Chapter 10. Security Levels

Security level which raises the safety of a project is as the admission for users to access to projec ts or windows. When setting the attributes of the window, we can see the selection of security level which displays as below:

indow Setting
Name : WINDOW_011
Window no. : 11 Start Pos. : X : 0 Y : 0
Size
Width: 640 Height: 480
Style Style Tracking Monopoly Clipping Coherence
Security level
Lowest ¥
Underlay window
1: None 💉 2: None 💉 3: None 💉
Frame
Width : 4 Color :
Background
Color : Pattern : Pattern :
✓ Filled Pattern color :
OK Cancel

Note: Security level is only valid for base window but not for other windows.

There are 3 levels in a project. Level 0 is the lowest level of security (all have access to these windows regardless of the password), Level 1 is a middle level allowing access to level 1 and level 0 windows. Level 2 is the highest level of security and can access all levels. For example, we can set the security of the most important switches as highest level so that general users are not allowed to access these important switches.

Here we take an example of security level:

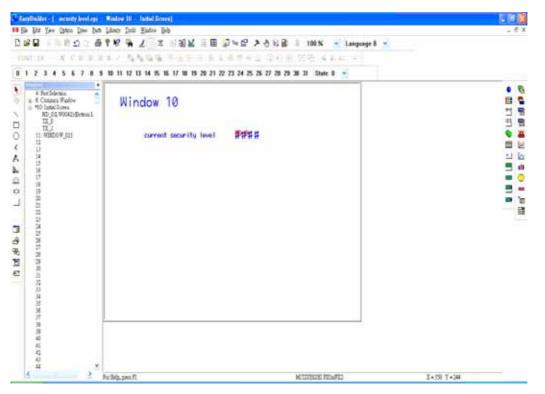
Select [File]/[New] to create a new project. Check [Security Control] from [Edit]/[System parameters]/[Security] and then set the passwords for di fferent 3 levels. 1111 is given to level 1:

System Parameter Setting	
PLC General Indicator Security Editor	Hardware Aux.
Password	
Level 0 : 0	Level 1 : 1111
Level 2 : 2222	
Mession the substances on the	duie sum the sum the sum the

System register LW9042 displays the security level of the active base window and just can be read out not be written in. Create a Numeric Data object and place it on window 10 to display the current security level showed as below:

Create Numeric	Data Object		
General Nume	ric Font		
Description :			
-Read address-			
Device type :	LW	Device address :	9042
	BIN	🖌 👘 No. of words :	1
	Aux.		
	in the billion is a	ALCONT SAL	
S. MARTIN			
Les anna anna anna anna anna anna anna an			STATISTICS STATES
			and the second
	ОК	Cancel	Apply Help

The whole project is as follows:



Save, compile and Off-line simulation:

			EasyView
Wi	ndow 10		
	current security level	0	

Because there's no password input, the current security level must be 0. Now, create a window 11 and set the security level for 1:

Window Setting
Name : WINDOW_011
Window no. : 11 Start Pos. : X : 0 Y : 0
Size
Width: 640 Height: 480
Style
Tracking Monopoly Clipping Coherence
Security level
Underlay window
1: None 🖌 2: None 🖌 3: None 🖌
Frame Width : 4 Color :
Background
Color : Pattern : Pattern :
Filled Pattern color :
OK Cancel

Create a function key on window 10, the attributes display as below:

eate Function Key Object	
eneral Shape Label	
Description :	
○[ENT] ○[BS]	◯[CLR] ◯[ESC]
O [ASCII]	Hard copy Attributes
Ohange window	O Return to previous
O Change common window	Window no. : 11
O Popup window	O Close window
🔘 JOG FS-window	
○ Window bar	O Minimize window
Message board Set operation	n mode 🛛 🗸 Attributes
ОК	Cancel Apply Help

