

PLC130 LAB 1.3: DATA ARRAY TAGS

Student Name: _____

Student ID: _____

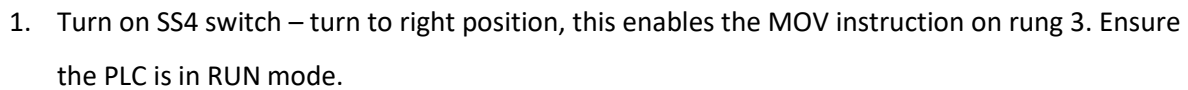
LAB OUTCOMES:

1. Explain how instructions move data within an array
2. Explain the scope of an array
3. Explain what happens to the processor if you overflow an array

LAB PROCESS:





Download the project "Compact_Module_4_EX3_Array1.ACD file, go online and put the CompactLogix into RUN mode.

Part 1



Tasks > Main Task > Index > Indexing

Task > Main Task > Index > Program Tags

Scope:  Index		Show: All Tags		Y. Enter Name	
	Name	Value	Force Mask	Style	
	index_counter	{...}	{...}		
	index_value	0		Decimal	
	value_array	{...}	{...}	Decimal	

Open the Controller Tags and not the Scope is "shift" (name of the processor in the project)

Scope:	shift	Show:	All Tags	Enter Name Filter...
Name	Value	Force Mask	Style	Data Type
in1	1		Decimal	BOOL
in2	0		Decimal	BOOL
in3	1		Decimal	BOOL
Local:1:I	{...}	{...}		AB:1769_DI16:I:0
Local:1:I.Fault	2#0000_0000_000...		Binary	DINT
Local:1:I.Data	2#0000_0000_000...		Binary	INT
Local:1:I.Data.0	0		Decimal	BOOL
Local:1:I.Data.1	0		Decimal	BOOL
Local:1:I.Data.2	0		Decimal	BOOL

Return to the Program tag screen

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

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

Explain.

- Press PB1

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

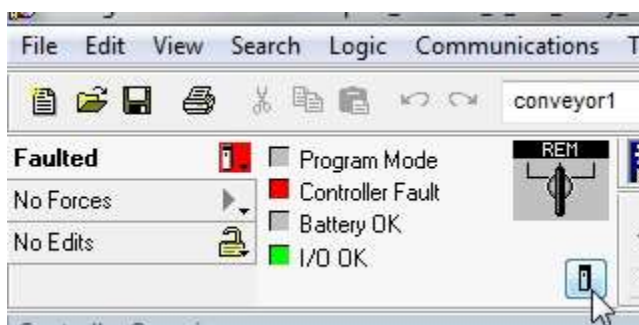
- Press PB2, then PB3. What happens to the values of the array? Explain.

- Press the PB1 button 50 times

What happens to the processor?

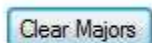
- View processor fault information

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



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

6. What caused the processor fault?
7. Clear the Fault by clicking the Clear Majors button



What mode is the processor in?
Turn off the SS4 switch
Press the PB2 pushbutton
Press the PB3 pushbutton
Put the processor in to Run Mode

8. How can the Project file be changed to prevent the fault from reoccurring? Explain then modify the project file.

The outcomes of this exercise (listed on page 1) specifies the skills that the Student must demonstrate to the Instructor. Once the Instructor is satisfied with the demonstration of Knowledge & Skills by the individual student, they will sign this document (for the student), then enter a 100% into the Hands-On Lab grade in Sakai.

I verify that this student has completed all of the requirements of this Hands-On Assessment:

Student Name: _____

Faculty Signature: _____ Date: _____

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