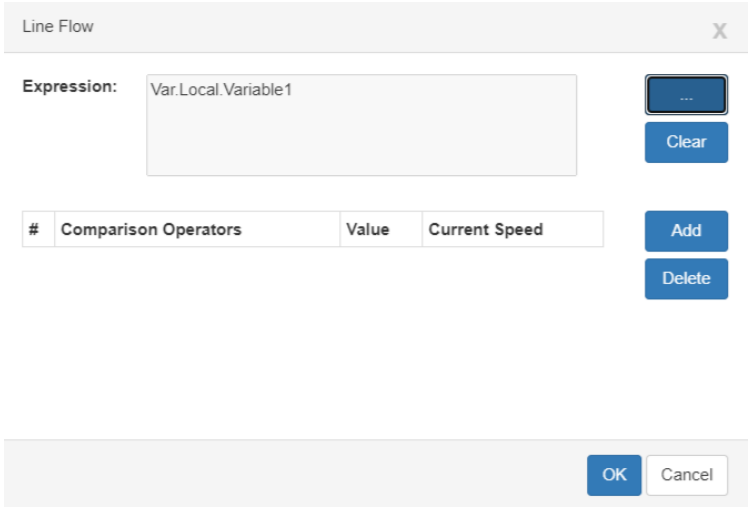
Step 2: Line Flow animation configuration window will pop up.



The meanings of each setting in the configuration window are as follows:

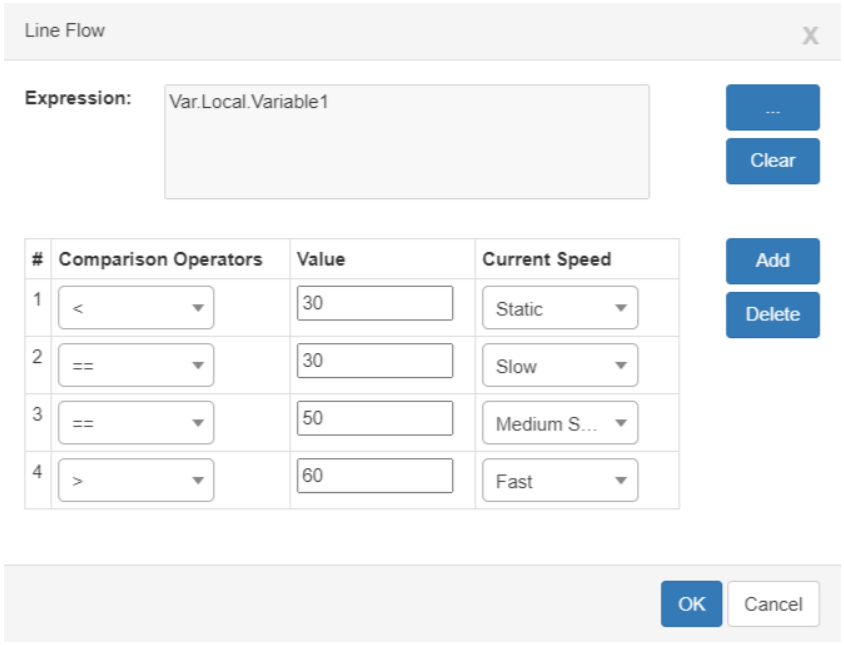
Expression: Click to open the variables browser to select variables

Clear: Clear the related variables.

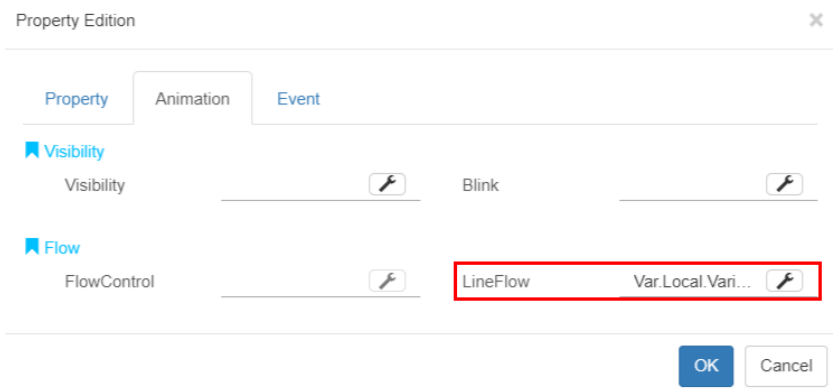


Line Flow configuration:

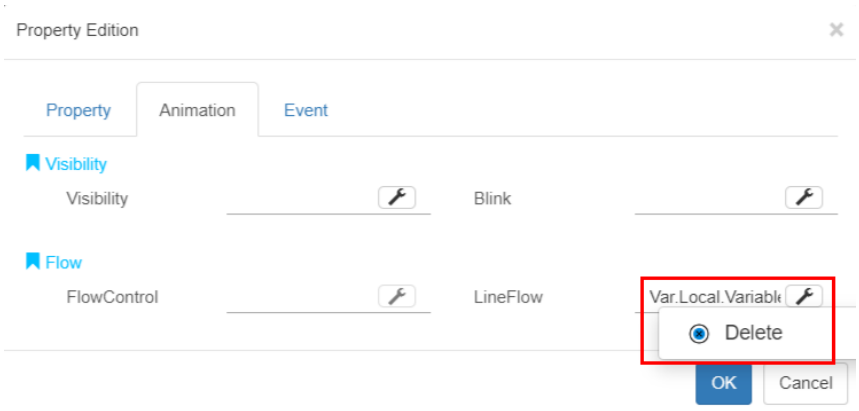
- **Comparison Operators:** Setting the symbol for comparing the expression and value, which is a drop-down list with 6 options:
  1. =: Equal to (default)
  2. !=: Not equal to
  3. <: Less than
  4. >: Greater than
  5. <=: Less than / equal to
  6. >=: Greater than / equal to
- **Value:** Set the reference value for “expression” comparison. It can be an integer or a decimal (up to two decimal places).
- **Current Speed:** Set the liquid flow speed, which is a drop-down list with 4 options:
  1. Static
  2. Slow
  3. Medium
  4. Fast
- **Add:** Click the button to add a configuration item, as shown in the image below.
- **Delete:** Select a configuration item and click this button to delete it.



Step 3: After finishing the configuration, click **OK**. The animation window will display the configured information for this graphic.



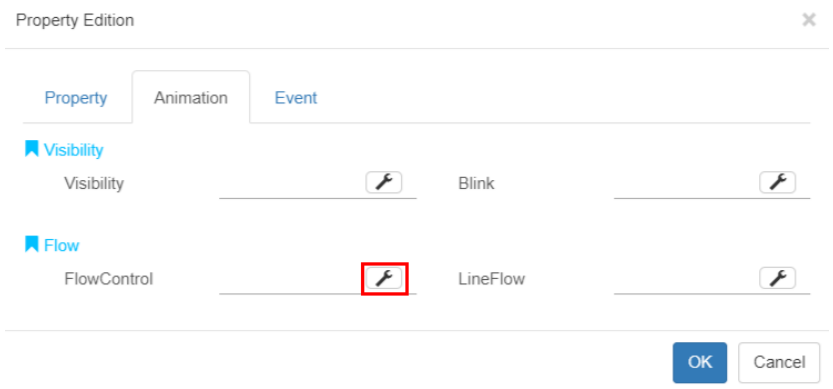
To delete an animation, select the animation from the list, then right-click and choose **Delete**.



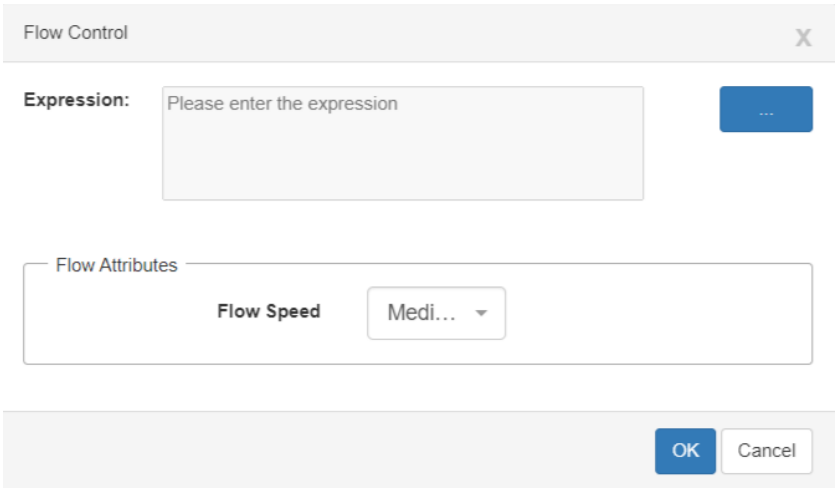
7.11.2 Flow Control

Here are the setup steps for Flow Control animation:

Step 1: Open the DIAWeb Designer software, click the window where animation needs to be configured in the project. Select the graphic object > double-click to open **Property Edition** > **Animation** > **Flow Control**, as shown in the image below.



Step 2: Flow Control animation configuration window will pop up.



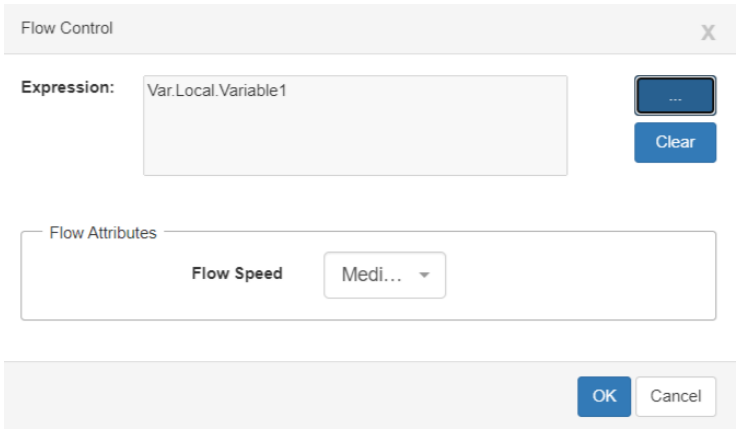
The meanings of each setting in the configuration window are as follows:

Expression: Click to open the variables browser to select variables.

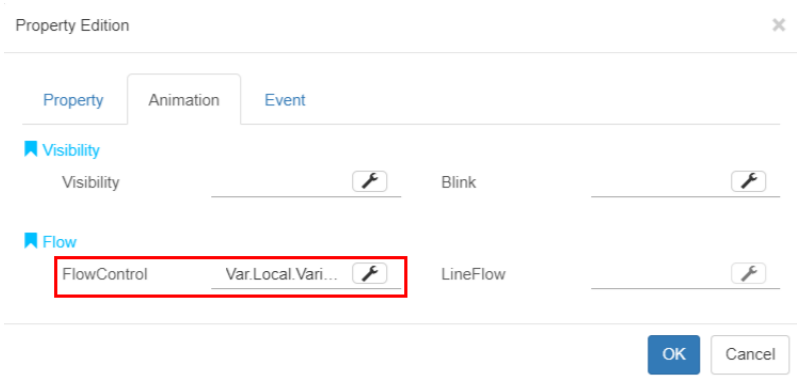
Clear: Clear the related variables.

Flow Attributes configuration:

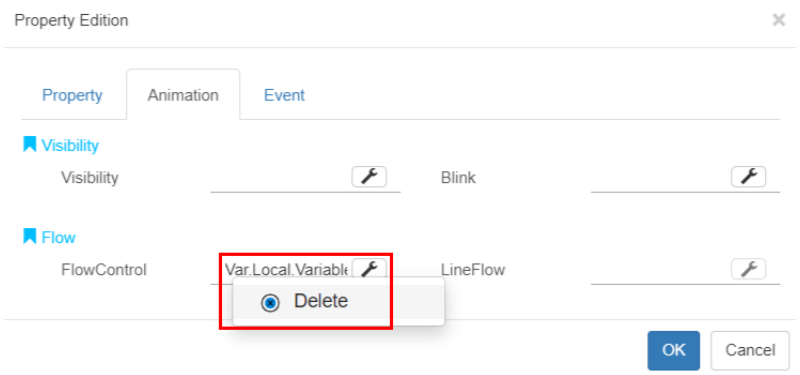
- **Flow Speed:** Set the liquid flow speed, which is a drop-down list with 4 options:
  1. Static
  2. Slow
  3. Medium
  4. Fast



Step 3: After finishing the configuration, click **OK**. The animation window will display the configured information for this graphic.



To delete an animation, select the animation from the list, then right-click and choose **Delete**.



Chapter 8 Event

Overview

Events are operations that can be recognized and responded to by graphic objects, which are divided into system event and user event. Events in DIAWeb Designer are often user event, where the user operates the graphic objects in the window to drive the graphic control to perform certain functions.

Events in the DIAWeb Designer refer to triggering relevant script processes when the user uses mouse, keyboard and etc. to operate graphic objects. Therefore, configuring events mainly involves using the script editor to configure the script program, or calling the packaged program: The DIAWeb Designer software script editor contains many pre-written commands and system functions that users can directly use in script programs.

DIAWeb Designer software provides comprehensive events processing functions, including mouse, window operation, value input and etc.; the same event corresponding to the same graphic object can only be configured once.

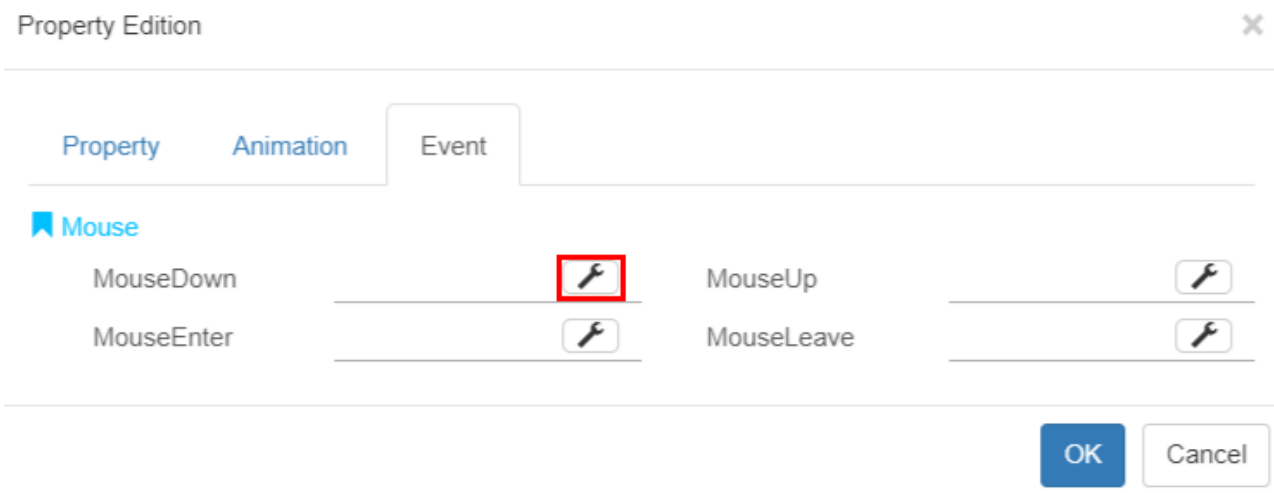
8.1Mouse Event

Mouse event is the event triggered by mouse movements, clicks and other operations on the graphic objects, and then apply releveant script to complete related functions.

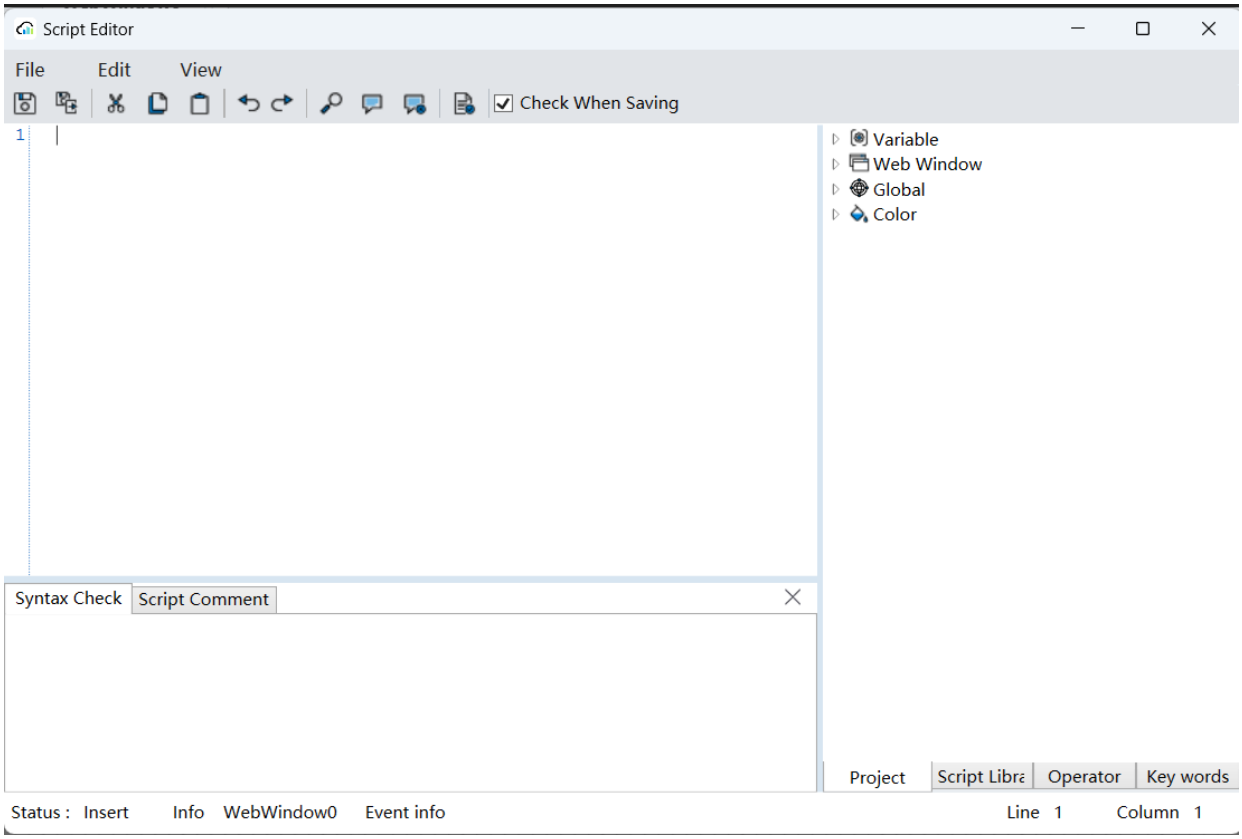
There are 4 types of Mouse event: Mouse Down, Mouse Up, Mouse Enter, Mouse Leave.

Take Mouse Down as an example. The configuration process is demonstrated as below:

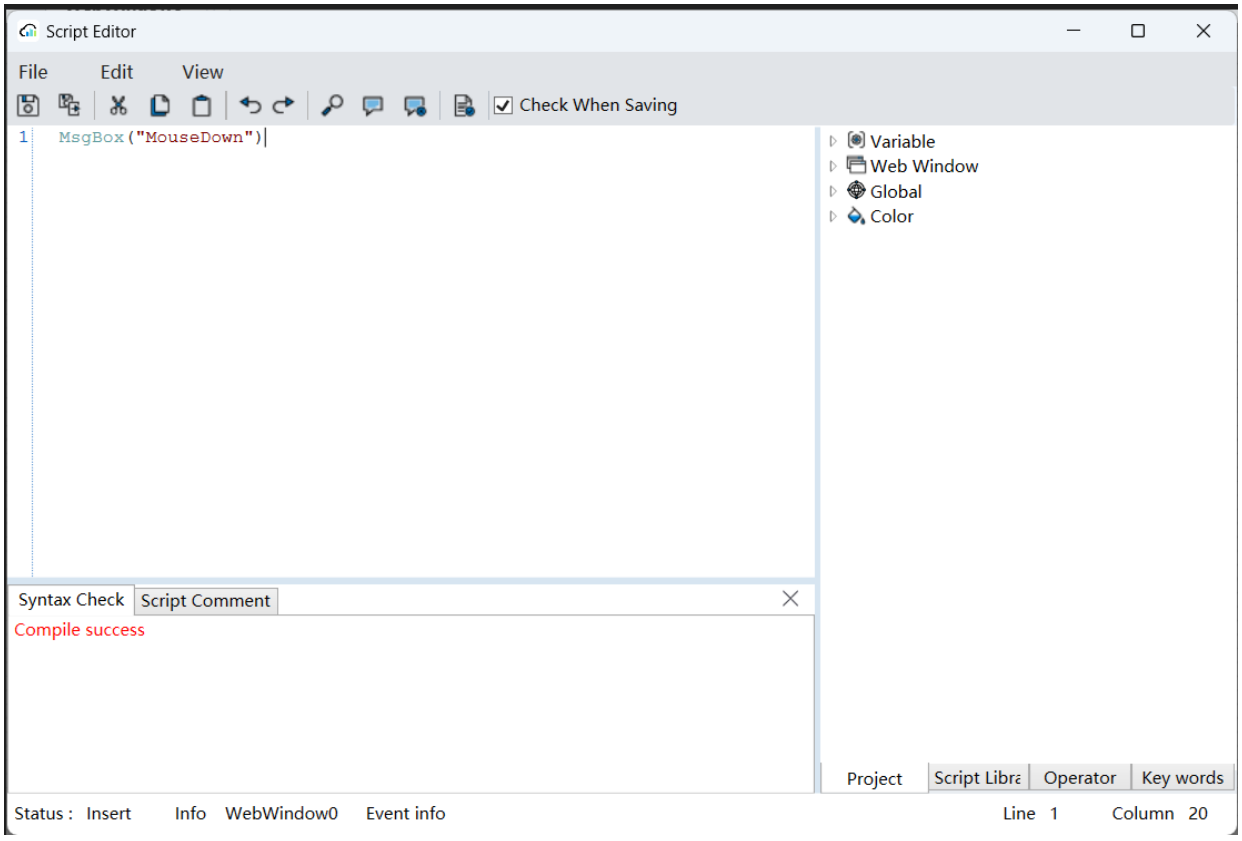
Step 1: Open the window in the project where the events need to be configured in DIAWeb Designer development environment > Select the graphic object > Double-click **Property Edition** > Click **Event** > Click **Mouse Down** button.


Property Edition
Property
Animation
Event
Mouse
MouseDown
MouseUp
MouseEnter
MouseLeave
OK
Cancel

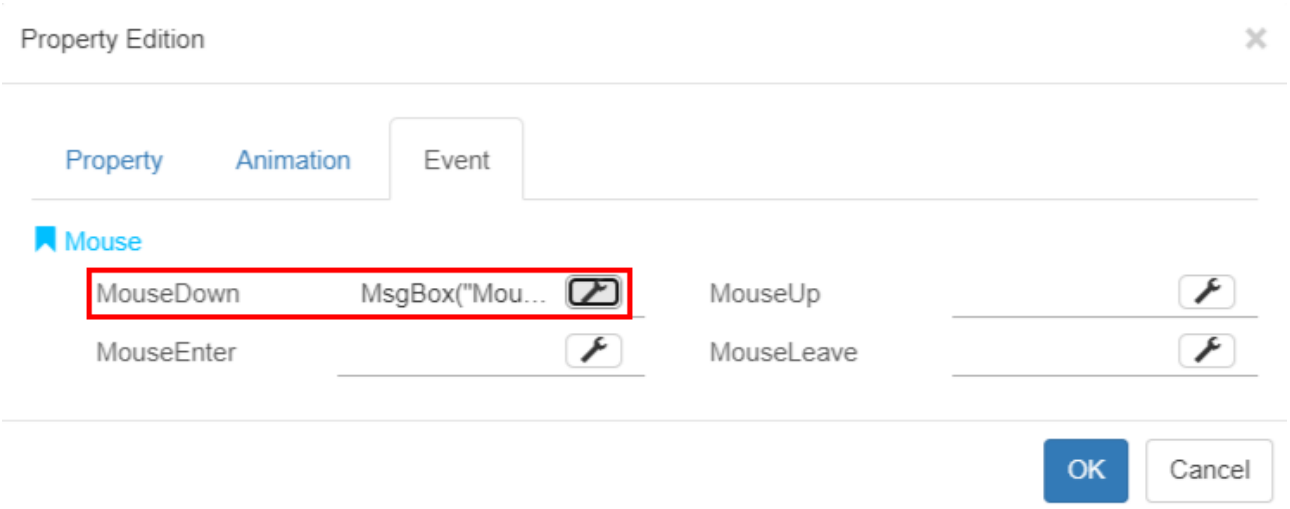
Step 2: Then the **Script Editor** window will pop up.



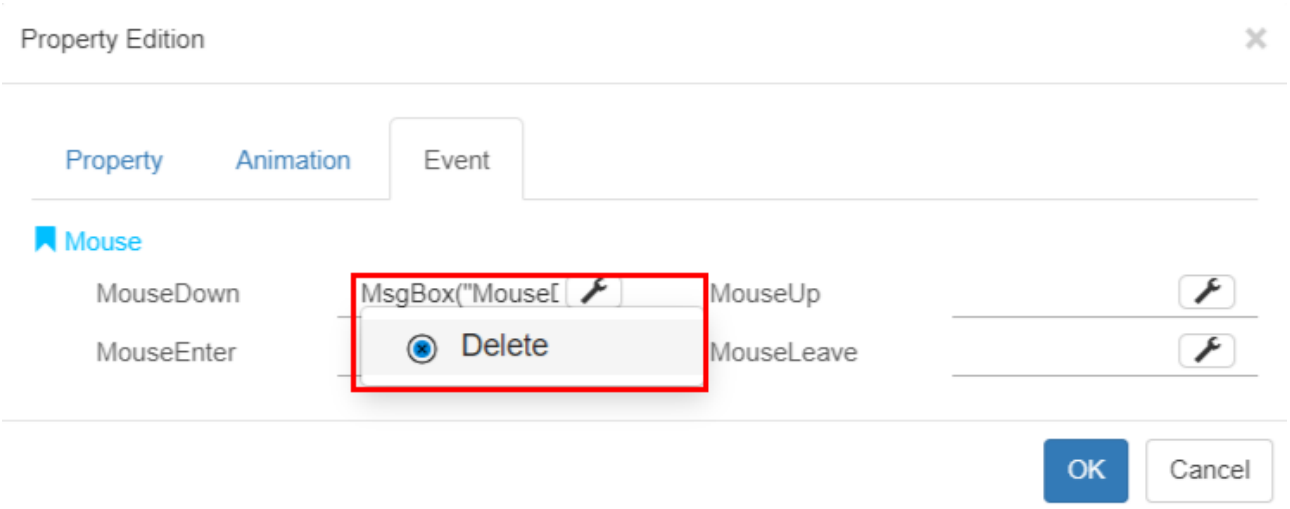
Step 3: Edit the script (The script in DIAWeb Designer is called Visual Basic Script, and the script editor will compile the syntax check).



Step 4: After completing the script, click **Save and Exit** button , and the event information will be displayed in the event window.



To delete the event, select the event in the list and right-click **Delete** button.



8.2 Window Operation Event

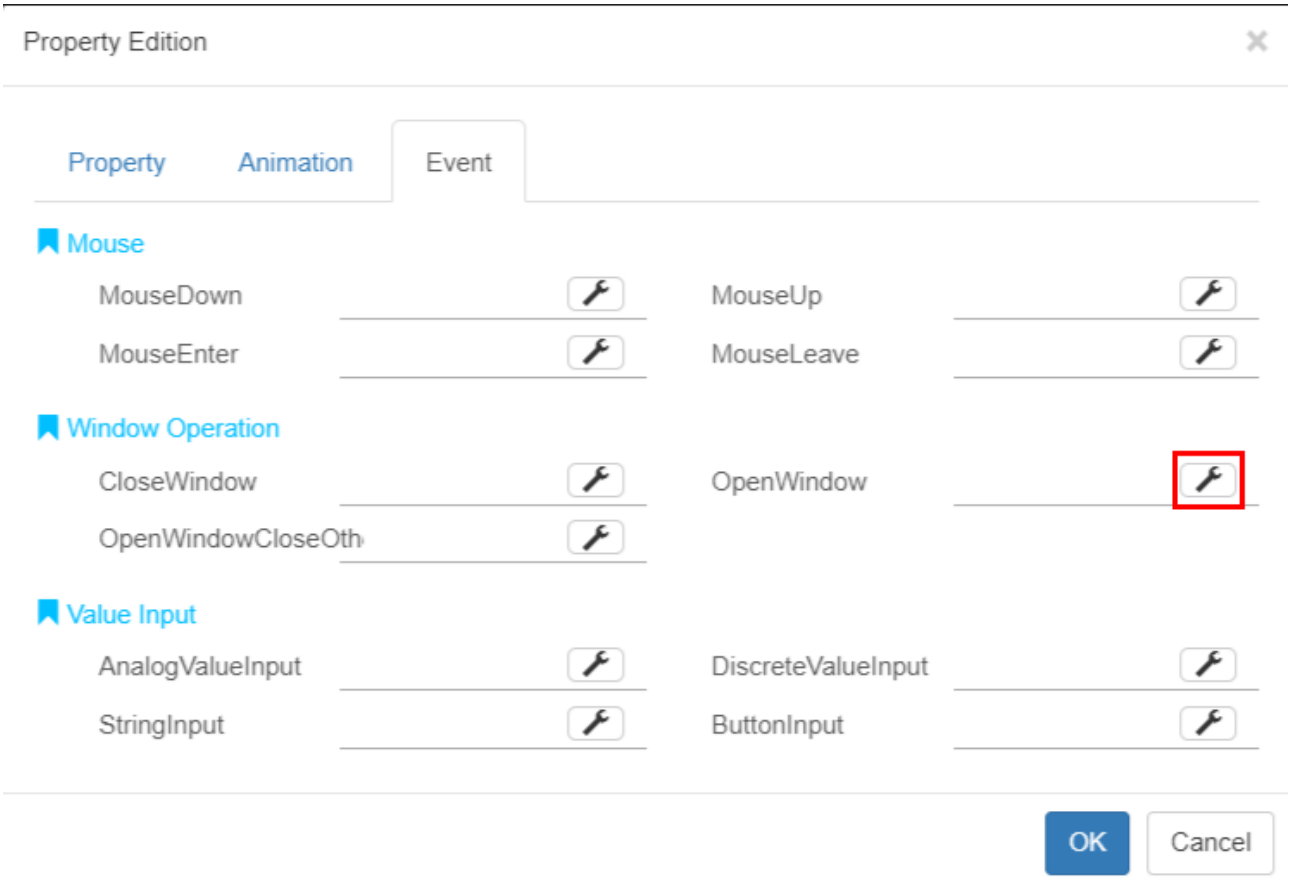
Window Operation events are operations that open and close the windows. Only button controls support this configuration.

There are 3 types of Window Operation event: Open Window, Close Window and Open Window Close Others.

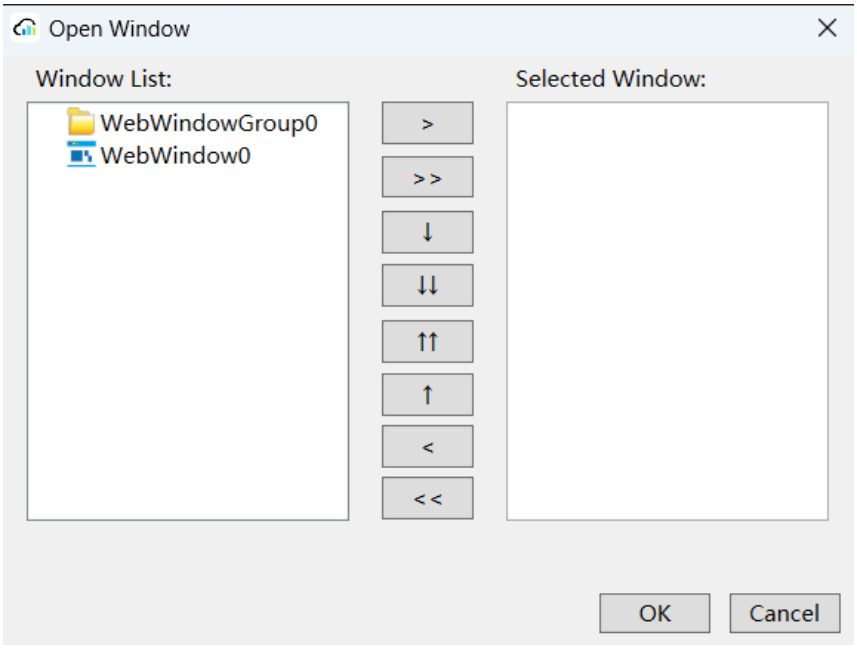
Open Window means open the set window; **Close Window** means close the set window; **Open Window Close Others** means open the set window and close other windows.

