Report: Display random numbers

CS22BTECH11006

***Abstract*—In this assignment we have made a Random number generator using shift registers**

Procedure

1) We connected the 555 timer circuit according to the figure 1

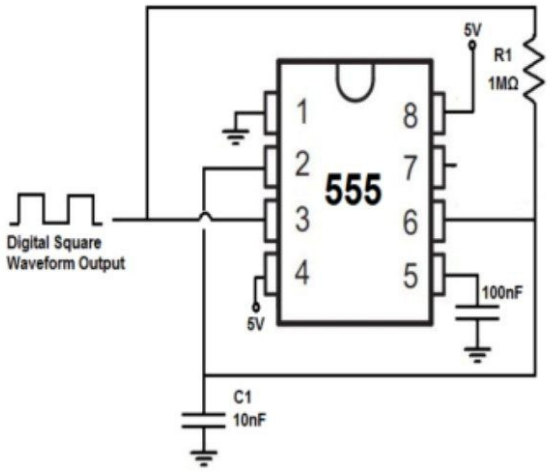

Fig. 1. Connection in 555 timer circuit

2) Then we connected Clock output of 555 timer circuit to the clock signal of D-Flip flops
3) Now we make the circuit for shift registers using a 4 D-Flip flops (using two 7474 IC's)

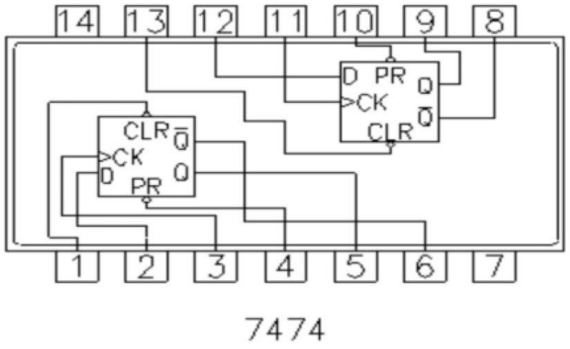

Fig. 3. Connection in 7474 IC

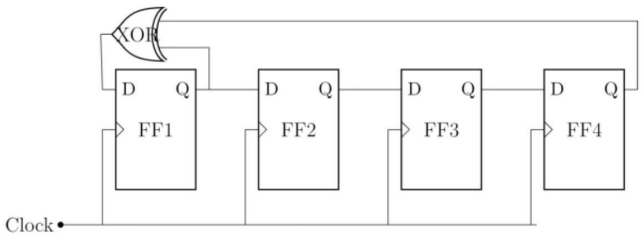

Fig. 4. Connection in XOR gate

4) Then we connected XOR gate (7486 IC) according to the figure 4
5) then we connected the decoder (7447 IC) and connected its A,B,C,D with Q_0,Q_1,Q_2,Q_3 respectively as per the figure 5

Fig. 5. Connection in Decoder gate

6) Then we connected The seven segmented display and then connected it with the dceoder (7447 IC) according to the table 6 and the figure 6

7447	$\bar{a}$	$\bar{b}$	$\bar{c}$	$\bar{d}$	$\bar{e}$	$\bar{f}$	$\bar{g}$
Display	a	b	c	d	e	f	g

Fig. 6. Connection of seven segmented display with decoder

7) We connected all the independent parts with each other and then connected the power source

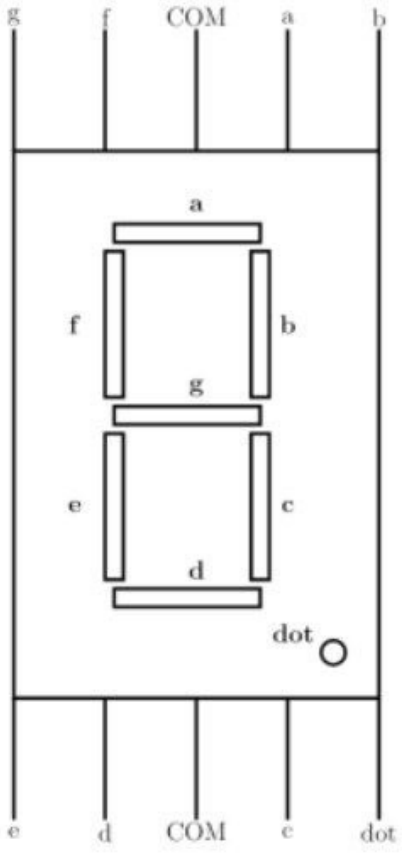

Fig. 6. Seven segmented display

Output

Output was changing digits on the seven segment display the output is shown in figure.

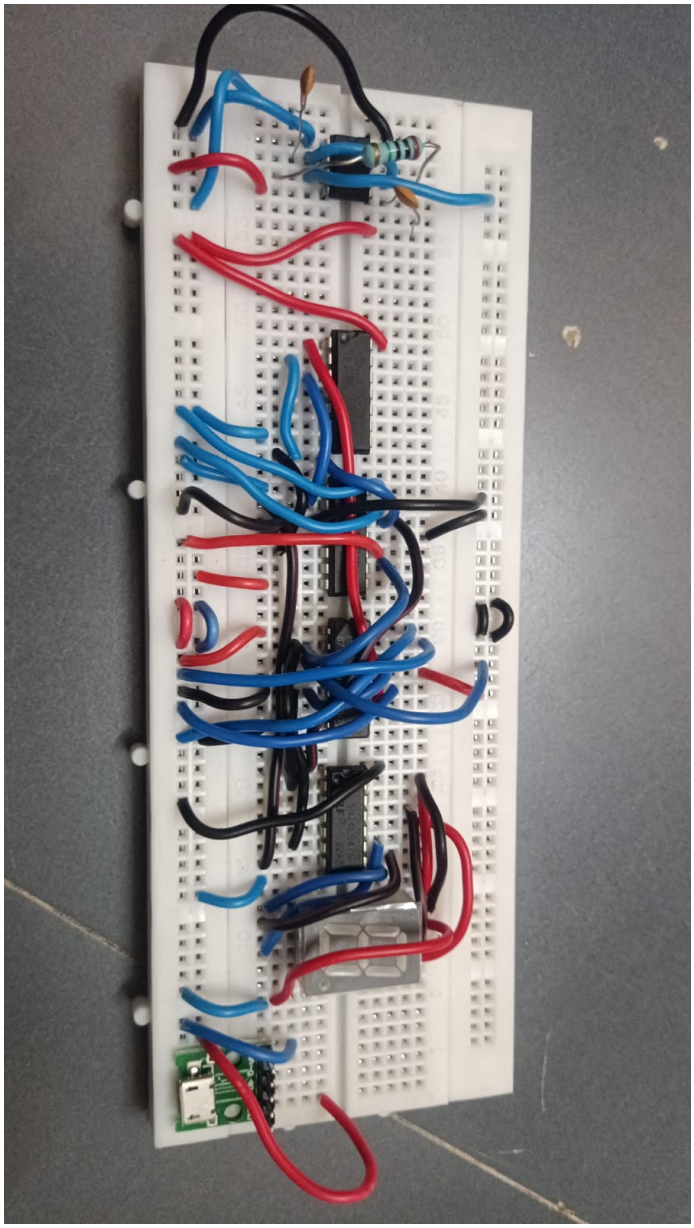

Fig. 7. MY HARDWARE IMAGE