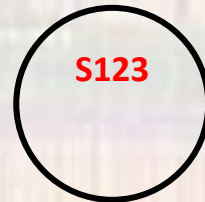# State Diagrams

Last updated 12/12/24

State Diagrams

- State Diagram – Moore

  - State name

    S123

  - Outputs

    100110

  - Inputs
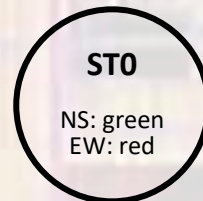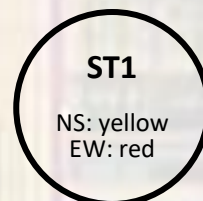 - Conditions

    In1

State Diagrams

- ## State Transition Diagram – Moore
  - Transitions ONLY occur on clock edges (rising)
  - Transitions occur on EVERY clock edge (rising)
  - Priority stop light – Inputs: Reset, Traffic N/S, Traffic E/W

  - State 0 :   NS light state variable (memory) holds code for green
                 EW light state variable (memory) holds the code for red

    ST0

    NS: green
    EW: red

  - State 1 :   NS light state variable (memory) holds code for yellow
                 EW light state variable (memory) holds the code for red

    ST1

    NS: yellow
    EW: red

State Diagrams

- State Transition Diagram – Moore
  - Transitions ONLY occur on clock edges (rising)
  - Transitions occur on EVERY clock edge (rising)
  - Priority stop light – Inputs: Reset, Traffic N/S, Traffic E/W

ST0

NS: green
EW: red

ST1

NS: yellow
EW: red

ST3

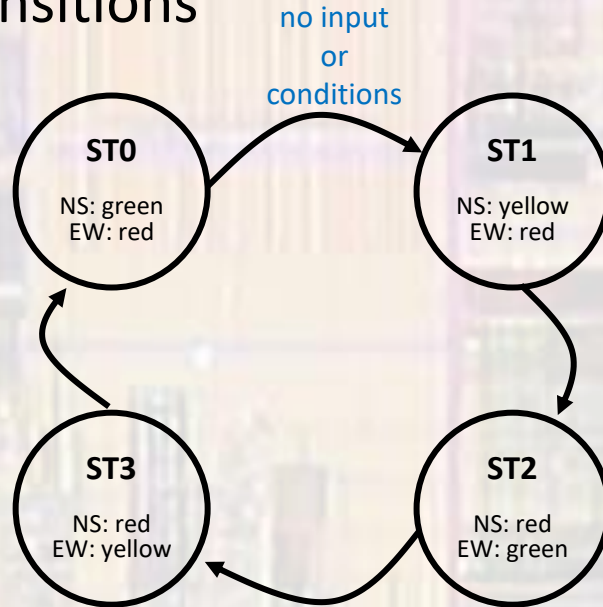NS: red
EW: yellow
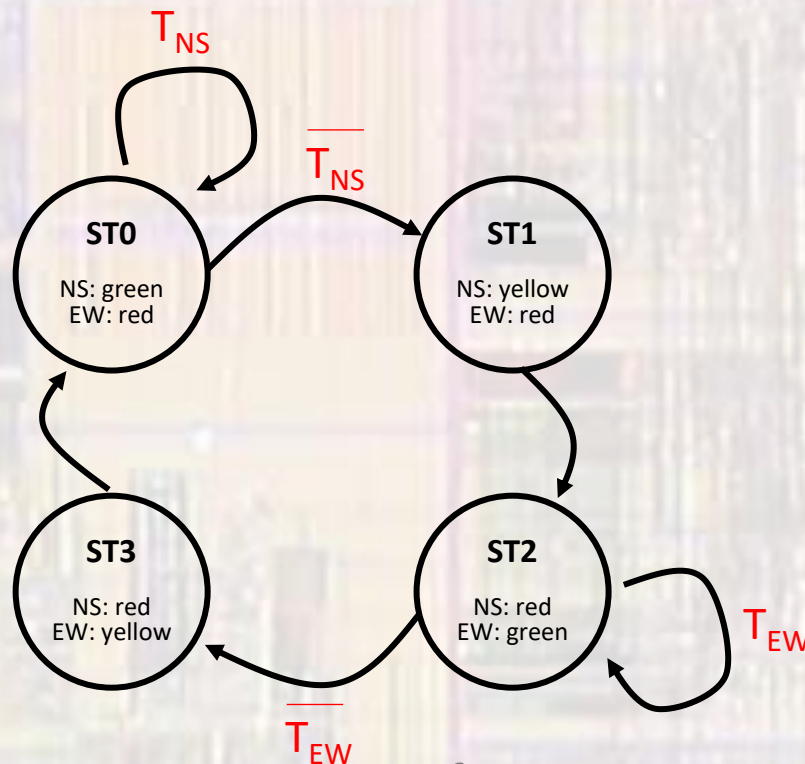
ST2

NS: red
EW: green

State Diagrams

- ## State Transition Diagram – Moore
  - Transitions ONLY occur on clock edges (rising)
  - Transitions occur on EVERY clock edge (rising)
  - Priority stop light – Inputs: Reset, Traffic N/S, Traffic E/W

  - Basic transitions

no input
or
conditions

ST0

NS: green
EW: red

ST1

NS: yellow
EW: red

ST3

NS: red
EW: yellow

ST2

NS: red
EW: green

If we did not sense for traffic – this would be complete

State Diagrams

- State Transition Diagram – Moore
  - Transitions ONLY occur on clock edges (rising)
  - Transitions occur on EVERY clock edge (rising)
  - Priority stop light – Inputs: Reset, Traffic N/S, Traffic E/W

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State Diagrams

- State Transition Diagram – Moore
  - Transitions ONLY occur on clock edges (rising)
  - Transitions occur on EVERY clock edge (rising)
  - Priority stop light – Inputs: Reset, Traffic N/S, Traffic E/W

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