

DIAView

Recipe management

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Outline

- Recipe overview
- Recipe configuration
- Use of formula
- Recipe script

Purpose

After this chapter, you will learn...

- ... Basic operation and management of recipes
- ... The function of recipes and their scripts

Outline

- Recipe overview
- Recipe configuration
- Use of formula
- Recipe script

➤ What is recipe?

- In industrial production, a recipe is a prescription that provides a method for the product's ingredients and a proportion of materials used.
- In the DIAView configuration software is a collection of parameter values corresponding to variables in the production process. In the DIAView configuration software, you can view and maintain recipes through the “Recipe Browser” control, which is simple and efficient.





- Recipe overview
- **Recipe configuration**
- Use of formula
- Recipe script



➤ Recipe browser

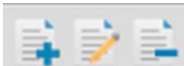

Recipe overview


	RecipeItemName	Flour(g)	Suger(g)	Egg(g)	Water(g)	Vanilla(g)	Redbean(g)
1	VanillaCake	50	10	10	30	20	0
2	RedBeanCake	10	10	30	0	20	50


Recipe Name:Recipe0

 All Detail about the selected recipe
  Save the recipe browser to image

 Change, switch columns and rows
  Save the recipe changes









 Add, Edit, Delete recipes
  Left: Write Recipe into Var.
Right: Write Var. into Recipe

 Left: import recipe from xls
Right: export xls into recipe

 Switch between recipes

➤ Recipe configuration

Recipe overview

 Add element  Insert element  Delete element  Add item  Insert item  Delete item  Import  Export						
	Name	RecipeType	Associated variables	Description	VanillaCake	RedBeanCake
1	Flour	Analog	Var.Variable1	High quality flour	50	50
2	Suger	Analog	Var.Variable2	Crystal sugar	10	10

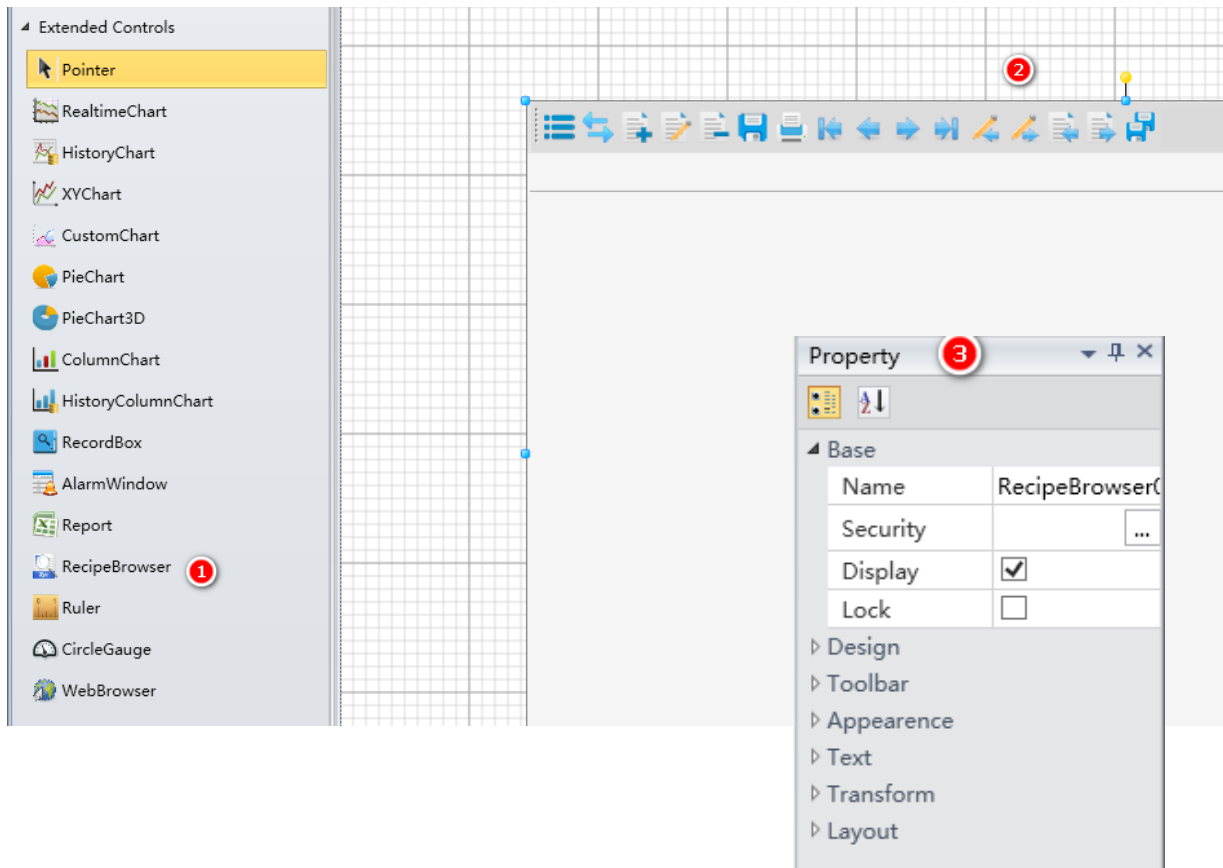
- **Add Element:** Add a recipe ingredient, the newly added recipe ingredient is displayed in the ingredient list in the recipe editing area
- **Insert Element:** Insert a recipe ingredient, the newly inserted recipe ingredient is displayed above the inserted recipe ingredient
- **Delete Element:** Delete a recipe ingredient
- **Add Item:** Add a formula item, the newly added formula item is displayed in the ingredient list in the formula editing area
- **Insert Element:** Insert a formula item, the newly inserted formula item is displayed in front of the inserted formula item
- **Delete Element:** Delete a recipe item
- **Import:** Import external recipe configuration files to improve recipe configuration efficiency
- **Export:** Recipe configuration information can be exported as an excel file, supporting xls andxlsx formats
- **Save:** Save recipe configuration