Take Open Window as an example. The configuration process is demonstrated as below:

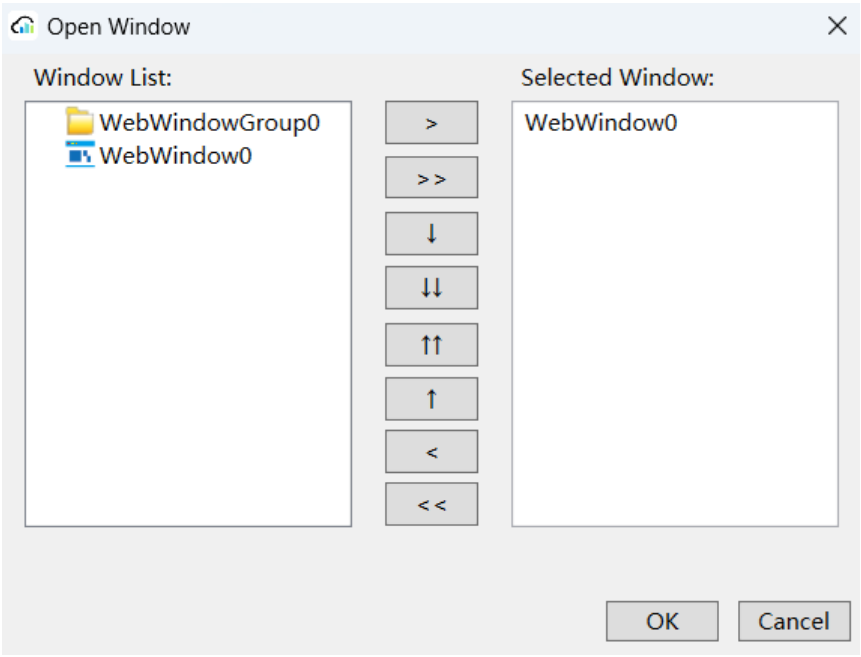
Step 1: Open the window in the project where the events need to be configured in DIAWeb Designer development environment > Select the graphic object > Double-click **Property Edition** > Click **Event** > Click **Open Window** button.



Step 2: Then the **Open Window** window will pop up.



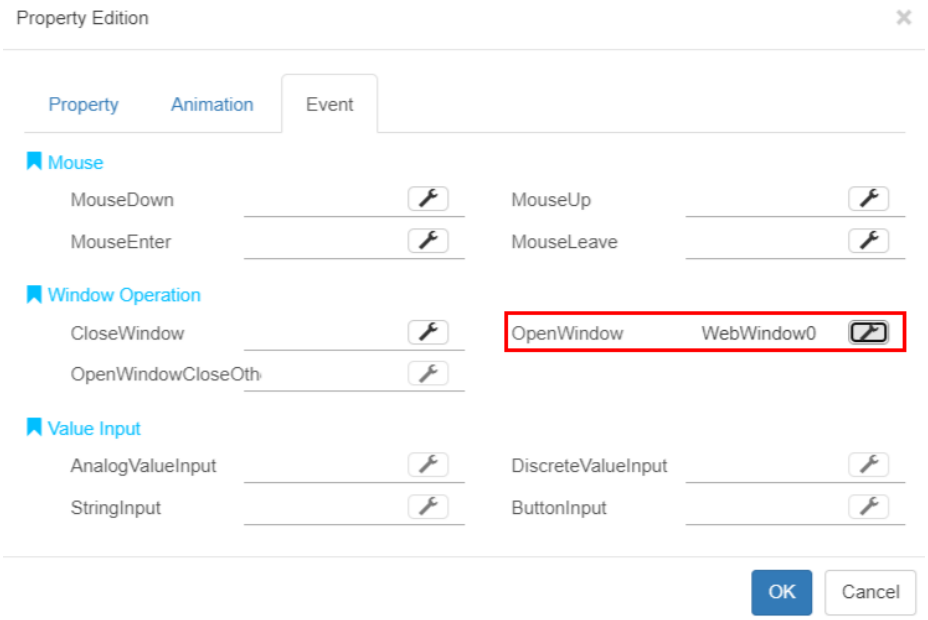
Step 3: Select the window to open in the window list on the left and click > button to add it to the selected window.



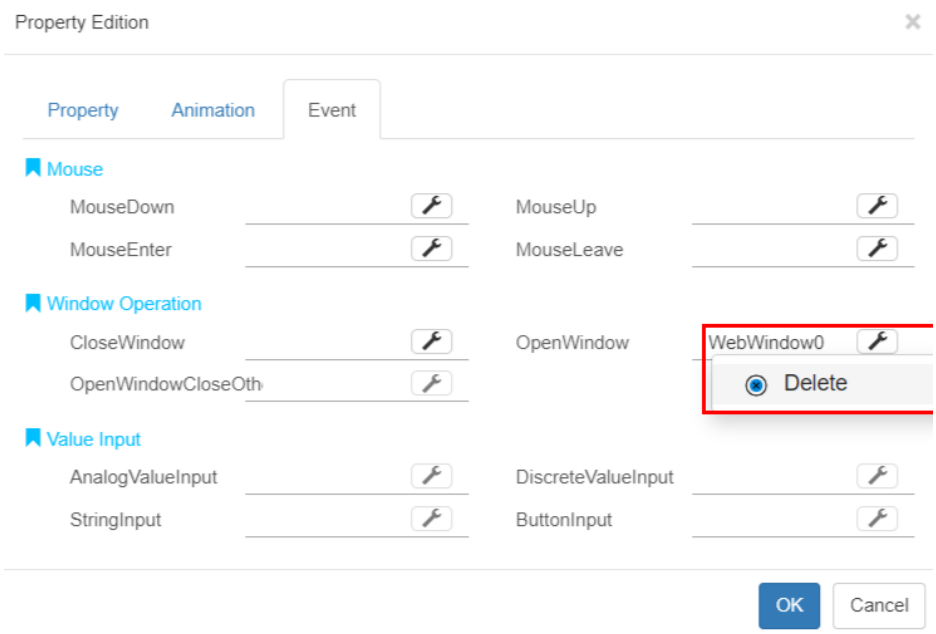
Button	Description
>	Add the window to Selected Window.
>>	Add all windows to Selected Window
↓	Move down the chosen window

Button	Description
⇊	Pin the chosen window to the bottom
⇈	Pin the chosen window to the top
↑	Move up the chosen window
<	Remove the chosen window from Selected Window
>	Remove all chosen windows from the Selected Window

Step 4: Click **OK** after the configuration is completed and the event information will display in the window.



To delete the event, select the event in the list and right-click **Delete** button.


Property Edition
Property
Animation
Event
Mouse
MouseDown
MouseUp
MouseEnter
MouseLeave
Window Operation
CloseWindow
OpenWindow
WebWindow0
OpenWindowCloseOth
Delete
Value Input
AnalogValueInput
DiscreteValueInput
StringInput
ButtonInput
OK
Cancel

8.3 Value Input Event

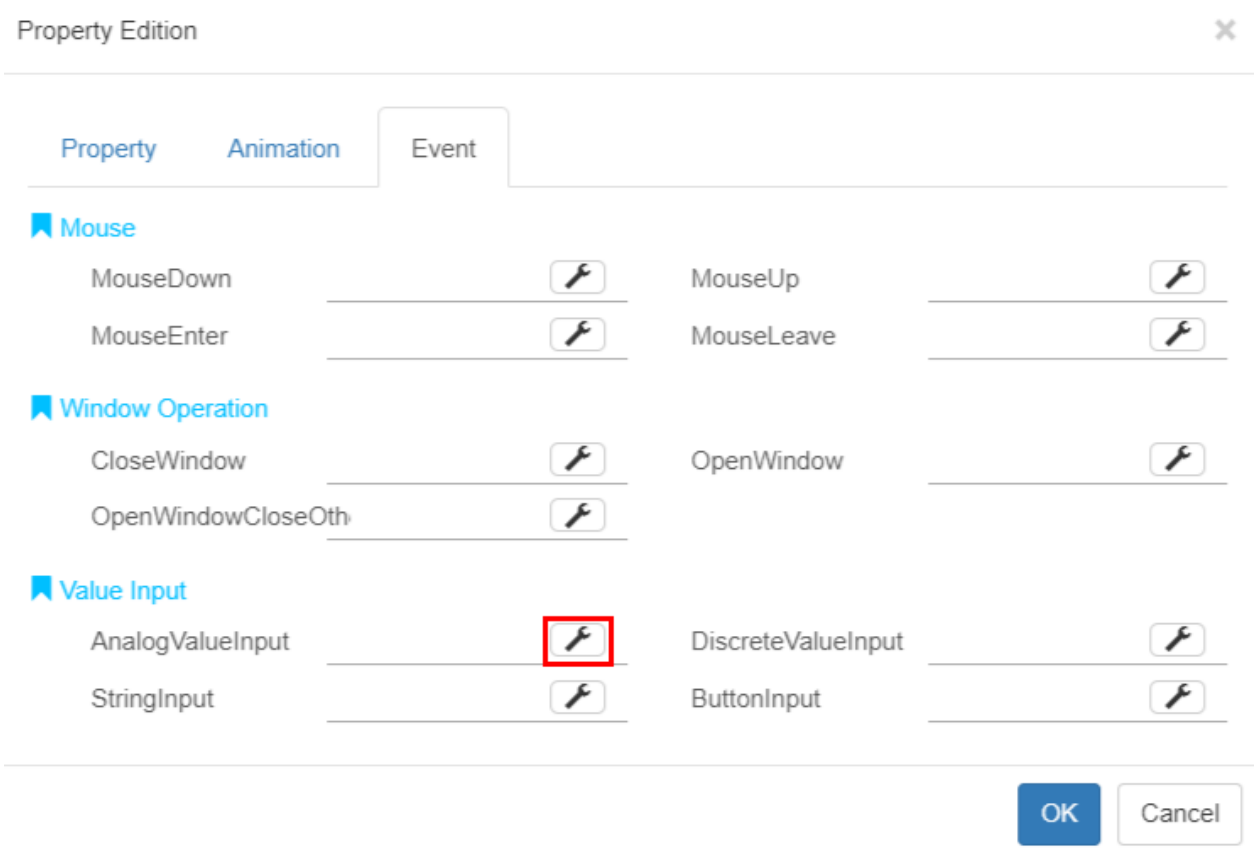
Value Input event is event triggering DIAWeb Designer input window by clicking the graphic object in the window to perform value input operations.

There are four types of Value Input event: Analog Value Input, Discrete Value Input, String Input, Button Input.

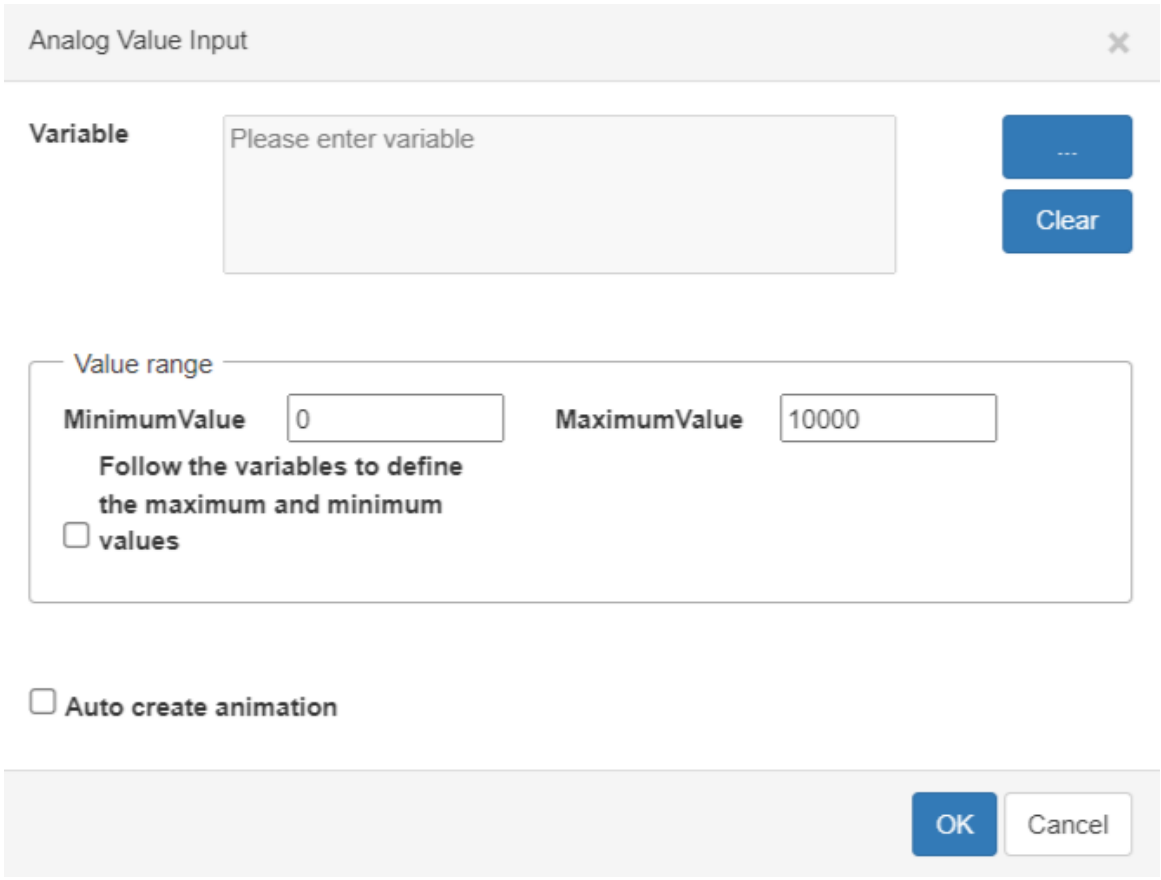
8.3.1 Analog Value Input

When the graphic object is clicked, the Analog Value Input dialog will pop up, including numerical buttons. User can click the button to enter values to change the value. The configuration process is shown below:

Step 1: Open the window in the project where the events need to be configured in DIAWeb Designer development environment > Select the graphic object > Double-click **Property Edition** > Click **Event** > Click **Analog Value Input**.



Step 2: Then the **Analog Value Input** window will pop up.



The meanings of each setting in the configuration window are as follows:

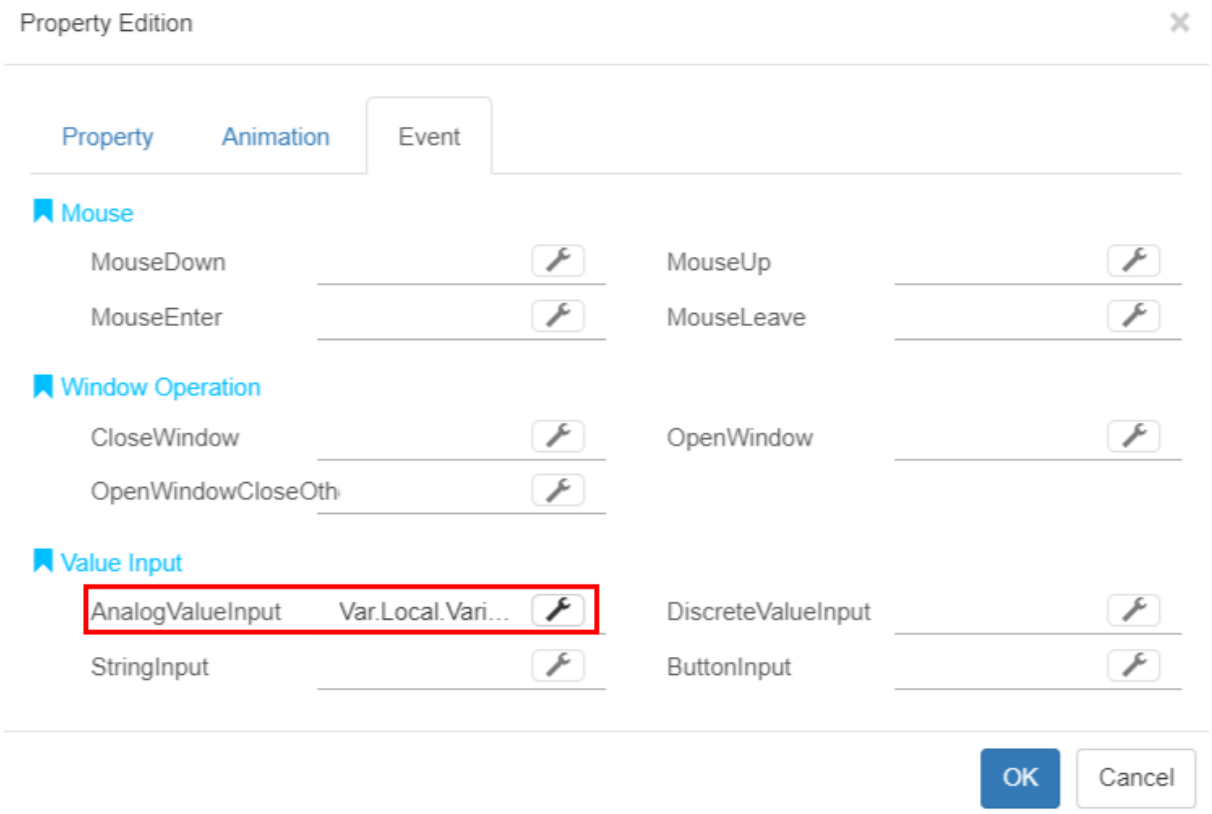
Variable: click to open the variable browser to select the variables; click **Clear** button to clear the variables.

Value range configuration:

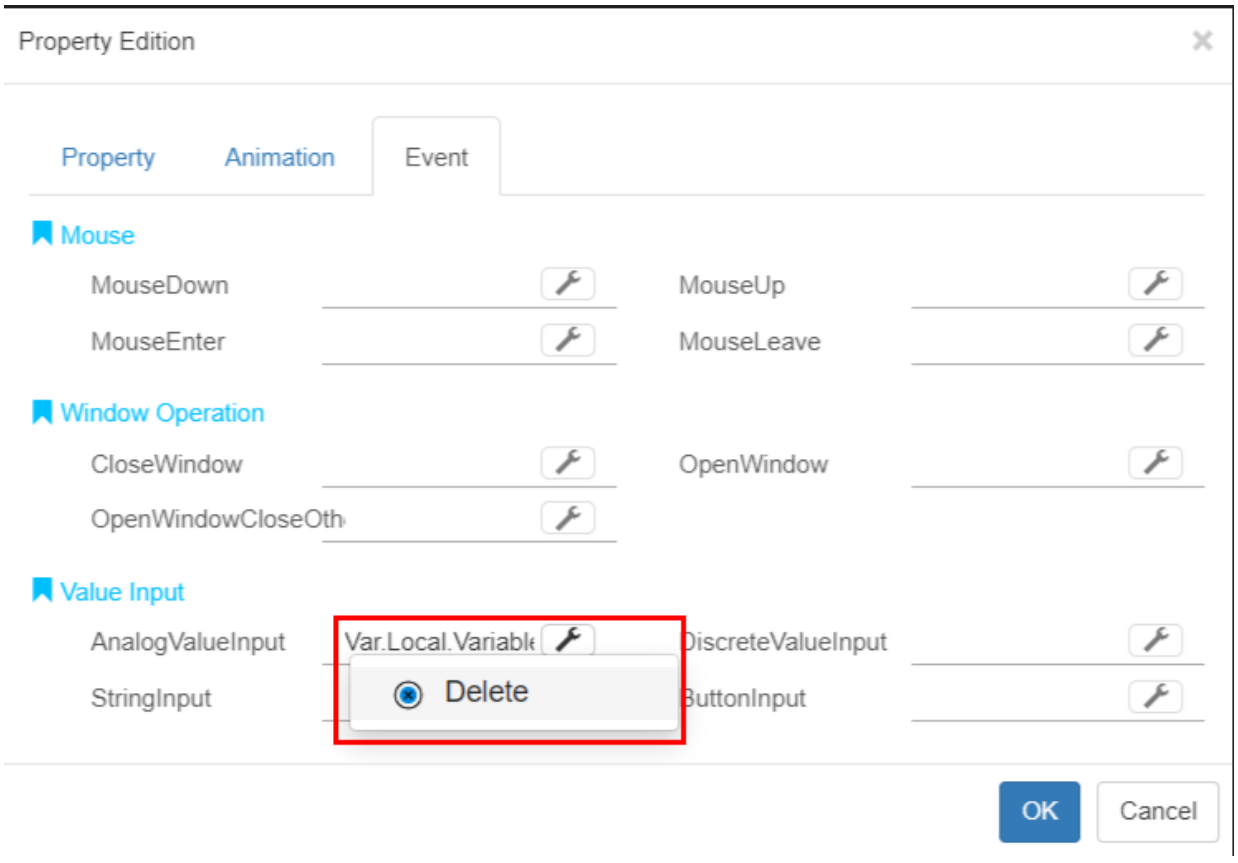
- **Minimum Value:** the minimum value that can be set.
- **Maximum Value:** the maximum value that can be set.
- **Follow the variables to define the maximum and minimum**: The maximum value range is synchronized to the maximum and minimum of the bound variables.

Auto create animation: Set whether to create corresponding numerical display animations automatically (text box and label controls support this function)

Step 3: Click **OK** after the configuration is completed and the event information will display in the window.



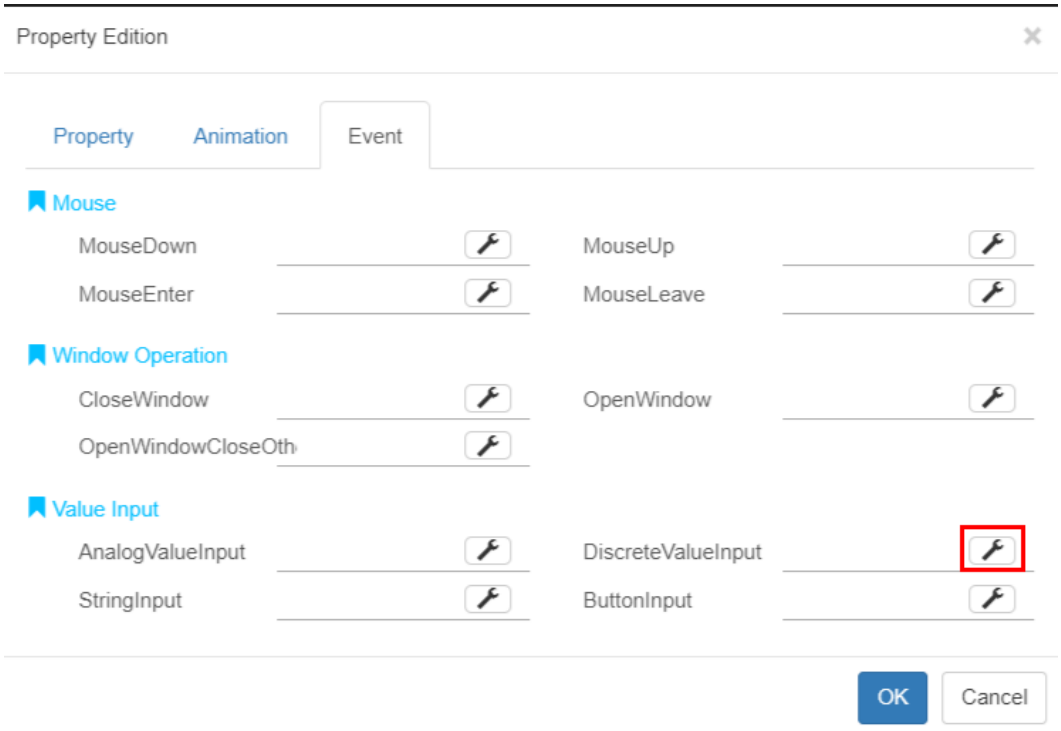
To delete the event, select the event in the list and right-click **Delete** button.



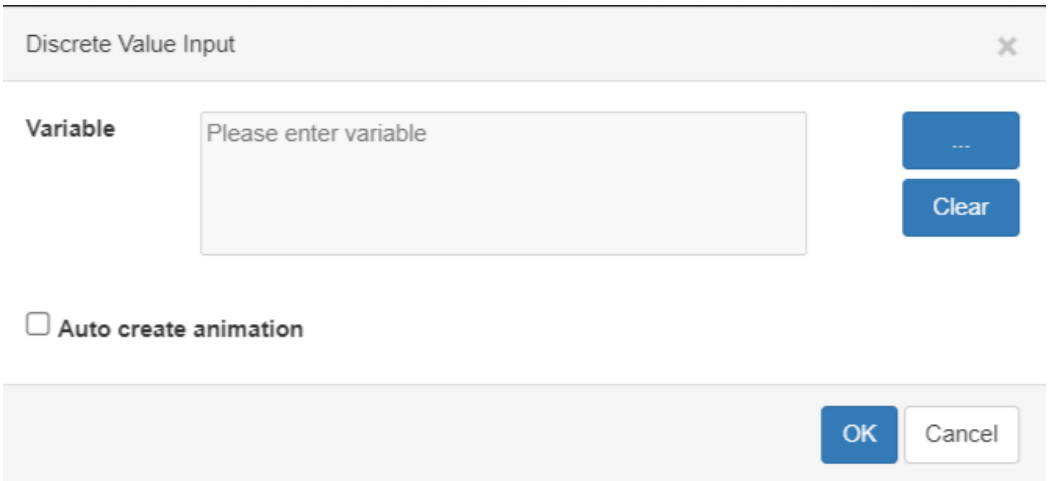
8.3.2 Discrete Value Input

When the graphic object is clicked, the Discrete Value Input dialog will pop up. User can set text display content of the button based on the value of the discrete variables to True or False. The configuration process is shown below:

Step 1: Open the window in the project where the events need to be configured in DIAWeb Designer development environment > Select the graphic object > Double-click **Property Edition** > Click **Event** > Click **Discrete Value Input**.



Step 2: Then the **Discrete Value Input** window will pop up.



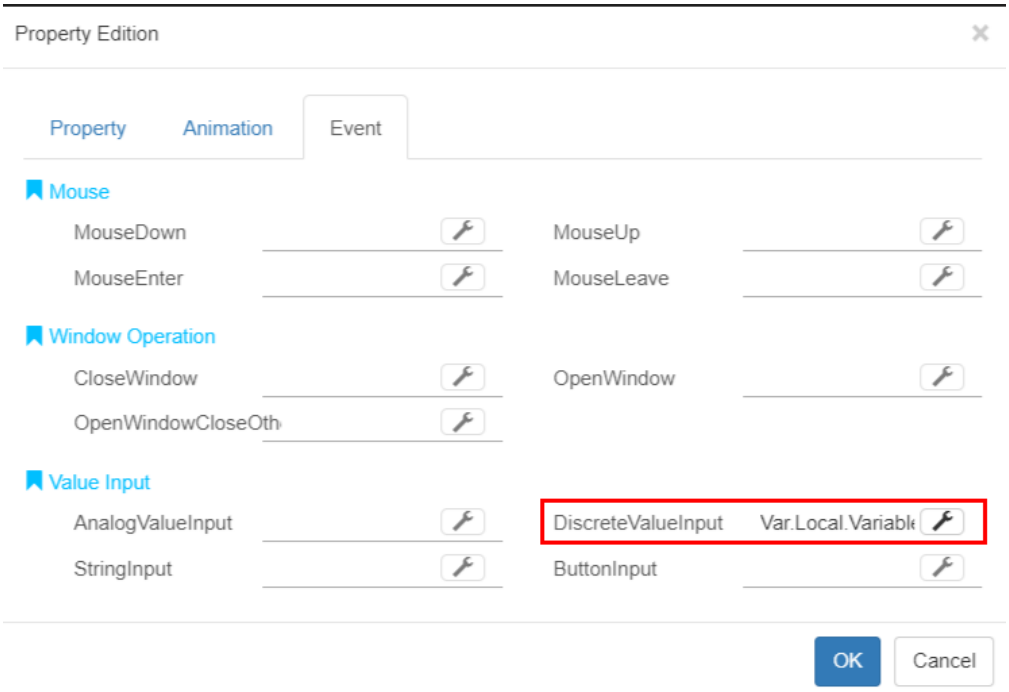
The meanings of each setting in the configuration window are as follows:

Variable: Click to open the variable browser to select the variables; click **Clear** button to clear the

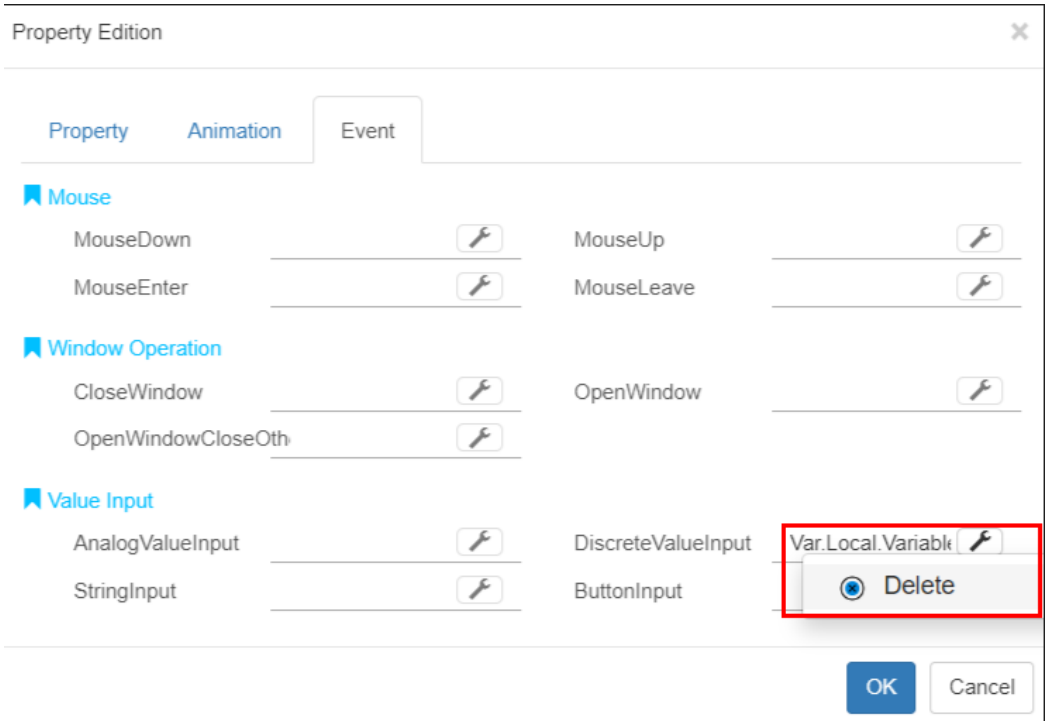
variables.

Auto create animation: Set whether to create corresponding numerical display animations automatically (text and label controls support this function)

Step 3: Click **OK** after the configuration is completed and the event information will display in the window.



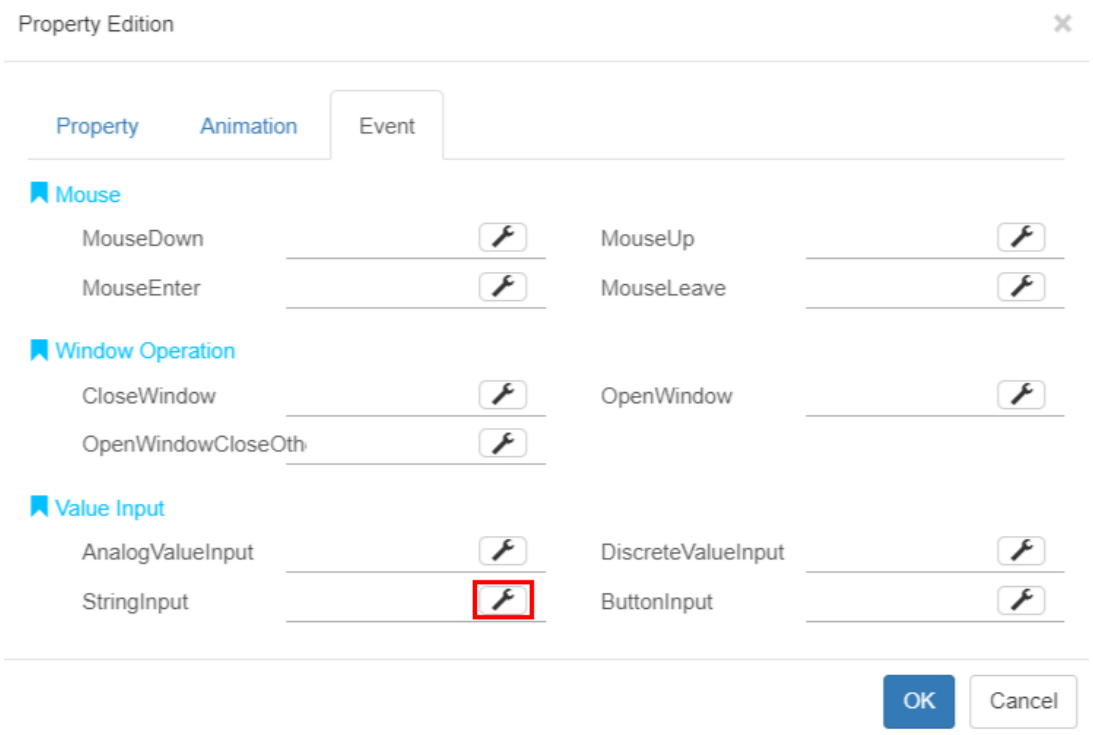
To delete the event, select the event in the list and right-click **Delete** button.



