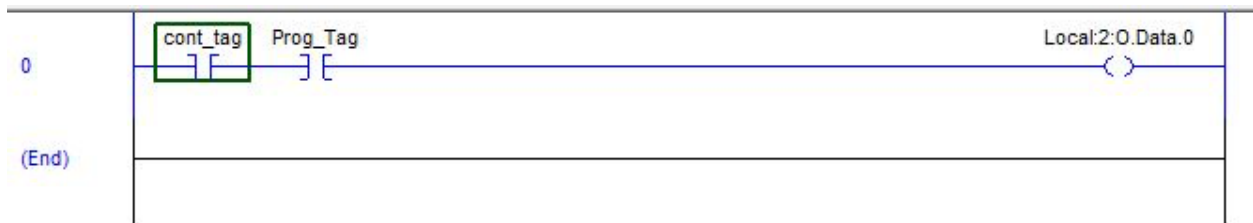


PLC210 Lab Exercise 12: Controller Programs

Download the project Compact_Module_5_Ex3_Programs.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.



1. View the Controller Organizer window.

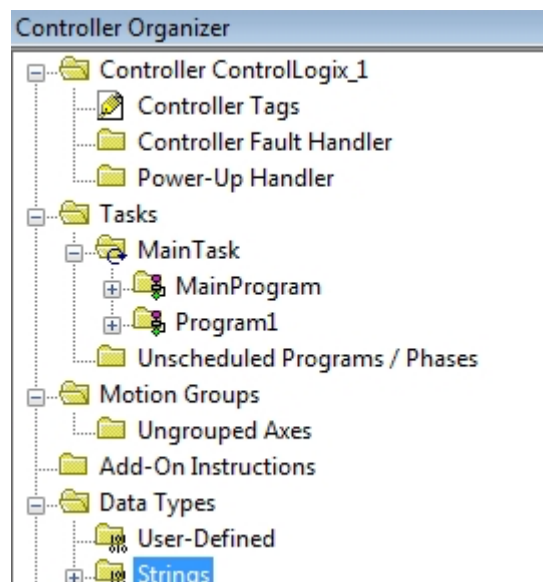


Figure 1. The Controller Organizer window.

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 name 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.

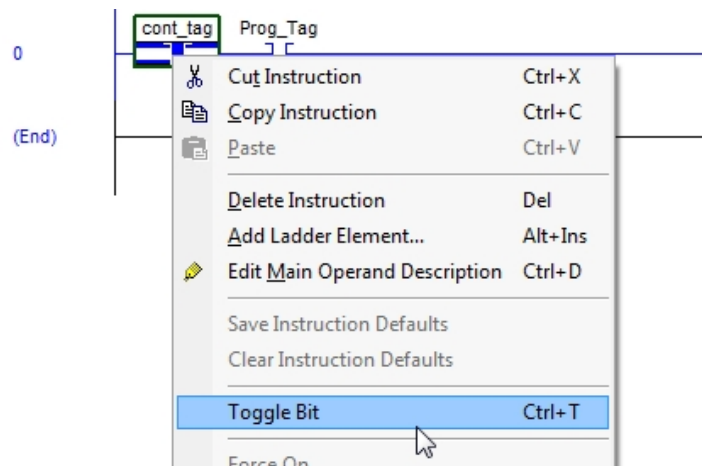


Figure 2. Toggle the cont_tag bit.

