

Lab 3 Problem 2

February 28, 2017

Activities to do-

1. What is the meaning of “SPST” and “NO” in the context of electro-mechanical switches?

SPST - Single-Pole-Single-Throw; There is one pole that connects to one throw when the toggle is activated.

NO - Normally Open; The normal state of the toggle is normally open. When the button is pushed, that's when current goes through the connected circuit.

2. Design a small digital circuit (with Logisim) using basic logic gates, so that when this circuit is used with the chosen switch, it will make the circuit function as a toggle switch. Use the button component in Logisim for this question. (Input/Output > Button) The way the button switch operates in Logisim, as long as you keep the button pressed an LED or other output signal will stay ON. When you release the button, the LED or output signal goes OFF. Design a toggle switch such that when you press the button once, your LED turns ON and then remains ON (even after the button is released) until the button is pushed again.

3. Using the text-insert feature in Logisim mention in the circuit the chip number(s) (from the 74XX family) that you would use for the circuit and identify the pin numbers that would be used by your circuit.