EXPERIMENT-6

AIM: To study a priority encoder and verify it's truth table

HARDWARE / SOFTWARE APPARATUS : Power supply , bread board , connecting wires , respective IC

TRUTH TABLE:

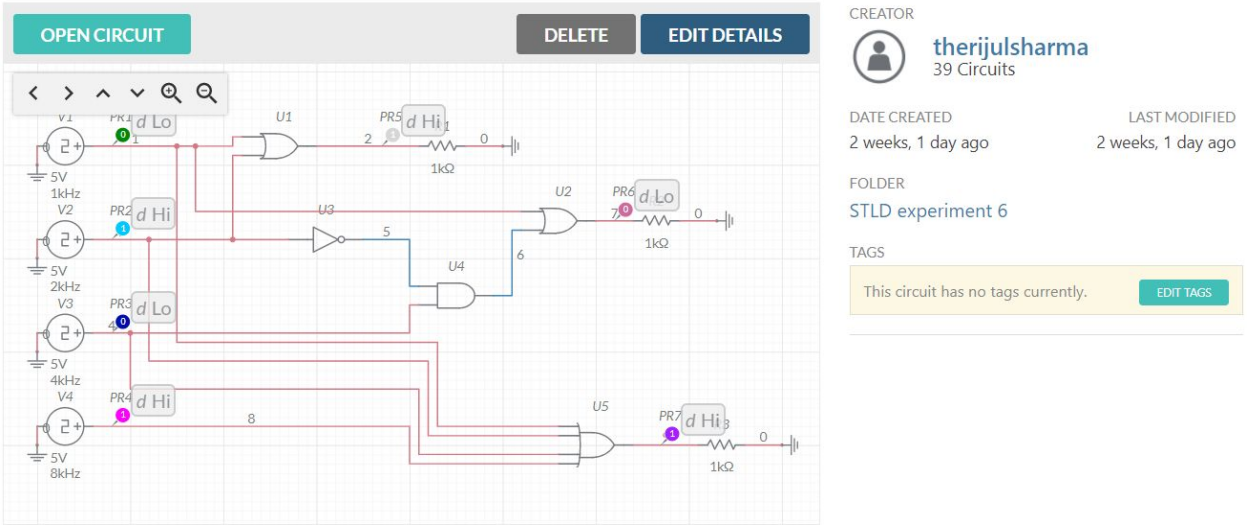
INPUTS				OUTPUTS	
Y3	Y2	Y1	Y0	A1	A0
0	0	0	1	0	0
0	0	1	0	0	1
0	1	0	0	1	0
1	0	0	0	1	1

THEORY: An Encoder is a combinational circuit that performs the reverse operation of Decoder.It has a maximum of 2^n input lines and 'n' output lines, hence it encodes the information from 2^n inputs into an n-bit code. It will produce a binary code equivalent to the input, which is active High. Therefore, the encoder encodes 2^n input lines with 'n' bits.

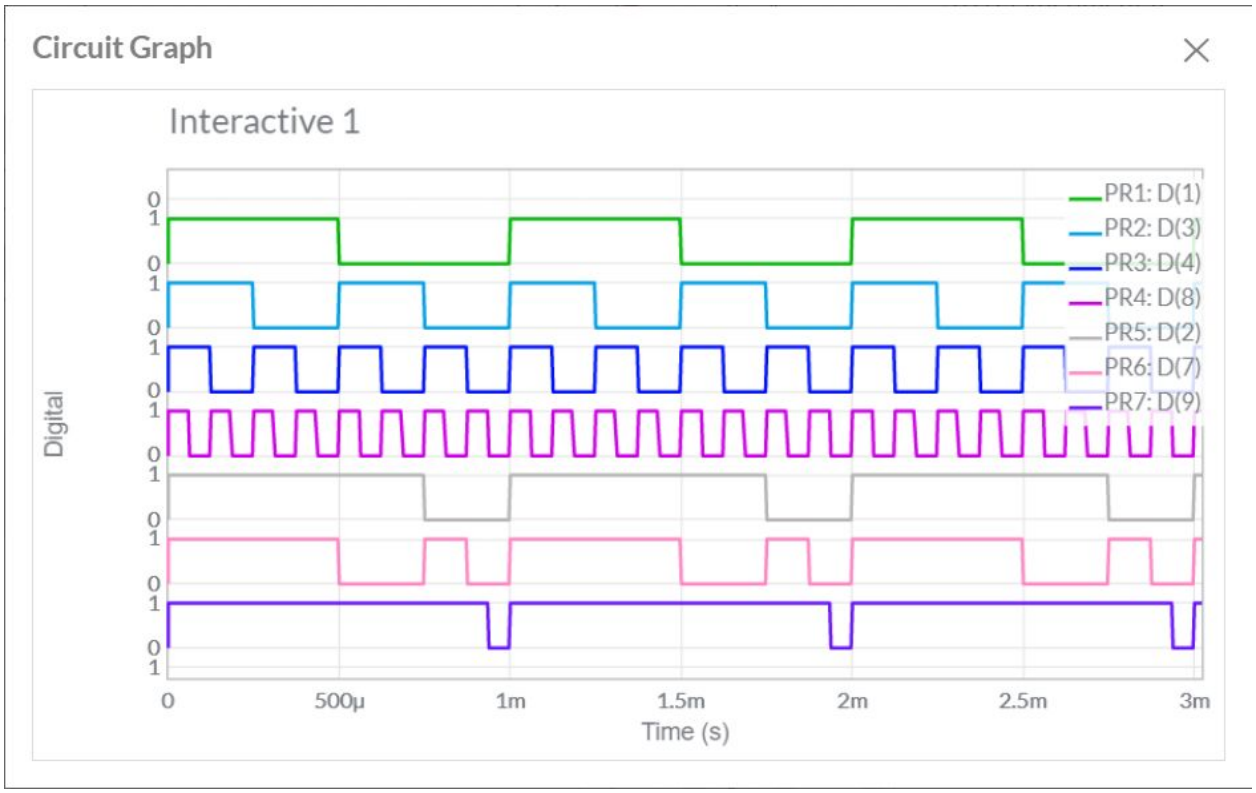
PROCEDURE (MULTISIM):

- Select the required gate symbol from the digital section of the tool bar on the left .
- Select a resistor from the same toolbar.
- Select the voltage sources and ground symbols from that toolbar.
- Ground both the voltage sources(clock) and then connect them to the input terminal of the gate.
- Connect the output terminal to 1kohm resistor and ground it.

CIRCUIT DIAGRAMS:



INPUT /OUTPUT WAVEFORMS:



PRECAUTIONS:

- Power supply should not exceed more than 5V.
- Connections should be tight.
- Components should be tested before the practical.