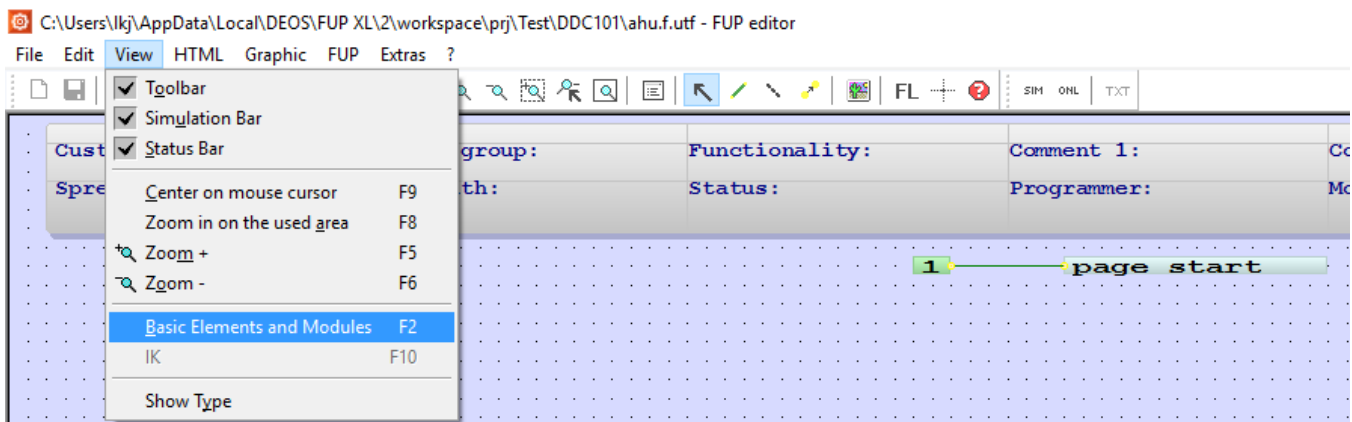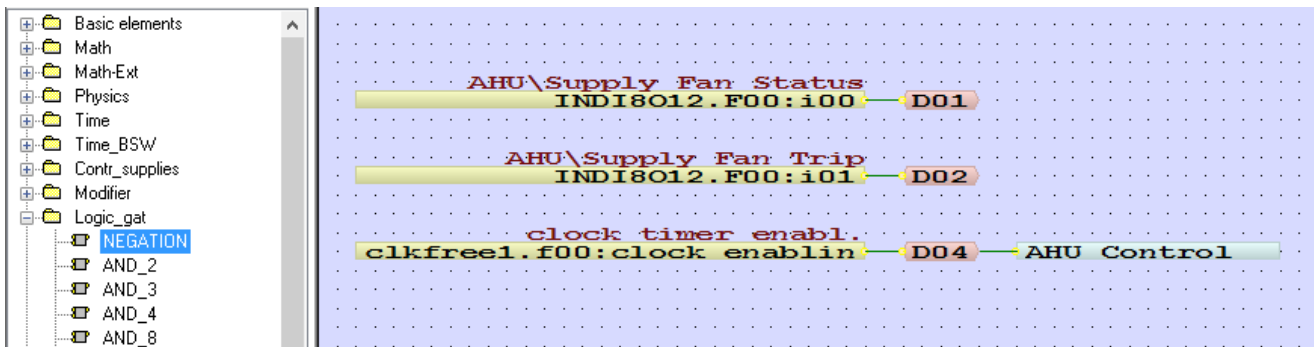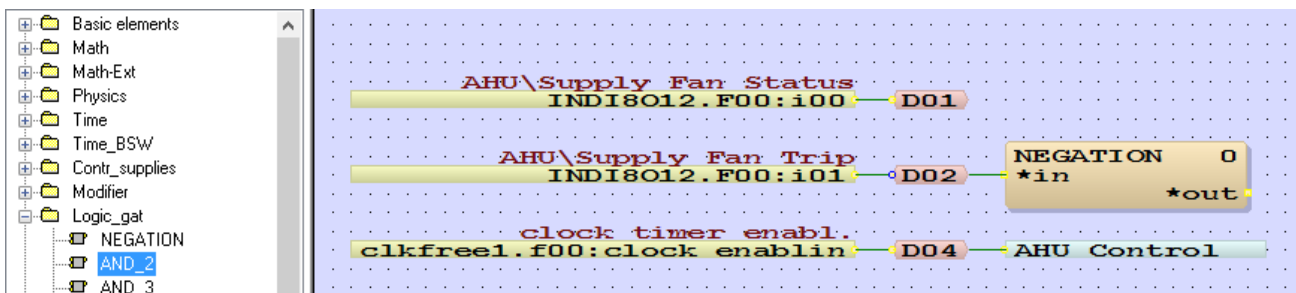# TT190103 - FUP - Simple Logic and Alarm