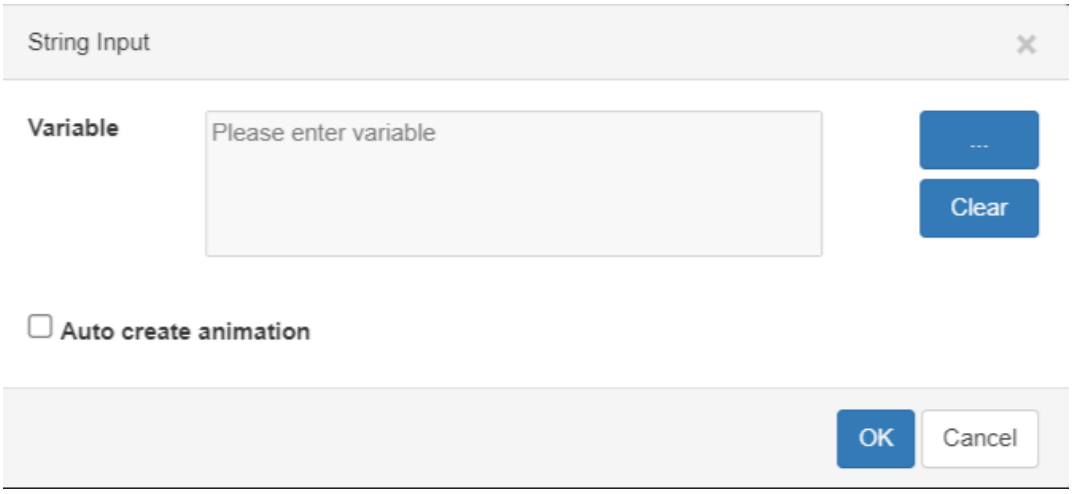
8.3.3 String Input

When the graphic object is clicked, the String Input dialog will pop up, including alphabet and numbers. User can click the button to enter a string to change the value of associated text type variables.

Step 1: Open the window in the project where the events need to be configured in DIAWeb Designer development environment > Select the graphic object > Double-click **Property Edition** > Click **Event** > Click **String Input**.



Step 2: Then the **String Input** window will pop up.

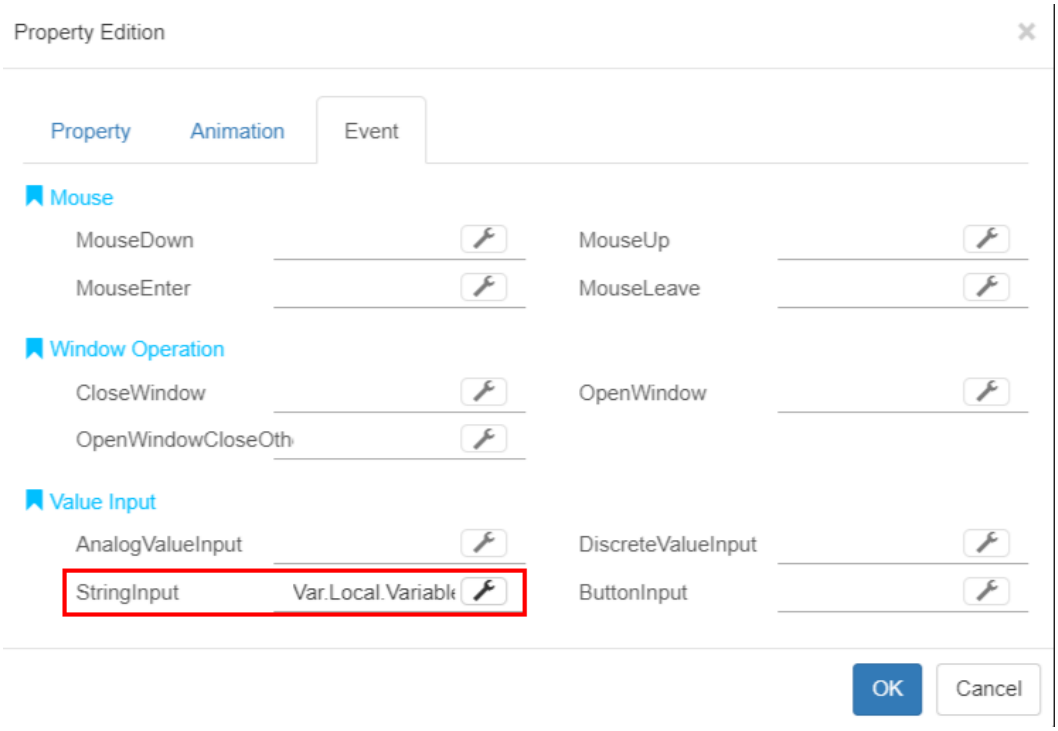


The meanings of each setting in the configuration window are as follows:

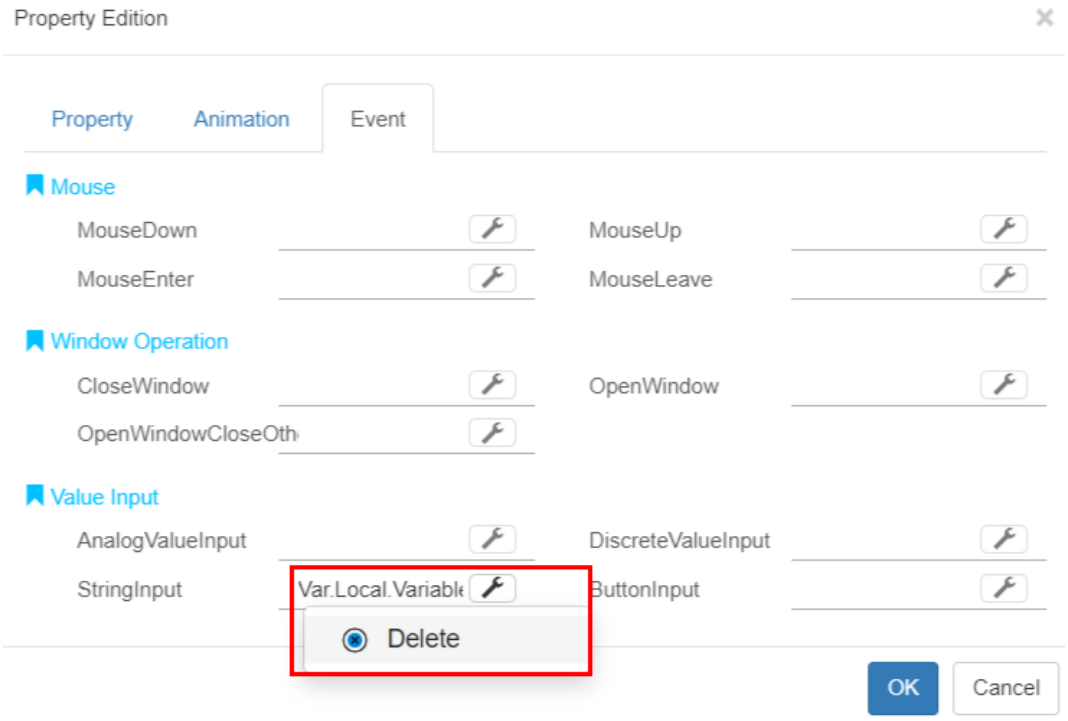
Variable: click to open the variable browser to select the variables; click **Clear** button to clear the variables.

Auto create animation: Set whether to create corresponding numerical display animations automatically (available in text box and label controls).

Step 3: Click **OK** after the configuration is completed and the event information will display in the window.



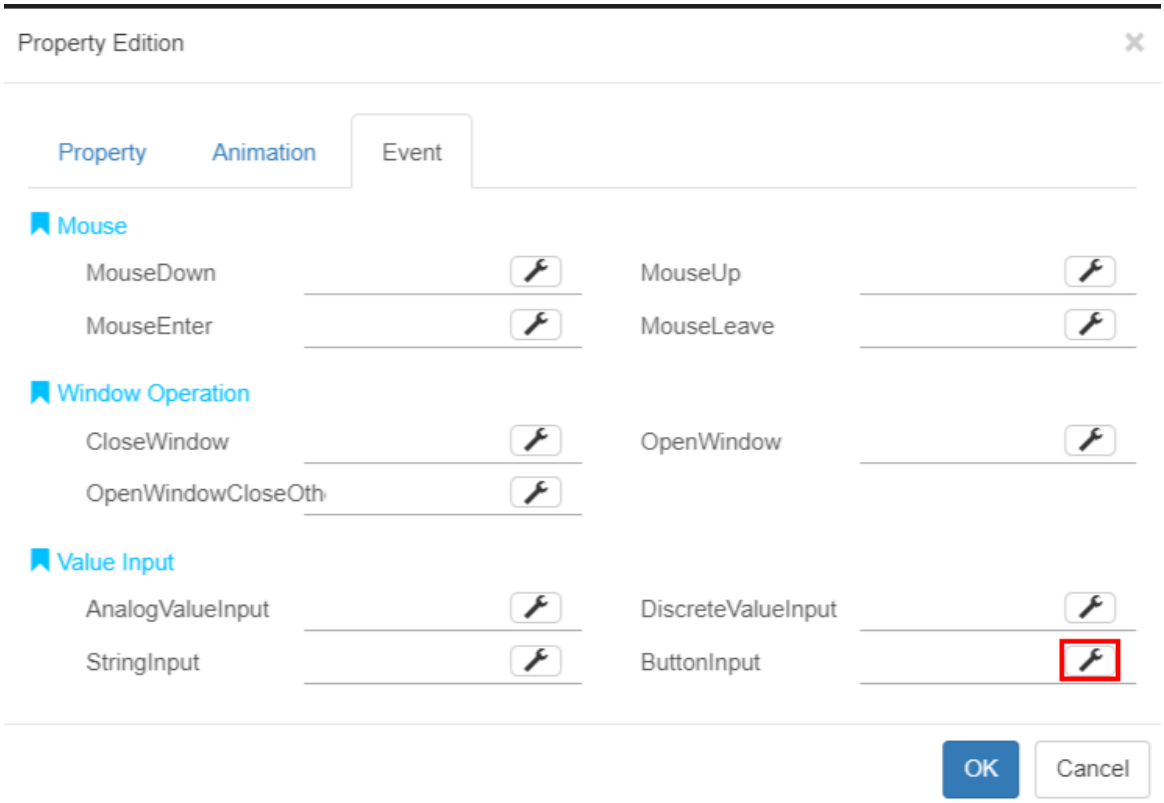
To delete the event, select the event in the list and right-click **Delete** button.



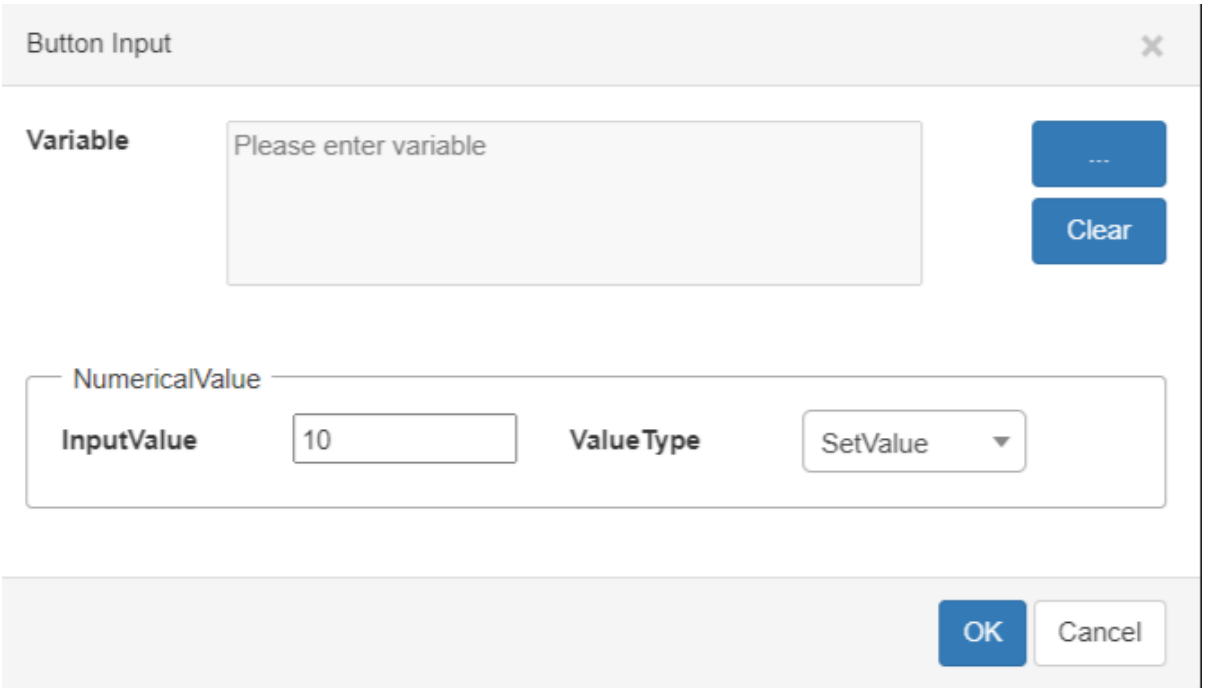
8.3.4 Button Input

When the graphic object is clicked, the associated value will change in the way of the settings. The configuration process is shown below:

Step 1: Open the window in the project where the events need to be configured in DIAWeb Designer development environment > Select the graphic object > Double-click **Property Edition** > Click **Event** > Click **Button Input**.



Step 2: Then the **Button Input** window will pop up.



The meanings of each setting in the configuration window are as follows:

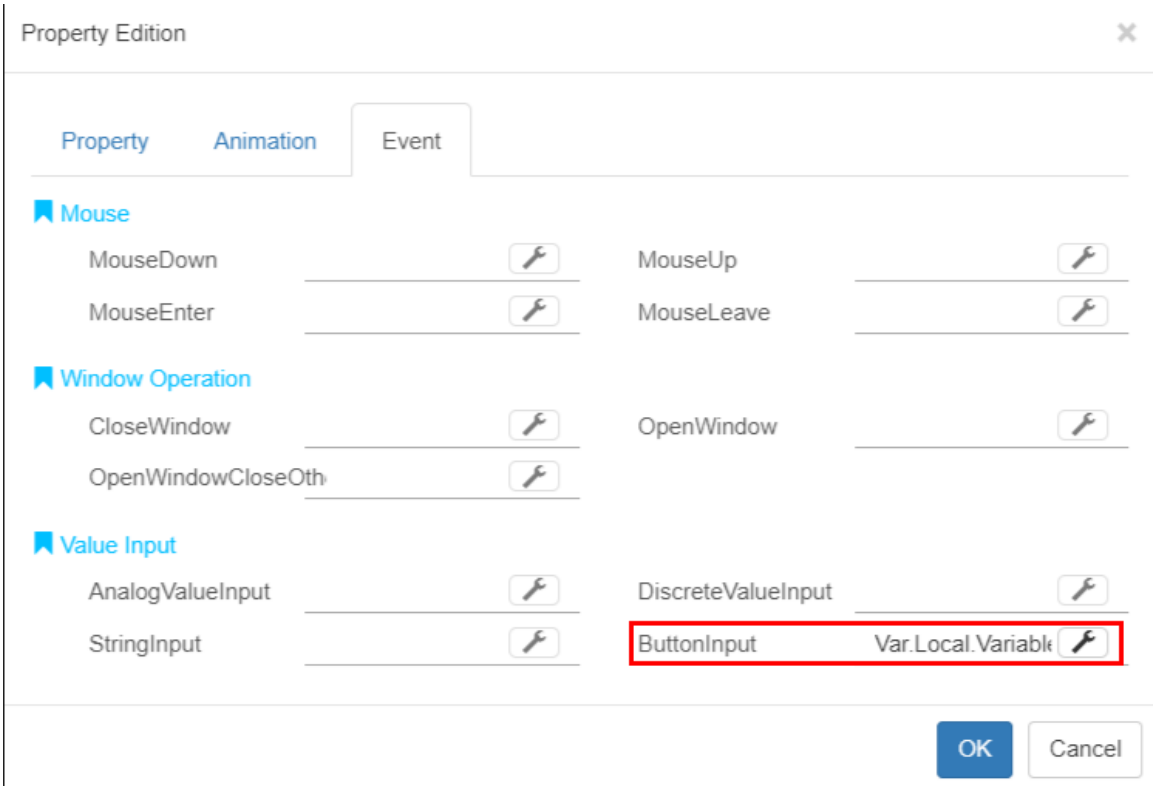
Variable: click to open the variable browser to select the variables; click **Clear** button to clear the variables.

Numerical Value configuration:

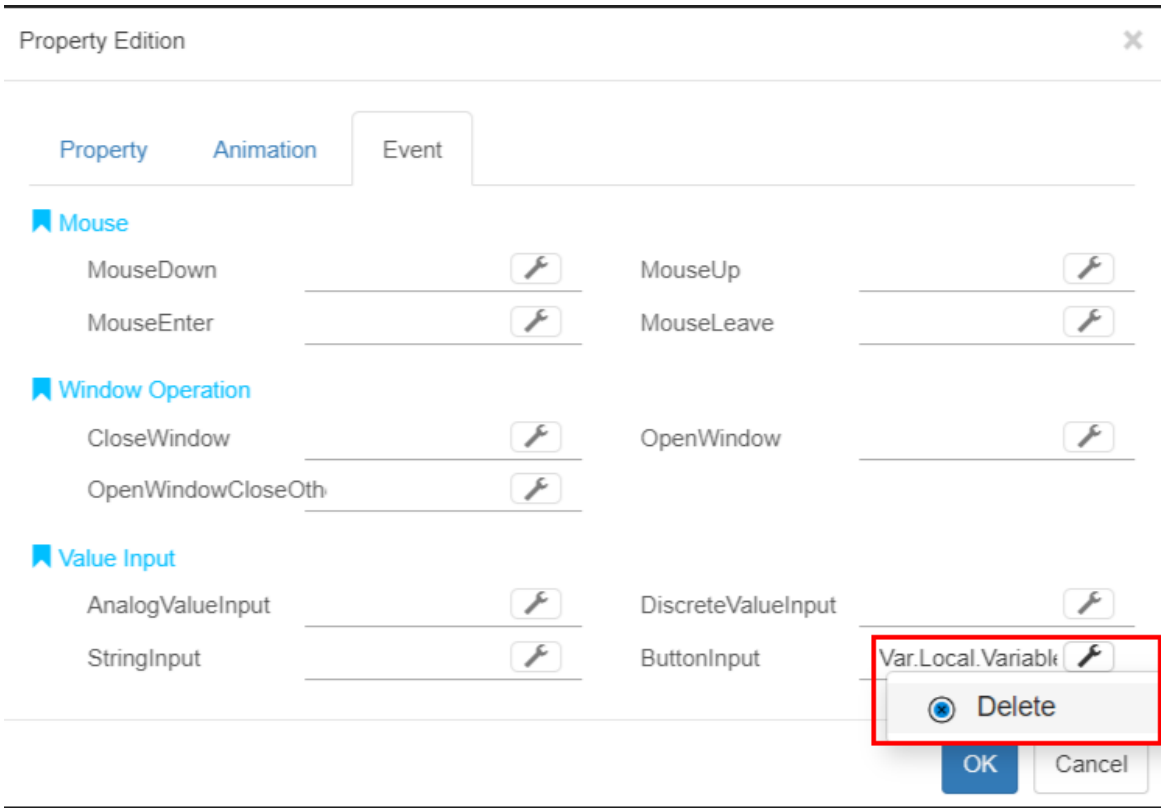
- **Input Value:** Enter the set value.
- **ValueType:** There are 6 types to change the variable value:

1. Set Value: Directly enter the input value to the associated variable and the analog value is valid.
2. Increase: Add the set value to the associated variable value and assign it to the associated variable, the analog is valid.
3. Decrease: Subtract the set value from the associated variable value and assign it to the associated variable, the analog is valid.
4. Multiply: Multiply the set value by the associated variable value and assign it to the associated variable, the analog is valid.
5. Divide: Divide the associated variable value by the set value and assign it to the associated variable, the analog is valid.
6. Toggle: The analog values switch between 0 and 1; the switching values switch between true and false.

Step 3: Click **OK** after the configuration is completed and the event information will display in the window.



To delete the event, select the event in the list and right-click **Delete** button.



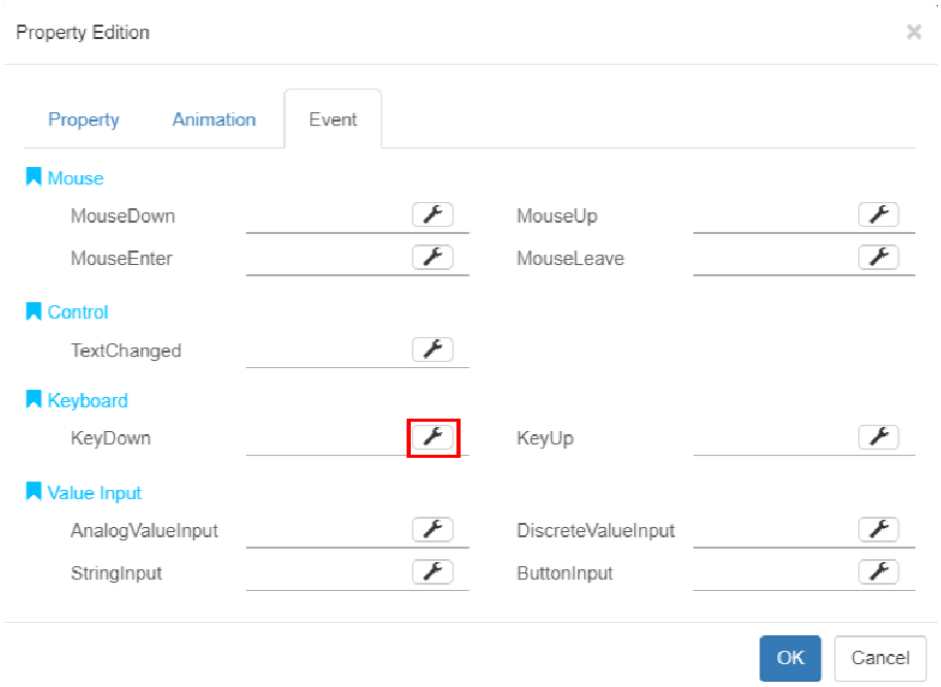
8.4 Keyboard Event

Keyboard event refers to the event triggered by keyboard operations such as pressing up and down on the graphical objects to further utilize relevant script to complete related functions.

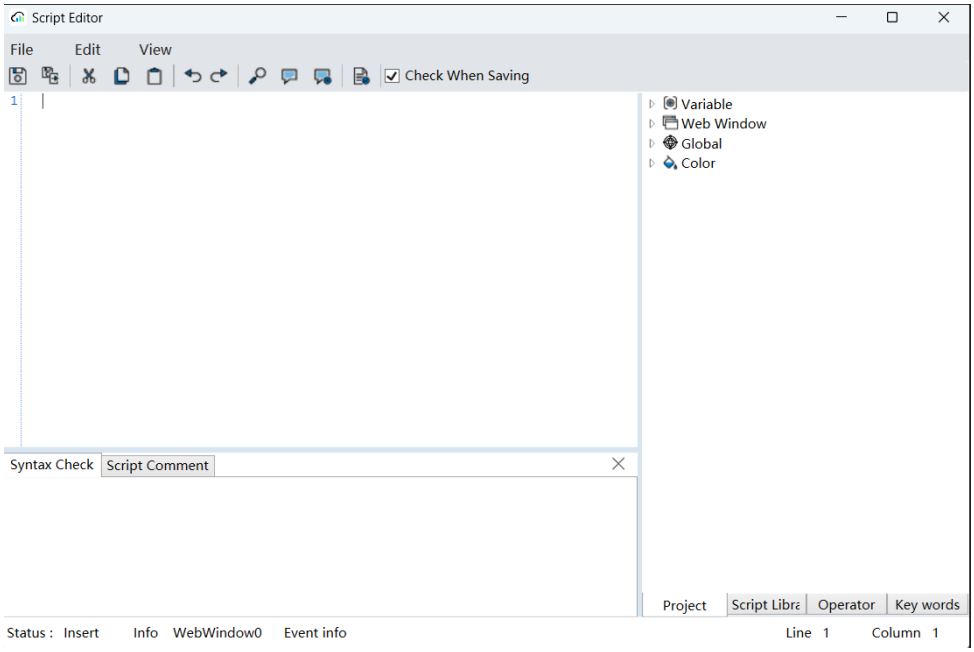
There are 2 types of Keyboard event: Key Down, Key Up.

Key Down and Key up share the same configuration process. Take Key Down as an example.

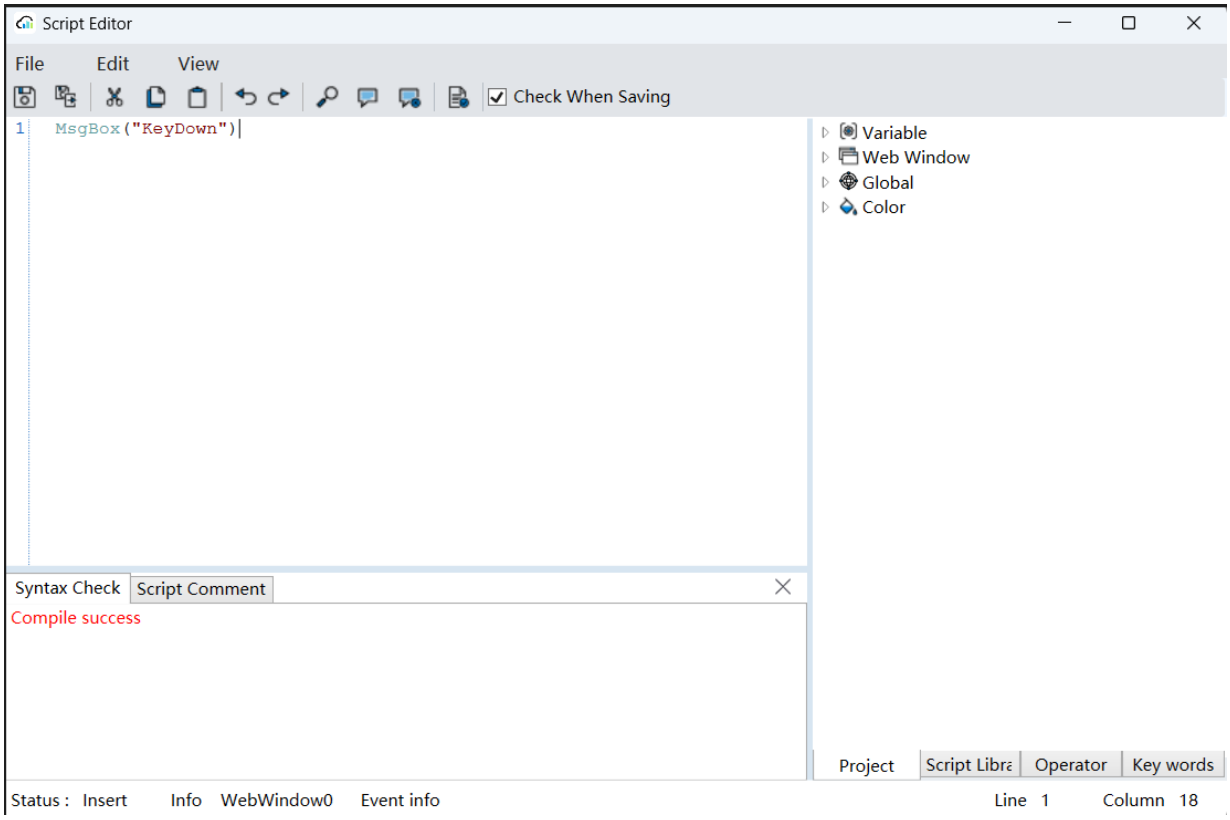
Step 1: Open the window in the project where the events need to be configured in DIAWeb Designer development environment > Select the graphic object > Double-click **Property Edition** > Click **Event** > Click **KeyDown**



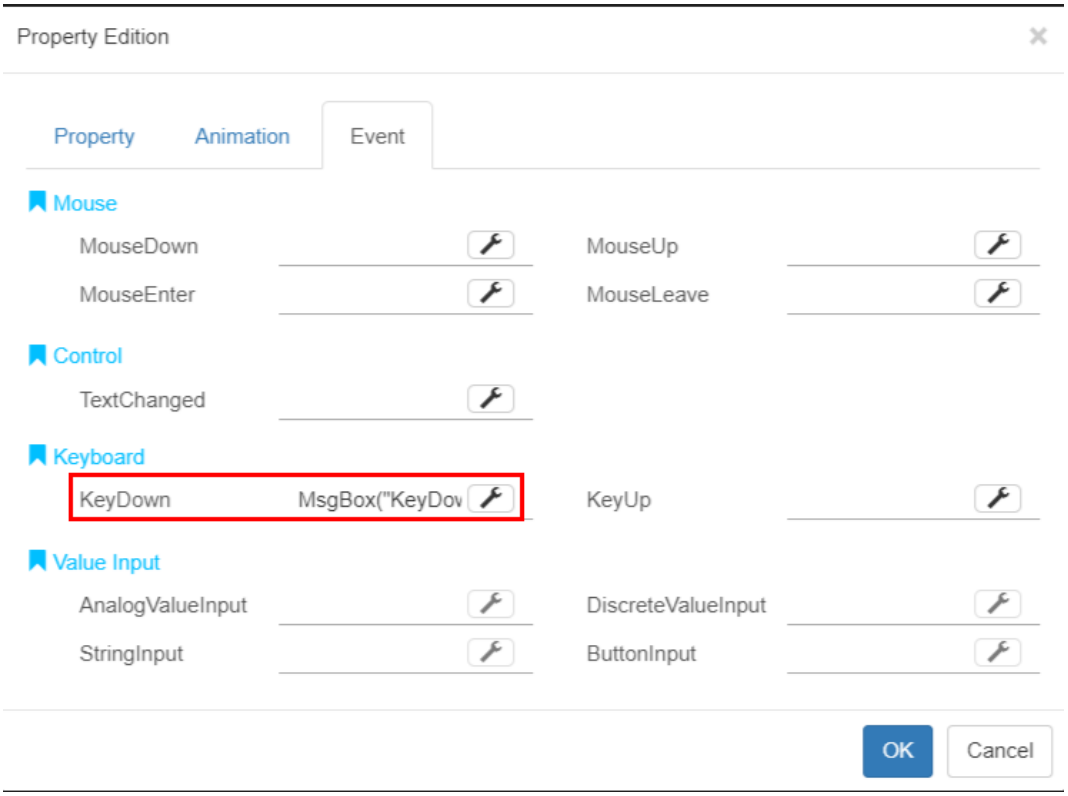
Step 2: Then the **Script Editor** window will pop up.


Script Editor
File
Edit
View
Check When Saving
1
Variable
Web Window
Global
Color
Syntax Check
Script Comment
Project
Script Libra
Operator
Key words
Status : Insert
Info
WebWindow0
Event info
Line 1
Column 1

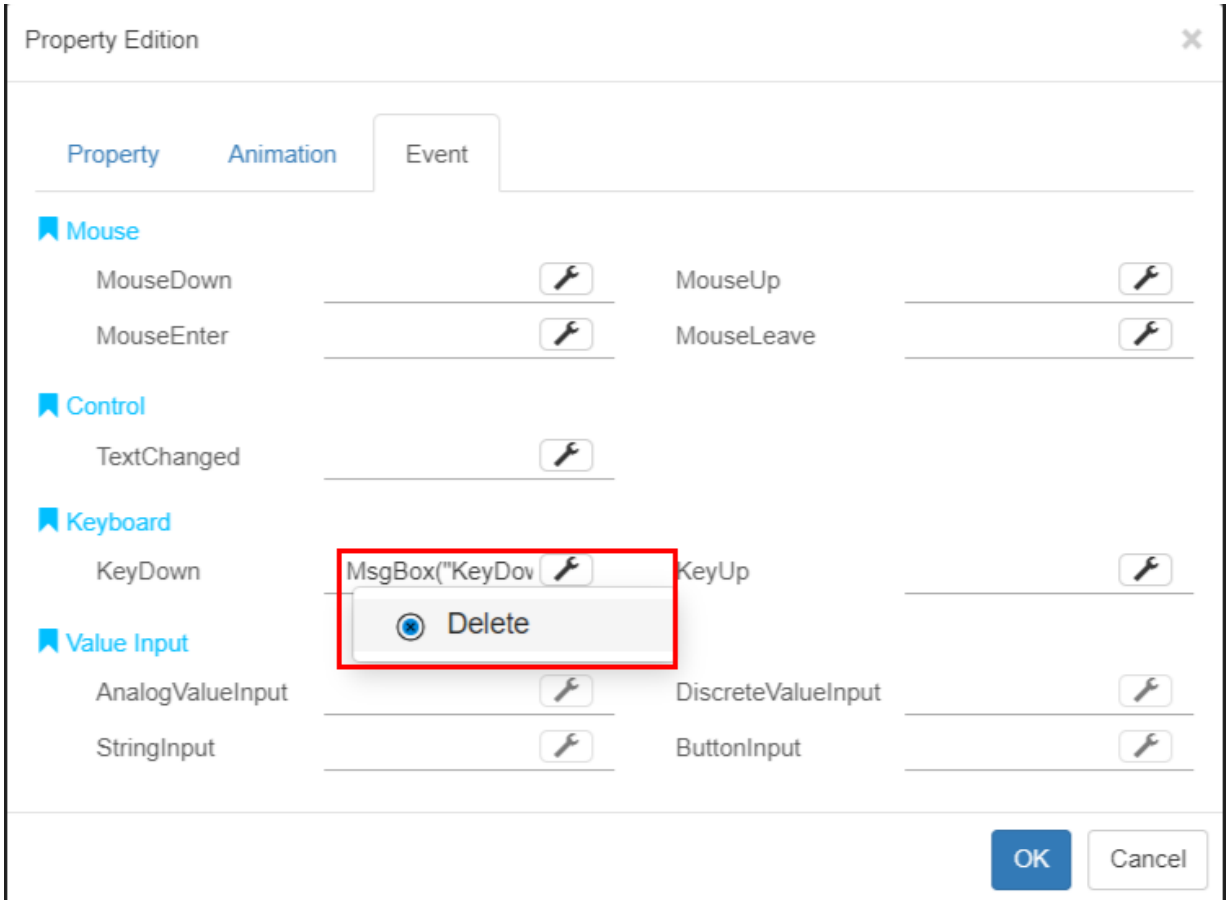
Step 3: Edit the script (The script in DIAWeb Designer is called Visual Basic Script, and the script editor will compile the syntax check)



Step 4: After completing the script, click **Save and Exit** button , and the event information will display in the event window.



