Chapter 4  Script

In this chapter, you will:
- Understand the characteristics of the command syntax
- Know the common functions of the command syntax

Section 1  Introduction

Introduction to Script

KingView not only supports connected expression with animation link settings, but also allows the user to compile their own script and therefore expand the repertoire of functions available in the program.

The script (syntax) resembles C language, it is easy for engineers to understand and learn this language and therefore make the most of the program. The Script copy-editing capabilities are already set; the user only needs to adjust certain parts of the program according to fit their criteria, areas they can adjust include the application program, hot keys, event data changing, user-defined function, and pictures and so on.

The syntax of the script resembles C language, and not only has the complete trouble shooting functions for accidence and syntax but also has rich operator math functions, string functions, control functions, SQL functions and system functions. Various scripts can be edited and inserted by the “script editor” which are compiled and executed in the running system.

There are six types of script; the difference lies with the time and conditions of execution for each script.
1. Application Script
   Used to carry out functions when the program is starting up, closing down or periodically whilst it is running. In this case a time interval needs to be specified.
2. Hotkey script
   This is linked to the hot keys appointed by the designers. The operator may run this function whilst the software is running by pressing the allotted hot key.
3. Condition Script
   Pre-determines when the function is to be carried out, i.e. when an event occurs, exits or disappears.
4. Data change Script
   Only linked to a tag or a tag domain. When the value of the tag or the tag domain changes to
exceed the range defined by the tagname dictionary the function is carried out.

5. Custom Function Script
Offer users the option of a user-defined function. Users can define various functions using the function build-up according to the basic KingView syntax/offered functions. These functions can be used in special projects when specialized functions are needed.

6. Picture Script
The function is carried out in the picture at a pre-determined time; when the system is starting up, running or exiting.

Script can be used to give animation to graphics within a picture.

**How to Quit the System**

How to quit the KingView system, and return to Windows? This can be done using the function: Exit (0).

1. Select \[button\] from the toolbox, draw a button in the picture, right click on the button and from the drop down menu select “string replace”, set the button text: system quit.
2. Double click on the button, the animation link dialogue box will popup, select “when popup” from the dialogue box, then input the following command: Exit (0);
3. Click “confirm” to close the dialogue box. Clicking this new button when the KingView system is running will enable you to quit the system and return to windows.

**Section 2  Common Function Usage**

**Defining a Hot Key**

In the actual industry scene it is likely that we will need some hot keys to carry out pre-determined control commands. For example, using hot key script you can designate F1 as the hot key to open and close the Raw_Oil_Output_Valve.

1. From the left side of “TouchExplorer” select “script” and then select “Hotkey script”, double click the new icon from the right side of the screen, the “Hotkey script” editing dialogue box will appear as shown below:
2. Select “key” from the dialogue box, select “F1” in the “select key” dialogue box and then close the editing dialogue box.

3. Input the following syntax in the script editing zone:

   If (\local\ Raw_Oil_Output_Valve == 1 )
   \local\ Raw_Oil_Output_Valve = 0;
   Else
   \local\ Raw_Oil_Output_Valve = 1;

4. Select “confirm” to close the dialogue box. Press “F1” to execute the above script while the system is running. Firstly, check the current state of the Raw_Oil_Output_Valve, close it if it is open, else open it, and then realize on-off switch function of button.

**Creating a Switch Function in the Picture**

You can create a function to switch from the main picture to another random picture using the tools “menu” and the “ShowFigure()” function of the system the operation is as follows:

1. Select from the toolbox, place the mouse anywhere within the monitor and control picture, and draw an object the shape and size of a button, then double click and the following dialogue box will appear:
Set-up the dialogue box as follows:

Menu text: Picture_Switch

Menu item:
- Alarm and Event Picture
- Real-time Trend Curve Picture
- Historical Trend Curve Picture
- XY Control Picture
- Calendar Control Picture
- Real-time Data Report Picture
- Select the Real-time Data Report Picture
- Historical Data Report Picture
- One-minute Data Report Picture
- Database Operation Picture

*Note: To carry out steps in the “menu item”; right click “menu item” in the editing zone, click “new” in the subsequent popup menu, then you can edit the menu item.*

2. Select “script” after inputting the menu items in the script editing dialogue box, input the following syntax in the editing dialogue box:
3. Select “confirm” to close the dialogue box, select the desired items from the menu when the system is running, and switch between the relevant pictures.

**Review**

1. Be able to use the various animation links offered by KingView.

2. Be familiar with KingView syntax, program the picture to be able to switch between screens, exit the project and so on.