1. We are going to add some simple logic and alarm message to your program. This will make the AHU turn off when the fan is in trip alarm, and display an alarm message in the system
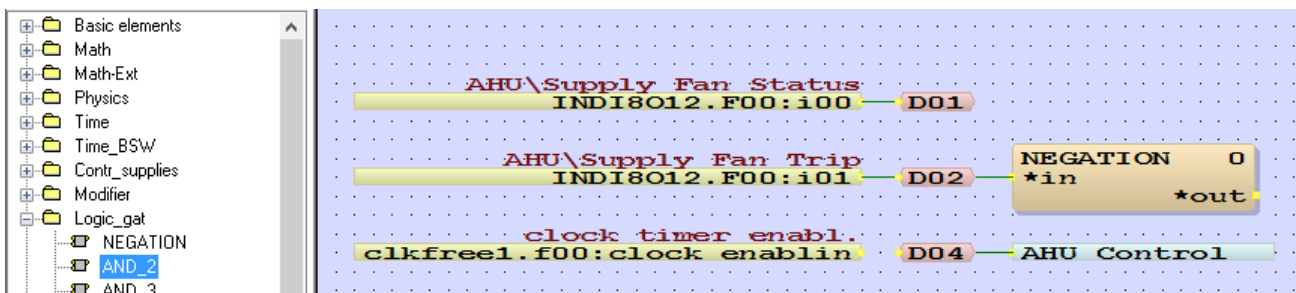2. Open "ahu.f", click "View", "Basic Elements and Modules" to see all the functional modules

