**Discussion:**

The main purpose of this project was to show some alphabets and numbers in 7-segment. For this, we used multiplexers, JK flip-flops and some other devices. First we completed our combinational part using 8X1 multiplexers (74151 IC). We found out the Boolean algebraic functions of LED pins using truth table and K-map, and then we drew the circuit in logisim .After that, we built our circuit and successfully connected the connections of the multiplexers with ground, VCC and other pins. In 8X1 MUX, we connected the 7th pin with ground and the 14th pin with VCC.

Then in another breadboard, we made our sequential part using JK flip-flop and 555 – timer IC. We also used some LEDs to show the output from the JK flip-flop. We had to make a clock with 555- timer IC which will give a pulse in around every 2 second. We connected this clock with JK flip-flop to run the sequential part. And finally we connected this whole sequential part with combinational part.