Does the bit change state? _____

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

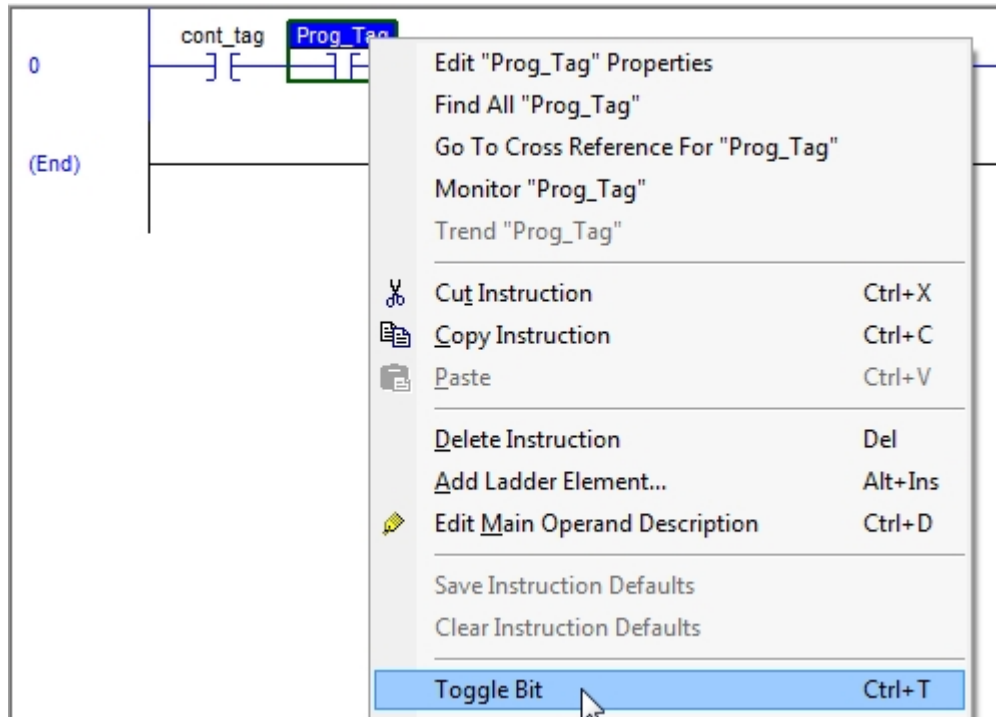


Figure 3. Toggle the Prog_Tag bit.

Does the bit change state? _____

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

2. Monitor the Properties of the cont_tag.

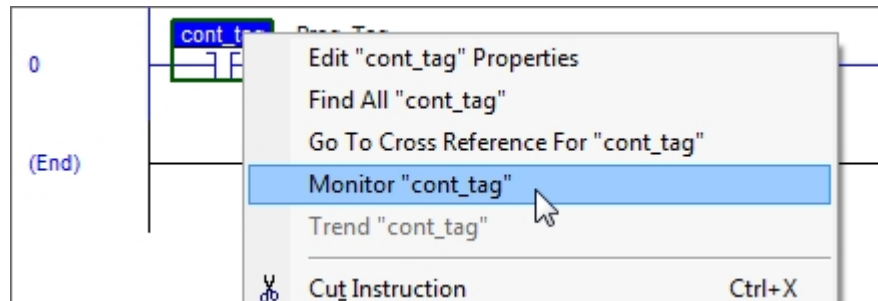


Figure 4. Monitor the cont_tag bit.

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	{ ... }	

Figure 5. Viewing the status of the cont_tag bit.

What is the Scope of the cont_tag?_____

Close the Tag window.

On the Controller Organizer window – double click on Controller Tags

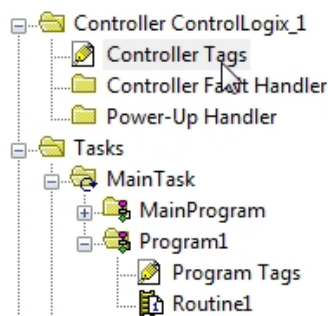


Figure 6. Opening the Controller Tags view.

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.

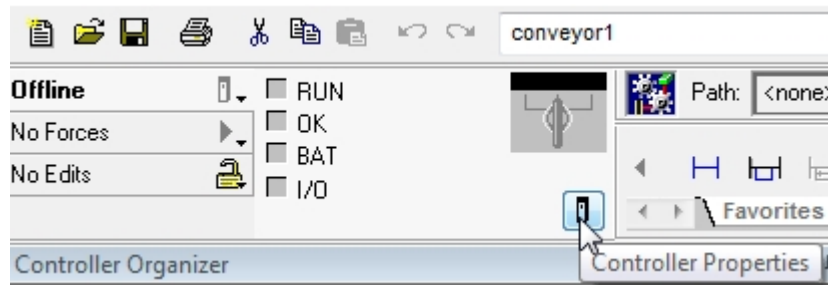


Figure 7. Viewing the Controller Properties.