Create Function Key Object	
General Shape Label	
Attribute	
Color : Font :	24
Align : Left 😪 State :	0
Bold Italic	
Content :	
Switch over it to window 11	<u></u>
	<u>v</u>
Use label Use Label Library V Tracking	Label Library
Duplicate this label to other states	
OK Cancel	Apply Help

Save, compile and Off-line simulation:

Window 10 current security level Switch over it to window 1	0		
T P A		Easy	View

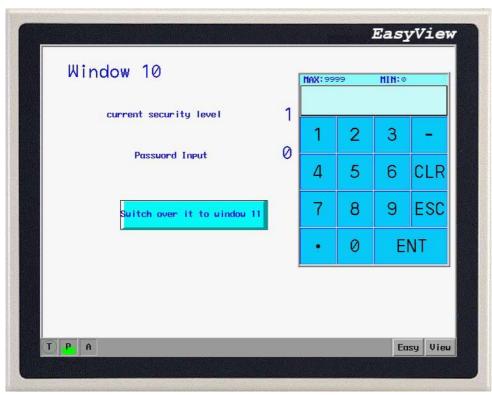
When we press function key, we are not allowed to switch to window 11. The reason is because the current security level is 0 but the security level of window 11 is 1. Lower security level can't access to higher security level. We are allowed to enter higher security level by inputting password. System register LW9040-LW9041 are for setting password. Add another Numeric Data object on window 10:

Create Numeric	Input Extend Object		
General Nume	nic Shape Font		
Description :			
-Read address-			
Device type :	LW 😽	Device address :	9040
	BIN	No. of words :	2
	Aux.		
- Trigger addres	s:		
Device type :	LB 💌	Device address :	9000
(Hereiten einen			Self-succession
	Aux.		
	ОК	Cancel	Apply Help

Note: The system is kept register LW9040-LW9041 the introduction password, number is double word. Add a Numeric Input object , Save, Compile and Off-line simulation:

urrent security level	0	MAX:99	99	MIN:0	
	0	1	2	3	-
Passuord Input	U	4	5	6	CLF
Suitch over it to uindou	11	7	8	9	ESC
		٠	0	E	NT

Now, if we input password 1111, the current window will be switch to level 1.



Press the switch window button under security level 1, window is successfully changed to window 11:



However, how to switch the higher level security to lower lever security? LW9043 allows the project to force the HMI to a lower security level. Add a Numeric Data on window 10 as below:

Create Numeric	Input Extend Objec	t	
General Numer	ric Shape Font		
Description : — Read address —			
Device type :	LW 😽	Device address :	9043
	BIN 🗸	No. of words :	1
- Trigger addres	s :		0000
Device type :	LB	Device address :	9000
	Aux.		
	ОК	Cancel	Apply Help

Save, Compile and Off-line Simulation:

Window 10			
current security level	0		
Password Input	0		
Suitch over level	0		
S <mark>witch over it to</mark>	window 11		
T P A		Εαsy	View

Input 1 into Change level but current level doesn't become 1. A lower level can't be force to higher level.

current security level	0	MAX:99	99	min:© 1	
Password Input	0	1	2	3	
Switch over level	1	4	5	6	CLR
		7	8	9	ESC
Suitch over it to uin	dou 11	•	0	E	NT

Now, we input password 1111 to change the current level to 1:

current security level	1	MAX:99	99	MIN:0	
Password Input	0	1	2	3	
Switch over level	0	4	5	6	CLR
		7	8	9	ESC
Suitch over it to uin	dou 11	•	0	E	NT

Press function key to switch window 11. If we set 0 for change level, the current level becomes 0 and we can't switch the current window to window 11.

current security level	0	MAX:99	99	MIN:0	
Passuord Input	0	1	2	3	-
Switch over level	0	4	5	6	CLR
		7	8	9	ESC
Suitch over it to uind	ow 11		0	E	NT

It raises the system safety to apply the reasonable password security level to the projects by different permissions for different operators.