To delete the event, select the event in the list and right-click **Delete** button.



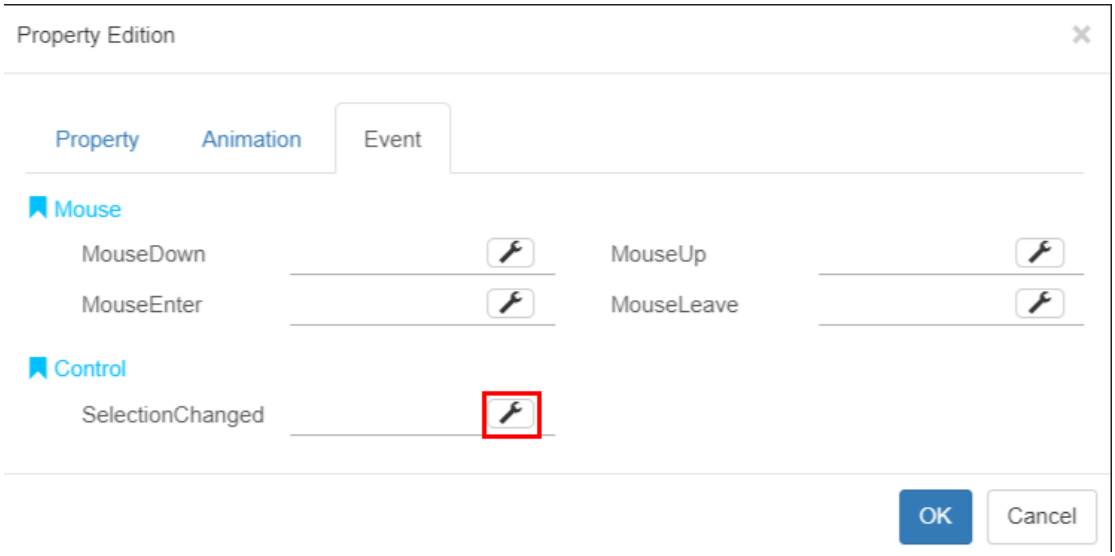
8.5 Control Event

Control event is a type of event exclusive to window controls; and, different window controls are equipped with different types of control events.

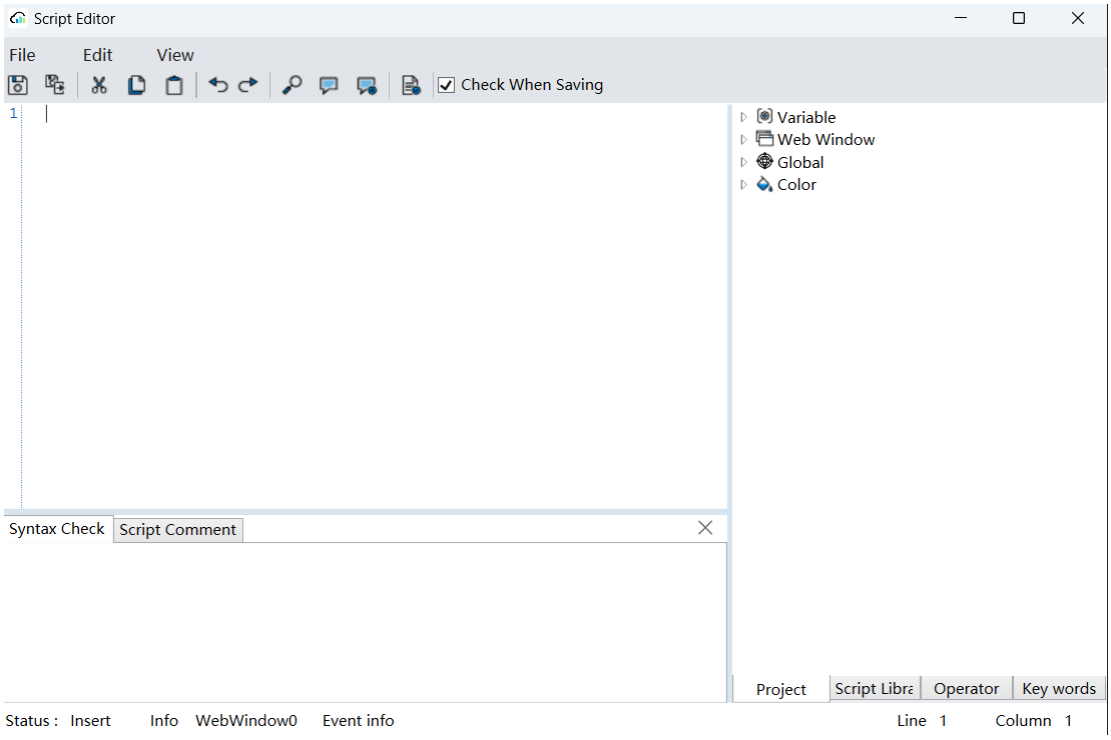
The combo box has **Selection Changed** event; the check box has **Checked** and **Unchecked** event; the text box has **Text Changed** event; the password box has **Password changed** event; the date time picker has **Value Changed** event. All events share the same configuration process and can be edited through the script editor to perform corresponding functions.

Take Selection Changed event as an example. The configuration process is shown below:

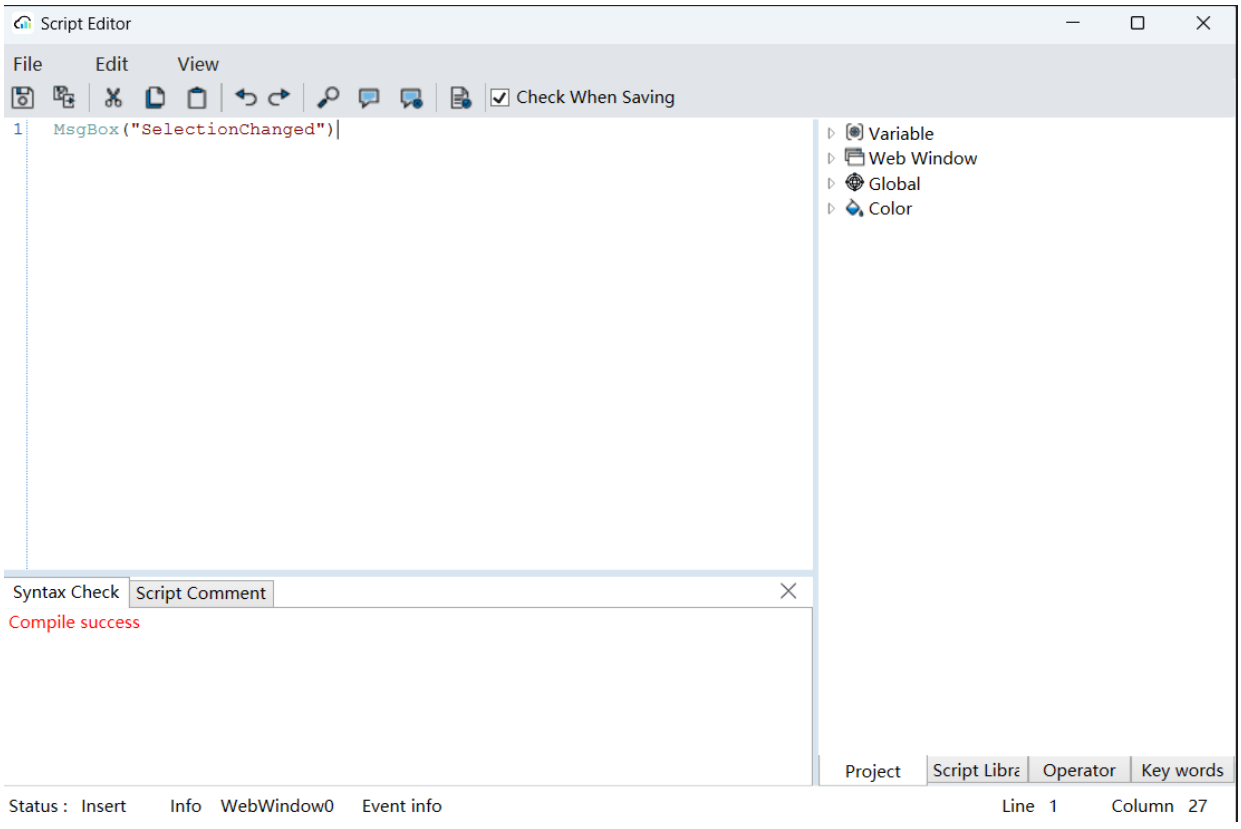
Step 1: Open the window in the project where the events need to be configured in DIAWeb Designer development environment > Select the graphic object > Double-click **Property Edition** > Click **Event** > Click **SelectionChanged.**



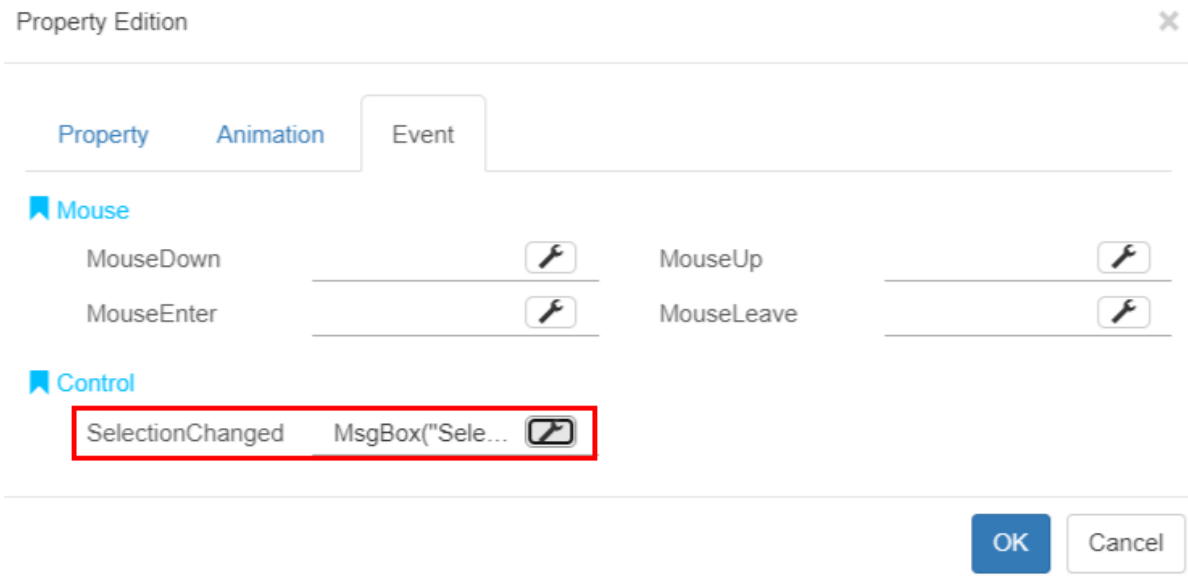
Step 2: Then the **Script Editor** window will pop up.



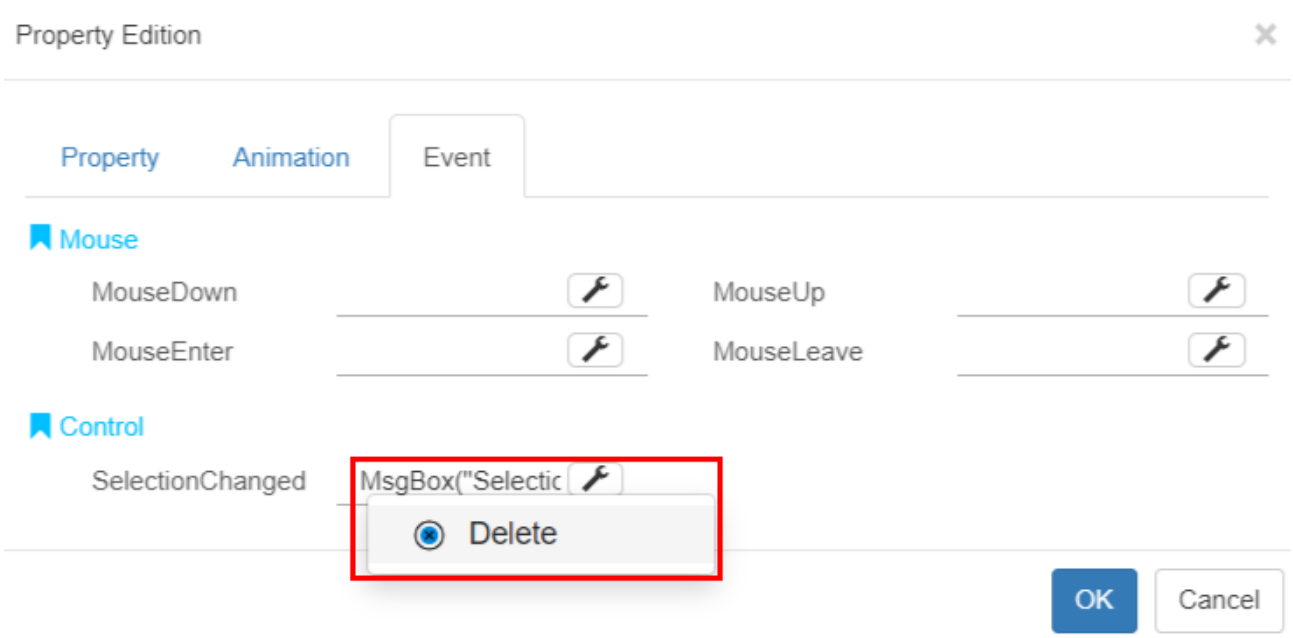
Step 3: Edit the script (The script in DIAWeb Designer is called Visual Basic Script, and the script editor will compile the syntax check)



Step 4: After completing the script, click **Save and Exit** button , and the event information will display in the event window.


Property Edition
Property
Animation
Event
Mouse
MouseDown
MouseUp
MouseEnter
MouseLeave
Control
SelectionChanged
MsgBox("Sele...
OK
Cancel

To delete the event, select the event in the list and right-click **Delete** button.



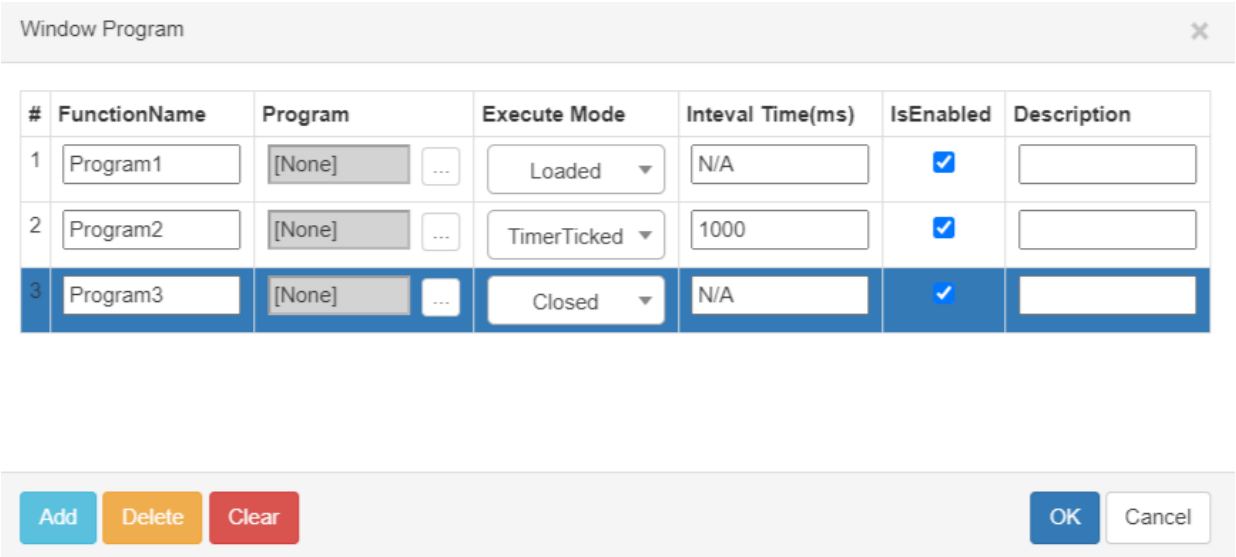
8.6 Window Program Event

Window Program event is the program executed when the window is running within the user-defined intervals.

There is the only one type of Window Program event. The configuration process is shown below:

Step 1: Open the window in the project where the events need to be configured in DIAWeb Designer development environment > Select anywhere in the window > Double-click **Property Edition** > Click **Event** > Click **Window Program** button:

Step 2: Then the **Window Program** window will pop up. Click **Add** to create new program.



The meanings of each setting in the configuration window are as follows:

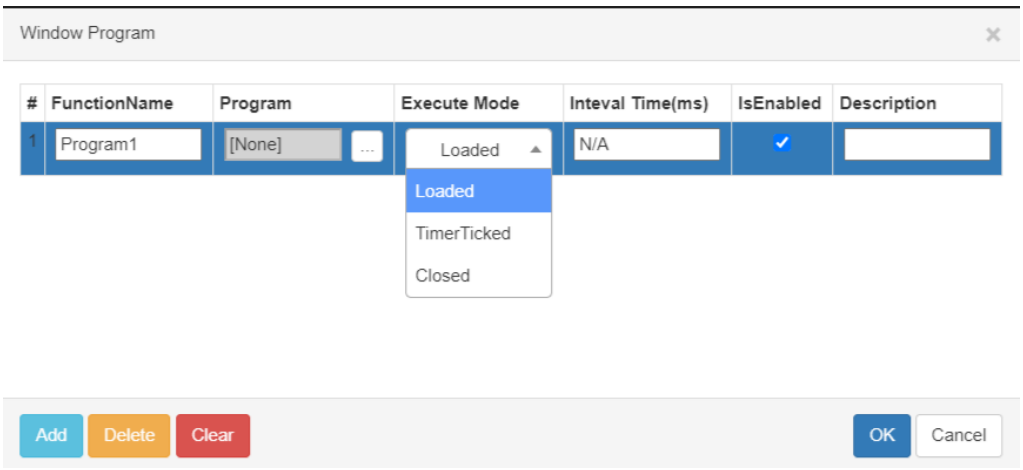
Function Name: User can set their own program name and the naming rules are as below:

- Consists of letters, numbers, and Chinese characters; must begin with a letter or Chinese character.
- Not case-sensitive.
- Cannot contain spaces, periods, exclamation marks, underscores or special characters such as @$#?*&.

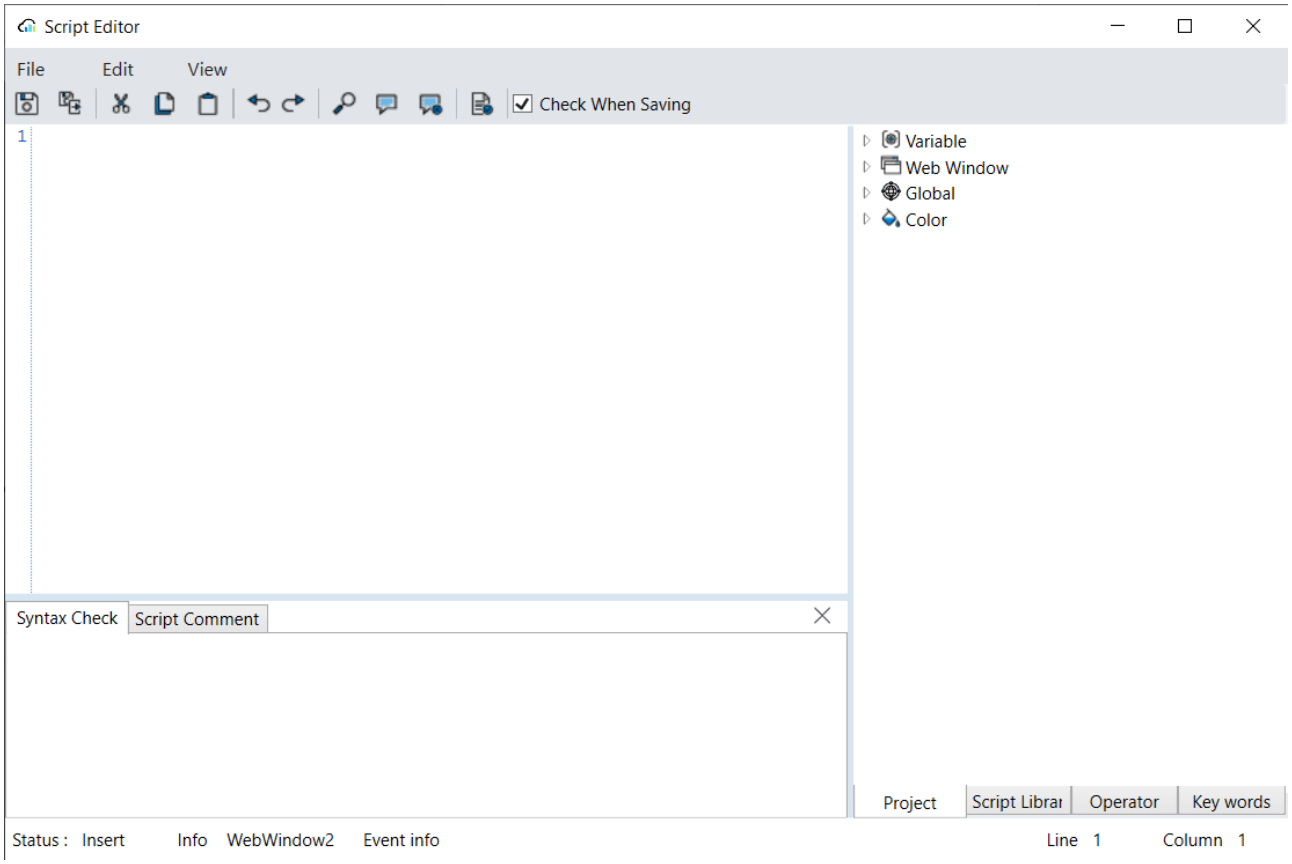
- Cannot exceed 200 characters, with no more than 20 Chinese characters.
- Cannot share the same name with other window programs in the same web window.
- Only support names in traditional Chinese, simplified Chinese, or English.

Program: Set the program to be executed.
Execute Mode: Methods to execute a specified program, including Loaded, TimerTicked and Closed. The default is Loaded.
Interval Time (ms): Set the program interval time.
Is Enabled: If the box is checked, it means executing the program; if unchecked, it means not executing the program.
Description: Related information about the ongoing program.
Add: Add a program.
Delete: Delete the selected program.
Clear: Clear all programs.

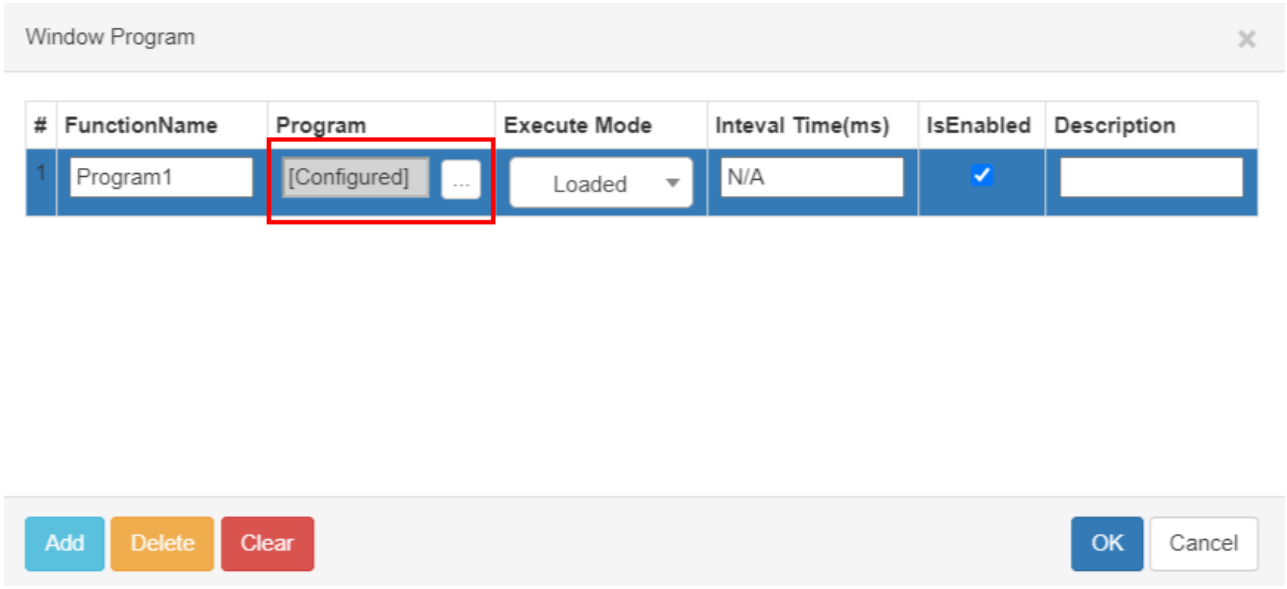
Step 3: Click **Execute Mode** button and choose the mode to execute in the drop-down list.



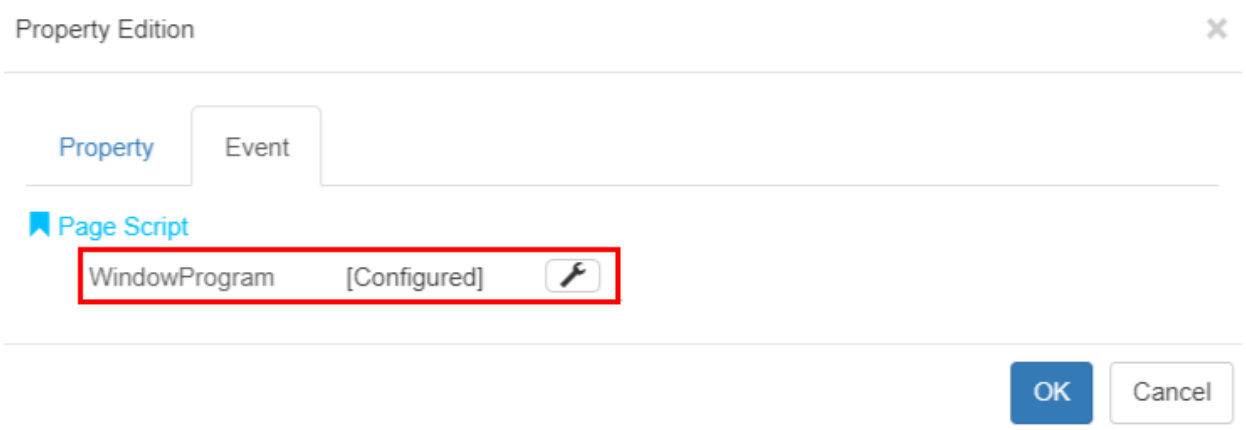
Step 4: Click **Program** button and the **Script Editor** window will pop up for programming.



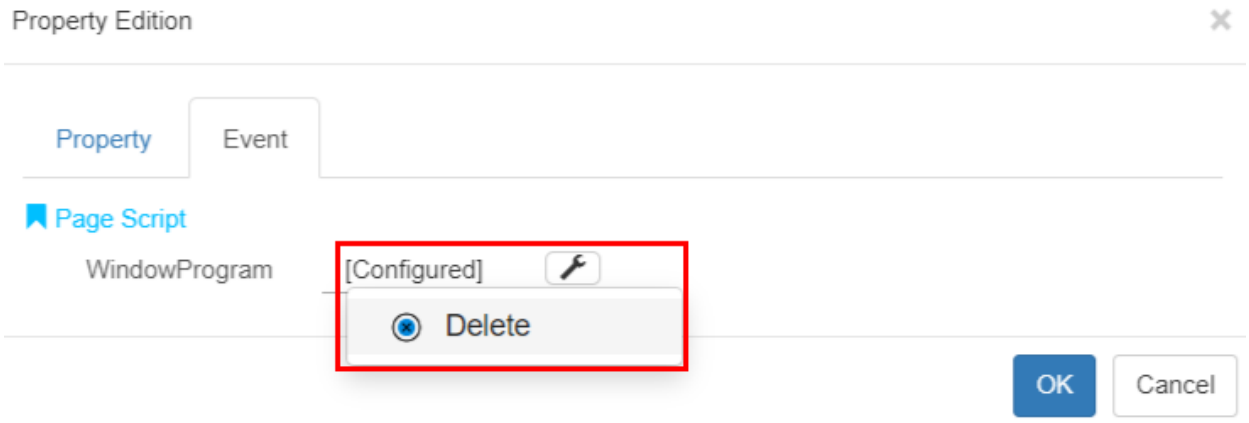
Step 5: Click **OK** after the setting is completed and the word **Configured** will be displayed below the program.



Step 6: Click **OK** after confirming the configuration to complete WindowProgram event and the information will display in the window.



To delete the event, select the event in the list and right-click **Delete** button.

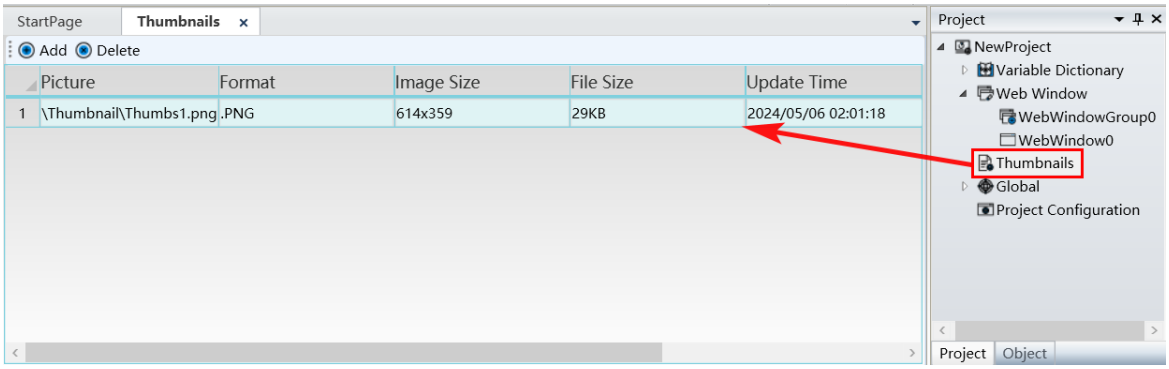


Chapter 9 Thumbnails

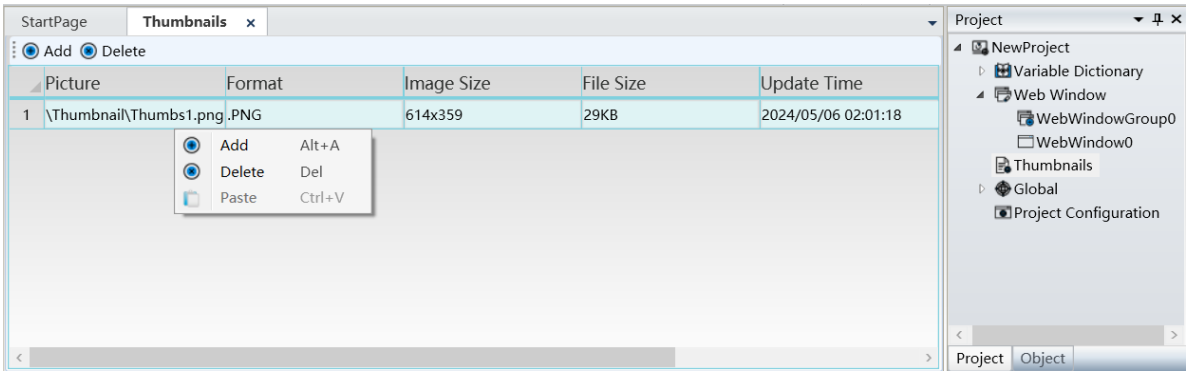
9.1 Thumbnails

When publishing a project in DIAWeb Designer, it is optional for users to submit related pictures to display the project overview on FUDA Cloud platform. By doing so, quick previews of projects are released on the cloud platform, which largely enhances user experience in project switching. In this case, DIAWeb Designer serves as the thumbnail management portal.

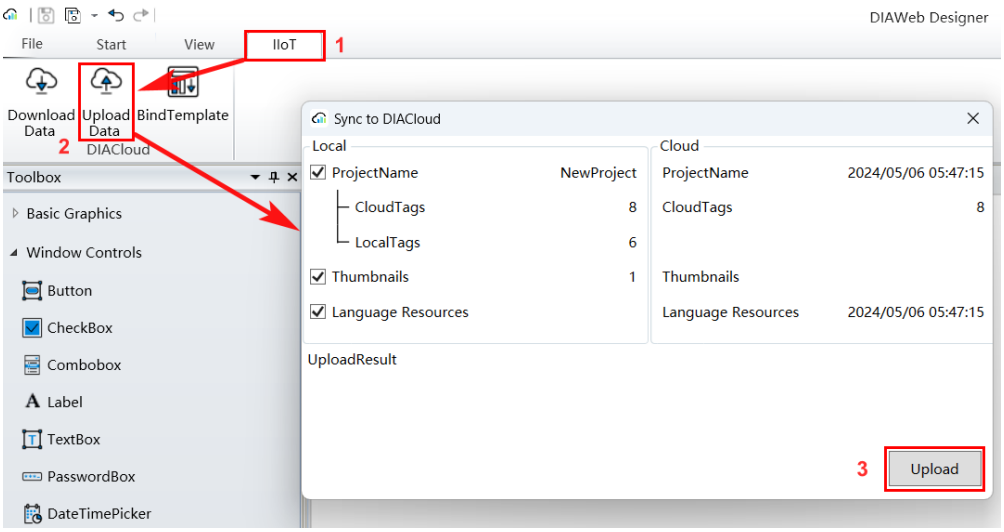
1. Open **Thumbnails** in the project tree on the **Project** pane and enter the picture management page.