What is the name of the Controller? _____

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

3. Monitor the Properties of the Prog_Tag in MainRoutine.

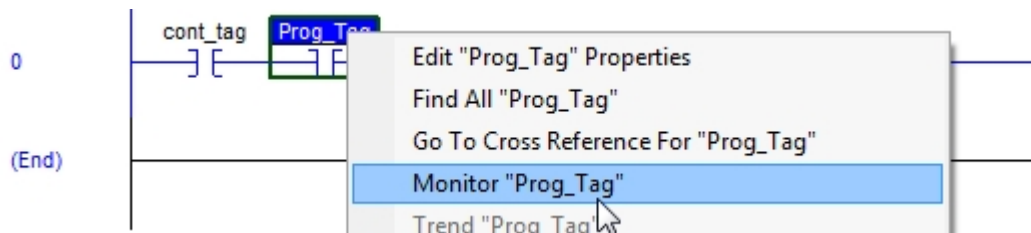


Figure 8. Monitoring the Prog_tag, tag.

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.

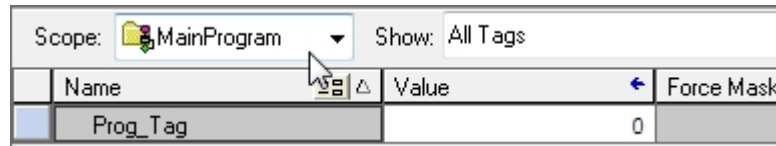


Figure 9. Viewing the status of the Prog_Tag.

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.

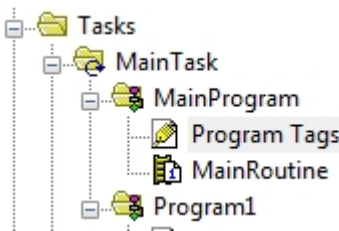


Figure 10. Viewing the Program Tags.

What is the Scope of the tag window that opens? _____

Is the Prog_Tag in the list of tags shown? _____

Close the tag window

4. Monitor the Properties of the Prog_Tag in Routine1.

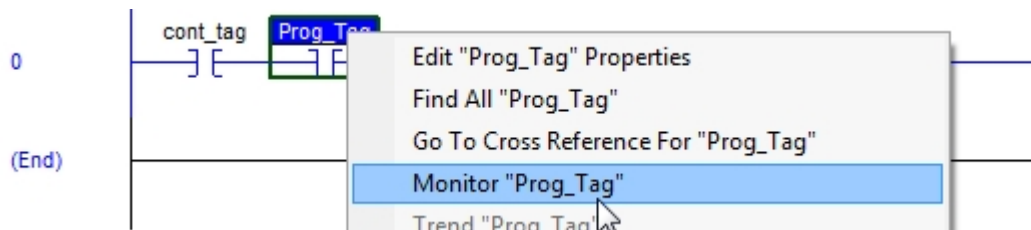


Figure 11. Monitoring Prog_Tag.

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.

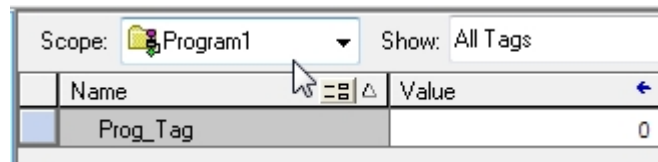


Figure 12. Viewing the status of the Prog_Tag.

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.

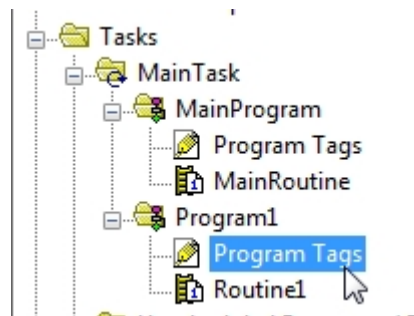


Figure 13. Opening the view of the Program Tags.

