Northwest State
Community College

PLC 210 Hands-On Assessments: Module 3

Student Name: _____ N# _____ Date: _____

This hands-on assessment requires that each student successfully demonstrates each of these tasks to the instructor's satisfaction. There is no grade for this assessment.

Prior to taking this assessment, the student must pass (minimum of 80%) the Knowledge and Application Assessment.

The student cannot proceed to the HOA for the next module without completing this HOA

Note: Be specific in answering questions on the status of Dest and array values.
   Saying only that tags are a particular value is not a sufficient answer.
   Explain why the tags are of a particular value

Download the project file HOA_Module_3.ACD to the CompactLogix demo.

Ensure all demo inputs are OFF / False – Selector Switches turned to left.

Place processor in RUN mode

_____ 1. At Rung 0, what is the value of tag30?_____

   What is the output instruction on Rung 0?_____

   Toggle SS7 at Rung 0 to the right

   What is the value of tag30?_____

   Toggle SS7 at Rung 0 to the left

   What is the value of tag30?_____

   Toggle SS7 at Rung 0 to the right

   What is the value of tag30?_____

   Is the output instruction on Rung 0 True or False?_____

   Explain:_____

   _____

   _____

_____ 2. At Rung 1, what is value for tag10?_____

   What is value for tag11?_____

   What is value for tag12?_____

   What is the output instruction on Rung 1?_____

   Toggle SS6 at Rung 0 to the right

   What is the decimal value of tag12?_____

   Explain the Dest value based on the Source and Mask data:

_____

_____

_____

_____ 3. At Rung 2, what is value for tag1?_____

What are the element (tag) values of the Dest array?

[0]_____

[1]_____

[2]_____

[3]_____

[4]_____

[5]_____

[6]_____

[7]_____

[8]_____

[9]_____

What is the output instruction on Rung 2?_____

Toggle SS4 at Rung 2 to the right

What are the element (tag) values of the Dest array?

[0]_____

[1]_____

[2]_____

[3]_____

[4]_____

[5]_____

[6]_____

[7]_____

[8]_____

[9]_____

Explain why the element (tag) have changed values:_____

_____

_____

_____ 4. At Rung 3, Name of the Expression array?_____

At Rung 3, what are the element (tag) values of the Expression array?

[0]_____

[1]_____

[2]_____

[3]_____

[4]_____

[5]_____

[6]_____

[7]_____

[8]_____

[9]_____

At Rung 3, Name of the Dest array?_____

At Rung 3, what are the element (tag) values of the Dest array?

[0]_____

[1]_____

[2]_____

[3]_____

[4]_____

[5]_____

[6]_____

[7]_____

[8]_____

[9]_____

What is the output instruction on Rung 3?_____

What is Data Type tag2? _____

What DINT tags are included with tag2?

_____

_____

What BOOL tags are being used by the FAL instruction?

Hint: View right-side of the FAL instruction

_____

_____

_____

What is the Mode setting for the FAL instruction?_____

Explain the purpose of the Mode setting :_____

_____

_____

At Rung 4, Name of the Source array?_____

At Rung 4, what are the element (tag) values of the Source array?

[0]_____

[1]_____

[2]_____

[3]_____

[4]_____

[5]_____

[6]_____

[7]_____

[8]_____

[9]_____

At Rung 4, Name of the Dest array?_____

At Rung 4, what are the element (tag) values of the Dest array?

[0]_____

[1]_____

[2]_____

[3]_____

[4]_____

[5]_____

[6]_____

[7]_____

[8]_____

[9]_____

Note: Monitor the FAL's instruction EN and DN bits as PB2 is being pressed

At Rung 3, press PB2 ten (10) times.

When does the EN go True?_____

When did the DN go True?_____

What is the Position value when the DN bit goes True?_____

Explain why the DN bit change values:_____

_____

_____

_____

_____ 4. At Rung 3, what are the element (tag) values of the Expression array?

[0]_____

[1]_____

[2]_____

[3]_____

[4]_____

[5]_____

[6]_____

[7]_____

[8]_____

[9]_____

At Rung 3, what are the element (tag) values of the Dest array?

[0]_____

[1]_____

[2]_____

[3]_____

[4]_____

[5]_____

[6]_____

[7]_____

[8]_____

[9]_____

At Rung 3, explain the values of the elements (tags) in the Dest array:

_____

_____

_____

_____

_____

_____

At Rung 4, what are the element (tag) values of the Source array?

[0]_____

[1]_____

[2]_____

[3]_____

[4]_____

[5]_____

[6]_____

[7]_____

[8]_____
[9]_____

At Rung 4, what are the element (tag) values of the Dest array?
[0]_____
[1]_____
[2]_____
[3]_____
[4]_____
[5]_____
[6]_____
[7]_____
[8]_____
[9]_____

At Rung 4, explain the values of the elements (tags) in the Dest array:

_____
_____
_____
_____
_____
_____

_____ 5. What do the instructions at Rung 5 do when SS5 is turned ON – to the right

Explain:_____
_____
_____

To run through the HOA exercise again
Ensure all selector switches are OFF – turned to left
Toggle SS5 ON then OFF – turn to right then left.
Return to start of HOA

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