

Homework #2: ECE 461 / 661

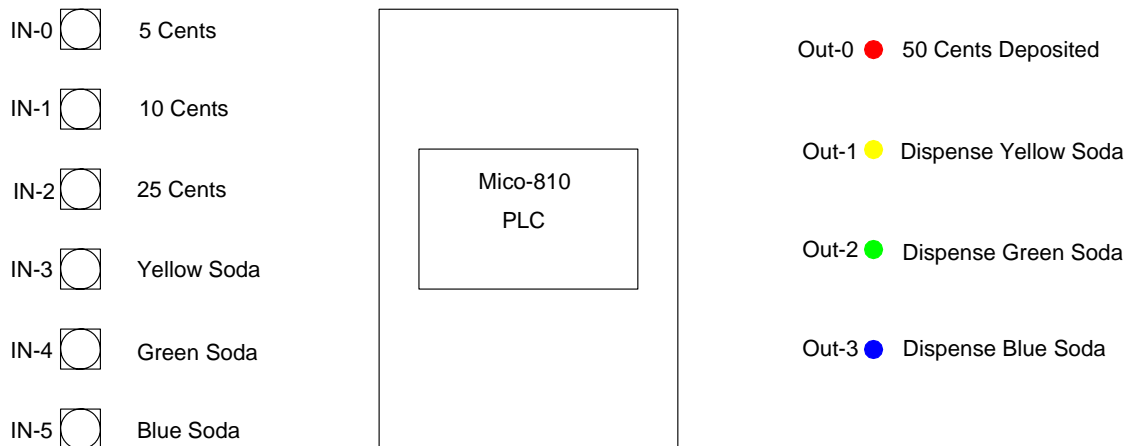
State Transitional Logic - Counters - Timers:. Due Wednesday, September 5th

You may work in groups of 1-3 if you like.

Homework can be turned in in class, in my office, or emailed to jacob_glower@yahoo.com

A PLC is to control a pop machine. The coin slot can accept either nickles, dimes, or quarters.

- When you add 50 cents or more, the red light turns on indicating that you have enough money to buy a pop.
- If the red light is turned on and you press a yellow / green / or blue button,
 - The corresponding light turns on for 2 seconds then turns off, indicating that a pop has been dispensed, and
 - The money counter is cleared (no change)



Problem 1) Write a ladder-logic program which holds OUT-1 to OUT-3 high for 2.00 seconds when the corresponding button is pressed.

Problem 2) Write a ladder-logic program which counts to 50 cents and turns on the red light when the total is 50 cents or more.

Problem 3) Write a ladder-logic program to implement the soda pop controller.

Problem 4) Demonstrate that your program works (video or in-person demo is OK)