3. Under "Logic_gat", drag and drop the "NEGATION" module to your page
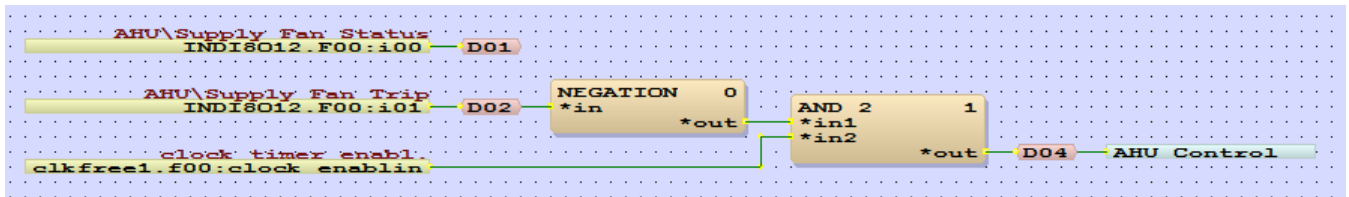

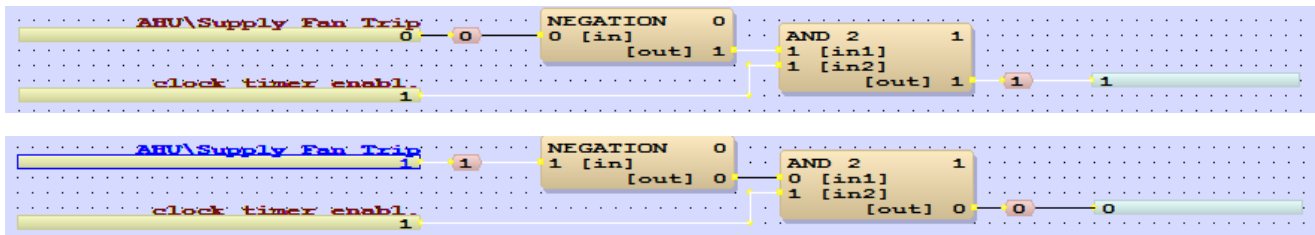4. Connect the "Supply Fan Trip" to the "in" of the "NEGATION" module

5. Disconnect the link between "Clock Timer Enabl." and "D04", drag and drop the "AND_2" module to your page
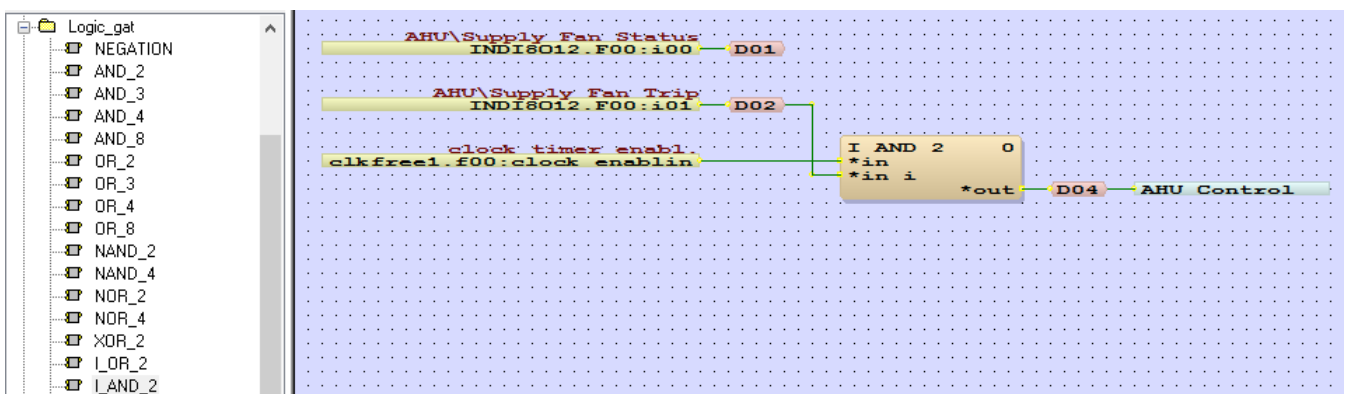
6. Connect it like this. You can click on the yellow dot in the green line, drag and drop it to the correct place to make the line turn at 90 degrees. You can also use the draw line button ✎ , to draw vertical and horizontal lines

7. Now you can click the SIM button to test your program. The "AHU Control" output should be 0 when the "Supply Fan Trip" is 1