2. Right-click to open the context menu with options: **Add**, **Delete** or **Paste**.



3. **IIoT > Upload Data > Upload** the thumbnails.


DIAWeb Designer
File
Start
View
IIoT
1
Download Data
Upload Data
BindTemplate
2
DIACloud
Toolbox
Basic Graphics
Window Controls
Button
CheckBox
Combobox
Label
TextBox
PasswordBox
DateTimePicker
Sync to DIACloud
Local
ProjectName
NewProject
CloudTags
8
LocalTags
6
Thumbnails
1
Language Resources
Cloud
ProjectName
2024/05/06 05:47:15
CloudTags
8
Thumbnails
Language Resources
2024/05/06 05:47:15
UploadResult
3
Upload

Chapter10 Global

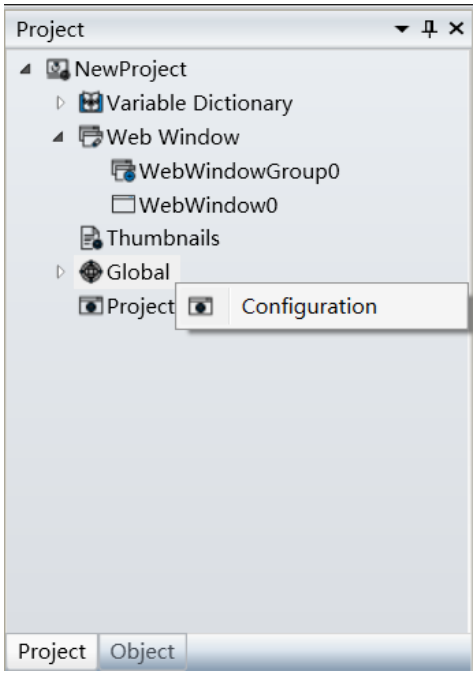
10.1 Overview

Global function allows users to extract the contents of multiple function blocks to multilanguage resource list and edit the extracted contents to achieve multilanguage switching.

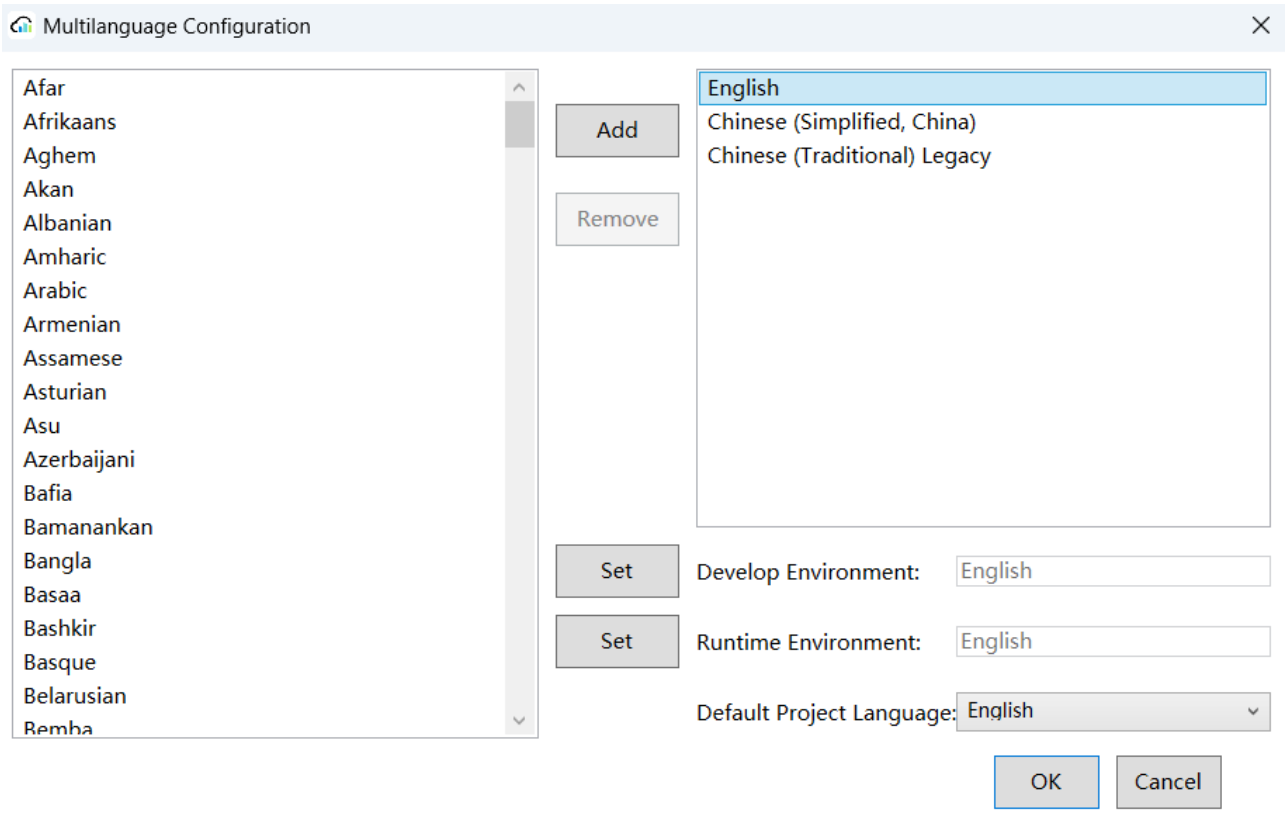
String is the multilanguage resource type currently supported.

10.2 Multilanguage Configuration

1. Right-click the **Global** node in the project tree and select **Configuration**.



2. Then the **Multilanguage Configuration** window will pop up.



Add: Add the language selected in the list on the left.

Remove: Remove the selected languages from the list on the right. If the chosen language is set to be the development language, runtime language or default project language, then the removal is denied.

Set Develop Environment: Set the selected language in the list on the right to be the display language in the development environment.

Set Runtime Environment: Set the selected language in the list on the right to be the display language at runtime.

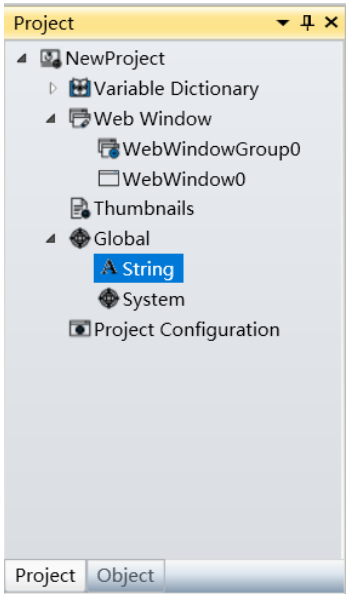
Default Project Language: Select **Default Project Language** from the drop-down list**.** Currently, it supports Simplified Chinese, Traditional Chinese and English. When the language switched has not been translated, the default language will be displayed. To set the default language, all contents in the software needs to be translated into that language.

Note: When the software language and the default project language do not match (e.g. software language is English; default language is Chinese), it is recommended to switch the default language to be consistent with the software language.

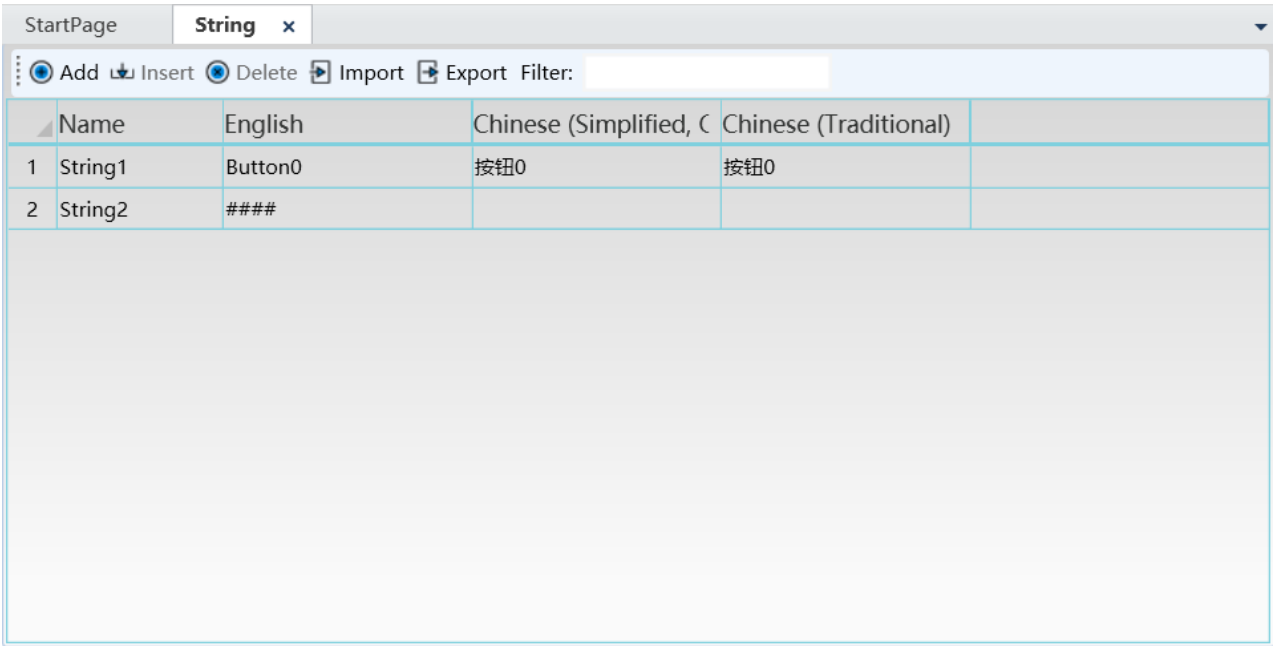
10.3 String

String is the resource library of Chinese text type in Global function, which can be customized and edited by the user. The editing process is as follows:

1. Click the **String** node in the project tree.



2. Double-click **String** to edit.



Note: In the string interface, one row represents the content of the multilanguage displayed in different languages; one column represents one type of language. If it left blank in the row, the content in the default language will be displayed.

Function blocks in DIAWeb Designer that can be converted into the string resource includes:

a. Tooltip for all controls in the window

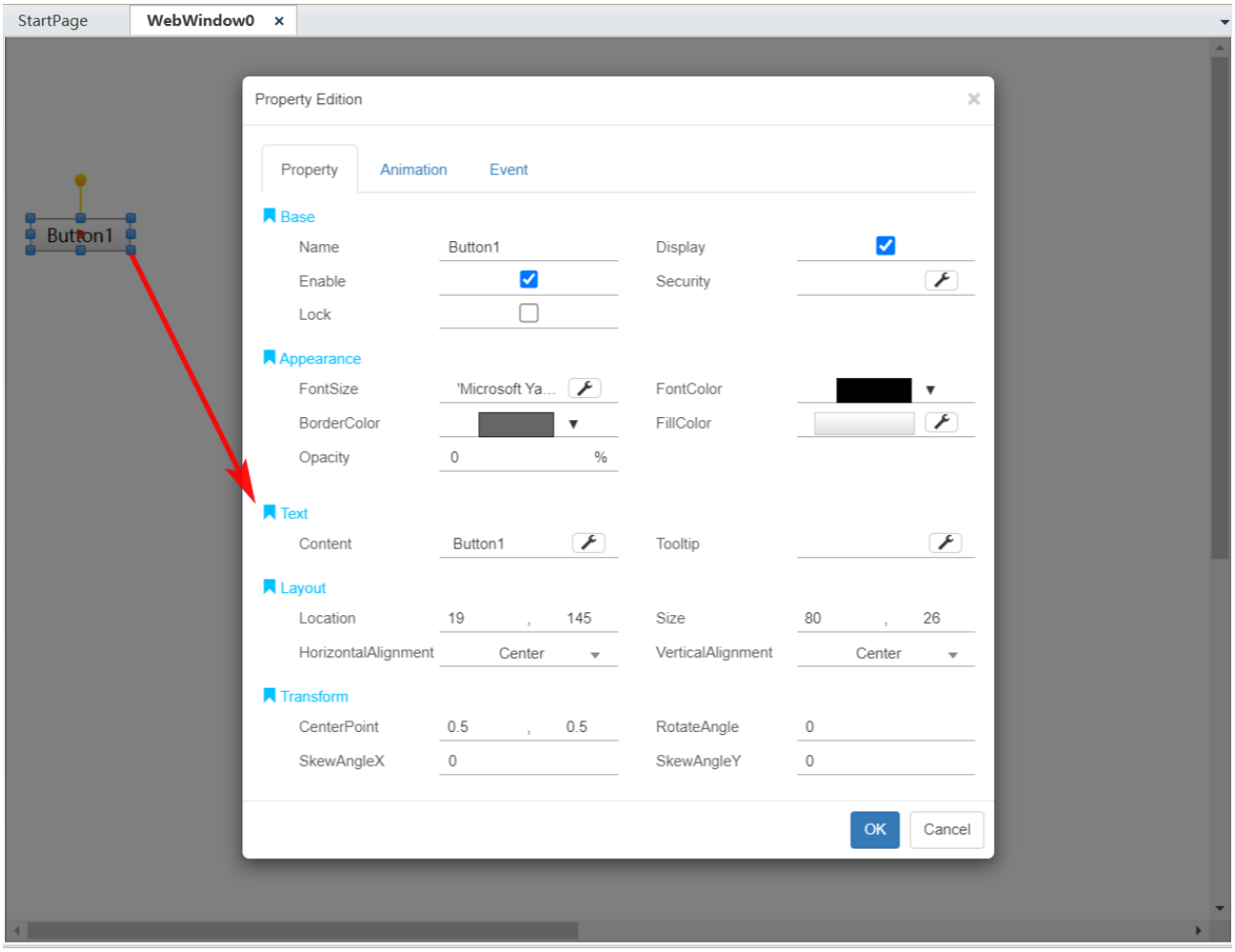
b. Text content in the button control, label control, checkbox control and text box control; text content and the subset in the combo box control

c. Some properties in extended controls

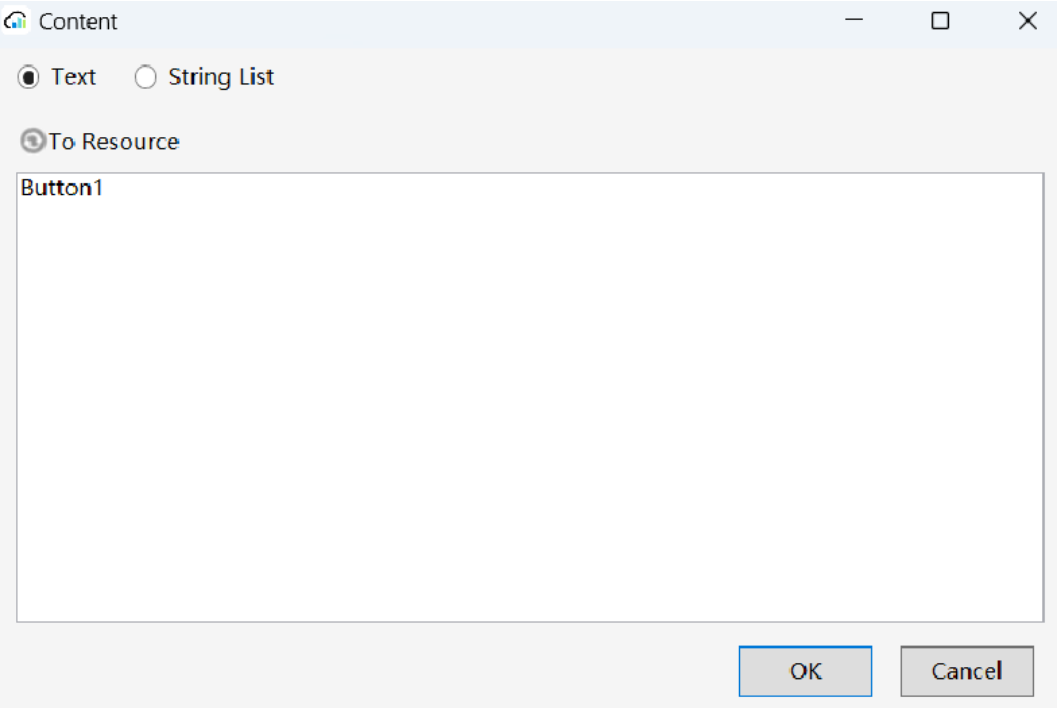
- **Select resources**

During development, you can select existing string resources in the text property. Specific steps are as follow:

1. Create a new button control and double-click the button to pop up the property editing window.

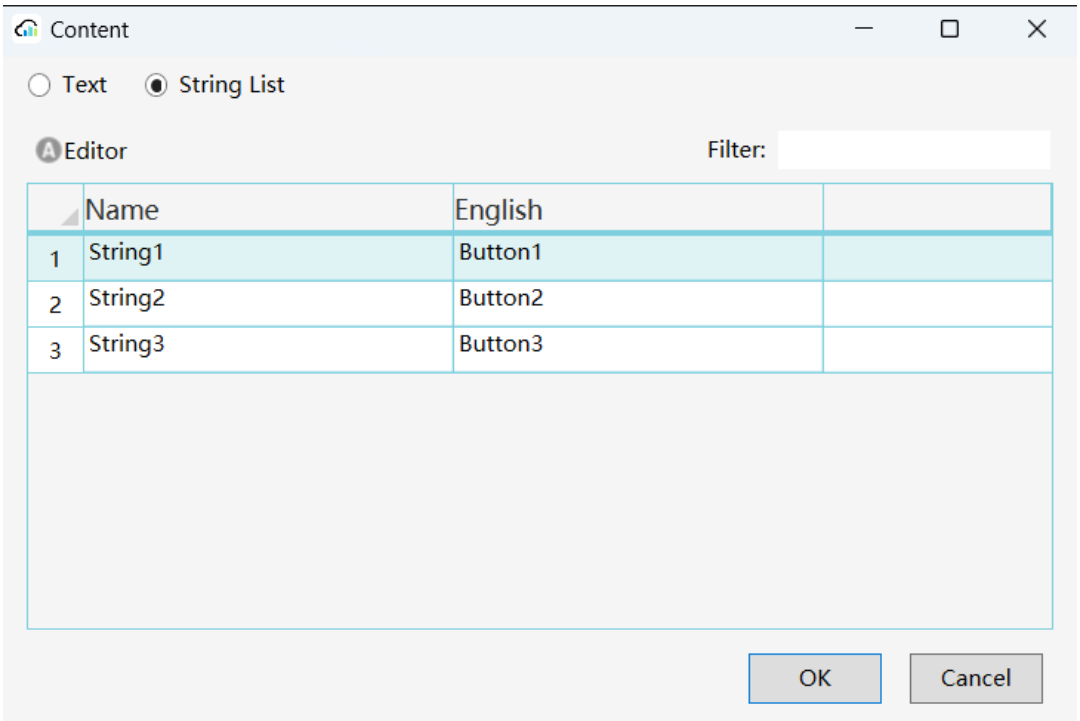


2. Open the text content editing box.



Note: If the corresponding resources have been edited in the string, then select String List and choose the corresponding resources; if the corresponding resources have not been edited in the library, then select To Resource to directly add a new resource library and apply it.

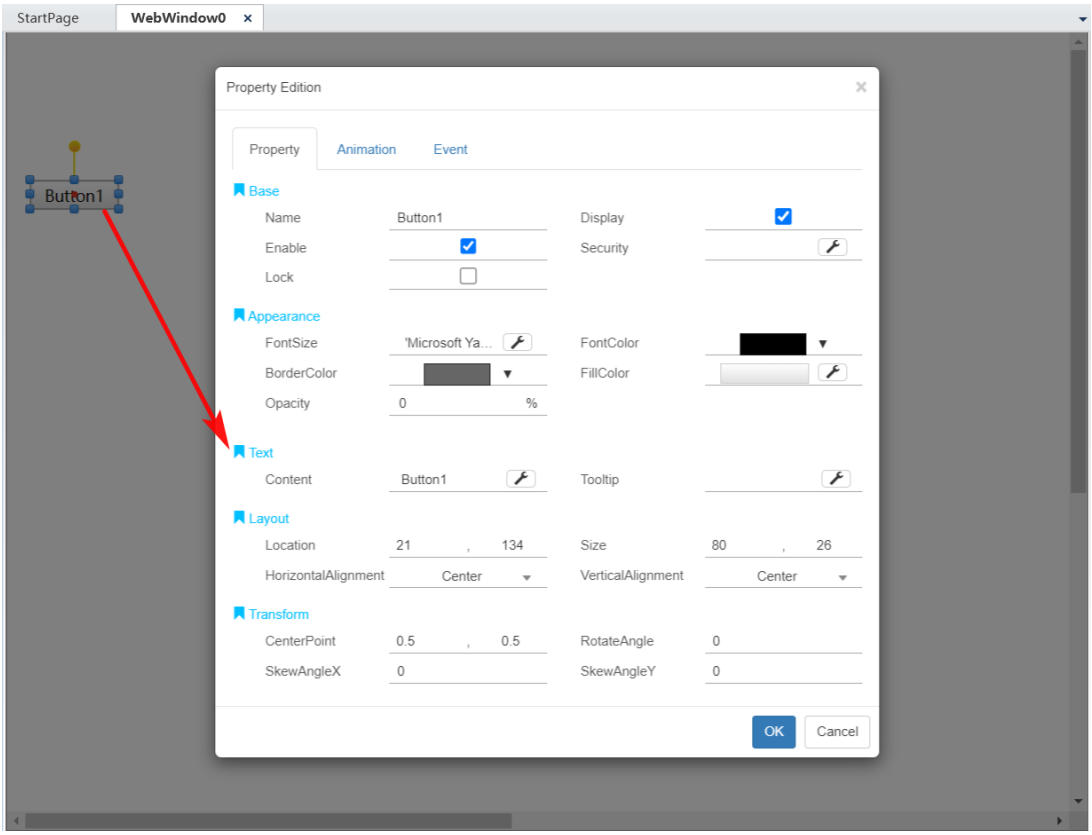
3. Click **String List** and select the corresponding resource content. After clicking **OK**, the multilanguage resource configuration is completed.



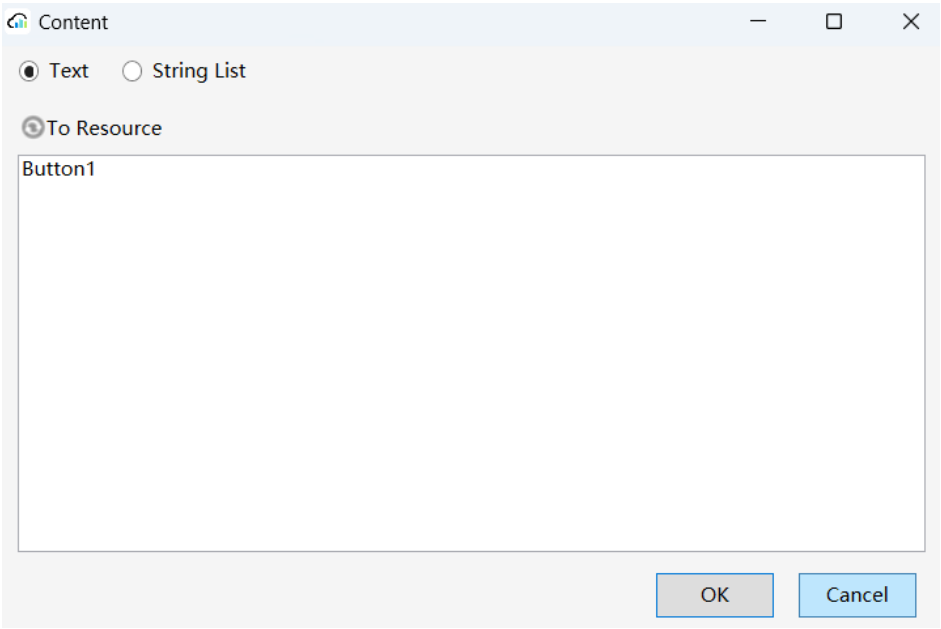
- **Converted into resource**

  During development, you can convert texts to string resource library. Specific steps are as follow:

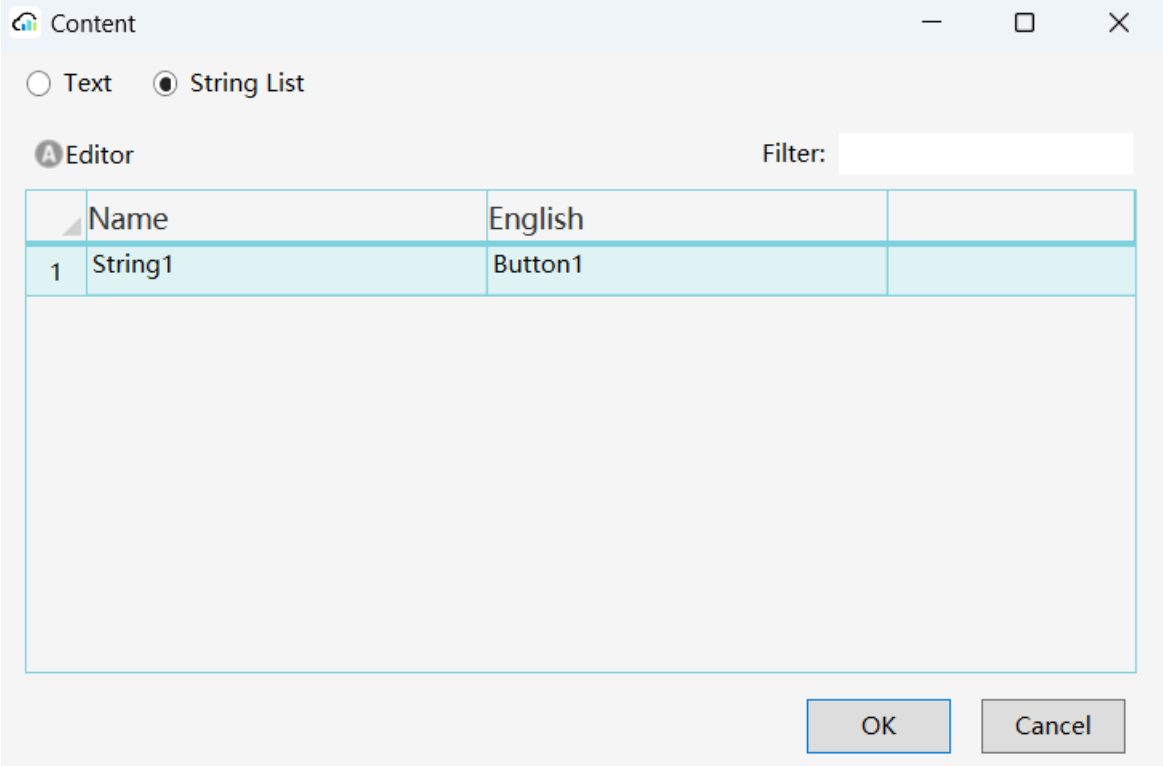
  1. Create a new button control and double-click the button to pop up the **Property Edition** window.



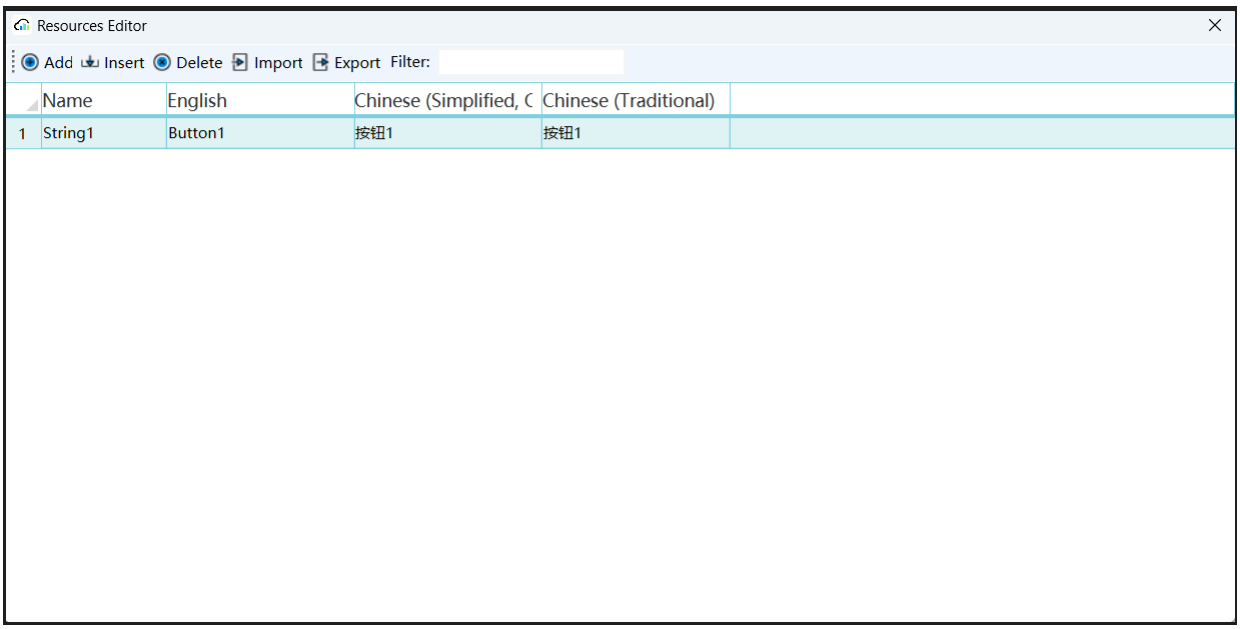
  2. Open the text content editing box.



3. Click **To Resource** to add the current content to String List.



4. Click **Editor** button at the upper left corner to customize the converted resources in the String List.

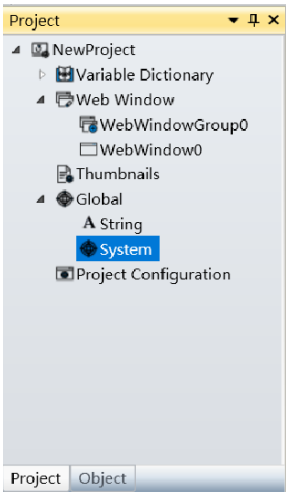


5. Close **Resources Editor** and select the related string resources. After clicking **OK**, the configuration is completed.

10.4 System

System in the Global function means the system text in the window is displayed in the specified language. It includes the menu and drop-down box content of the advanced control and menu bar at runtime. For example, there are three languages in the system multilanguage editing box: Simplified Chinese, Traditional Chinese and English, then the project can switch among languages during development and runtime.

1. Double-click **Global** node in the project tree and click **System** in the menu.



2. Open the System editing interface.

	Name	English	Chinese (Simplified, C	Chinese (Traditional)
1	PleaseInput	Enter:	请输入:	請輸入:
2	MinValue	MinValue:	最小值:	最小值:
3	MaxValue	MaxValue:	最大值:	最大值:
4	VariableName	VariableName:	变量名称:	變數名稱:
5	AnalogValueInpu	Analog Value Input	模拟值输入	類比值輸入
6	OutOfRange	Out Of Range	輸入超出範圍	输入超出范围
7	Btn_Ok	OK	确定	確定
8	Btn_Cancel	Cancel	取消	取消
9	InvalidInput	The Express is invalid,plea	输入不合法，请重新输入.	輸入不合法，請重新輸入.
10	CurrentValue	Current Value	当前值	當前值
11	GoBack	GoBack	后退	後退
12	Clear	Clear	清除	清除
13	DigitalInput	Digital Input	开关量输入	數位值輸入

In the system interface, one row represents the content of the resource displayed in different languages; and one column represents one language.

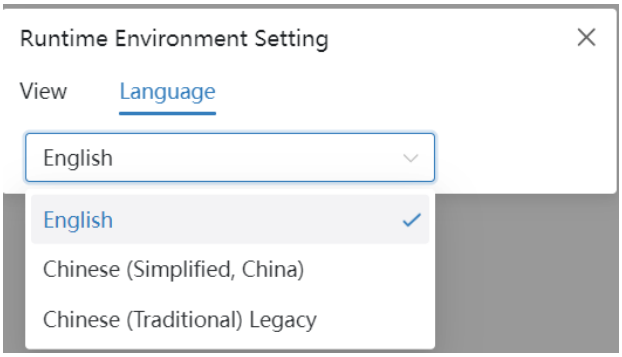
Users cannot edit these three languages, Simplified Chinese, Traditional Chinese and English, even the export of Excel to modify the re-import is invalid.

Users cannot customize the addition of multilanguage resources to the system, but can only translate into the corresponding national languages for currently available resources.

10.5 Runtime Environment Setting

When the system is in operation, user can change languages in the following way:

- **Runtime Environment Setting:**
  When the system is running, click the floating icon in the bottom left corner and the setting window will pop for you to switch languages.



