

PLC130 LAB 2.3: CONTROLLER PROGRAMS

Student Name: _____

Student ID: _____

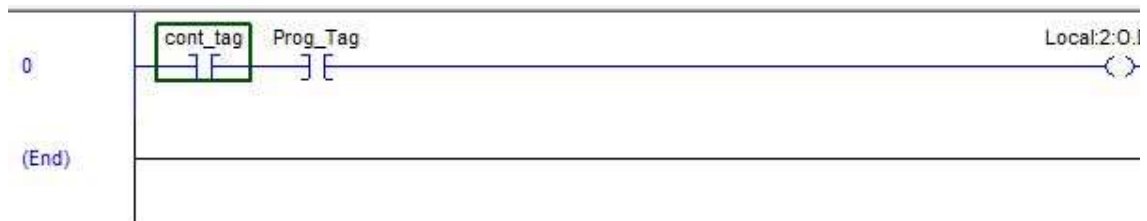
LAB OUTCOMES:

1. Explain what types of Task's there are
2. Explain what the task's in a project file are
3. Explain how many Programs are in a project file
4. Demonstrate what the scope of a given Tag is

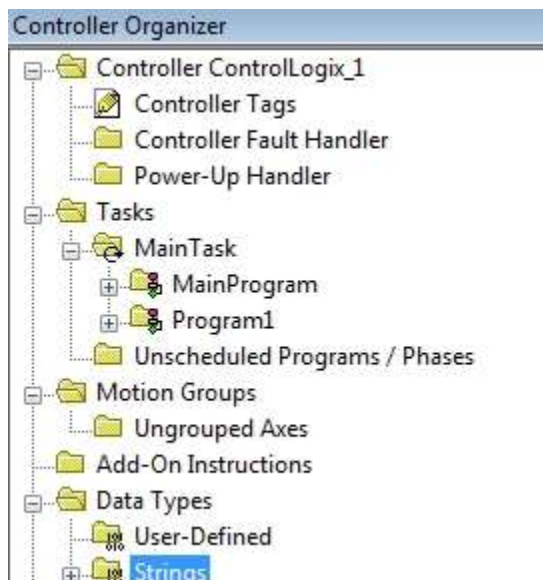
LAB PROCESS:

Download the project "Compact_Module_5_Ex3_Programs.ACD" file, go online and put the CompactLogix into RUN mode.

Part 1



1. View the Controller Organizer window.



How many Tasks are in the project file?

What are the name of the Task(s)?

What type(s) of Tasks are included in the project file?

How many Programs are in the project file?

What are the names of the Programs(s)?

The Program(s) are included in which Tasks in the project file?

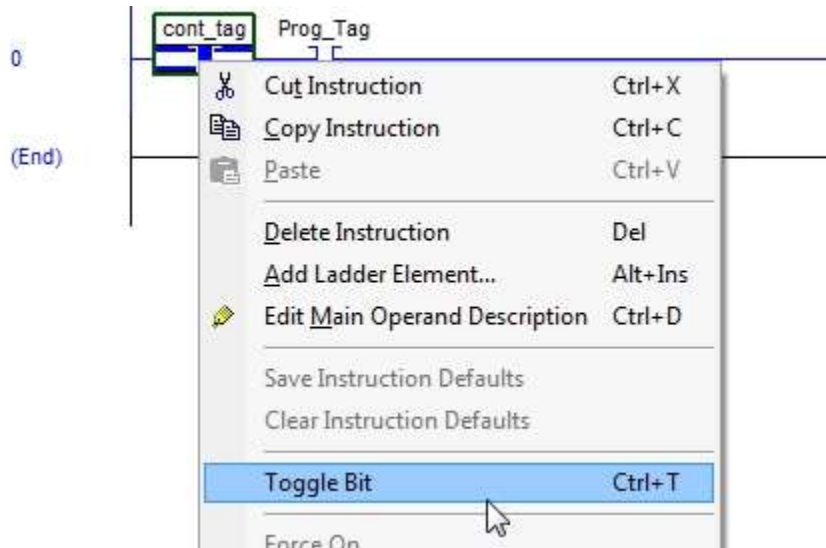
What are the names of the Routine(s) in the MainProgram ?

What are the names of the Routine(s) in the Program1 ?

