Assignment -1

1. Write the code of following programme
    a. Six basic gates with n input operation
    b. 4 bit full adder
    c. 4 Bit Adder Subtractor
    d. Carry look ahead adder.
    e. Parity Generator and checker
    f. 4 Bit magnitude comparator
2. Write the code of MSI logic like (choose appropriate programming process)
    a. 4 bit , 8 bit , 16 bit MUX
    b. 4 bit , 8 bit , 16 bit De-MUX
    c. 16 bit MUX using MUX tree
    d. 64 bit MUX using MUX tree
    e. Full adder using MUX
    f. 3-8 Decoder
    g. BCD encoder
    h. BCD to Excess three converter using Decoder
    i. BCD to Grey code converter using Decoder
    j. Priority Encoder
3. Write the code for following sequential logic
    a. J-K , D and T flipflop
    b. Pulse generator
    c. 3 bit up down ripple counter
    d. 3 bit ring counter
    e. 3 bit Shift right-left register (choose clock as per req)
    f. Mod 2, Mod 5, Mod 10 counter
    g. 4-bit Unsigned Up Counter with Asynchronous Clear
4. Write code for 16 word 8 bit RAM
5. Write a code for Mealy Machine
6. Write a code for Moore Machine
7. Write test bench for following
    a. Pulse generator
    b. Mealy Machine
    c. Moore Machine
    d. 16 bit MUX tree
    e. Ring counter
    f. 4 bit Parallel adder
    g. n bit Ex-or

8. Register stores three BCD digits and shows one of them on the output in a format that can be fed directly to the LCD. It also tells the length of the result. Write the code for that register.
9. Write a code for Dual-Port RAM with Asynchronous Read