What is the Scope of the tag window that opens? _____

Is the Prog_Tag in the list of tags shown? _____

Close the tag window

5. Open the MainRoutine.

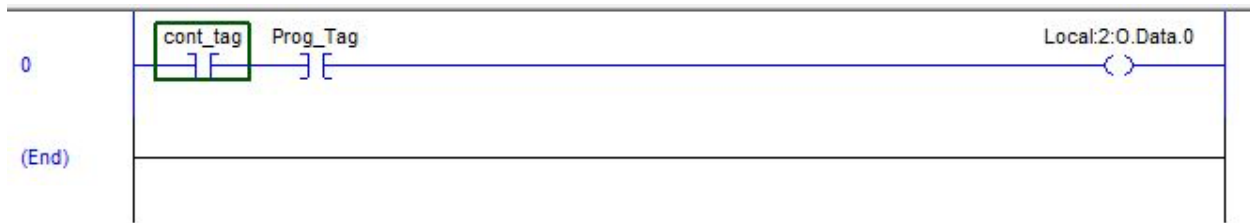


Figure 14. Opening the routine.

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

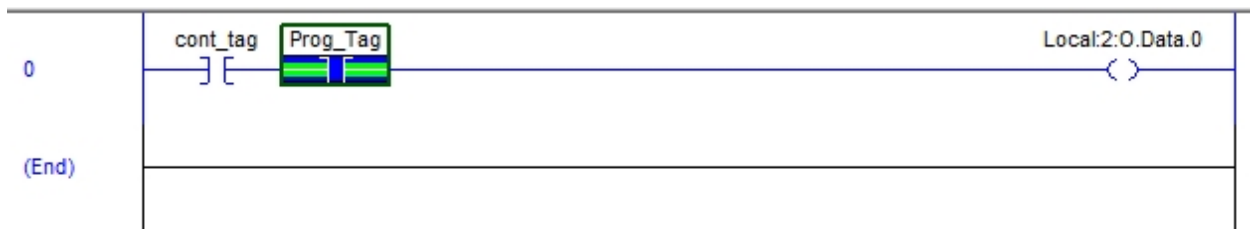


Figure 15. Verfyng highlight after the bit is toggled.

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

What is the value of the Prog_Tag? _____

6. Open the Program1 routine.

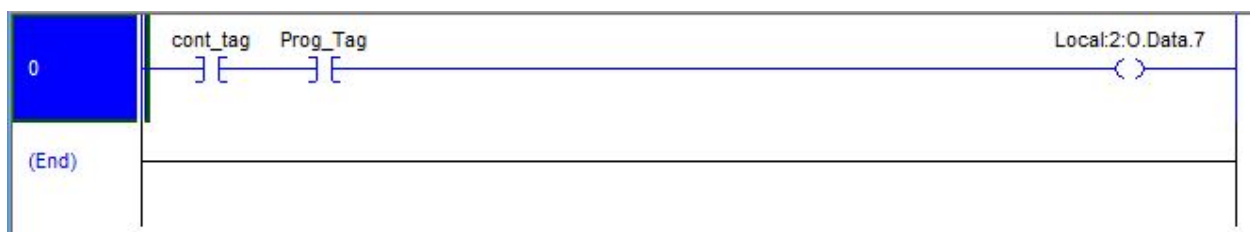


Figure 16. Viewing the Program 1 routine.

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? _____

7. Does the tag Prog_Tag have the same value in the MainRoutine as the Prog_Tag in Routine 1? _____

Explain: _____

8. Open the MainRoutine.

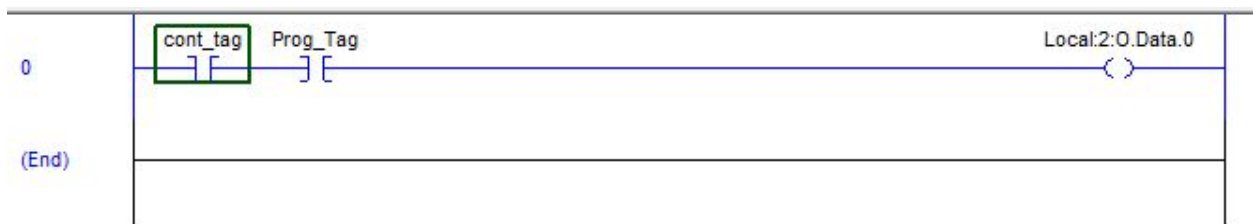


Figure 17. Toggle the cont_tag bit.