2. Monitor the MainRoutine

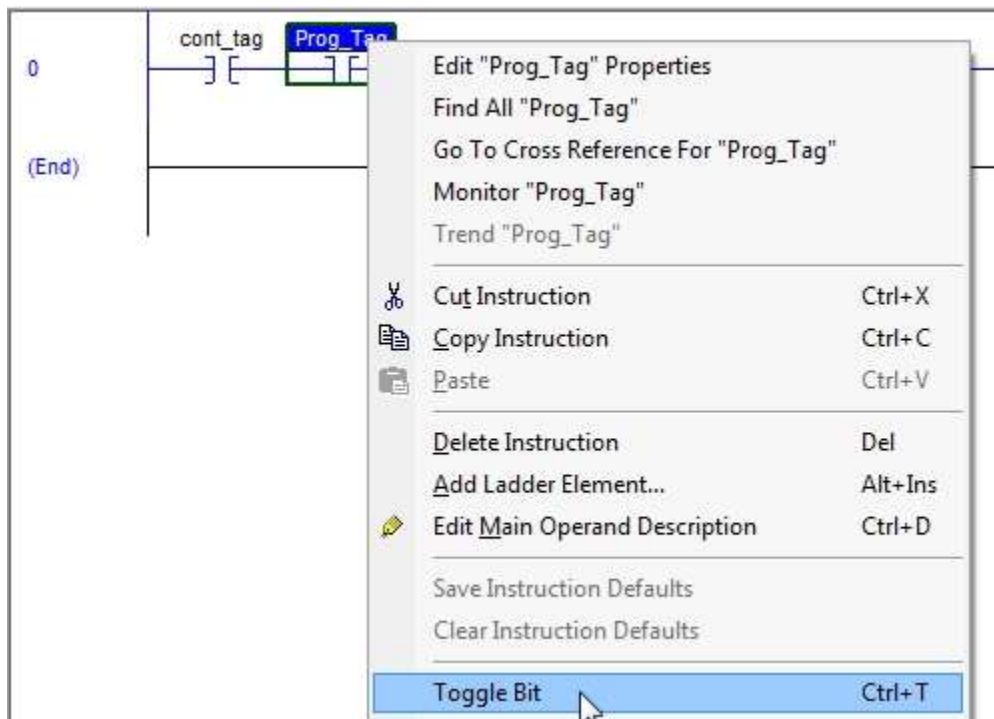
Is the MainRoutine being scanned?

Hint: Toggle the cont_tag - Right mouse-click on the cont_tag and select Toggle Bit from the selection menu.



Does the bit change state?

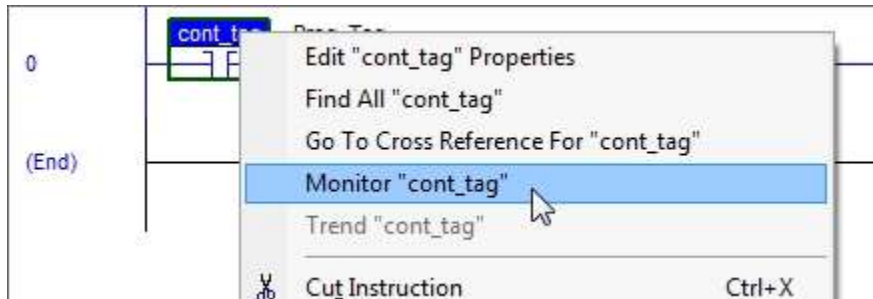
Toggle the Prog_tag - Right mouse-click on the Prog_tag and select Toggle Bit from the selection menu.



Does the bit change state?


Toggle both bits True (ON) – Does PL0 turn ON?

3. Monitor the Properties of the cont_tag.



Right mouse-click on the cont_tag name and choose
Monitor "cont_tag" from menu screen.

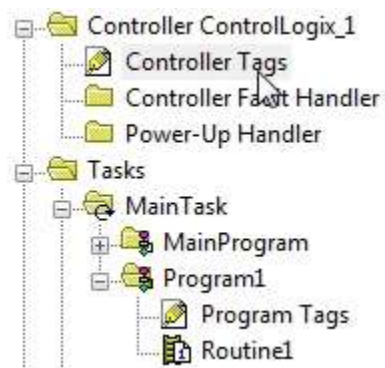
From the tag screen – view the Scope of the cont_tag.

Scope:	 ControlLogix_1	Show:	All Tags
Name	Value		
cont_tag	0		
+ Local:1:I	{...}		
+ Local:2:C	{...}		
+ Local:2:I	{...}		

What is the Scope of the cont_tag?

Close the Tag window.

