

# Report on Hardware Assignment

## AI1110

G Sai Keerthi  
CS22BTECH11024

### (I).COMPONENTS:

Components	Value	Quantity
Breadboard	-	1
Seven segment display	Common Anode	1
Decoder	7447	1
Flip Flop	7474	2
X-OR GATE	7486	1
555 IC	-	1
Resistor	1K $\Omega$	1
Resistor	1M $\Omega$	1
Capacitor	100nF	1
Capacitor	10nF	1
Jumper Wires	-	20

### (II). DESCRIPTION:

We have generated the clock signal using the 555 timer circuit using all the components given in the above table. And then connected the clock output of 555 timer circuit to clock signal of D-Flip flops. After we connected the circuit for shift registers using 4 D-Flip flops (by using two 7474 IC's) and one X-OR gate (7486 IC), the output of each D-flip flop to Decoder IC (7447 IC). The pin out of 7447 IC. As per the pinout of IC 7474 [2,12] pins of both IC's are connected to the [7,1,2,6] of decoder IC respectively and connections between the seven segment display and the 7447 IC. Additionally we made connections like Vcc and GND to every IC as per the respective IC pinout for IC's 7474, 7447, 7486.

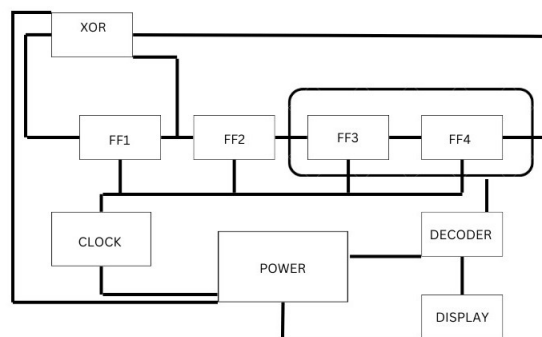


Fig. 1: Block diagram

### (III). Observation:

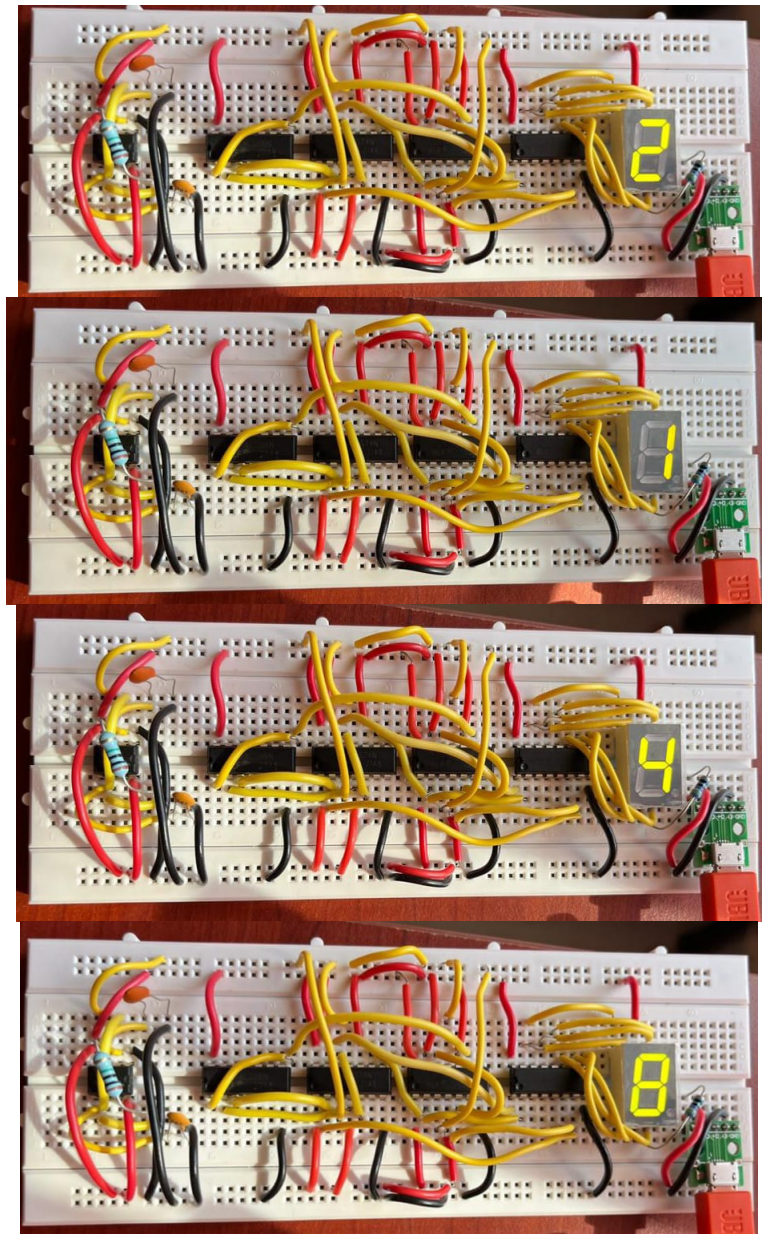


Fig. 2: Circuits

Here we have observed that digits from 1-8 are displayed on the Seven segment display.