State Machine Design Process

- Design Process

    1) Identify the states – collectively these make a state variable
    2) Identify the Inputs and Outputs
    3) Assign values for each input/output (encoding)
    4) Create a state transition diagram / table
    5) Assign values for the state variable for each state (encoding)
    6) Create truth tables for the combinational logic blocks in the machine model: next state, output
    7) Minimize the next state and output equations using K-maps or Boolean Algebra techniques
    8) Draw the circuit schematic
    9) Verify the solution
    10) Build the physical circuit
    11) Test the physical circuit to ensure correct operation