

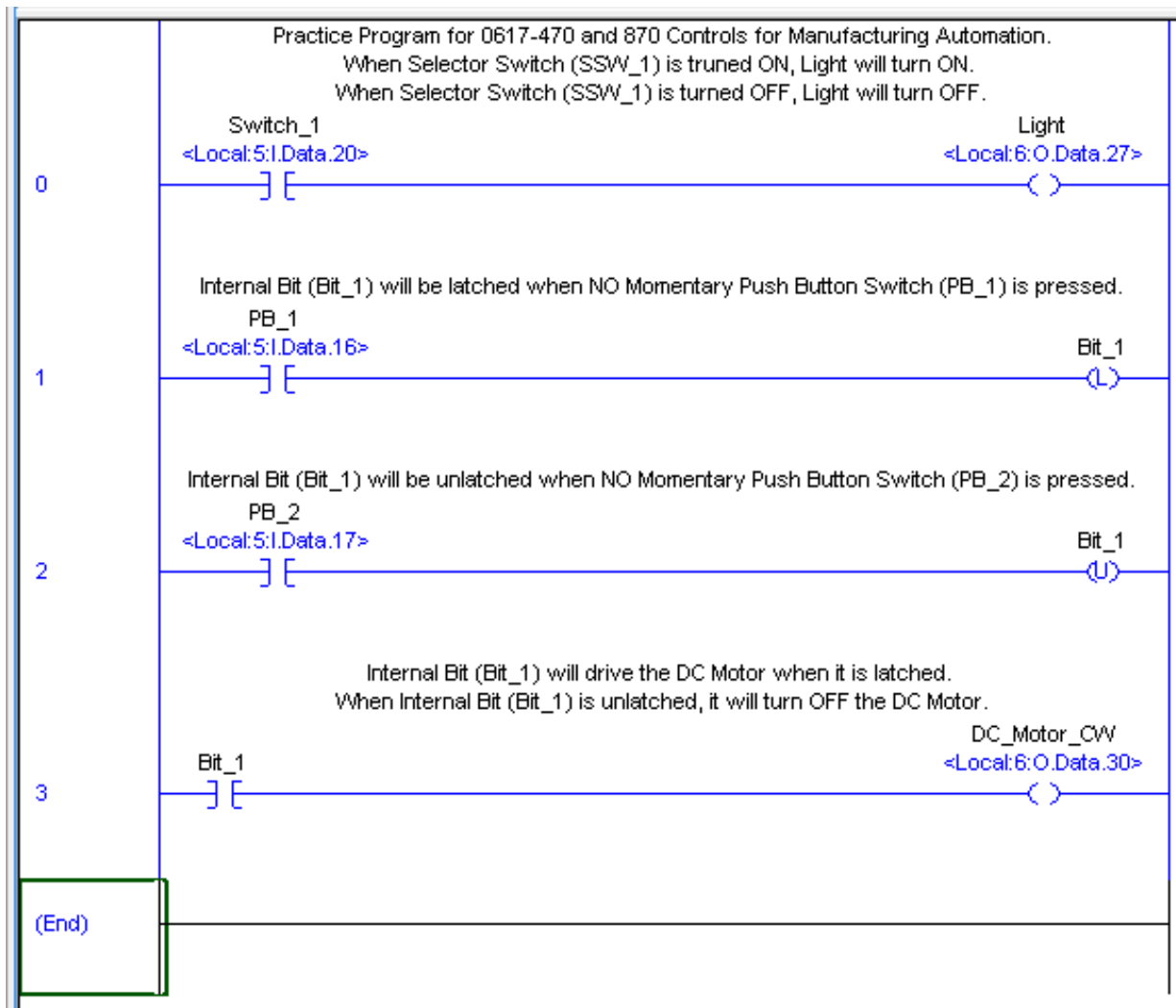
0617-470 and 870 Controls for Manufacturing Automation
Department of MMET-PS
Rochester Institute of Technology
Practice Laboratory Exercise

Objective:

The objective of this practice laboratory exercise is to familiarize you with the RSLogix 5000 PLC software and type in the PLC program given below.

Tasks to be accomplished:

1. Turn the Light ON and OFF using a NO selector switch.
 - a. The Light should turn ON when the switch is turned ON.
 - b. The Light should turn OFF when the switch is turned OFF.
2. Turn the DC Motor ON and OFF in clock-wise direction using two NO Momentary Push Button Switches and an internal bit.
 - a. The DC Motor should turn ON when one of the Momentary Push Button switches is pressed.
 - b. The DC Motor should turn OFF when other Momentary Push Button Switch is pressed.



Experiment Setup - Input and Output Addresses

NO Momentary Pushbutton Switch 1 (Input)	Local:5:I.Data.16
NO Momentary Pushbutton Switch 2 (Input)	Local:5:I.Data.17
NC Momentary Pushbutton Switch 1 (Input)	Local:5:I.Data.18
NC Momentary Pushbutton Switch 2 (Input)	Local:5:I.Data.19

NO Selector Switch 1 (Input)	Local:5:I.Data.20
NO Selector Switch 2 (Input)	Local:5:I.Data.21
NO Selector Switch 3 (Input)	Local:5:I.Data.22
NO Selector Switch 4 (Input)	Local:5:I.Data.23

Fan (Output)	Local:6:O.Data.18
Light (Output)	Local:6:O.Data.27
Thumbwheel Switches (BCD – Input)	Local:5:I.Data.00 – 15
7 Segment Display (BCD – Output)	Local:6:O.Data.00 – 15

Solenoid Valve for Pneumatic Cylinder (Output)	<i>Cylinder Extend (Output)</i>	Local:6:O.Data.16
	<i>Cylinder Retract (Output)</i>	Local:6:O.Data.17
	<i>Extend Sensor (Input)</i>	Local:5:I.Data.24
	<i>Retract Sensor (Input)</i>	Local:5:I.Data.25

Traffic Light Setup (4 Way Intersections) (Output)	<i>Street A – Red</i>	Local:6:O.Data.20
	<i>Street A – Yellow</i>	Local:6:O.Data.21
	<i>Street A – Green</i>	Local:6:O.Data.22
	<i>Street B – Red</i>	Local:6:O.Data.23
	<i>Street B – Yellow</i>	Local:6:O.Data.24
	<i>Street B – Green</i>	Local:6:O.Data.25

Stepper Motor (Output)	<i>Enable</i>	Local:6:O.Data.26
	<i>Direction Control</i>	Local:6:O.Data.28
	<i>Pulse Train</i>	Local:6:O.Data.29
	<i>Rotation Sensor 1 (Prox – Input)</i>	Local:5:I.Data.28
	<i>Rotation Sensor 2 (Prox – Input)</i>	Local:5:I.Data.29

DC Motor (Output)	<i>Clockwise Turn</i>	Local:6:O.Data.30
	<i>Counter Clockwise Turn</i>	Local:6:O.Data.31
	<i>Rotation Sensor 1 (Prox – Input)</i>	Local:5:I.Data.26
	<i>Rotation Sensor 2 (Prox – Input)</i>	Local:5:I.Data.27