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Create a recipe browser

➤ How to create a recipe browser?

- ① Click on the recipe in the toolbar
- ② Drag to the desired position on the canvas
- ③ Configure recipe properties



The screenshot illustrates the steps to create a recipe browser in the Delta HMI software. On the left, the 'Extended Controls' panel lists various widgets. The 'RecipeBrowser' widget is highlighted with a red circle labeled '1'. In the center, a canvas displays a toolbar with various icons. A red circle labeled '2' is placed over the 'RecipeBrowser' icon in the toolbar. On the right, the 'Property' dialog box is open, showing the configuration for the 'RecipeBrowser' widget. The 'Base' section is expanded, and the 'Name' field is set to 'RecipeBrowserC'. The 'Security' field is empty, and the 'Display' checkbox is checked. The 'Lock' checkbox is unchecked. The 'Design' section is also expanded, showing options for 'Toolbar', 'Appearance', 'Text', 'Transform', and 'Layout'.

Extended Controls Panel:

- Pointer
- RealtimeChart
- HistoryChart
- XYChart
- CustomChart
- PieChart
- PieChart3D
- ColumnChart
- HistoryColumnChart
- RecordBox
- AlarmWindow
- Report
- RecipeBrowser (1)
- Ruler
- CircleGauge
- WebBrowser

Property Dialog Box:

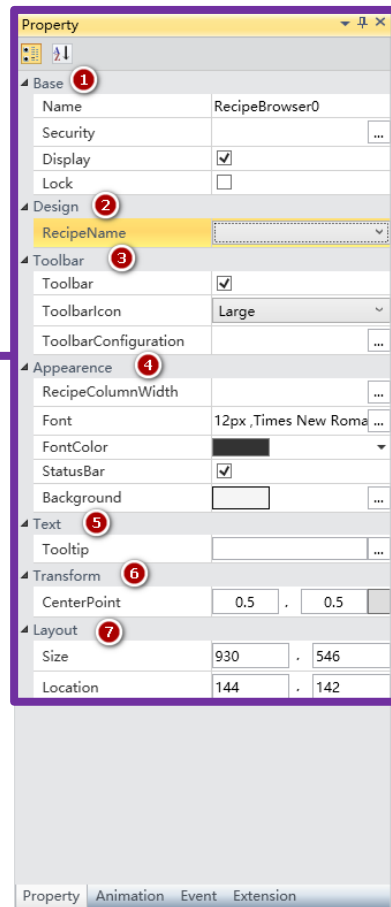
Base	
Name	RecipeBrowserC
Security	...
Display	<input checked="" type="checkbox"/>
Lock	<input type="checkbox"/>

