1. Design 2 to 1, 4 to 1, 8 to 1 and 16 to 1 multiplexer.
2. Design 1 to 2, 1 to 4, 1 to 8 and 1 to 16 demultiplexer.
3. Design an Encoder, decoder, multiplier
4. Design half adder and full adder circuit.
5. Build 16-bit full adder digital circuit. At first built 1-bit full adder by using that 1-bit full adder subcircuits built 4-bit full adder, 8-bit full adder, 16-bit full adder
6. Built 16-bit full subtractor circuit.
7. In seven segment display use numbers from 0-7 and lit a,b,c,d,e,f,g segments and also design the complete circuit lit.
8. Design a Counter that can count up to 100.

    a) Using seven J-K flip flops.
    b) Using 4 BCD counters.
    c) Display the output using a Seven-Segment Display (SDD)

Note: Upload answers as a one zip file.