On the Controller Organizer window – double click on Controller Tags

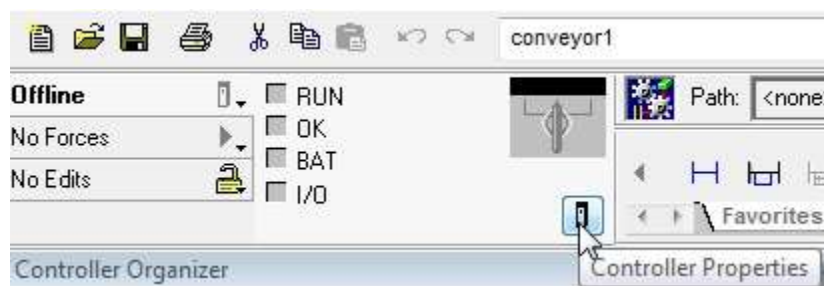


What is the Scope of the tag window that opens?

Is the cont_tag in the list of tags shown?

Close the tag window

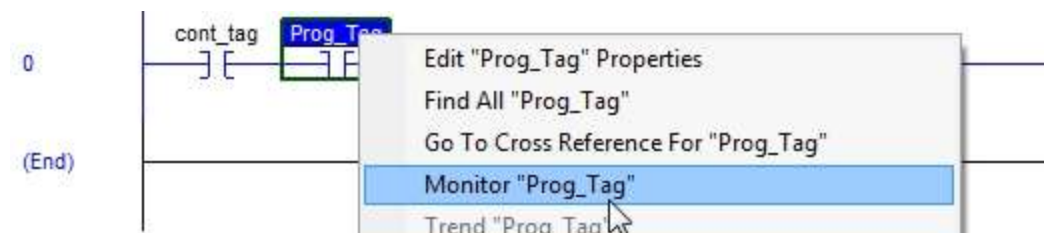
Open the Controller Property screen by clicking the Controller Properties button on the Online toolbar.



What is the name of the Controller?

Tags with the Scope of the controller's name are Controller Scope Tags.

4. Monitor the Properties of the Prog_Tag in MainRoutine.



Right mouse-click on the Prog_Tag name and choose Monitor "Prog_tag" from menu screen.

From the tag screen – view the Scope of the Prog_Tag.

Scope: MainProgram		Show: All Tags	
Name	Value	Force	Mask
Prog_Tag	0		

What is the Scope of the Prog_Tag? _____

Close the Tag window.

On the Controller Organizer window – double click on Program Tags listed under the MainProgram folder.

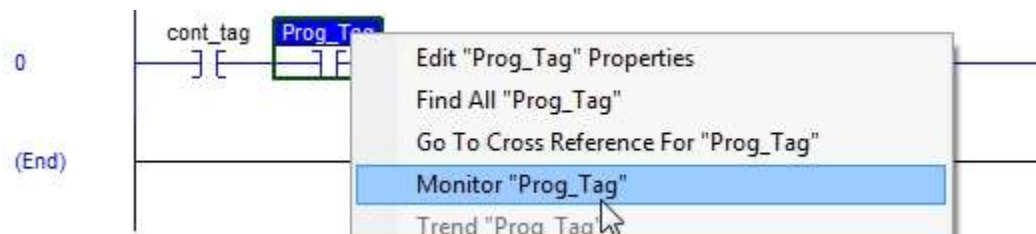


What is the Scope of the tag window that opens?

Is the Prog_Tag in the list of tags shown?



Close the tag window

- Monitor the Properties of the Prog_Tag in Routine1.



Right mouse-click on the Prog_Tag name and choose Monitor “Prog_Tag” from menu screen.

From the tag screen – view the Scope of the Prog_Tag.

Scope:  Program1 

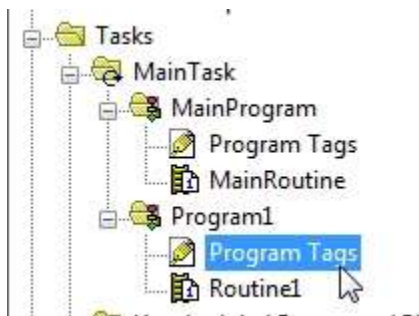
Show: All Tags

Name	Value
Prog_Tag	0

What is the Scope of the Prog_Tag?

Close the Tag window.

On the Controller Organizer window – double click on Program Tags listed under the Program1 folder.