Design Section:

- Design
- Toolbar
- Appearance
- Text
- Transform
- Layout

Recipe Properties

- ① **Base:**
Basic properties, the same as other control graphics
- ② **Design:**
Design and set the recipe bound to the pe browser
- ③ **Toolbar :**The toolbar contains whether to display the toolbar, toolbar configuration and toolbar size display
- ④ **Appearance :**
Appearance can design formula color font background, etc.
- ⑤ **Text:**
Recipe prompt text information
- ⑥ **Transform:**
Contains the center point of the recipe control
- ⑦ **Layout:**
The size and position of the formula in the canvas can be adjusted by numerical values



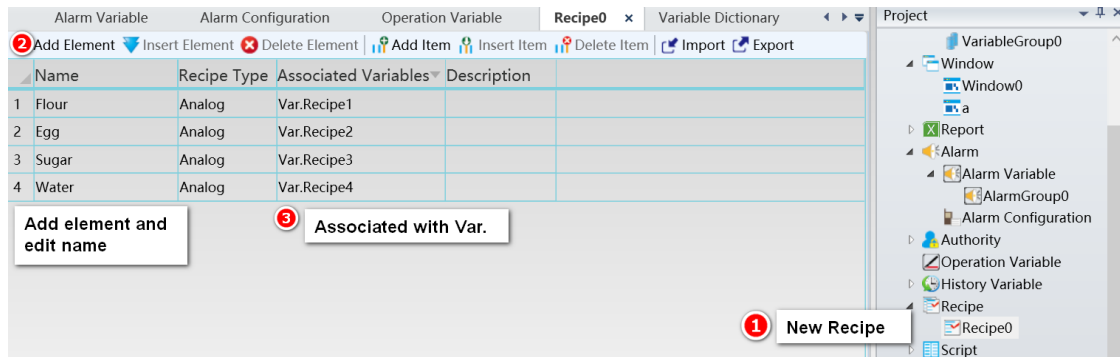
The screenshot shows the 'Property' dialog box for 'RecipeBrowser0'. It is divided into several sections, each with a red numbered callout:

- Base (1):** Includes fields for Name (RecipeBrowser0), Security, Display (checked), and Lock (unchecked).
- Design (2):** Includes a dropdown for RecipeName.
- Toolbar (3):** Includes checkboxes for Toolbar (checked), a dropdown for ToolbarIcon (Large), and a field for ToolbarConfiguration.
- Appearance (4):** Includes fields for RecipeColumnWidth, Font (12px, Times New Roma), FontColor (black), StatusBar (checked), and Background.
- Text (5):** Includes a field for Tooltip.
- Transform (6):** Includes a field for CenterPoint (0.5, 0.5).
- Layout (7):** Includes fields for Size (930, 546) and Location (144, 142).

At the bottom of the dialog, there are tabs for 'Property', 'Animation', 'Event', and 'Extension'.

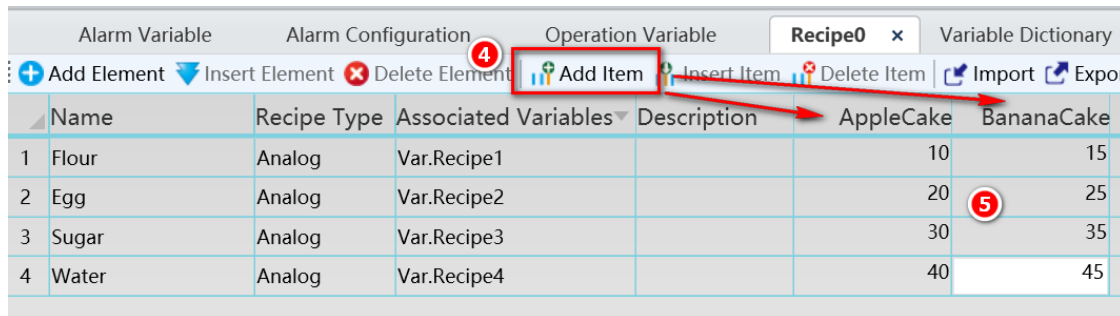
➤ Example: How to create a Recipe?