Chater 11 Runtime Environment

11.1 Overview

The DIAWeb Designer software consists of the development environment and the runtime environment. The graphical interfaces designed and the scripts edited in the development environment must run in the runtime environment so as to dynamically display the screen and realize the complete operation of various functions for real-time monitoring.

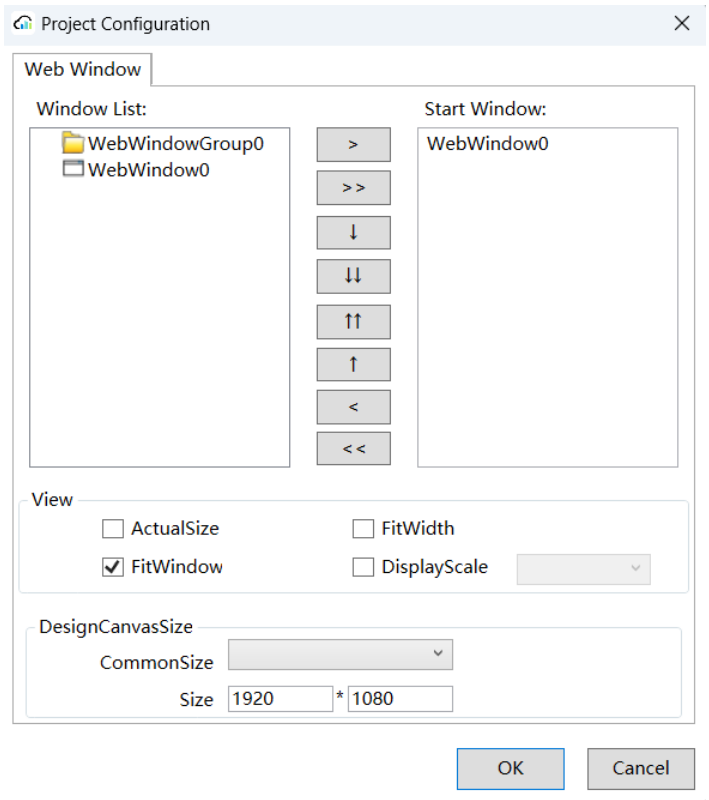
The runtime environment can display dynamic graphic components, as well as the animations and events configured for graphic objects and controls, achieving real-time control and data interaction between the web window and on-site devices.

11.2 Project Configuration

Project Configuration in DIAWeb Designer is used to configure the windows to be opened for project execution and set up their display mode.

- **Web Window**

  This tab sets the default start web window(s) for project execution, as well as the display order of web windows.



Select the web window to open from the **Window List** section for project execution.

Click > button to add the selected web window to the **Start Window** section.

Click >> button to add all web windows to the **Start Window** section. The number of web windows in the **Start Window** section can be one or more, with newly added web windows located below. If there are multiple ones in the section, you can click ↑ to move them up and click ↓ to move them down.

After the setup above is finished, click **OK** button to save the configuration.

The order of opening web windows: The web windows in the **Start Window** list are opened in order from top to bottom, and the last web window opened, which is the one at the bottom of the list, will display on the top layer of the screen.

- **View**

It sets the window display mode for a running project in the browser, with the following 4 display modes available:

1. **Actual size**: The display size is exactly the same as the canvas size setting in **Design Canvas Size** below.
2. **Fit Width**: The width of the canvas is scaled to fit the browser window.
3. **Fit Window**: The canvas display is resized to fit the browser window.
4. **Display Scale**: The canvas display is resized according to the scale factor, with optional factors: 25%, 33%, 50%, 67%, 80%, 90%, 100%, 110%, 125%, 150%, 175%, 200%, 250%, 300%, 400%, and 500%.

- **Design Canvas Size**

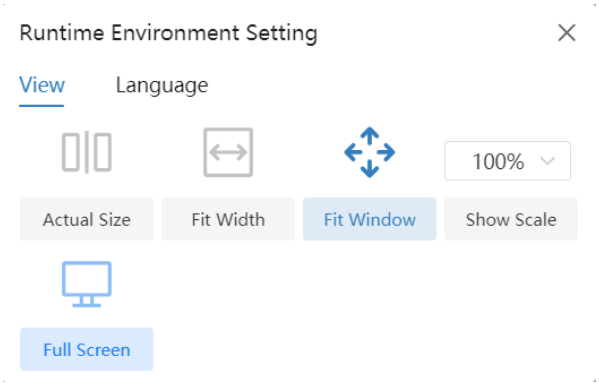
The canvas size setting here is the view size in the browser window.

Common Size: The display size for a preview, which is the default computer resolution for the developer to create a project for the first time. Switching the size during project execution is supported. The sizes of 1920 * 1080, 1440 * 900, 1366 * 768 and 1024 * 768 are for option.

Size: After a common size is selected, the size will be displayed in the **Size** field, which can be modified by the user. Note that it is the setting value in the **Size** field that is effective eventually.

- **Display mode switch**

In the process of running a project, click on the following floating icon in the bottom-left corner of the screen to open the **Runtime Environment Setting** window, where you can switch the adaptive display mode.

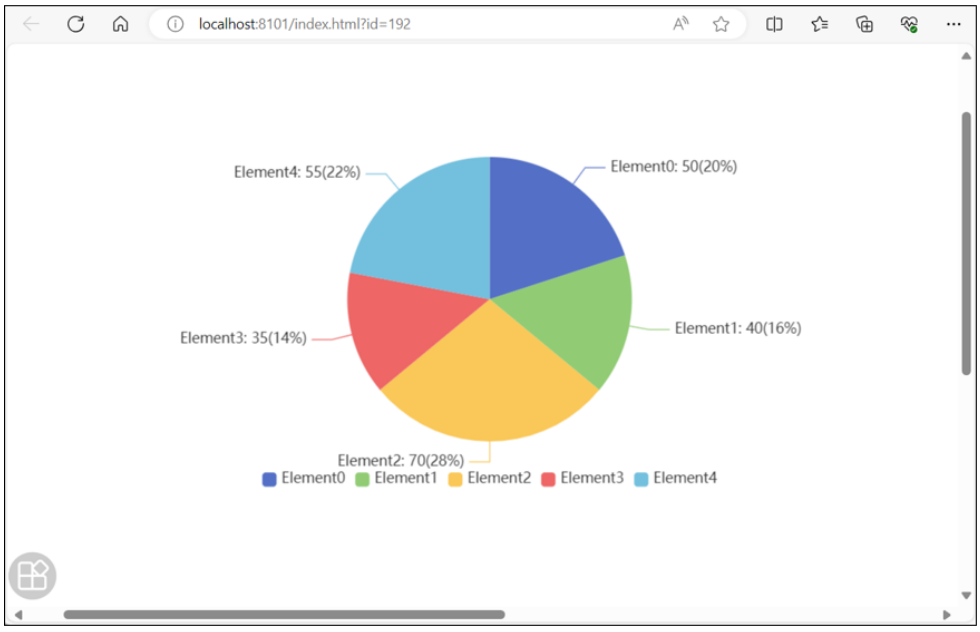


11.3 Runtime Environment

Before a project is running, it is necessary to configure the project first (see section 12.2 for details). After the configuration is completed, run the web window to start the runtime environment.

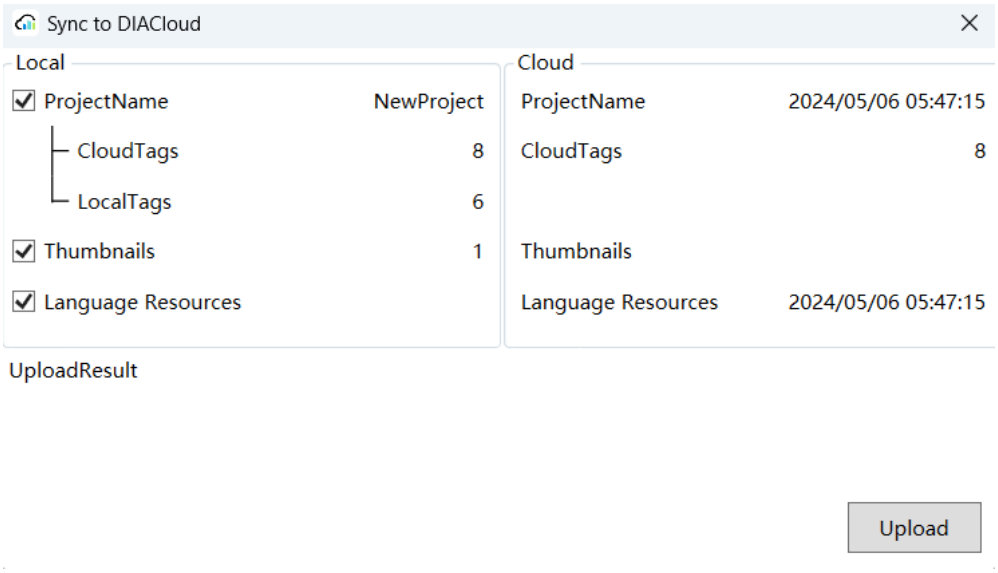
1. Local preview

In the DIAWeb Designer, click the home interface of the development environment > **Start** tab > **Preview** button to take a preview of local data as shown in the following figure.

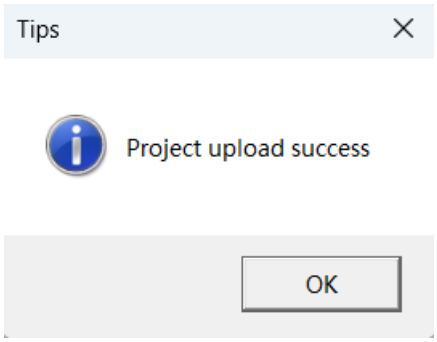


2. DIACloud display

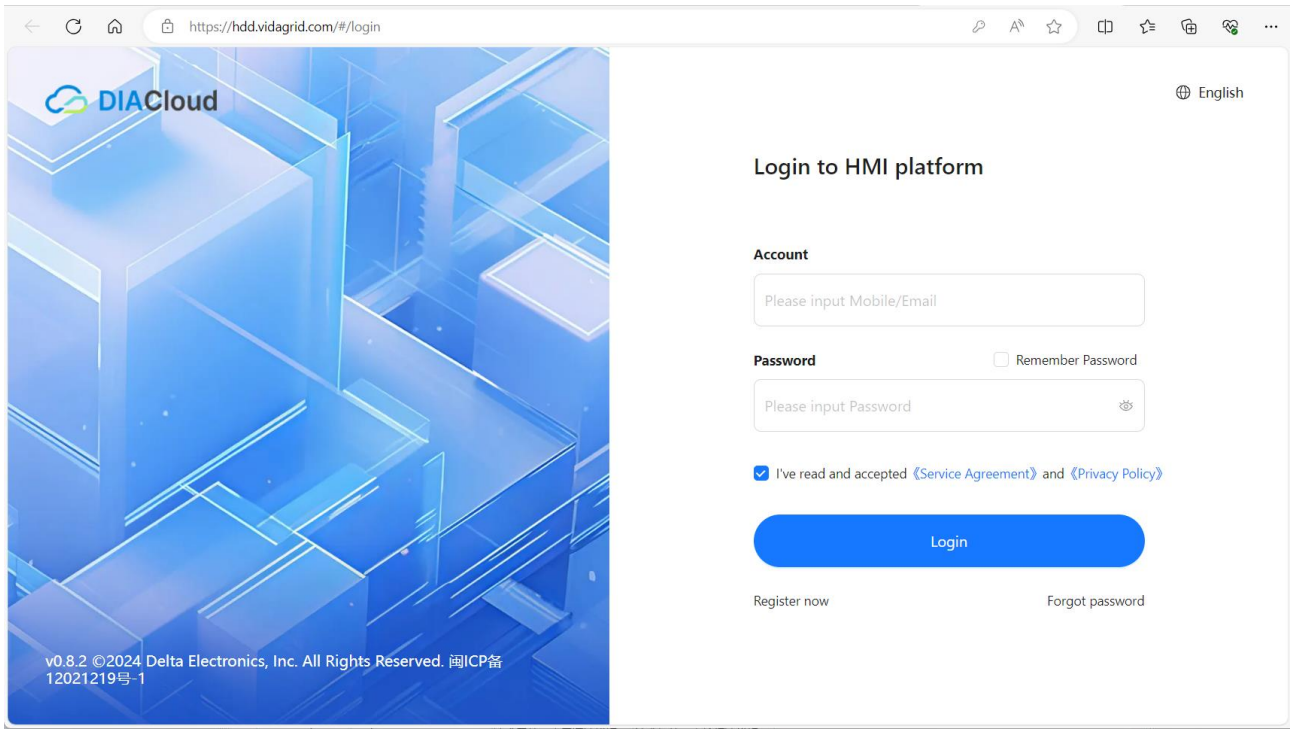
In login mode, click on the main interface of the development environment in DIAWeb Designer > **IIoT** tab > **Upload Data** button to upload the project in DIAWeb Designer to DIACloud.



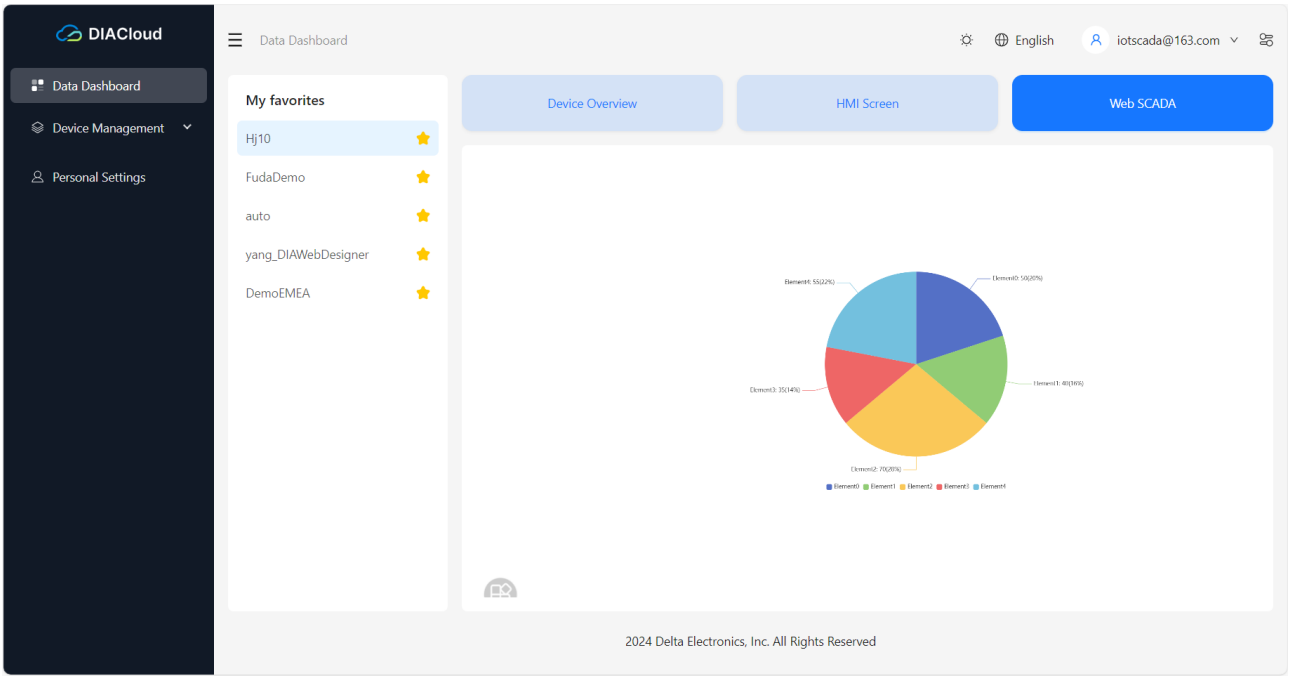
Select the items to be uploaded in the **Local** section and then click **Upload** button. Once the upload is finished, the following **Tips** window pops up, indicating that the project has been successfully uploaded.



Click **OK** to enter the DIACloud login page.


https://hdd.vidagrid.com/#/login
DIACloud
English
Login to HMI platform
Account
Please input Mobile/Email
Password
Remember Password
Please input Password
I've read and accepted《Service Agreement》and《Privacy Policy》
Login
Register now
Forgot password
v0.8.2 ©2024 Delta Electronics, Inc. All Rights Reserved. 闽ICP备12021219号-1

Upon successful login, the project will start running in DIACloud.



Chapter 12 Scripts

12.1 Overview

DIAWeb Designer provides comprehensive and powerful functions. To fulfill the diverse and wide-ranging requirements, DIAWeb Designer allows users customization to achieve special tasks and functions, which is accomplished by writing programs in the script editor.

The event configurations and user programs in DIAWeb Designer require script editor for script editing. DIAWeb Designer supports the VB Script (Visual Basic Script) scripting language, and thus users can write logic control programs that follow the syntax of VB Script language to carry out functions for special purposes and enhance the system availability.

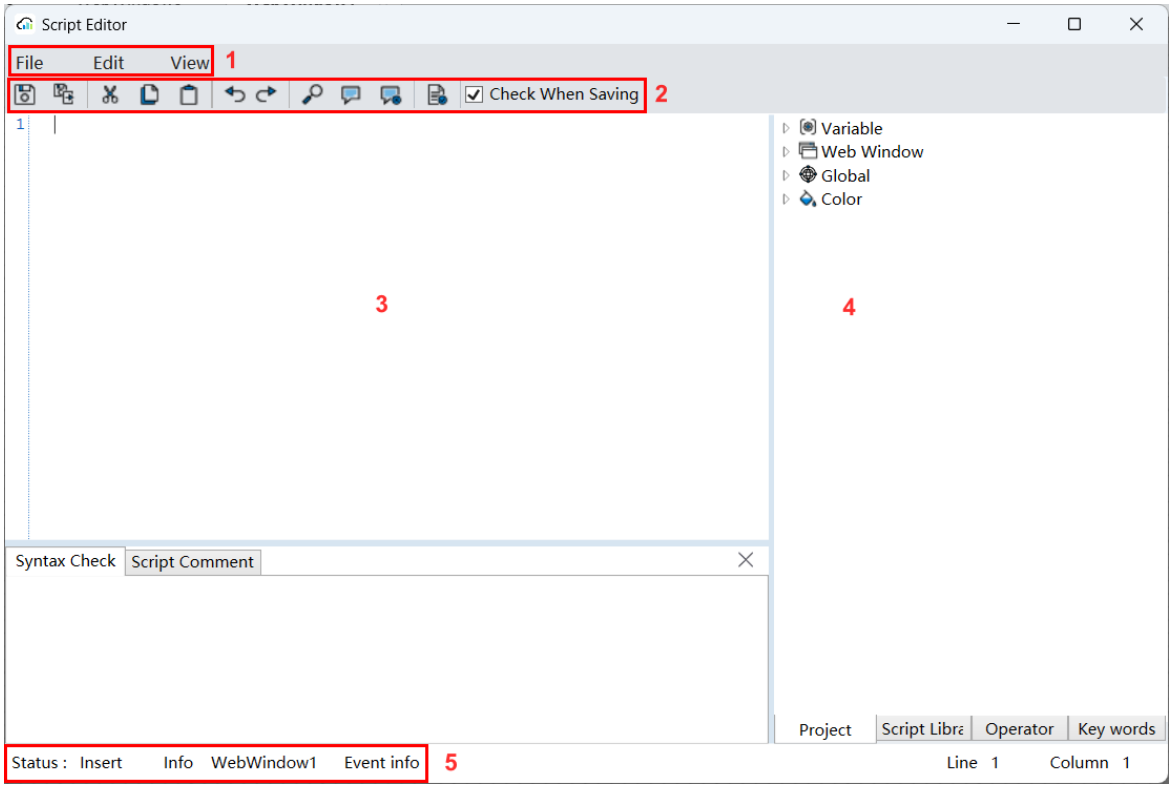
Note: Since the VB Script language also supports files or system environments beyond DIAWeb Designer, please ensure the security of your files or systems during use so as to prevent failures like file loss or incomplete system environment.

12.2 Script Editor

The editing of a script should be carried out in the Script Editor. It is handy for users to edit a script accurately since the script editor provides various functions including smart prompts, syntax highlights, Type Setting, Scroll to Line, as well as Syntax Check function.

The script editor in DIAWeb Designer is similar to all other common editors in terms of the interface, structure, and functionality. You can open the editor in the following steps.

On the **Project** pane of the development environment in DIAWebDesigner, select **Web Window** > right-click **New Web Window** > draw a shape in the current canvas > double-click or right-click the shape to open the **Property Edition** window, and click **Event** tab in the window. Then Click any event configuration button to open the **Script Editor** window.



Parts in the Script Editor window:

1. **Menu bar**: Basic function menus for operations
2. **Toolbar**: Shortcut function buttons for operations
3. **Script editing area**: Script program writing area
4. **Project / Script Library / Operator / Key words pane**: The window of directories for operations
5. **Information bar**: Displays the status, operation information, etc.

- **Menu bar**

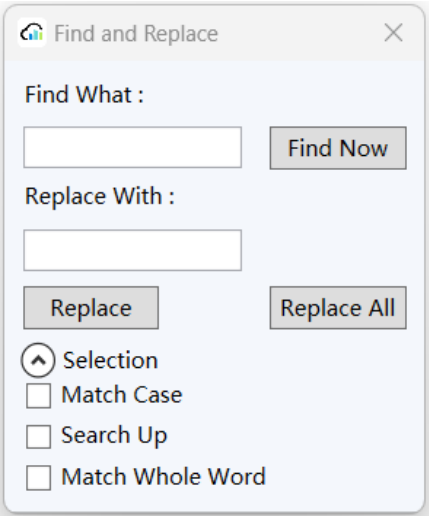
The menu bar of the **Script Editor** contains the following menus and their own commands:

1. **File** menu

Button	Function
Import	Import an external script file.
Export	Save the current script as an external script file.
Save	Save the current script.
Save and Exit	Save the current script and exit the script editor.
Check	Perform a syntax check on the current script, and the check result is displayed in the output window.
Exit	Stop editing the script and exit the script editor.

2. **Edit** menu

Button	Function
Undo	Click this command to cancel the previous operation. The script editing starts from the last operation.
Restore	Click this command to redo the previously cancelled operation. The script editing starts from the last operation.
Cut	After selecting the text in the script editing area, click this command and then the text is deleted and copied to the clipboard.
Copy	After selecting the text in the script editing area, click this command and the text is not deleted and copied to the clipboard.
Paste	Paste the contents of the current clipboard into the script editing area.
Delete	After selecting the text in the script editing area, click this command, and then the text is deleted.
Select All	Selects all text in the editing area will be selected.

<table>
<tr><th>Button</th><th>Function</th></tr>
<tr><td>Find and Replace</td><td>Click this command to open a secondary menu including three commands: Find, Replace, and Replace All.
With a click on this button, the following dialog will pop up:
 

<table>
<tr><th>Item</th><th>Description</th></tr>
<tr><td>Find Now</td><td>Enter the text you want to search for in this editing area.</td></tr>
<tr><td>Match Case</td><td>If this option is selected, the result only displays the instances that are written in the same way as those in "Find What".</td></tr>
<tr><td>Search Up</td><td>Select this option to search up from the position of the current cursor.</td></tr>
<tr><td>Match Whole Word</td><td>Select this option to display the instances that exactly match the whole word in “Find What”. For instance, after a search for "aaa", the result will return "aaa" instead of "baaa" or "aaac".</td></tr>
<tr><td>Replace</td><td>After entering what to find and what to replace with, click the "Replace" button.</td></tr>
<tr><td>Replace All</td><td>After entering what to find and what to replace with, click the "Replace All" button. The selections for "Replace" and "Replace All" have the same effect as those for "Find Now".</td></tr>
</table></td></tr>
<tr><td>Scroll to Line</td><td>Perform the operation of quick positioning. After entering a line number in the Scroll to Line dialog box, click OK, and then the system cursor moves to the end of the target line and the entire line is selected.</td></tr>
<tr><td>Type Setting</td><td>Click this command to perform an automatic typesetting of the script contents in the editing area.</td></tr>
</table>

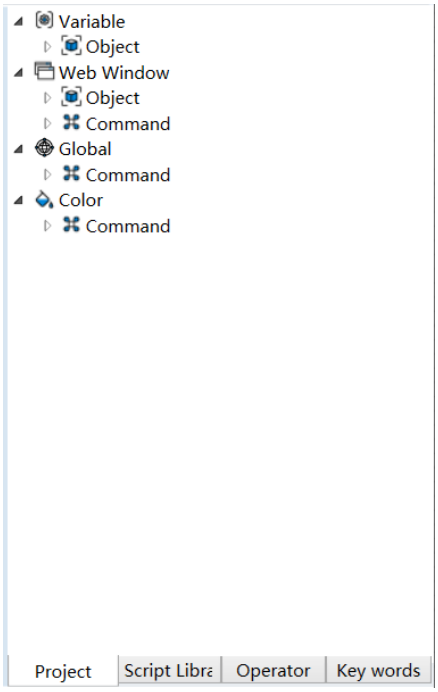
3. **View** menu

Button	Function
Font Setting	Clicking this command will open a secondary menu for setting the font style and font size. After saved, the settings are applied to the current project.
Show / Hide Syntax Check Window	Click this command to show or hide the Syntax Check output window.
Show / Hide Script Comment Window	Click this command to show or hide the Script Comment output window.

- **Project / Script Library / Operator / Key words pane**

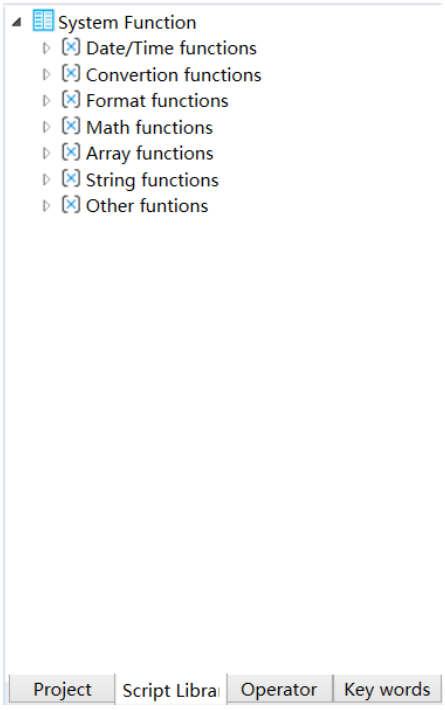
  1. **Project** tab:

     Contains various information for a project such as variables, web window, operation status and etc.



  2. **Script Library** tab:

     The system functions are classified into 7 types: Date / Time, Conversion, Format, Math, Array, String and Other functions. There are several functions for each type.

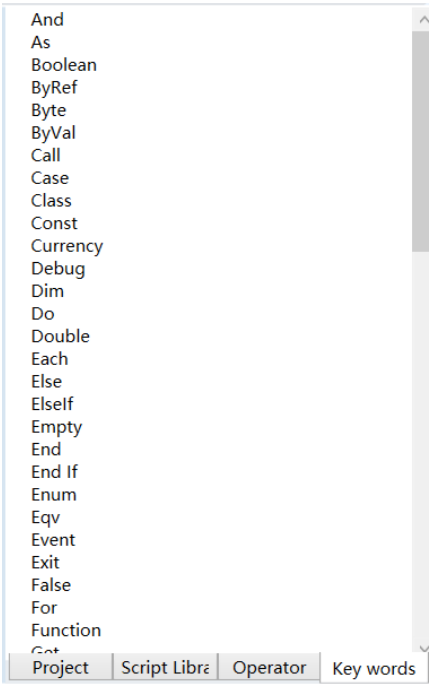


3. **Operator** tab:

Shows three types of operators: Arithmetic operators, Comparison operators, and Logical operators. There are several operators for each type. Double-click an operator and then the operator will be added to the script editing area immediately.

4. **Keyword** tab:

Displays all keywords related to the script syntax. Double-click on a keyword, and then the keyword will be added to the script editing area immediately.



- **Syntax Highlights**

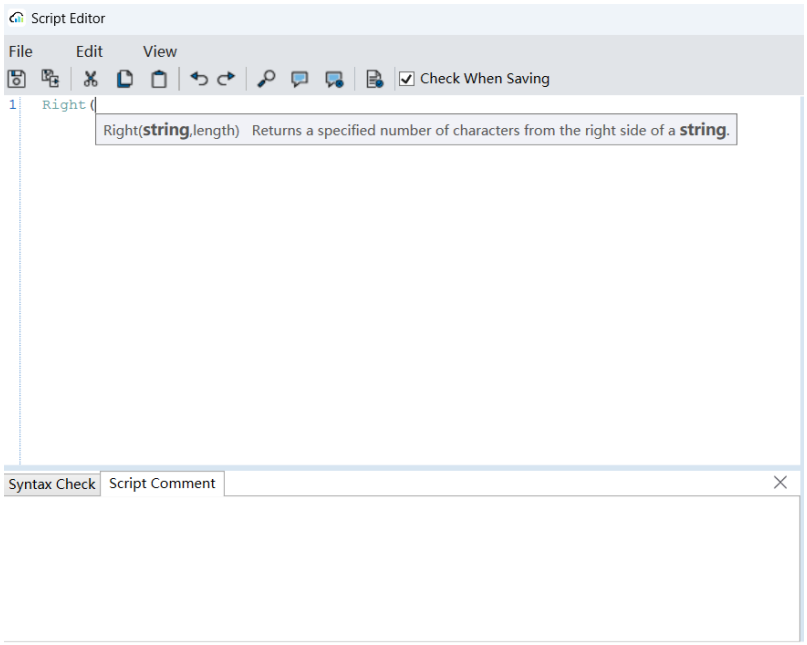
  In order to make it convenient and clear for users to edit a script, the script editor provides different colors for the highlight of different content types in the syntax.

Content Type	Color
Defaults	Black
Numbers	Purple
Strings	Dark brown
Mathematical Symbols	Red
Comments	Green
Keywords	Blue

- **Smart Prompts**

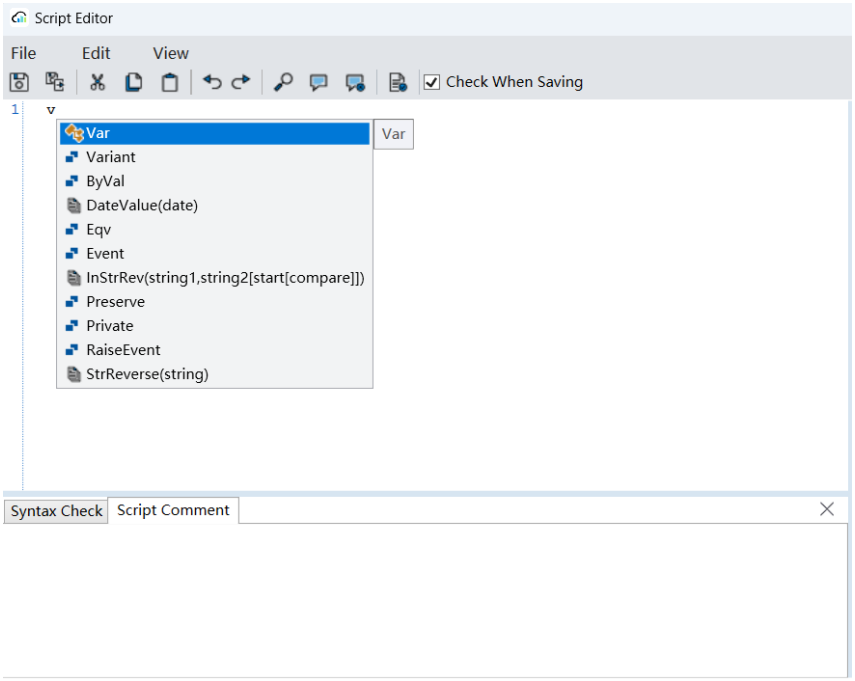
  1. Tip box

  When you enter a system function and a symbol "(", the tip box will appear telling you the name, parameters, and description of the function. In the tip box, the black bold parameters indicate which parameter is being entered.

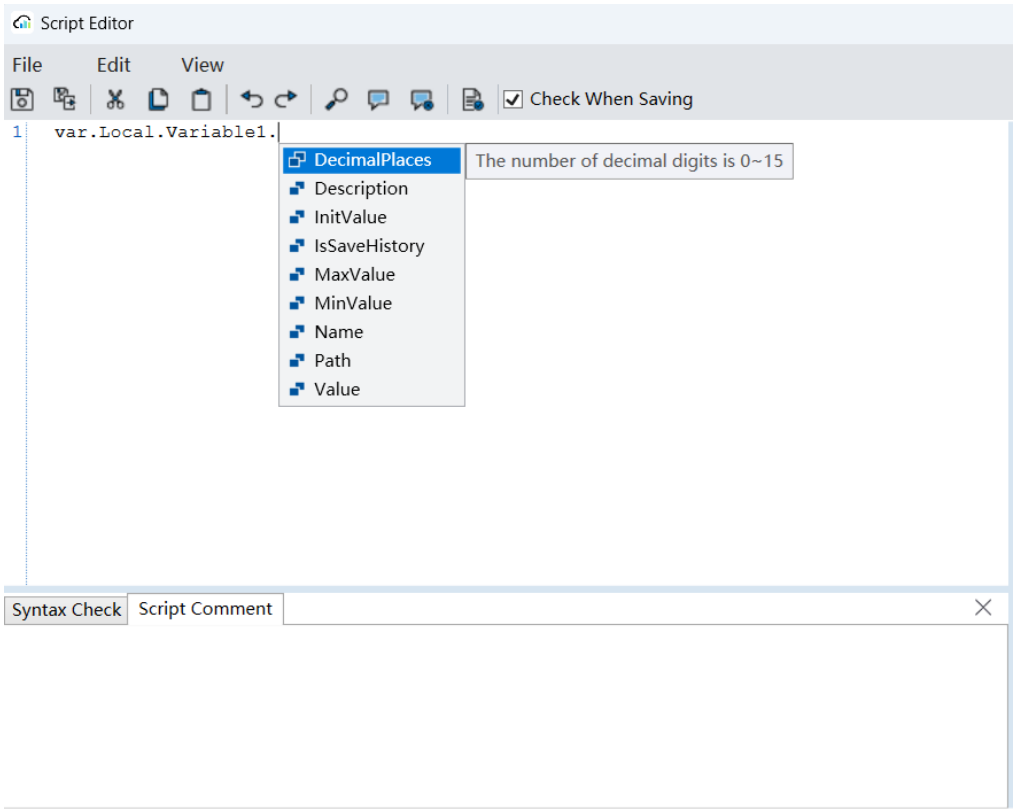


2. List box for tips

When you enter a letter, a list box for tips will automatically show up. This box lists the result of letter fuzzy matching, including objects, properties, methods, etc.



