PLC210 Lab 8: Data Array Tags

Before downloading, ensure the SS4 switch is in Off position – turned to left.

Download the project Compact_Module_4_Ex3_Array1.ACD, go Online and put the CompactLogix into the Run mode to do the following lab.

The I/O tag names in this lab may need to be changed to match the addresses on your hardware trainer.

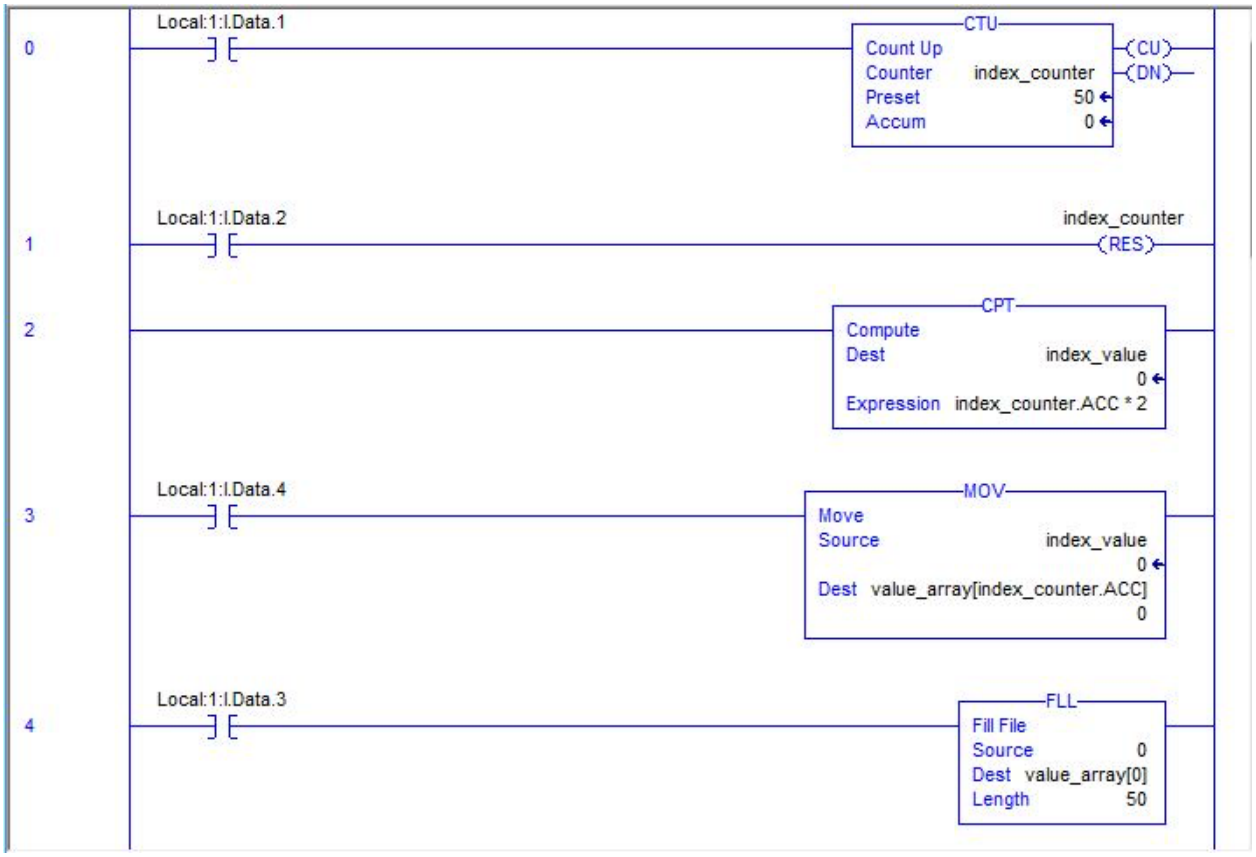


Figure 1-A. Data arrays in ladder logic.

1. Turn On SS4 switch – turn to right position

   This enables to MOV instruction on Rung 3.

   Ensure PLC is in RUN Mode.

From the Controller Organizer screen, monitor the Indexing routine.

Tasks > Main Task > Index > Indexing

Press PB1 on the demo unit two times.

View tags for the Index program.