- **Step 1:** Create Recipe0 and add element(element means different kind of contents in one recipe)



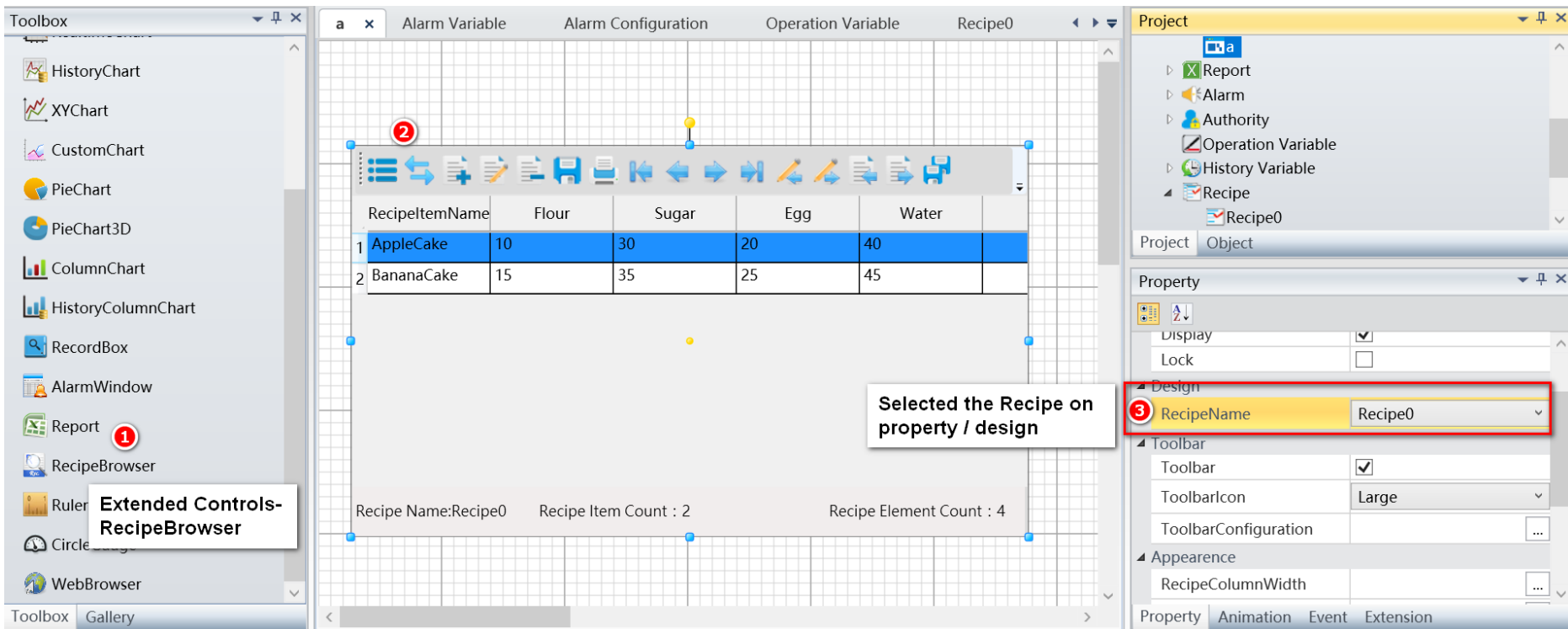
Name	Recipe Type	Associated Variables	Description
1 Flour	Analog	Var.Recipe1	
2 Egg	Analog	Var.Recipe2	
3 Sugar	Analog	Var.Recipe3	
4 Water	Analog	Var.Recipe4	

- **Step 2:** Add item means Add a different recipe, for example, here we added AppleCake & BananaCake, two kinds of recipes.



Name	Recipe Type	Associated Variables	Description	AppleCake	BananaCake
1 Flour	Analog	Var.Recipe1		10	15
2 Egg	Analog	Var.Recipe2		20	25
3 Sugar	Analog	Var.Recipe3		30	35
4 Water	Analog	Var.Recipe4		40	45

- **The Final step:** Build the completed recipe and recipe browser binding.