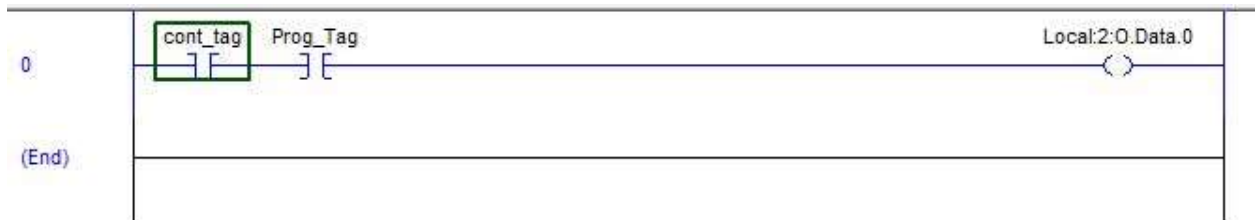


What is the Scope of the tag window that opens?

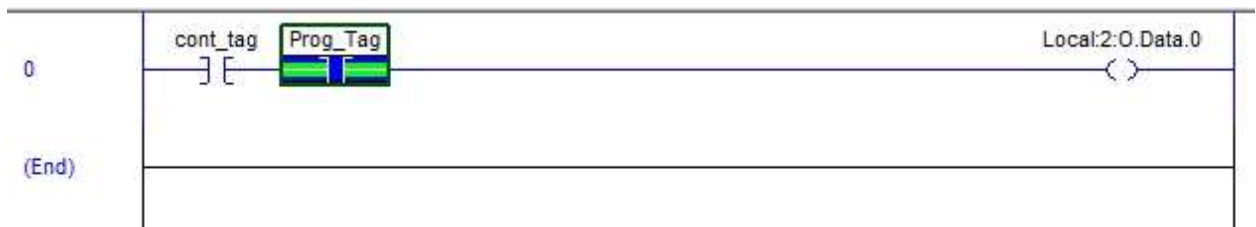
Is the Prog_Tag in the list of tags shown?

Close the tag window

- Open the MainRoutine.



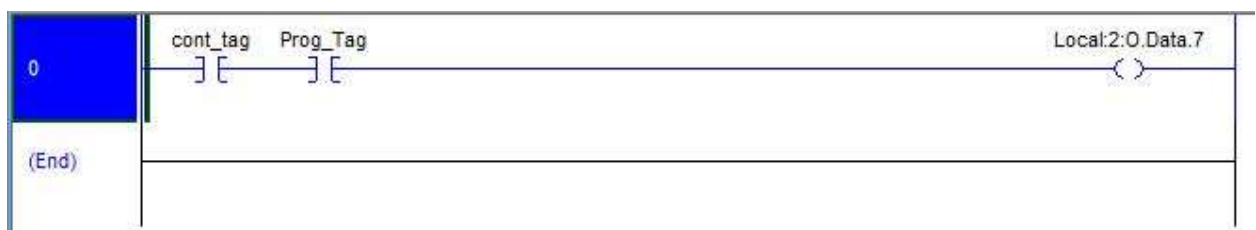
Toggle the tag Prog_Tag – True – XIC instruction hi-lighted



Monitor the Prog_Tag. – See Step 3 to Monitor “Prog_Tag” in the MainRoutine.

What is the value of the Prog_Tag?

- Open the Program1 routine.



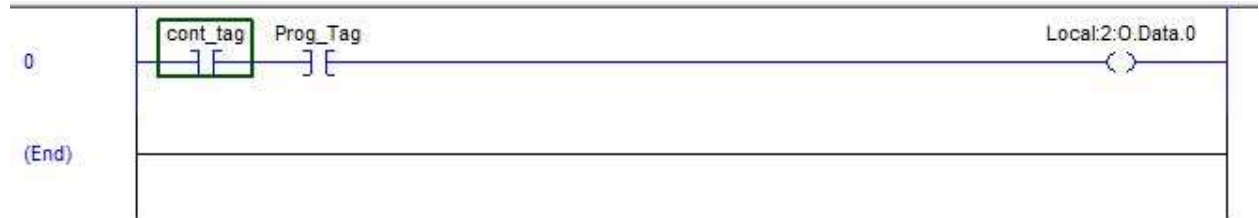
Ensure the tag Prog_Tag is False – XIC instruction not hi-lighted

Monitor the Prog_Tag. – See Step 4 to Monitor “Prog_Tag” in Routine1.

