PLC 210 Hands-On Assessments: Module 4

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 values. Saying only that tags are specific values is not a sufficient answer. Explain why tags have certain values.

Download the project file HOA_Module_4.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 Data Type for tag1? __________________________
At Rung 0, what is the Data Type for tag2? __________________________
Enter the value of 115 for tag1
What is the value of tag2? __________________
Enter the value of 200 for tag1
Explain message box: __________________________

Enter the value of 0 for tag1

_____  2. At Rung 1, what is the Data Type for tag3? __________________________
At Rung 1, what is the Data Type for tag9? __________________________
Enter the value of 30000 for tag3
What is the value of tag9? __________________
Enter the value of 50000 for tag3
What is the value of tag9? __________________
Explain the tag 9 value: __________________________

_____  3. At Rung 2, what is the Data Type for tag4? __________________________
At Rung 2, what is the Data Type for tag6?_______________________________
Enter the value of 7.4 for tag4
What is the value of tag6?_____________________
Enter the value of 10.7 for tag4
What is the value of tag6?_____________________
Enter the value of 6.5 for tag4
What is the value of tag6?_____________________
Enter the value of 9.5 for tag4
What is the value of tag6?_____________________

Explain how tag values are rounded in Logix 5000 processors
____________________________________________________________________
____________________________________________________________________
____________________________________________________________________

4. At Rung 3, what is the Data Type for tag7?_______________________________
At Rung 3, what is the Data Type for tag5?_______________________________
Enter the value of 2 billion for tag7
What is the value of tag5?_____________________
Explain the tag 5 value:_______________________________
____________________________________________________________________

5. At Rung 4, monitor the Control tag for the SQO instruction
Tag Name of the Control Tag:_________________________________
List the Structure of the Control Data Type:

<table>
<thead>
<tr>
<th>Tag Name</th>
<th>Value</th>
<th>Data Type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Page 2
6. At Rung 5, monitor the Counter tag for the CTU instruction
   Tag Name of the Counter Tag: ________________________________
   List the Structure of the Counter Data Type:
   
<table>
<thead>
<tr>
<th>Tag Name</th>
<th>Value</th>
<th>Data Type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

7. Toggle SS4 ON – to the right
   At Rung 5, press PB1 Fifty (50) times.
   What happens to the processor? _________________________
   Where is the instruction located that caused the problem?  _________________________
   _________________________
   _________________________
   _________________________
   _________________________
   What specific condition that caused the problem?  _________________________
   _________________________
   _________________________

   To run the logic again:
   Toggle SS4 OFF – to the left
   Clear the Fault
   Reset the CTU instruction at Rung 5
   Zero out value_array file.

8. Are there User-Defined tags used in the Project file? _________________________
   Name of User-Defined Data Type? _________________________
   Name of tag(s) using the User-Defined Data Type? _________________________
DOL DISCLAIMER:

This product was funded by a grant awarded by the U.S. Department of Labor’s Employment and Training Administration. The product was created by the grantee and does not necessarily reflect the official position of the U.S. Department of Labor. The Department of Labor makes no guarantees, warranties, or assurances of any kind, express or implied, with respect to such information, including any information on linked sites and including, but not limited to, accuracy of the information or its completeness, timeliness, usefulness, adequacy, continued availability, or ownership.

This work is licensed under a Creative Commons Attribution 4.0 International License.