The screenshot shows the Delta software interface with the following components:

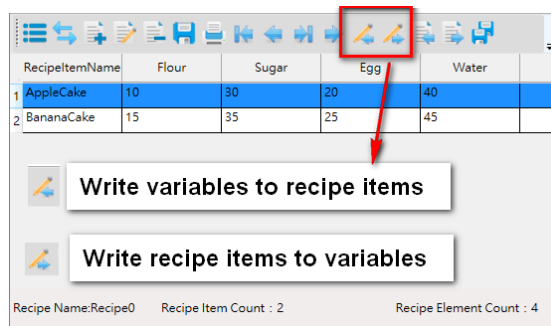
- Toolbox:** Contains various chart and control elements like HistoryChart, XYChart, CustomChart, PieChart, PieChart3D, ColumnChart, HistoryColumnChart, RecordBox, AlarmWindow, Report, RecipeBrowser, Ruler, Circle, and WebBrowser.
- Main Window:** Displays a recipe table with columns: RecipeItemName, Flour, Sugar, Egg, Water. The table contains two rows: AppleCake and BananaCake.
- Property Window:** Shows the 'Design' tab with the 'RecipeName' property set to 'Recipe0'.

RecipeItemName	Flour	Sugar	Egg	Water
1 AppleCake	10	30	20	40
2 BananaCake	15	35	25	45

Selected the Recipe on property / design

Recipe Name:Recipe0 Recipe Item Count : 2 Recipe Element Count : 4

Recipe Browser at Runtime

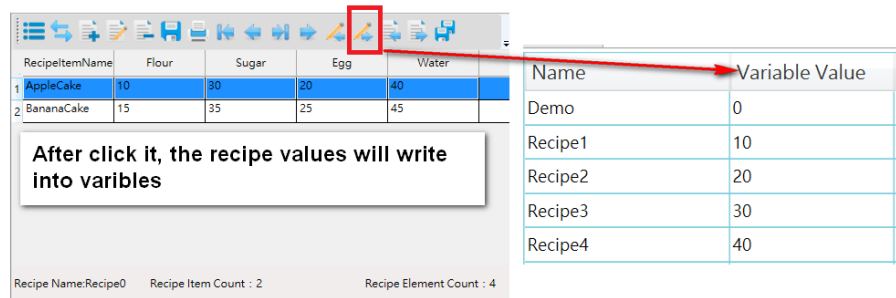


RecipeItemName	Flour	Sugar	Egg	Water
1 AppleCake	10	30	20	40
2 BananaCake	15	35	25	45

Write variables to recipe items

Write recipe items to variables

Recipe Name:Recipe0 Recipe Item Count : 2 Recipe Element Count : 4

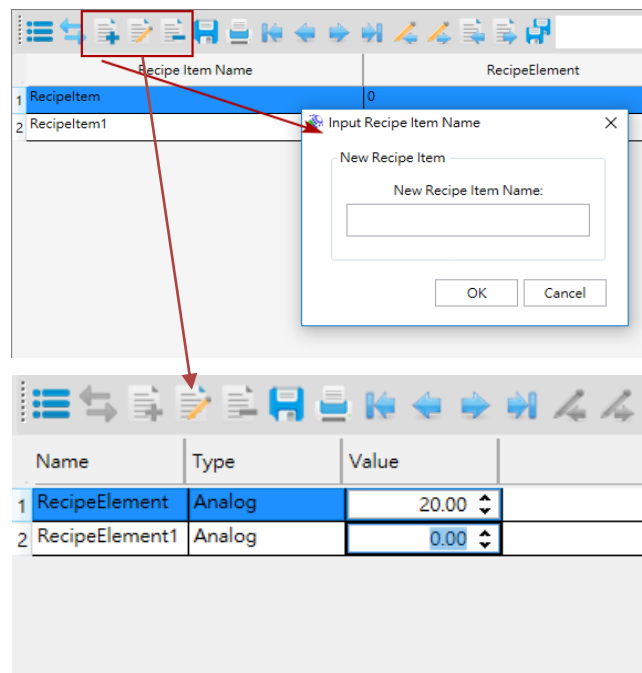


RecipeItemName	Flour	Sugar	Egg	Water
1 AppleCake	10	30	20	40
2 BananaCake	15	35	25	45