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

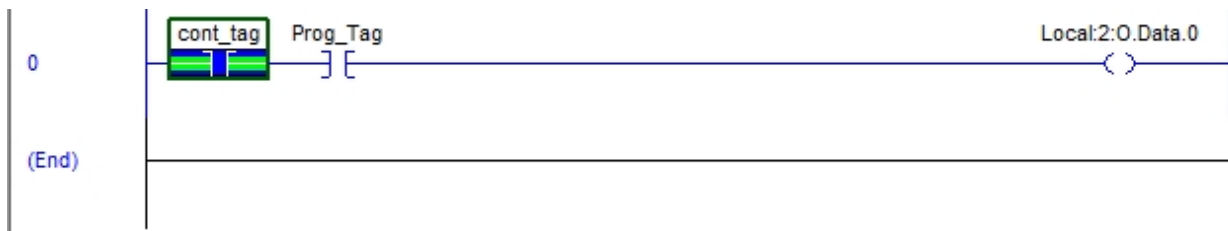


Figure 18. Verify the highlight of the XIC cont_tag in ladder logic.

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: _____

9. 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.

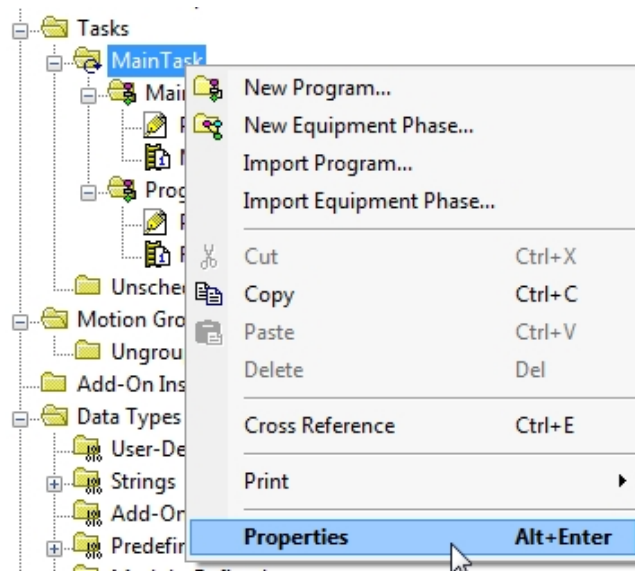


Figure 19. View the properties of the MainTask.

Select the Program / Phase Schedule tab.

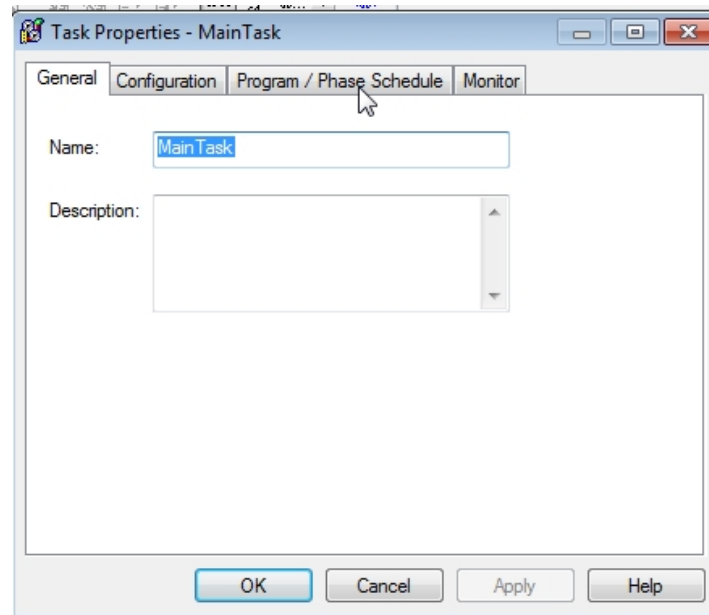


Figure 20. Selecting the Program/Phase Schedule.

