CS 225/226 - MINI PROJECT

# PART-1

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**AIM:** To simulate/realize the working of a traffic light controller in logisim using a 3 data bit width **ROM** to store output data.

**MOTIVATION:** This experiment has been performed to familiarize and stimulate one with the working of Read Only Memory in working systems.

**COMPONENTS USED:**

1. ROM (address bit width-3, data bit width-3).
2. Counter (Rising edge, data bits-3).
3. Splitter (3 splits).
4. LED (Green, Red, Yellow).
5. Button (Reset) & Clock.

**CRITICAL ANALYSIS:**

The design upon simulation (simulate-> tick enabled) realises the working of a traffic light system while reading the output stored as a sequence in the ROM.

The sequence stored in the ROM is 1,3,2,4,0,4,2,1. This sequence produces the required traffic light system.

ROM is used for storing the sequence bit that is read as an output to provide the sequence of the traffic light.

The traffic light is simulated using LEDs of the required colours.

A counter is used to access the data through the addresses stored in the ROM.

A Splitter divides the 3-bit data output to 3 1-bit data outputs.

Reset button resets the entire system to beginning of the sequence.

**SIMULATION RESULTS**:

The simulation works as expected and provides the given output.

