After click it, the recipe values will write into variables

Name	Variable Value
Demo	0
Recipe1	10
Recipe2	20
Recipe3	30
Recipe4	40

Recipe Name:Recipe0 Recipe Item Count : 2 Recipe Element Count : 4



RecipeItem	RecipeElement
1 RecipeItem	0
2 RecipeItem1	

Input Recipe Item Name

New Recipe Item

New Recipe Item Name:

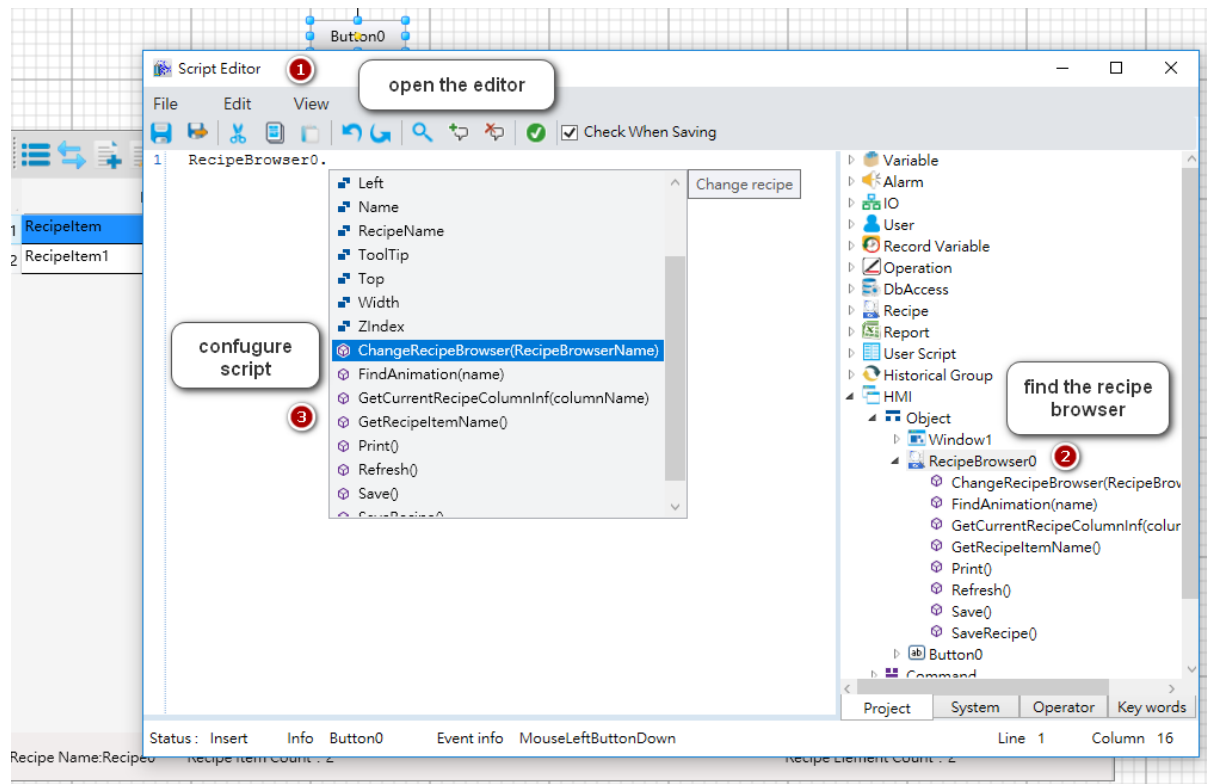
OK Cancel

Name	Type	Value
1 RecipeElement	Analog	20.00
2 RecipeElement1	Analog	0.00

Write variables to recipe items

Add, delete or change recipe items and recipe element.

Recipe events



✘ The recipe browser control script can refer to the user manual Ch20.3

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➤ Recipe script

- When users configure window button events, screen programs, and user program scripts, the software provides simple and easy-to-use script properties and methods to complete some special tasks and functions.



✘ For basic operation instructions of recipe script, please refer to the user manual "20.3 Script Syntax and Functions → Programming Model → Recipe".

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