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

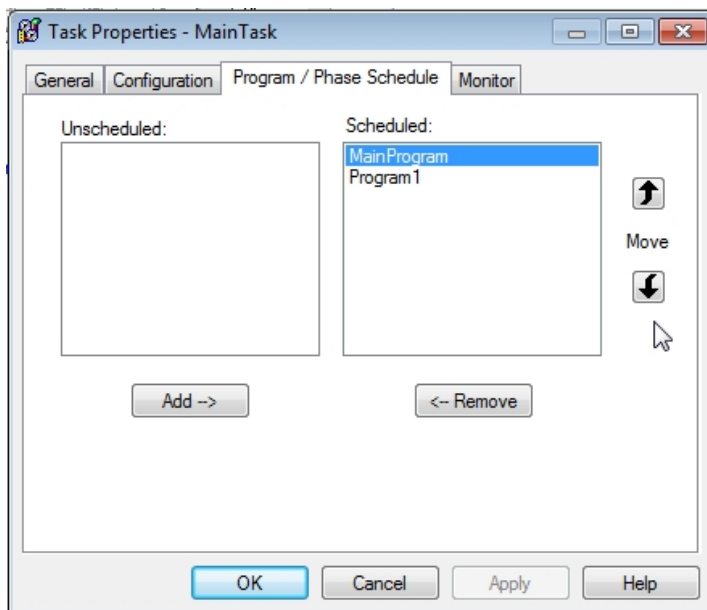


Figure 21. Viewing the Program/Phase Schedule.

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.

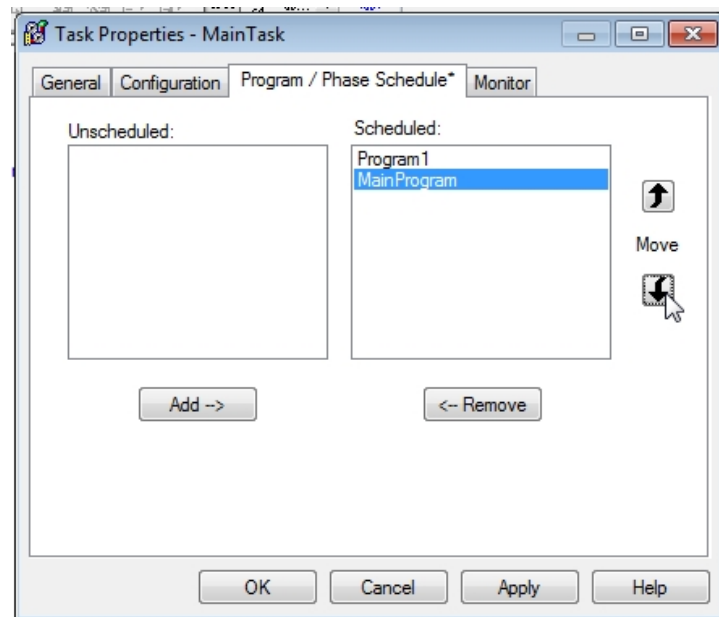


Figure 22. Moving the MainProgram moved down in order.

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

Click the apply button on the MainTask Properties window.

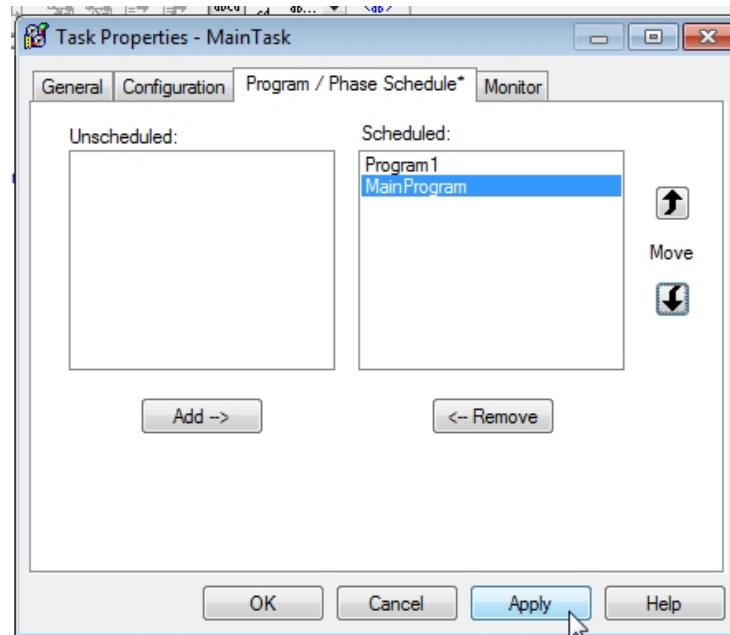


Figure 24. Verifying the MainProgram moved down in order.

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

DOL DISCLAIMER:

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