Homework #1 ECE 461 / 661
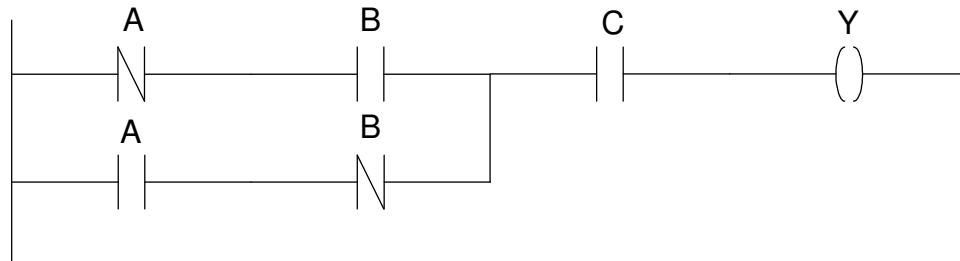
Ladder Logic. Due Monday, August 27th

1) Write a Ladder Logic program to implement the following logic function: Y = f(A,B,C,D)

		00	01	11	10
	00	1	0	1	0
	01	0	1	1	0
AB	11	0	1	1	0
	10	1	1	1	0

2) Determine the logic function which corresponds to the following ladder logic program:

3) Write a ladder logic program to meet the following requirements:

I/O:

- Input: Button 1, 2, 3, 4
- Output: 1 (red) and 3 (green)

How they relate:

- If no buttons are pressed, both lights are off. Otherwise,
- If an even number of buttons are pressed, the red light turns on and the green light is off.
- If an odd number of buttons are pressed, the green light is on and the red light is off.