Task > Main Task > Index > Program Tags

Note: index_counter tag, index_value tag and value_array tags have a Scope of Index (name of the project's Program)

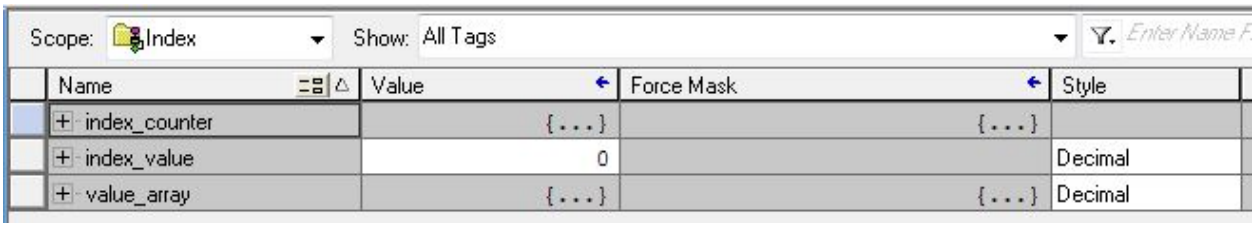


Figure 2-A. Viewing the data arrays.

Open the Controller Tags and note the Scope is Shift (name of the processor in the project).

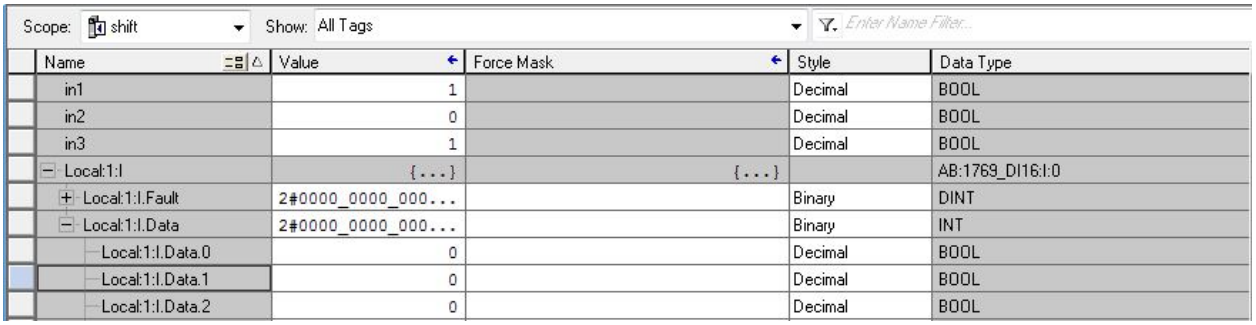


Figure 3-A. Expanding the view of the data arrays.

Return to Program tag screen.

What is the value of the tag value_array[0]? _____

What is the value of the tag value_array[1]? _____

Explain

2. Press PB1

   What is the value of the tag value_array[2]? _____

3. Press PB2, then PB3 . What happens to the values of the array?

   _____

   Explain:

4. Press the PB1 pushbutton 50 times

   What happens to the processor?_____

5. View processor fault information.

   Click the Controller's Property button on the On-Line Toolbar.

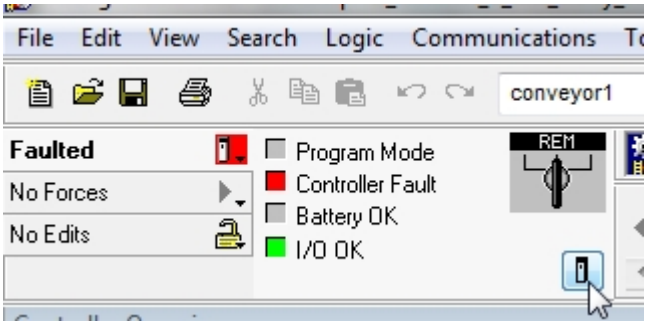
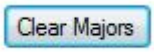


Figure 4-A. Controller has faulted.

This will open the Major Faults tab on the Controller's Properties window.

What caused the processor fault?

6. Clear the Fault by clicking the Clear Majors button.



What mode is the processor in?_____

Turn Off SS4 switch.

Press the PB2 pushbutton

Press the PB3 pushbutton

Put the processor in to Run Mode.

7. How can the Project file be changed to prevent the fault from reoccurring?

Explain then modify the project file.