When you enter the symbol ".", the system will display a prompt box based on the content before ".", which may include properties, variable group, etc.



- **Keyboard Shortcuts**

  In the Script Editor dialog, the shortcut keys that can be used are as follows.

Command	Shortcut Keys
Copy	Ctrl + C
Cut	Ctrl + X
Paste	Ctrl + V
Select All	Ctrl + A
Undo	Ctrl + Z
Restore	Ctrl + Y
Scroll to Line	Ctrl + G
Find and Replace	Ctrl + F
Type Setting	Alt + F8
Syntax Check	Alt + C
Exit	Alt + F4
Font Setting	Alt + S
Show / Hide the Syntax Check output window	Ctrl + O
Go to Definition (shown in Script Comment)	F12

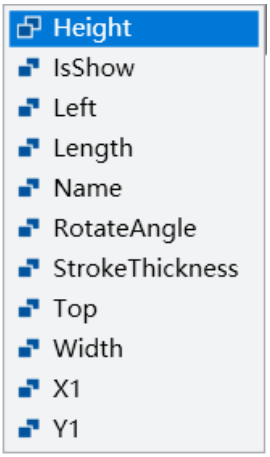
12.3 Programming Model

12.3.1 Web Window

12.3.1.1 Basic Graphics

1. Line

The properties of a line segment in the script are shown in the following figure.



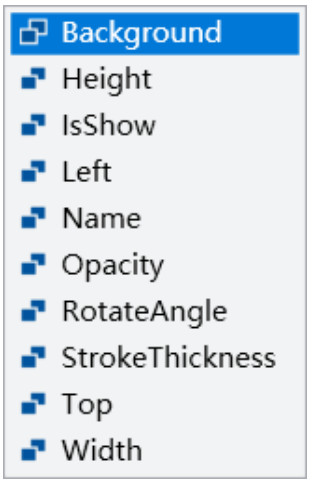
Property List:

Property	Description	Definition	Scripting Sample
Height	Height	Double Height	'Set the height of Line1 to 100. WebWindow1.Line1.Height=100
IsShow	Display or hide the selected object	Boolean IsShow	'True: Line1 is displayed on the web window. WebWindow1.Line1.IsShow=True 'False: Line 1 is hidden on the web window. WebWindow1.Line1.IsShow=False
Left	Left position	Double Left	'The left horizontal coordinate of Line 1 on the web window is 100. WebWindow1.Line1.Left=100
Length	Length	Double Length	'The length of Line1 is 100. WebWindow1.Line1.Length=100
Name	Name	String Name	'Get the name of Line1 and show it in the textbox. WebWindow1.Textbox1.Text=WebWindow1.Line1.Name
RotateAngle	Rotation angle	Double RotateAngle	'Set the rotation angle of Line1 to ninety degrees. WebWindow1.Line1.RotateAngle=90
StrokeThickne	Line thickness	Double StrokeThickne	'Set the thickness of Line1 to 10.

Property	Description	Definition	Scripting Sample
ss		ss	WebWindow1.Line1.StrokeThickness=10
Top	Top position	Double Top	'Set the top vertical coordinate of Line1 on the web window to 50. WebWindow1.Line1.Top=50
Width	Width	Double Width	'Set the width of Line1 on the web window to 100. WebWindow1.Line1.Width=100
X1	X-axis coordinate of the start point	Double X1	'Set the X-axis coordinate of the start point of Line1 on the web window to 10. WebWindow1.Line1.X1=10
Y1	Y-axis coordinate of the start point	Double Y1	'Set the Y-axis coordinate of the start point of Line1 on the web window to 20. WebWindow1.Line1.Y1=20

2. Rectangle

The properties of a rectangle in the script are shown in the following figure.



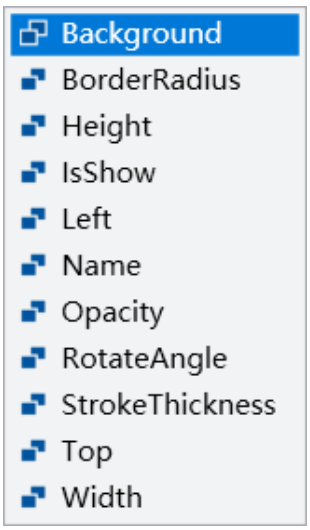
Property List:

Property	Description	Definition	Scripting Sample
Background	Fill color	Object Background	'Set the fill color of the specified object to red. WebWindow0.Rectangle1.Background=Colors.Red
Height	Height	Double Height	'Set the height of the specified object to 100. WebWindow0.Rectangle1.Height = 100
IsShow	Display or hide the selected	Boolean IsShow	'True: The specified object is displayed on the web window. WebWindow0.Rectangle1.IsShow = True

Property	Description	Definition	Scripting Sample
	object		'False: The specified object is hidden on the web window. WebWindow0.Rectangle1.IsShow = False
Left	Left position	Double Left	'The left horizontal coordinate of the object on the web window is 100. WebWindow0.Rectangle1.Left = 100
Name	Name	String Name	'Get the name of the specified object. WebWindow0.TextBox1.Text = WebWindow0 .Rectangle1.Name
Opacity	Opacity	Double Opacity	'The opacity of the specified object WebWindow0.Rectangle1.Opacity = 50
RotateAngle	Rotation angle	Double RotateAngle	'Set the rotation angle of the specified object to 90 degrees. WebWindow0.Rectangle1.RotateAngle = 90
StrokeThickness	Border thickness	Double StrokeThickness	'Set the border thickness of Rectangle1 to 5. WebWindow0.Rectangle1.StrokeThickness = 5
Top	Top coordinate	Double Top	'The top vertical coordinate of the object on the web window is 100. WebWindow0.Rectangle1.Top = 100
Width	Width	Double Width	'Set the width of the specified object to 100. WebWindow0.Rectangle1.Width = 100

3. Round Rectangle

The properties of a round rectangle in the script are shown in the following figure.



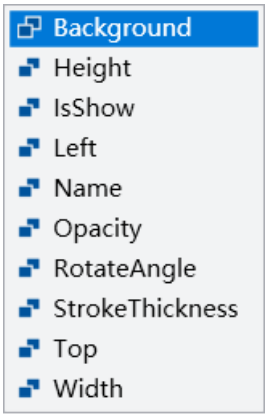
Property List:

Property	Description	Definition	Scripting Sample
Background	Fill color	Object Background	'Set the fill color of the specified object to red. WebWindow0.RoundRectangle1.Background =Colors.Red
BorderRadius	Corner radius	Double BorderRadius	'Set the Corner radius of the specified object to 45 WebWindow0.RoundRectangle1.BorderRadius= 45
Height	Height	Double Height	'Set the height of the specified object to 100. WebWindow0.RoundRectangle1.Height = 100
IsShow	Display or hide the selected object	Boolean IsShow	'True: The specified object is displayed on the web window. WebWindow0.RoundRectangle1.IsShow = True 'False: The specified object is hidden on the web window. WebWindow0.RoundRectangle1.IsShow = False
Left	Left position	Double Left	'The left horizontal coordinate of the object on the web window is 100. WebWindow0.RoundRectangle1.Left = 100

Property	Description	Definition	Scripting Sample
Name	Name	String Name	'Get the name of the specified object. WebWindow0.TextBox1.Text = WebWindow0.RoundRectangle1.Name
Opacity	Opacity	Double Opacity	'The opacity of the specified object WebWindow0.RoundRectangle1.Opacity = 50
RotateAngle	Rotation angle	Double RotateAngle	'Set the rotation angle of the specified object to 90 degrees. WebWindow0.RoundRectangle1.RotateAngle = 90
StrokeThickness	Border thickness	Double StrokeThickness	'Set the border thickness of the object to 5. WebWindow0.RoundRectangle1.StrokeThickness = 5
Top	Top position	Double Top	'The top vertical coordinate of the object on the web window is 100. WebWindow0.RoundRectangle1.Top = 100
Width	Width	Double Width	'Set the width of the specified object to 100. WebWindow0.RoundRectangle1.Width = 100

4. Ellipse

The properties of an ellipse in the script are shown in the following figure.

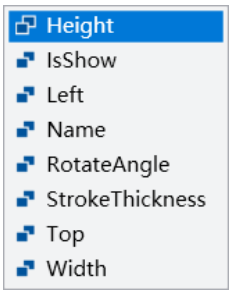


Property List:

Property	Description	Definition	Scripting Sample
Background	Fill color	Object Background	'Set the fill color of the specified object to red. WebWindow0.Ellipse1.Background=Colors.Red
Height	Height	Double Height	'Set the height of the specified object to 100. WebWindow0.Ellipse1.Height = 100
IsShow	Display or hide the selected object	Boolean IsShow	'True: The specified object is displayed on the web window. WebWindow0.Ellipse1.IsShow = True 'False: The specified object is hidden on the web window. WebWindow0.Ellipse1.IsShow = False
Left	Left position	Double Left	'The left horizontal coordinate of the object on the web window is 100. WebWindow0.Ellipse1.Left = 100
Name	Name	String Name	'Get the name of the specified object. WebWindow0.TextBox1.Text = WebWindow0.Ellipse1.Name
Opacity	Opacity	Double Opacity	'The opacity of the specified object WebWindow0.Ellipse1.Opacity = 50
RotateAngle	Rotation angle	Double RotateAngle	'Set the rotation angle of the specified object to 90. WebWindow0.Ellipse1.RotateAngle = 90
StrokeThickness	Border thickness	Double StrokeThickness	'Set the border thickness of the object to 5. WebWindow0.Ellipse1.StrokeThickness = 5
Top	Top position	Double Top	'The top vertical coordinate of the object on the web window is 100. WebWindow0.Ellipse1.Top = 100
Width	Width	Double Width	'Set the width of the specified object to 100. WebWindow0.Ellipse1.Width = 100

5. Polyline

The properties of a polyline in the script are shown in the following figure.

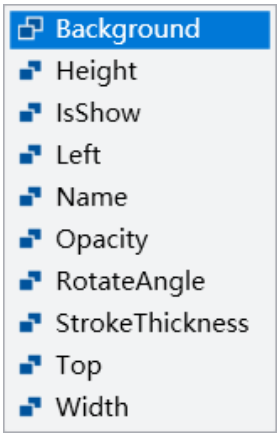


Property List:

Property	Description	Definition	Scripting Sample
Height	Height	Double Height	'Set the height of the specified object to 100. WebWindow1.Polyline1.Height = 100
IsShow	Display or hide the selected object	Boolean IsShow	'True: The specified object is displayed on the web window. WebWindow1.Polyline1.IsShow = True 'False: The specified object is hidden on the web window. WebWindow1.Polyline1.IsShow = False
Left	Left position	Double Left	'The left horizontal coordinate of the object on the web window is 100. WebWindow1.Polyline1.Left = 100
Name	Name	String Name	'Get the name of the specified object. WebWindow1.TextBox1.Text = WebWindow1.Polyline1.Name
RotateAngle	Rotation angle	Double RotateAngle	'Set the rotation angle of the specified object to 90. WebWindow1.Polyline1.RotateAngle = 90
StrokeThickness	Border thickness	Double StrokeThickness	'Set the border thickness of the object to 5. WebWindow1.Polyline1.StrokeThickness = 5
Top	Top position	Double Top	'The top vertical coordinate of the object on the web window is 100. WebWindow1.Polyline1.Top = 100
Width	Width	Double Width	'Set the width of the specified object to 100. WebWindow1.Polyline1.Width = 100

6. Polygon

The properties of a polygon in the script are shown in the following figure.



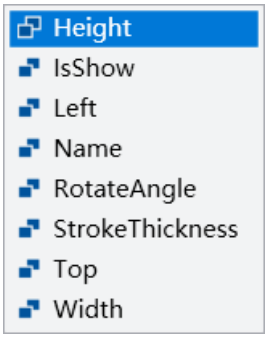
Property List:

Property	Description	Definition	Scripting Sample
Background	Fill color	Object Background	'Set the fill color of the specified object to red. WebWindow0.Polygon1.Background=Colors.Red
Height	Height	Double Height	'Set the height of the specified object to 100. WebWindow0.Polygon1.Height = 100
IsShow	Display or hide the selected object	Boolean IsShow	'True: The specified object is displayed on the web window. WebWindow0.Polygon1.IsShow = True 'False: The specified object is hidden on the web window. WebWindow0.Polygon1.IsShow = False
Left	Left position	Double Left	'The left horizontal coordinate of the object on the web window is 100. WebWindow0.Polygon1.Left = 100
Name	Name	String Name	'Get the name of the specified object. WebWindow0.TextBox1.Text = WebWindow0.Polygon1.Name
Opacity	Opacity	Double Opacity	'The opacity of the specified object WebWindow0.Polygon1.Opacity = 50
RotateAngle	Rotation angle	Double RotateAngle	'Set the rotation angle of the specified object to 90 degrees. WebWindow0.Polygon1.RotateAngle = 90
StrokeThickness	Border thickness	Double StrokeThickne	'Set the border thickness of the object to 5. WebWindow0.Polygon1.StrokeThickness = 5

Property	Description	Definition	Scripting Sample
		ss	
Top	Top position	Double Top	'The top vertical coordinate of the object on the web window is 100. WebWindow0.Polygon1.Top = 100
Width	Width	Double Width	'Set the width of the specified object to 100. WebWindow0.Polygon1.Width = 100

7. Bezier Curve

The properties of a Bezier curve in the script are shown in the following figure.



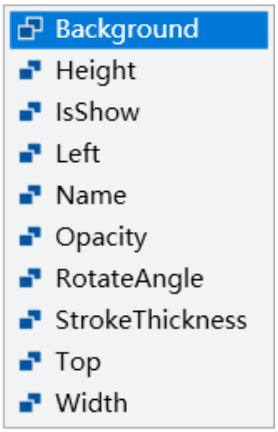
Property List:

Property	Description	Definition	Scripting Sample
Height	Height	Double Height	'Set the height of the specified object to 100. WebWindow1.BezierCurve1.Height = 100
IsShow	Display or hide the selected object	Boolean IsShow	'True: The specified object is displayed on the web window. WebWindow1.BezierCurve1.IsShow = True 'False: The specified object is hidden on the web window. WebWindow1.BezierCurve1.IsShow = False
Left	Left position	Double Left	'The left horizontal coordinate of the object on the web window is 100. WebWindow1.BezierCurve1.Left = 100
Name	Name	String Name	'Get the name of the specified object. WebWindow1.TextBox1.Text = WebWindow1.BezierCurve1.Name
RotateAngle	Rotation angle	Double RotateAngle	'Set the rotation angle of the specified object to 90 degrees. WebWindow1.BezierCurve1.RotateAngle = 90

Property	Description	Definition	Scripting Sample
StrokeThickness	Border thickness	Double StrokeThickness	'Set the border thickness of the object to 5.。 WebWindow1.BezierCurve1.StrokeThickness = 5
Top	Top position	Double Top	'The top vertical coordinate of the object on the web window is 100. WebWindow1.BezierCurve1.Top = 100
Width	Width	Double Width	'Set the width of the specified object to 100. WebWindow1.BezierCurve1.Width = 100

8. Closed Curve

The properties of a closed curve in the script are shown in the following figure.

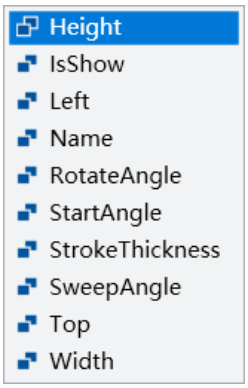


Property List:

Property	Description	Definition	Scripting Sample
Background	Fill color	String Background	'Set the fill color of ClosedCurve1 to green. WebWindow1.ClosedCurve1. Background=Colors.Red
Height	Height	Double Height	'Set the height of ClosedCurve1 to 100. WebWindow1.ClosedCurve1.Height=100
IsShow	Display or hide the selected object	Boolean IsShow	'True: ClosedCurve1 is displayed on the web window. WebWindow1.ClosedCurve1.IsShow=True 'False: ClosedCurve1 is hidden on the web window. WebWindow1.ClosedCurve1.IsShow=False
Left	Left position	Double Left	'The left horizontal coordinate of ClosedCurve1 on the web window is 100. WebWindow1.ClosedCurve1.Left=100
Name	Name	String Name	'Get the name of ClosedCurve1 and show it in the textbox. WebWindow1.TextBox1.Text=WebWindow1.ClosedCurve1.Name
Opacity	Opacity	Double Opacity	'Set the opacity of ClosedCurve1 to 8%. WebWindow1.ClosedCurve1.Opacity=80
RotateAngle	Rotation angle	Double RotateAngle	'Set the rotation angle of ClosedCurve1 to 90 degrees. WebWindow1.ClosedCurve1.RotateAngle=90
StrokeThickness	Border thickness	Double StrokeThickness	'Set the border thickness of ClosedCurve1 to 10. WebWindow1.ClosedCurve1.StrokeThickness=10
Top	Top position	Double Top	'The top vertical coordinate of ClosedCurve1 on the web window is 50. WebWindow1.ClosedCurve1.Top=50
Width	Width	Double Width	'Set the width of ClosedCurve1 on the web window to 100. WebWindow1.ClosedCurve1. Width=100

9. Arc

The properties of an arc control in the script are shown in the following figure.



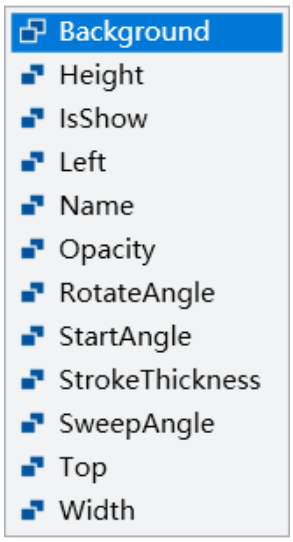
Property List:

Property	Description	Definition	Scripting Sample
Height	Height	Double Height	'Set the height of Arc1 to 100. WebWindow1.Arc1.Height = 100
IsShow	Display or hide the selected object	Boolean IsShow	'True: Arc1 is displayed on the web window. WebWindow1.Arc1.IsShow = True 'False: Arc1 is hidden on the web window. WebWindow1.Arc1.IsShow = False
Left	Left position	Double Left	'The left horizontal coordinate of Arc1 on the web window is 100. WebWindow1.Arc1.Left = 100
Name	Name	String Name	'Get the name of Arc1. WebWindow1.TextBox1.Text =WebWindow1.Arc1.Name
RotateAngle	Rotation angle	Double RotateAngle	'Set the rotation angle of Arc1 to 90. WebWindow1.Arc1.RotateAngle = 90
StartAngle	Start angle	Double StartAngle	'The start angle of Arc1 is 90 degrees. WebWindow1.Arc1.StartAngle = 90
StrokeThickness	Line thickness	Double StrokeThickness	'Set the line thickness of Arc1 to 5. WebWindow1.Arc1.StrokeThickness = 5
SweepAngle	Sweep angle	Double SweepAngle	'The sweep angle of Arc1 is 90 degrees. WebWindow1.Arc1.SweepAngle = 90
Top	Top position	Double Top	'The top vertical coordinate of Arc1 on the web window is 100.

Property	Description	Definition	Scripting Sample
			WebWindow1.Arc1.Top = 100
Width	Width	Double Width	'Set the width of Arc1 to 100. WebWindow1.Arc1.Width = 100

10. Arch

The properties of an arch control in the script are shown in the following figure.



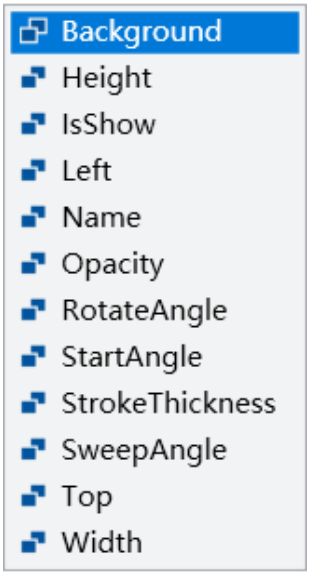
Property List:

Property	Description	Definition	Scripting Sample
Background	Fill color	Object Background	'Set the fill color of the specified object to red. WebWindow0.Arch1.Background=Colors.Red
Height	Height	Double Height	'Set the height of the specified object to 100. WebWindow1.Arch1.Height = 100
IsShow	Display or hide the selected object	Boolean IsShow	'True: The specified object is displayed on the web window. WebWindow1.Arch1.IsShow = True 'False: The specified object is hidden on the web window. WebWindow1.Arch1.IsShow = False
Left	Left position	Double Left	'The left horizontal coordinate of the object on the web window is 100. WebWindow1.Arch1.Left = 100
Name	Name	String Name	'Get the name of the specified object. WebWindow1.TextBox1.Text =WebWindow1.Ar

Property	Description	Definition	Scripting Sample
			ch1.Name
Opacity	Opacity	Double Opacity	'The opacity of the specified object is 50. WebWindow0.Arch1.Opacity = 50
RotateAngle	Rotation angle	Double RotateAngle	'Set the rotation angle of the specified object to 90. WebWindow1.Arch1.RotateAngle = 90
StartAngle	Start angle	Double StartAngle	'Set the start angle of Arch1 to 90 degrees. WebWindow1.Arch1.StartAngle = 90
StrokeThickness	Border thickness	Double StrokeThickness	'Set the border thickness of Arch1 to 5. WebWindow1.Arch1.StrokeThickness = 5
SweepAngle	Sweep angle	Double SweepAngle	'Set the sweep angle of Arch1 to 90 degrees. WebWindow1.Arch1.SweepAngle = 90
Top	Top position	Double Top	'The top vertical coordinate of the object on the web window is 100. WebWindow1.Arch1.Top = 100
Width	Width	Double Width	'Set the width of the specified object to 100. WebWindow1.Arch1.Width = 100

11. Pie

The properties of a pie in the script are shown in the following figure.



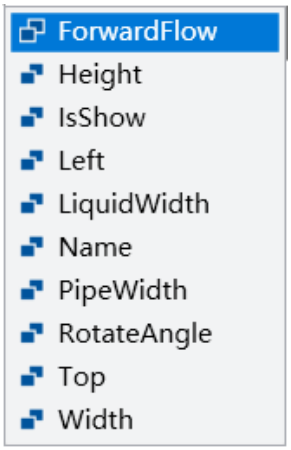
Property List:

Property	Description	Definition	Scripting Sample
Background	Fill color	Object Background	'Set the fill color of the specified object to red. WebWindow0.Pie1.Background=Colors.Red
Height	Height	Double Height	'Set the height of Pie1 to 100. WebWindow1.Pie1.Height = 100
IsShow	Display or hide the selected object	Boolean IsShow	'True: Pie1 is displayed on the web window. WebWindow1.Pie1.IsShow = True 'False: Pie1 is hidden on the web window. WebWindow1.Pie1.IsShow = False
Left	Left position	Double Left	'The left horizontal coordinate of Pie1 on the web window is 100. WebWindow1.Pie1.Left = 100
Name	Name	String Name	'Get the name of Pie1. WebWindow1.TextBox1.Text =WebWindow1.Pie1.Name
Opacity	Opacity	Double Opacity	'Set the opacity of Pie1. WebWindow0.Pie1.Opacity = 50
RotateAngle	Rotation angle	Double RotateAngle	'Set the rotation angle of Pie1 to 90. WebWindow1.Pie1.RotateAngle = 90

Property	Description	Definition	Scripting Sample
Start Angle	Start angle	Double Start Angle	'The start angle of Pie1 is 90 degrees. WebWindow1.Pie1.StartAngle = 90
Stroke Thickness	Border thickness	Double Stroke Thickness	'Set the line thickness of Pie1 to 5. WebWindow1.Pie1.StrokeThickness = 5
Sweep Angle	Sweep angle	Double Sweep Angle	'The sweep angle of Pie1 is 90 degrees. WebWindow1.Pie1.SweepAngle = 90
Top	Top position	Double Top	'The top vertical coordinate of Pie1 on the web window is 100. WebWindow1.Pie1.Top = 100
Width	Width	Double Width	'Set the width of Pie1 to 100. WebWindow1.Pie1.Width = 100

12. Pipe

The properties of a pipe control in the script are shown in the following figure.



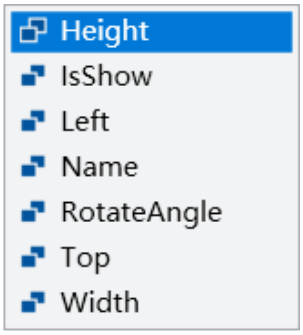
Property List:

Property	Description	Definition	Scripting Sample
ForwardFlow	Liquid flow direction	Boolean ForwardFlow	'True: Forward flow WebWindow1.Pipe1.ForwardFlow=True 'False: Reverse flow WebWindow1.Pipe1.ForwardFlow=False
Height	Height	Double Height	'Set the height of Pipe1 to 100. WebWindow1.Pipe1.Height = 100
IsShow	Display or hide the selected object	Boolean IsShow	'True: Pipe1 is displayed on the web window. WebWindow1.Pipe1.IsShow = True 'False: Pipe1 is hidden on the web window.

Property	Description	Definition	Scripting Sample
			WebWindow1.Pipe1.IsShow = False
Left	Left position	Double Left	'The left horizontal coordinate of Pipe1 on the web window is 100. WebWindow1.Pipe1.Left = 100
LiquidWidth	Liquid width	Double LiquidWidth	'Set the liquid width of Pipe1 to 30. WebWindow1.Pipe1.LiquidWidth=30
Name	Name	String Name	'Get the name of Pipe1. WebWindow1.TextBox1.Text =WebWindow1.Pipe1.Name
PipeWidth	Pipe width	Double PipeWidth	'Set the pipe width of Pipe1 to 100. WebWindow1.Pipe1.PipeWidth=100
RotateAngle	Rotation angle	Double RotateAngle	'Set the rotation angle of Pipe1 to 90. WebWindow1.Pipe1.RotateAngle = 90
Top	Top position	Double Top	'The top vertical coordinate of Pipe1 on the web window is 100. WebWindow1.Pipe1.Top = 100
Width	Width	Double Width	'Set the width of Pipe1 to 100. WebWindow1.Pipe1.Width = 100

13. Group

The properties of a control group in the script are shown in the following figure.



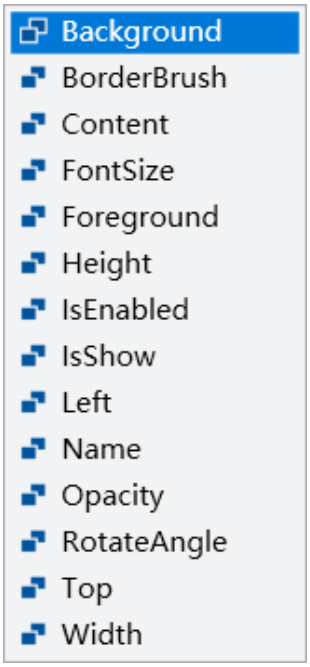
Property List:

Property	Description	Definition	Scripting Sample
Height	Height	Double Height	'Set the height of Group1 to 100. WebWindow1.Group1.Height = 100
IsShow	Display or hide the selected object	Boolean IsShow	'True: Group1 is displayed on the web window. WebWindow1. Group1.IsShow = True 'False: Group1 is hidden on the web window. WebWindow1.Group1.IsShow = False
Left	Left position	Double Left	'The left horizontal coordinate of Group1 on the web window is 100. WebWindow1.Group1.Left = 100
Name	Name	String Name	'Get the name of Group1. WebWindow1.TextBox1.Text =WebWindow1.Group1.Name
RotateAngle	Rotation angle	Double RotateAngle	'Set the rotation angle of Group1 to 90. WebWindow1.Group1.RotateAngle = 90
Top	Top position	Double Top	'The top vertical coordinate of Group1 on the web window is 100. WebWindow1.Group1.Top = 100
Width	Width	Double Width	'Set the width of Group1 to 100. WebWindow1.Group1.Width = 100

12.3.1.2 Window Controls

1. Button

The properties of a button control in the script are shown in the following figure.



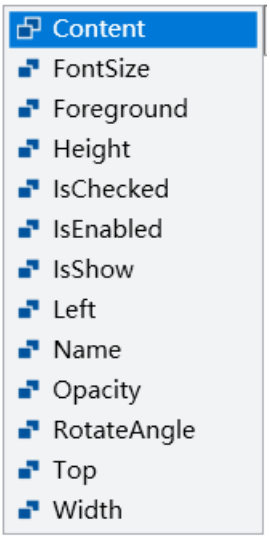
Property List:

Property	Description	Definition	Scripting Sample
Background	Fill color	Object Background	'Set the fill color of the specified object to Red. WebWindow0.Button1.Background=Colors.Red
BorderBrush	Border color	Object BorderBrush	'Set the border color of the specified object to Blue. WebWindow0.Button1.BorderBrush = Colors.Blue
Content	Text content	String Content	'Get or set the text content of Buttion1 WebWindow0.Button1.Content = "Delta"
FontSize	Font size	Double FontSize	'Set the font size of the specified object to 20. WebWindow0.Button1.FontSize = 20
Foreground	Foreground color	Object Foreground	'Set the foreground color of the specified object to Yellow WebWindow0.Button1.Foreground = Colors.Yellow

Property	Description	Definition	Scripting Sample
Height	Height	Double Height	'Set the height of the specified object to 100. WebWindow0.Button1.Height = 100
IsEnabled	Enable or disable	Boolean IsEnabled	'Enable the control. WebWindow0.Button1.IsEnabled = True 'Disable the control. WebWindow0.Button1.IsEnabled = False
IsShow	Display or hide the selected object	Boolean IsShow	'True: The specified object is displayed on the web window. WebWindow0.Button1.IsShow = True 'False: The specified object is hidden on the web window. WebWindow0.Button1.IsShow = False
Left	Left position	Double Left	'The left horizontal coordinate of the object on the web window is 100. WebWindow0.Button1.Left = 100
Name	Name	String Name	'Get the name of the specified object. WebWindow0.TextBox1.Text = WebWindow0.Button1.Name
Opacity	Opacity	Double Opacity	'The opacity of the specified object WebWindow0.Button1.Opacity = 50
RotateAngle	Rotation angle	Double RotateAngle	'Set the rotation angle of the specified object to 90 degrees. WebWindow0.Button1.RotateAngle = 90
Top	Top position	Double Top	'The top vertical coordinate of the object on the web window is 100. WebWindow0.Button1.Top = 100
Width	Width	Double Width	'Set the width of the specified object to 100. WebWindow0.Button1.Width = 100

2. Check Box

The properties of a check box in the script are shown in the following figure.



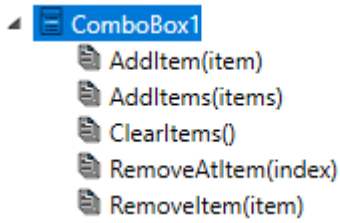
Property List:

Property	Description	Definition	Scripting Sample
Content	Text content	String Content	'Get or set the text content of CheckBox1. WebWindow0.CheckBox1.Content = "Delta"
FontSize	Font size	Double FontSize	'Set the font size of the specified object to WebWindow0.CheckBox1.FontSize = 20
Foreground	Foreground color	Object Foreground	'Set the foreground color of the specified object to Yellow. WebWindow0.CheckBox1.Foreground = Colors.Yellow
Height	Height	Double Height	'Set the height of the specified object to 100. WebWindow0.CheckBox1.Height = 100
IsChecked	Selected or not	Boolean IsChecked	'The control is selected. WebWindow0.CheckBox1.IsChecked = True 'The control is unselected. WebWindow0.CheckBox1.IsChecked=False
IsEnabled	Enabled or not	Boolean IsEnabled	'The control is enabled. WebWindow0.CheckBox1.IsEnabled = True 'The control is disabled. WebWindow0.CheckBox1.IsEnabled = False
IsShow	Display or hide the selected object	Boolean IsShow	'True: The specified object is displayed on the web window. WebWindow0.CheckBox1.IsShow = True 'False: The specified object is hidden on the web window. WebWindow0.CheckBox1.IsShow = False
Left	Left position	Double Left	'The left horizontal coordinate of the object on the web windo 100.