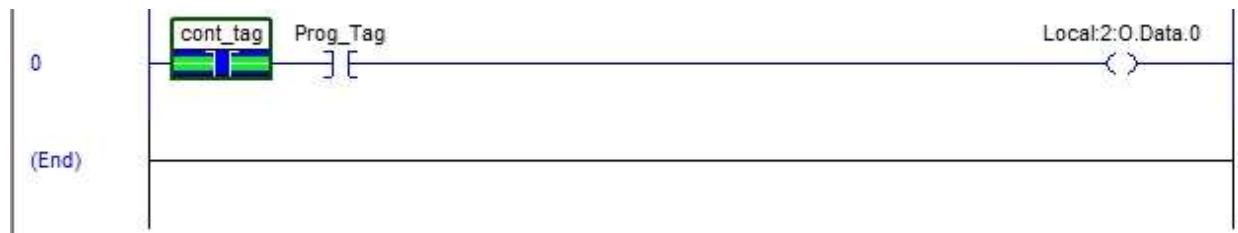
What is the value of the Prog_Tag?

8. Does the tag Prog_Tag have the same value in the MainRoutine as the Prog_Tag in Routine 1? Explain

9. Open the MainRoutine.



Toggle the tag cont_tag – True – XIC instruction hi-lighted



Open Routine1.

Is the cont_tag True or False?

Toggle the tag cont_tag – False – XIC instruction not hi-lighted

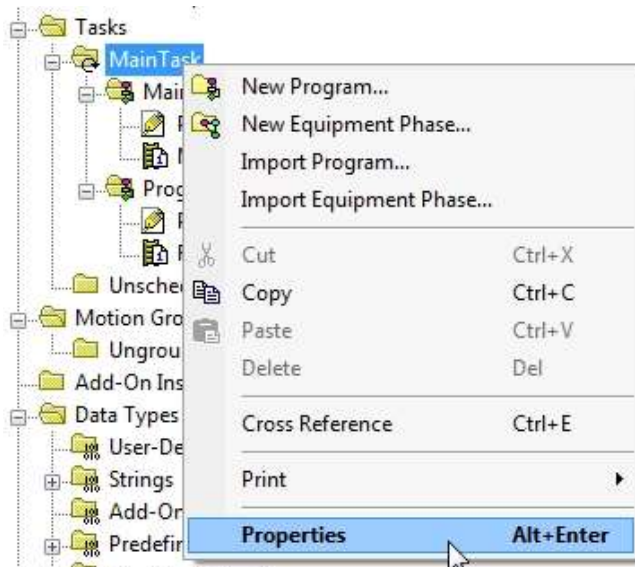
Reopen the MainRoutine

Is the cont_tag True or False? Explain:

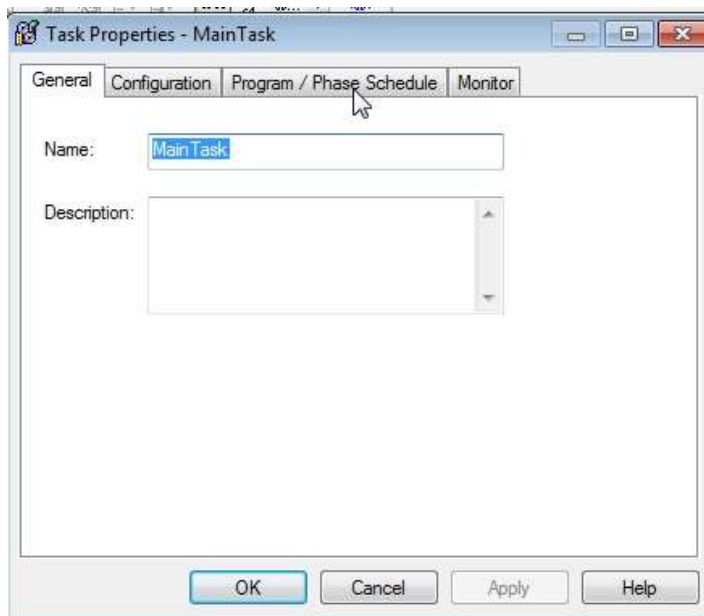
10. On the Controller Organizer window, what order are the Programs listed under the MainTask folder?

Open the MainTask Properties window.

