

# 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