Property	Description	Definition	Scripting Sample
			WebWindow0.CheckBox1.Left = 100
Name	Name	String Name	'Get the name of the specified object. WebWindow0.TextBox1.Text = WebWindow0.CheckBox1.Nar
Opacity	Opacity	Double Opacity	'The opacity of the specified object WebWindow0.CheckBox1.Opacity = 50
RotateAngle	Rotation angle	Double RotateAngle	'Set the rotation angle of the specified object to 90 degrees. WebWindow0.CheckBox1.RotateAngle = 90
Top	Top position	Double Top	'The top vertical coordinate of the object on the web window 100. WebWindow0.CheckBox1.Top = 100
Width	Width	Double Width	'Set the width of the specified object to 100. WebWindow0.CheckBox1.Width = 100

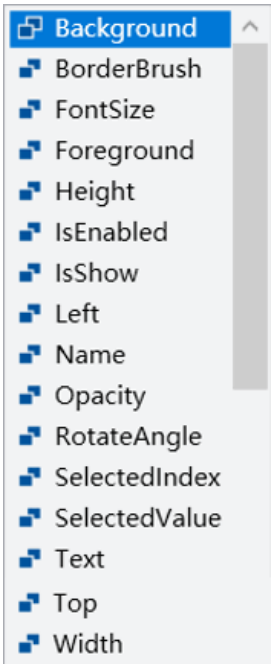
3. Combo Box

You can perform the following operations for a combo box in a script.



Operation	Description	Parameter	Scripting Sample
AddItem(item)	Add an item.	The item parameter is required, with the data type of String.	'Add the item A. WebWindow1.ComboBox1.AddItem("A")
AddItems(items)	Add an item set	The items are required, separated by a comma and with the data type of String	'Add a set of items A, B and C. WebWindow1.ComboBox1.AddItems("A,B,C")
ClearItems()	Clear the item set.	_____	'Clear all items in the set. WebWindow1.ComboBox1.ClearItems()
RemoveAtItem(index)	Remove the specified item according to the index.	The index parameter is required, with the data type of Int.	'Remove the first item in ComboBox1. WebWindow1.ComboBox1.RemoveAtItem(0)
RemoveItem(item)	Remove the specified item	The item parameter is required, with the data type of String.	'Remove the specified item A. WebWindow1.ComboBox1.RemoveItem("A")

The properties of a combo box in the script are shown in the following figure.



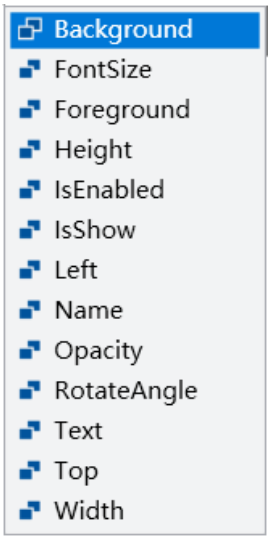
Property List:

Property	Description	Definition	Scripting Sample
Background	Background color	Object Background	'Set the background color of the specified object to Yellow. WebWindow1.ComboBox1.Background=Colors.Yellow
BorderBrush	Border color	Object BorderBrush	'Set the border color of the specified object to Red. WebWindow1.ComboBox1.BorderBrush=Colors.Red
FontSize	Font size	Double FontSize	'Set the font size of the text of the specified object to 20. WebWindow1.ComboBox1.FontSize=20
Foreground	Foreground color	Object Foreground	'Set the foreground color of the specified object to Blue. WebWindow1.ComboBox1.Foreground=Colors.Blue
Height	Height	Double Height	'Set the height of the specified object to 100. WebWindow1.ComboBox1.Height=100
IsEnabled	Enable	Boolean IsEnabled	'Enable the control. WebWindow1.ComboBox1.IsEnabled=True
IsShow	Display or hide the selected object	Boolean IsShow	'True: The specified object is displayed on the web window. WebWindow1.ComboBox1.IsShow=True 'False: The specified object is hidden on the web

Property	Description	Definition	Scripting Sample
			window. WebWindow1.ComboBox1.IsShow = False
Left	Left position	Double Left	'The left horizontal coordinate of the object on the web window is 100. WebWindow1.ComboBox1.Left = 100
Name	Name	String Name	'Get the name of the specified object. WebWindow1.TextBox1.Text = WebWindow1.ComboBox1.Name
Opacity	Opacity	Double Opacity	'The opacity of the specified object is 50. WebWindow1.ComboBox1.Opacity=50
RotateAngle	Rotation angle	Double RotateAngle	'Set the rotation angle of the specified object to 90. WebWindow1.ComboBox1.RotateAngle = 90
SelectedIndex	Get or set the index of the 1st item. (It returns -1 for a null selection.)	Int32 SelectedIndex	'Select the first item in ComboBox1. WebWindow1.ComboBox1.SelectedIndex=0
SelectedValue	Select a value	String SelectedValue	'Select A in ComboBox1. WebWindow1.ComboBox1.SelectedValue="A"
Text	Set or get text content	String Text	'Set the text content of ComboBox1 to A. WebWindow1.ComboBox1.Text="A"
Top	Top position	Double Top	'The top vertical coordinate of the object on the web window is 100. WebWindow1.ComboBox1.Top = 100
Width	Width	Double Width	'Set the width of the specified object to 100. WebWindow1.ComboBox1.Width = 100

4. Label

The properties of a label control in the script are shown in the following figure.



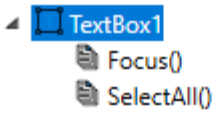
Property List:

Property	Description	Definition	Scripting Sample
Background	Background color	Object Background	'Set the background color of the specified object to Yellow. WebWindow1.Label1.Background = Colors.Yellow
FontSize	Font size	Double FontSize	'Set the font size of the text content of the object to 20. WebWindow1.Label1.FontSize=20
Foreground	Foreground color	Object Foreground	'Set the foreground color of the specified object to Blue. WebWindow1.Label1.Foreground = Colors.Blue
Height	Height	Double Height	'Set the height of the specified object to 100. WebWindow1.Label1.Height=100
IsEnabled	Enable	Boolean IsEnabled	'Enable the control. WebWindow1.Label1.IsEnabled=True
IsShow	Display or hide the selected object	Boolean IsShow	'True: The specified object is displayed on the web window. WebWindow1.Label1.IsShow=True 'False: The specified object is hidden on the web window. WebWindow1.Label1.IsShow = False
Left	Left position	Double Left	'The left horizontal coordinate of the object on the web window is 100. WebWindow1.Label1.Left = 100

Property	Description	Definition	Scripting Sample
Name	Name	String Name	'Get the name of the specified object. WebWindow1.TextBox1.Text = WebWindow1.Label1.Na...
Opacity	Opacity	Double Opacity	'The opacity of the specified object is 50. WebWindow1.Label1.Opacity=50
RotateAngle	Rotation angle	Double RotateAngle	'Set the rotation angle of the specified object to 90. WebWindow1.Label1.RotateAngle = 90
Text	Set or get text content	String Text	'Set the text content of Label1 to A. WebWindow1.Label1.Text="A"
Top	Top position	Double Top	'The top vertical coordinate of the object on the web window is 100. WebWindow1.Label1.Top = 100
Width	Width	Double Width	'Set the width of the specified object to 100. WebWindow1.Label1.Width = 100

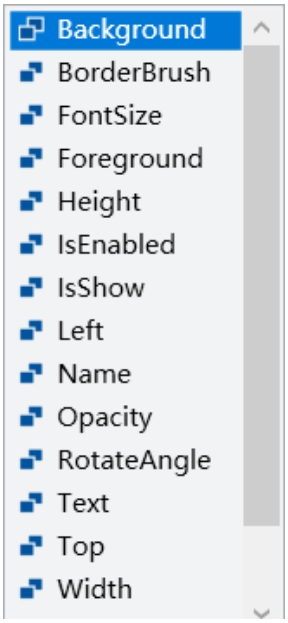
5. Text Box

You can perform the following operations for a text box in a script.



Operation	Description	Scripting Sample
Focus()	Set the focus on this control.	'The focus is on TextBox1. WebWindow1.TextBox1.Focus()
SelectAll()	Select all contents of the text box	'Select all contents in TextBox1. (Note: set the focus on the textbox first.) WebWindow1.TextBox1.Focus() WebWindow1.TextBox1.SelectAll()

The properties of a text box in the script are shown in the following figure.



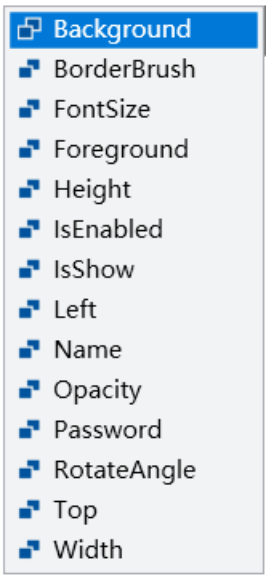
Property List:

Property	Description	Definition	Scripting Sample
Background	Background color	Object Background	'Set the background color of the specified object to Yellow. WebWindow1.TextBox1.Background = Colors.Yellow
BorderBrush	Border color	Object BorderBrush	'Set the border color of the specified object to Red. WebWindow1.TextBox1.BorderBrush = Colors.Red
FontSize	Font size	Double FontSize	'Set the font size of the text content of the object to 20. WebWindow1.TextBox1.FontSize=20
Foreground	Foreground color	Object Foreground	'Set the foreground color of the specified object to Blue. WebWindow1.TextBox1.Foreground = Colors.Blue
Height	Height	Double Height	'Set the height of the specified object to 100. WebWindow1.TextBox1.Height=100
IsEnabled	Enable	Boolean IsEnabled	'Enable the control. WebWindow1.TextBox1.IsEnabled=True

Property	Description	Definition	Scripting Sample
IsShow	Display or hide the selected object	Boolean IsShow	'True: The specified object is displayed on the web window. WebWindow1.TextBox1.IsShow=True 'False: The specified object is hidden on the web window. WebWindow1.TextBox1.IsShow = False
Left	Left position	Double Left	'The left horizontal coordinate of the object on the web window is 100. WebWindow1.TextBox1.Left = 100
Name	Name	String Name	'Get the name of the specified object. WebWindow1.TextBox1.Text = WebWindow1.TextBox1.Name
Opacity	Opacity	Double Opacity	'The opacity of the specified object WebWindow1.TextBox1.Opacity=50
RotateAngle	Rotation angle	Double RotateAngle	'Set the rotation angle of the specified object to 90. WebWindow1.TextBox1.RotateAngle = 90
Text	Set or get text content	String Text	'Set the text content of TextBox1 to A. WebWindow1.TextBox1.Text="A"
Top	Top position	Double Top	'The top vertical coordinate of the object on the web window is 100. WebWindow1.TextBox1.Top = 100
Width	Width	Double Width	'Set the width of the specified object to 100. WebWindow1.TextBox1.Width = 100

6. Password Box

The properties of a password box in the script are shown in the following figure.



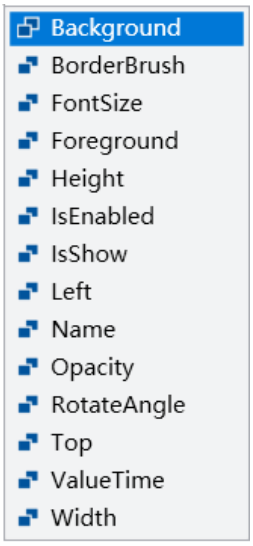
Property List:

Property	Description	Definition	Scripting Sample
Background	Background color	Object Background	'Set the background color of the specified object to red. WebWindow0.PasswordBox1.Background=Colors.Red
BorderBrush	Border color	Object BorderBrush	'Set the border color of the specified object to Blue. WebWindow0.PasswordBox1.BorderBrush = Colors.Blue
FontSize	Font size	Double FontSize	'Set the font size of the specified object to 20. WebWindow0.PasswordBox1.FontSize = 20
Foreground	Foreground color	Object Foreground	'Set the foreground color of the specified object to Yellow. WebWindow0.PasswordBox1.Foreground = Colors.Yellow
Height	Height	Double Height	'Set the height of the specified object to 100. WebWindow0.PasswordBox1.Height = 100
IsEnabled	Enable or not	Boolean IsEnabled	'Enable the control. WebWindow0.PasswordBox1.IsEnabled = True 'Disable the control. WebWindow0.PasswordBox1.IsEnabled = False
IsShow	Display or	Boolean	'True: The specified object is displayed on the web

Property	Description	Definition	Scripting Sample
	hide the selected object	IsShow	window. WebWindow0.PasswordBox1.IsShow = True 'False: The specified object is hidden on the web window. WebWindow0.PasswordBox1.IsShow = False
Left	Left position	Double Left	'The left horizontal coordinate of the object on the web window is 100. WebWindow0.PasswordBox1.Left = 100
Name	Name	String Name	'Get the name of the specified object. WebWindow0.TextBox1.Text = WebWindow0.PasswordBox1.Name
Opacity	Opacity	Double Opacity	'The opacity of the specified object WebWindow0.PasswordBox1.Opacity = 50
Password	Password	String Password	'Set the password. WebWindow0.PasswordBox1.Password = “123456”
RotateAngle	Rotation angle	Double RotateAngle	'Set the rotation angle of the specified object to 90 degrees. WebWindow0.PasswordBox1.RotateAngle = 90
Top	Top position	Double Top	'The top vertical coordinate of the object on the web window is 100. WebWindow0.PasswordBox1.Top = 100
Width	Width	Double Width	'Set the width of the specified object to 100. WebWindow0.PasswordBox1.Width = 100

7. Date Time Picker

The properties of a date time picker in the script are shown in the following figure.



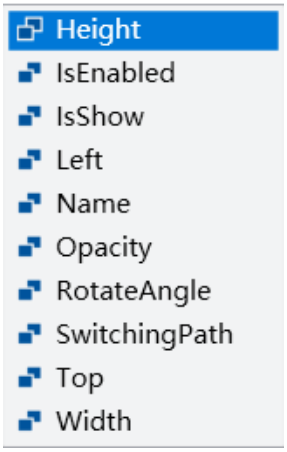
Property List:

Property	Description	Definition	Scripting Sample
Background	Background color	Object Background	'Set the background color of the specified object to Yellow. WebWindow1.DateTimePicker1.Background = Colors.Yellow
BorderBrush	Border color	Object BorderBrush	'Set the border color of the specified object to Red. WebWindow1.DateTimePicker1.BorderBrush = Colors.Red
FontSize	Font size	Double FontSize	'Set the font size of the text of the specified object to 20. WebWindow1.DateTimePicker1.FontSize=20
Foreground	Foreground color	Object Foreground	'Set the foreground color of the specified object to Blue. WebWindow1.DateTimePicker1.Foreground = Colors.Blue
Height	Height	Double Height	'Set the height of the specified object to 100. WebWindow1.DateTimePicker1.Height=100
IsEnabled	Enable	Boolean IsEnabled	'Enable the control. WebWindow1.DateTimePicker1.IsEnabled=True
IsShow	Display or hide the selected object	Boolean IsShow	'True: The specified object is displayed on the web window. WebWindow1.DateTimePicker1.IsShow=True 'False: The specified object is hidden on the web

Property	Description	Definition	Scripting Sample
			window. WebWindow1.DateTimePicker1.IsShow = False
Left	Left position	Double Left	'The left horizontal coordinate of the object on the web window is 100. WebWindow1.DateTimePicker1.Left = 100
Name	Name	String Name	'Get the name of the specified object. WebWindow1.TextBox1.Text = WebWindow1.DateTimePicker1.Name
Opacity	Opacity	Double Opacity	'The opacity of the specified object WebWindow1.DateTimePicker1.Opacity=50
RotateAngle	Rotation angle	Double RotateAngle	'Set the rotation angle of the specified object to 90. WebWindow1.DateTimePicker1.RotateAngle = 90
Top	Top position	Double Top	'The top vertical coordinate of the object on the web window is 100. WebWindow1.DateTimePicker1.Top = 100
ValueTime	Display the time value	String ValueTime	'Display the time value WebWindow1.Label1.Text = WebWindow1.DateTimePicker1.ValueTime
Width	Width	Double Width	'Set the width of the specified object to 100. WebWindow1.DateTimePicker1.Width = 100

8. Image

The properties of an image in the script are shown in the following figure.



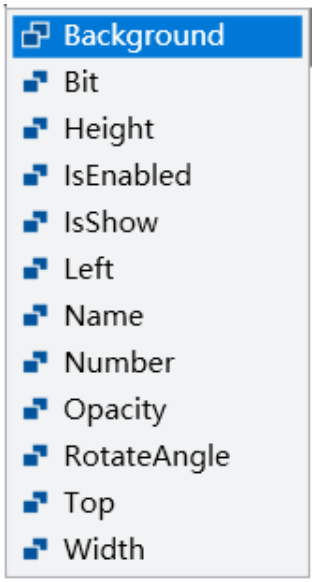
Property List:

Property	Description	Definition	Scripting Sample
Height	Height	Double Height	'Set the height of Image1 to 100. WebWindow1.Image1.Height=100
IsEnabled	Enabled or not	Boolean IsEnabled	'The control is enabled. WebWindow1.Image1.IsEnabled=True
IsShow	Display or hide the selected object	Boolean IsShow	'Image1 is displayed on the web window. WebWindow1.Image1.IsShow=True 'Image1 is hidden on the web window. WebWindow1.Image1.IsShow=False
Left	Left position	Double Left	'Set the left horizontal coordinate of Image1 on the w window to 100. WebWindow1.Image1.Left=100
Name	Name	String Name	'Get the name of Image1 and show it in the textbox. WebWindow1.TextBox1.Text=WebWindow1.Image1.Na
Opacity	Opacity	Double Opacity	'Set the opacity of Image1 to 8 WebWindow1.Image1.Opacity=80
RotateAngle	Rotation angle	Double RotateAngle	'Set the rotation angle of Image1 to WebWindow1.Image1.RotateAngle=90
SwitchingPath	Image path	String SwitchingPath	'Switch the image display in Image1 to “123.jpg” pict under “Image” folder (Only the existing pictures in project folder under a relative path can be switched to.) WebWindow0.Image1.SwitchingPath="/Image/123.jpg"
Top	Top position	Double Top	'Set the top vertical coordinate of Image1 on the w window to 50.

Property	Description	Definition	Scripting Sample
			WebWindow1.Image1.Top=50
Width	Width	Double Width	'Set the width of Image1 to 100. WebWindow1.Image1.Width=100

9. Nixie Tube

The properties of a Nixie tube in the script are shown in the following figure.



Property List:

Property	Description	Definition	Scripting Sample
Background	Background color	Object Background	'Set the background color of the specified object to Yellow. WebWindow1.NixieTube1.Background = Colors.Yellow
Bit	Decimal places	Int Bit	'Set the number of decimal places to 5. WebWindow1.NixieTube1.Bit = 5
Height	Height	Double Height	'Set the height of the specified object to 100. WebWindow1.NixieTube1.Height=100
IsEnabled	Enable	Boolean IsEnabled	'Enable the control. WebWindow1.NixieTube1.IsEnabled=True
IsShow	Display or hide the selected object	Boolean IsShow	'True: The specified object is displayed on the web window. WebWindow1.NixieTube1.IsShow=True 'False: The specified object is hidden on the web window.

Property	Description	Definition	Scripting Sample
			WebWindow1.NixieTube1.IsShow = False
Left	Left position	Double Left	'The left horizontal coordinate of the object on the web window is 100. WebWindow1.NixieTube1.Left = 100
Name	Name	String Name	'Get the name of the specified object. WebWindow1.TextBox1.Text = WebWindow1.NixieTube1.Name
Number	Number display	Double Number	'Set the value displayed in NixieTube1. WebWindow1.NixieTube1.Number=1.23456
Opacity	Opacity	Double Opacity	'The opacity of the specified object WebWindow1.NixieTube1.Opacity=50
RotateAngle	Rotation angle	Double RotateAngle	'Set the rotation angle of the specified object to 90. WebWindow1.NixieTube1.RotateAngle = 90
Top	Top position	Double Top	'The top vertical coordinate of the object on the web window is 100. WebWindow1.NixieTube1.Top = 100
Width	Width	Double Width	'Set the width of the specified object to 100. WebWindow1.NixieTube1.Width = 100

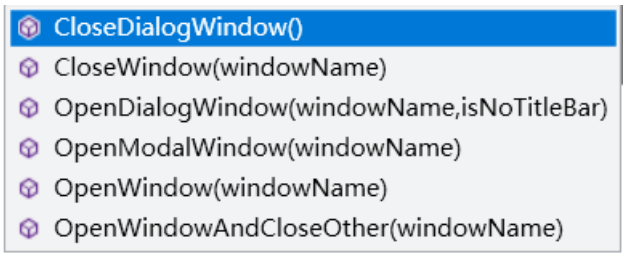
12.3.1.3 Command

- **HMICmd Object**

HMICmd

HMICmd is used for calling the commands of opening and closing windows.

- **Command List**



- **CloseDialogWindow**

This closes a dialog window.

Definition:

CloseDialogWindow()

Example:

Close the dialog window which is open.

VBScript Example
HMICmd.CloseDialogWindow()

Note: The event script to be executed must be placed in the same window as the dialog window to be closed.

- **CloseWindow**

This closes a window.

Definition:

CloseWindow(windowName)

Parameter:

Name	Required / optional	Data type	Description
windowName	Required	**String**	Window name

Example:

Close the window of WebWindow0. Close the windows of WebWindow0, WebWindow1 and WebWindow2. Employ the same way for closing more web windows.

VBScript Example
HMICmd.CloseWindow("WebWindow0") or HMICmd.CloseWindow("WebWindow0,WebWindow1,WebWindow2")

- **OpenDialogWindow**

This opens a dialog window.

Definition:

OpenDialogWindow(windowName,isShowTitle)

Parameters:

Parameter name	Required / optional	Data type	Description
windowName	Required	**String**	Window name
isShowTitle	Required	**Bool**	Whether or not to show the title

Example:

Open a dialog window.

VBScript Example
Call HMICmd.OpenDialogWindow("WebWindow0",true)

- **OpenWindow**

This opens a window.

Definition:

OpenWindow(windowName)

Parameter:

Parameter name	Required/optional	Data type	Description
windowName	Required	**String**	Window name

Example:
Open both WebWindow0 and WebWindow1.

VBScript Example
HMICmd.OpenWindow("WebWindow0, WebWindow1")

- **OpenWindowAndCloseOther**

This just opens the specified window(s) and closes other window(s).

Definition:

OpenWindowAndCloseOther(windowName)

Parameter:

Parameter name	Required / optional	Data type	Description
windowName	Required	**String**	Window name

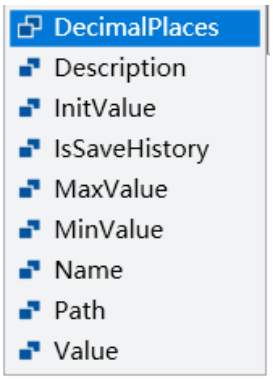
Example:
Open the windows of WebWindow0 and WebWindow1 and close other windows that are open.

VBScript Example
HMICmd.OpenWindowAndCloseOther("WebWindow0, WebWindow1")

12.3.2 Variable

12.3.2.1 AnalogVariable Object

The following figure shows the properties of an analog variable in a script.



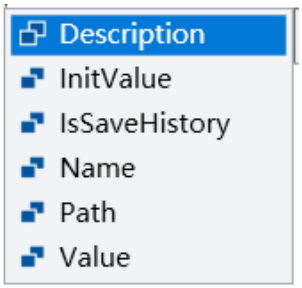
Property List:

Property	Description	Scripting Sample
DecimalPlaces	Number of decimal places	'Get the number of decimal places of the specified variable. WebWindow0.TextBox0.Text=Var.Cloud.tag1.DecimalPlaces
Description	Variable description	'Get the description of the specified variable. WebWindow0.TextBox0.Text=Var.Local.Variable.Description
InitValue	Initial value	'Get the initial value of the specified variable. WebWindow0.TextBox0.Text=Var.Cloud.tag1.InitValue
IsSaveHistory	Whether to save the history records (Only for Cloud tags)	'Get the setting of the history records of the specified variable, which are to be saved or not. WebWindow0.TextBox0.Text=Var.Cloud.tag1.IsSaveHistory
MaxValue	Maximum value	'Get the maximum value of the specified variable. WebWindow0.TextBox0.Text=Var.Local.Variable.MaxValue
MinValue	Minimum value	'Get the minimum value of the specified variable. WebWindow0.TextBox0.Text=Var.Local.Variable.MinValue
Name	Name	'Get the variable name of the specified variable. WebWindow0.TextBox0.Text=Var.Local.Variable.Name
Path	Path	'Get the path of the specified variable. WebWindow0.TextBox0.Text=Var.Cloud.tag1.Path

Property	Description	Scripting Sample
Value	Variable value	'Get the current value of the specified variable. WebWindow0.TextBox0.Text=Var.Cloud.tag1.Value

12.3.2.2 DigitalVariable Object

The following figure shows the properties of a digital variable in a script.

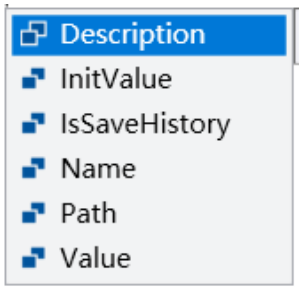


Property List:

Property	Description	Scripting Sample
Description	Variable description	'Get the description of the specified variable. WebWindow0.TextBox0.Text=Var.Local.Variable.Description
InitValue	Initial value	'Get the initial value of the specified variable. WebWindow0.TextBox0.Text=Var.Cloud.tag1.InitValue
IsSaveHistory	Whether to save history records (only for cloud tags)	'Get whether the specified variable is set to save history records. WebWindow0.TextBox0.Text=Var.Cloud.tag1.IsSaveHistory
Name	Name	'Get the name of the specified variable. WebWindow0.TextBox0.Text=Var.Local.tag1.Name
Path	Path	'Get the path of the specified variable. WebWindow0.TextBox0.Text=Var.Cloud.tag1.Path
Value	Variable value	'Get the current value of the specified variable. WebWindow0.TextBox0.Text=Var.Cloud.tag1.Value

12.3.2.3 TextVariable Object

The following figure shows the properties of a text variable in a script.

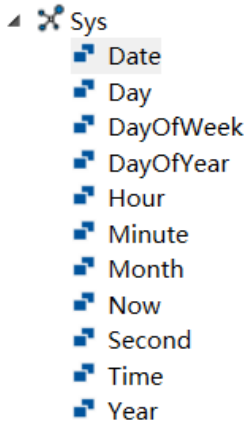


Property List:

Property	Description	Scripting Sample
Description	Variable description	'Get the description of the specified variable. WebWindow0.TextBox0.Text=Var.Local.Variable.Description
InitValue	Initial value	'Get the initial value of the specified variable. WebWindow0.TextBox0.Text=Var.Cloud.tag1.InitValue
IsSaveHistory	Whether to save history records (only for cloud tags)	'Get whether the specified variable is set to save history records. WebWindow0.TextBox0.Text=Var.Cloud.tag1.IsSaveHistory
Name	Name	'Get the name of the specified variable. WebWindow0.TextBox0.Text=Var.Local.Variable.Name
Path	Path	'Get the path of the specified variable. WebWindow0.TextBox0.Text=Var.Cloud.tag1.Path
Value	Variable value	'Get the current value of the specified variable. WebWindow0.TextBox0.Text=Var.Cloud.tag1.Value

12.3.2.4 SystemVariable Object

The following figure lists the system variable properties in a script.



Property List:

Property	Description	Scripting Sample
Date	The current date of the system	'The text of TextBox0 displays the current date of the system. WebWindow0.TextBox0.Text=Sys.Date
Day	The number of days of the current system date	'The text of TextBox0 displays the number of days of the current system date. WebWindow0.TextBox0.Text=Sys.Day
DayOfWeek	The day of week of the current system date	'The text of TextBox0 displays the day of week of the current system date. WebWindow0.TextBox0.Text=Sys.Day
DayOfYear	The day of year of the current system date	'The text of TextBox0 displays the day of year of the current system date. WebWindow0.TextBox0.Text=Sys.Day
Hour	The hours of the current system time	'The text of TextBox0 displays the hours of the current system time. WebWindow0.TextBox0.Text=Sys.Hour
Minute	The minutes of the current system time	'The text of TextBox0 displays the minutes of the current system time. WebWindow0.TextBox0.Text=Sys.Minute
Month	The month of the current system date	'The text of TextBox0 displays the month of the current system date. WebWindow0.TextBox0.Text=Sys.Month

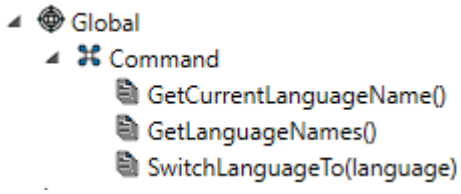
Property	Description	Scripting Sample
Now	The current date and time of the system	'The text of TextBox0 displays the current date and time of the system. WebWindow0.TextBox0.Text=Sys.Now
Second	The seconds of the current system time	'The text of TextBox0 displays the seconds of the current system time. WebWindow0.TextBox0.Text=Sys.Second
Time	The current system time	'The text of TextBox0 displays the current system time. WebWindow0.TextBox0.Text=Sys.Time
Year	The year of the current system date	'The text of TextBox0 displays the year of the current system date. WebWindow0.TextBox0.Text=Sys.Year

12.3.3 Global

12.3.3.1 LanguageCmd Object

LanguageCmd is used for calling the commands of getting the current language and all configured languages, as well as switching to the specified language.

- **Command list**



- **GetCurrentLanguageName**

GetCurrentLanguageName

This gets the current language name.

Definition:

GetCurrentLanguageName()

Example:

Get the current language name.

VBScript Example
Text0.Text = Languagecmd.GetCurrentLanguageName()

- **GetLanguageNames**

GetLanguageNames

This gets the names of all configured languages.

Definition:

GetLanguageNames()

Example:

Get the names of all configured languages.

VBScript Example
Text0.Text = LanguageCmd.GetLanguageNames()

- **SwitchLanguageTo**

SwitchLanguageTo

This switches the current language to the specified language.

Definition:

SwitchLanguageTo(language)

Parameter:

Parameter name	Required / optional	Data type	Description
language	Required	**String**	The specified language name

Example:

Switch the current language to English.

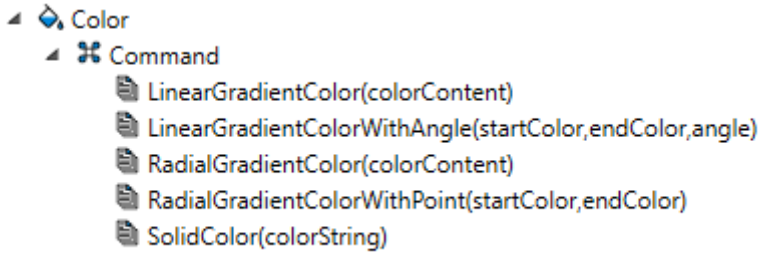
VBScript Example
LanguageCmd.SwitchLanguageTo("en")

12.3.4 Color

12.3.4.1 Colors Object

The Colors object is for writing the scripts of color commands.

- **Command list**



- **LinearGradientColor**

This sets a linear gradient color.

Definition:

LinearGradientColor(colorContent)

Parameter:

Parameter name	Required/optional	Data type	Description
colorContent	Required	**String**	Multiple sets of RGB color codes and offsets

Example:
Set the fill color of Rectangle0 to a linear gradient color.

VBScript Example
Rectangle0.Fill = Colors.LinearGradientColor("#FFFF8080,0;#FFC1FFFF,0.5;#FFFF8080,1;")

- **LinearGradientColorWithAngle**

This sets a linear gradient color with the gradient angle.

Definition:

LinearGradientColorWithAngle (startcolor, endcolor, angle)

Parameter:

Parameter name	Required / optional	Data type	Description
startcolor	Required	**String**	Starting color
endcolor	Required	**String**	Finishing color
angle	Required	**Double**	Gradient angle

Example:
Set the fill color of Rectangle0 to a linear gradient color (with the angel of 45 degrees).

VBScript Example
Rectangle0.Fill = Colors.LinearGradientColor("#FFFF80FF","#FF80FFFF",45)

- **RadialGradientColor**

This sets a radial gradient color.

Definition:

RadialGradientColor(colorContent)

Parameter:

Parameter name	Required / optional	Data type	Description
colorContent	Required	**String**	Multiple sets of RGB color codes and offsets

Example:
Set the fill color of Rectangle0 to a radial gradient color.

VBScript Example
Rectangle0.Fill = Colors.RadialGradientColor("#FFFFFFFF,0;#FFFFFFFF,0;#FF000000,1;")

- **RadialGradientColorWithPoint**

This sets a radial gradient color.

Definition:

RadialGradientColorWithPoint(startcolor, endcolor)

Parameters:

Parameter name	Required / optional	Data type	Description
startcolor	Required	**String**	Starting color
endcolor	Required	**String**	Finishing color

Example:
Set the fill color of Rectangle0 to a radial gradient color.

VBScript Example
Rectangle0.Fill = Colors. RadialGradientColorWithPoint ("#FFFF0000","#FF00FF00")

- **SolidColor**

This sets a single solid color.

Definition:

SolidColor(colorstring)

Parameter:

Parameter name	Required / optional	Data type	Description
colorstring	Required	**String**	Color code

Example:
Set the fill color of Rectangle0 to a single solid color.

VBScript Example
Rectangle0.Fill = Colors.SolidColor("#FFFF0000")