8. We have a special module "I_AND_2" that combine the functions of these 2 modules, it makes your program more simple

9. Double click on the "I_AND_2" module, and you can see the properties of the module. Click on the "Help Text" tab to see the description and help of the module
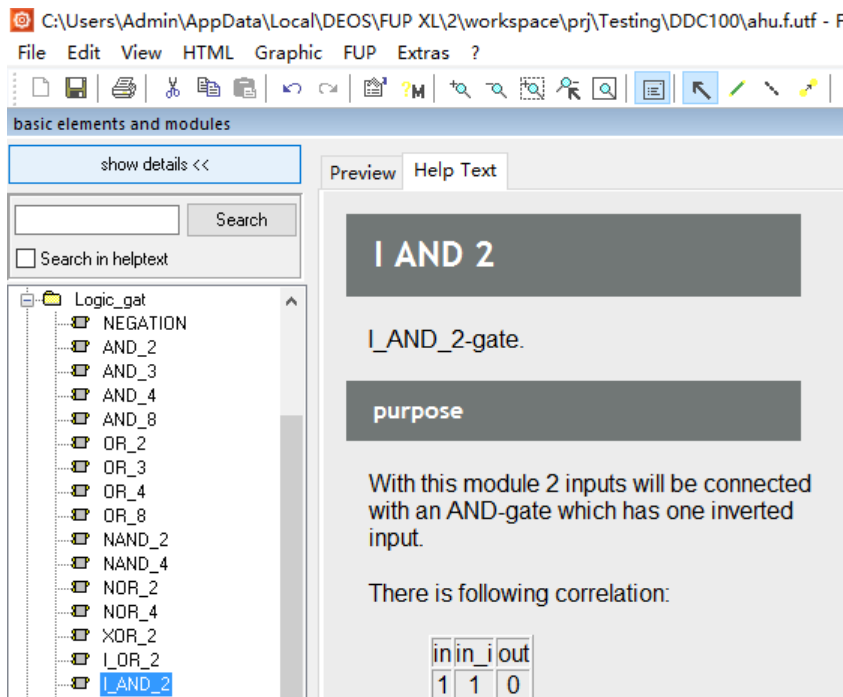

I AND 2

I_AND_2-gate.

purpose

With this module 2 inputs will be connected with an AND-gate which has one inverted input.

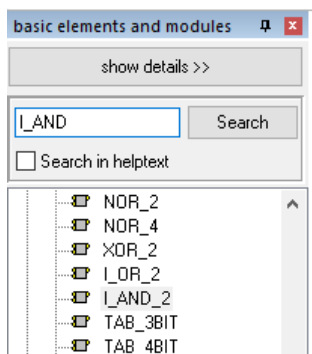There is following correlation:

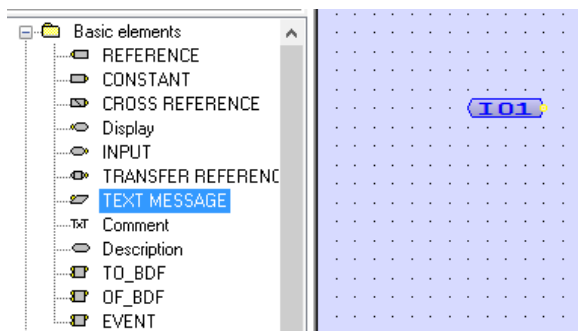| in	in_i	out
1	1	0
1	0	1
0	1	0

10. You can also click on the "Show Details" button to view the help text. You can then use it to find the correct module for your program
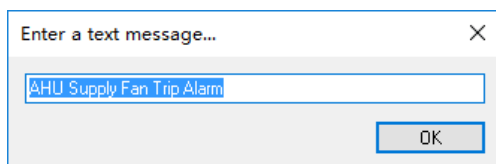

11. To search for a module, type the name in the textbox next to "Search" button, and the module will highlight automatically. Click "Search" button to find the next match. Please note that the module name are always underscore "_", not space
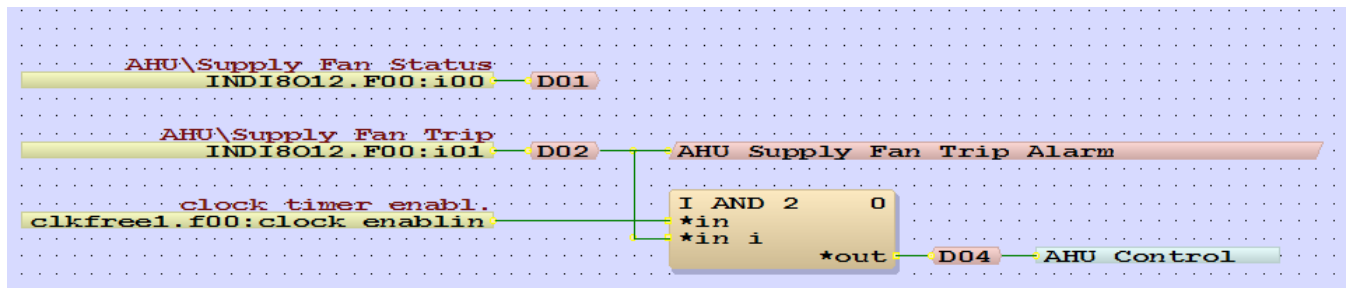