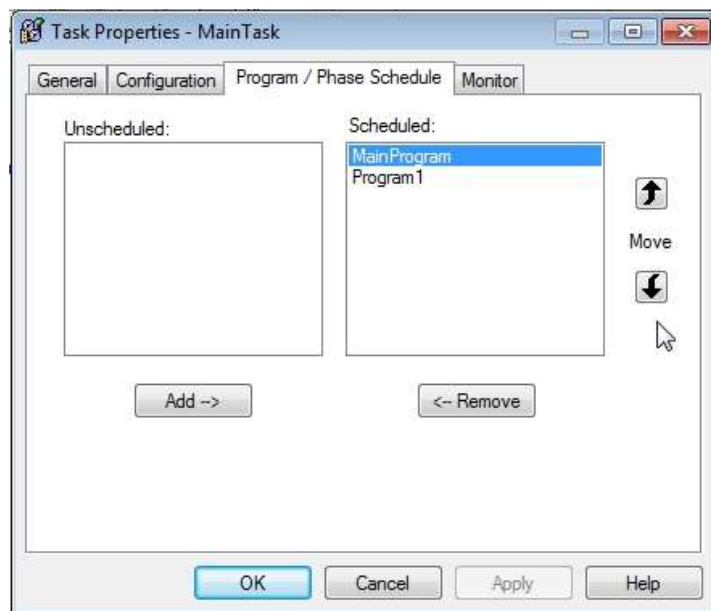
Right mouse click on MainTask and choose Properties on Menu.



Select the Program / Phase Schedule tab.

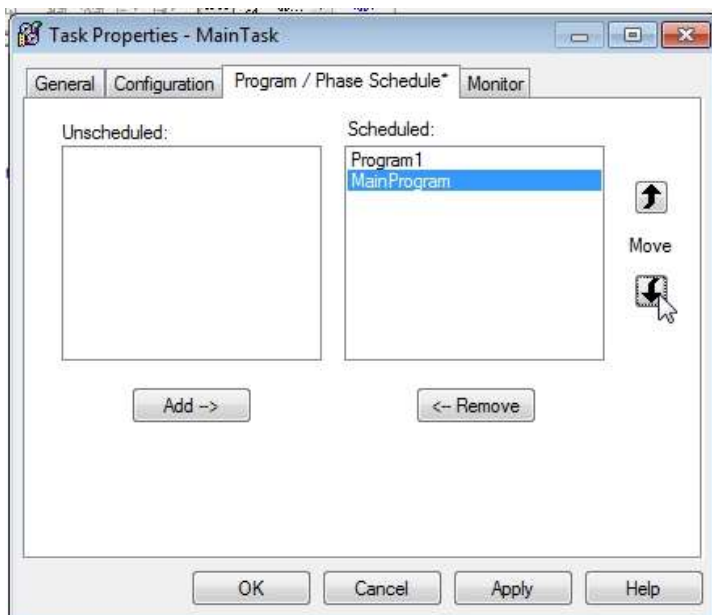


Note the order of the Programs listed in the Scheduled window.



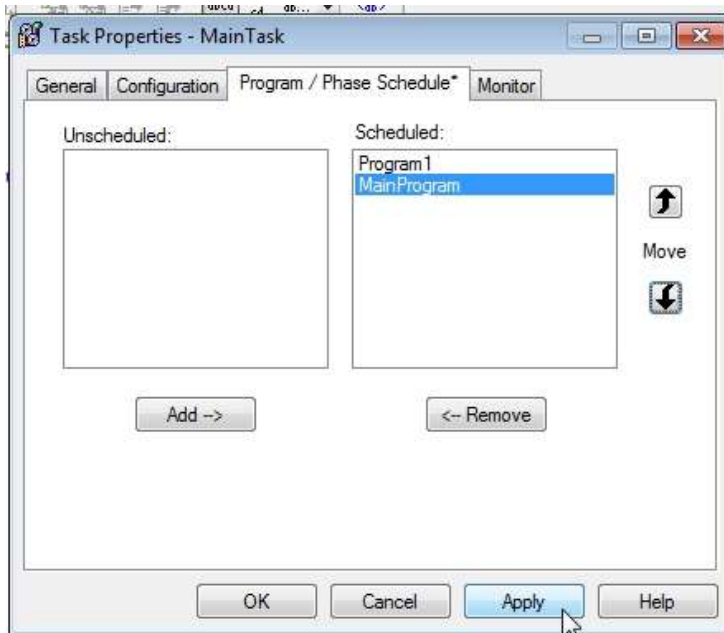
Is this the same order as the MainTask programs are list in the Controller Organizer window?

Hi-Light the MainProgram and click the Move down arrow button.



Note the order of the Programs listed in the Scheduled window.

Click the apply button on the MainTask Properties window.



On the Controller Organizer window, what order are the Programs listed under the MainTask folder? Explain.

Note: Processor scans the programs in the order they are listed on the Controller Organizer window

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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