12. To add alarm message, we use the "Text Message" module, under "Basic Elements"
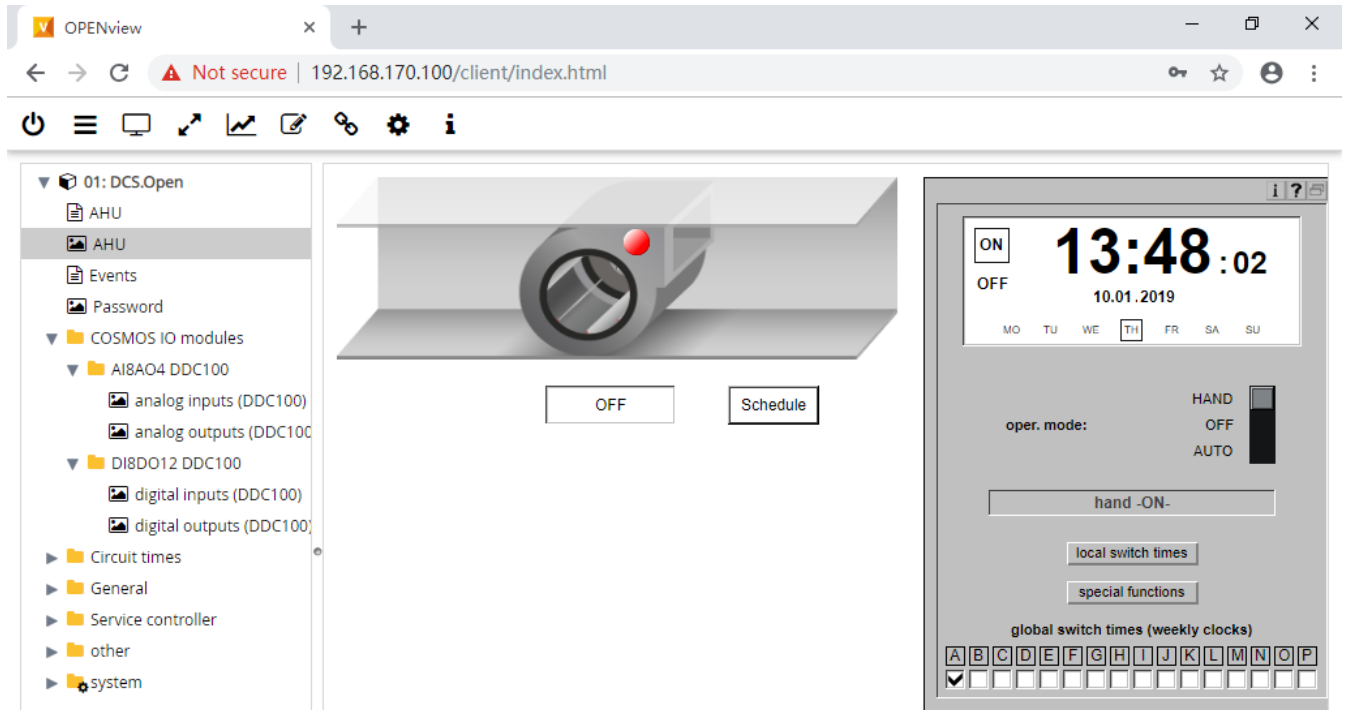

13. Drag and drop it, type "AHU Supply Fan Trip Alarm"

14. Click OK, and connect it like this

15. So, you've finished the program. Compile and upload it to your controller. Now you should see the fan control is OFF, even though the schedule is HAND ON, when the fan trip is alarmed

16. In the "Events" page, you will also see the alarm message, when it is in alarm