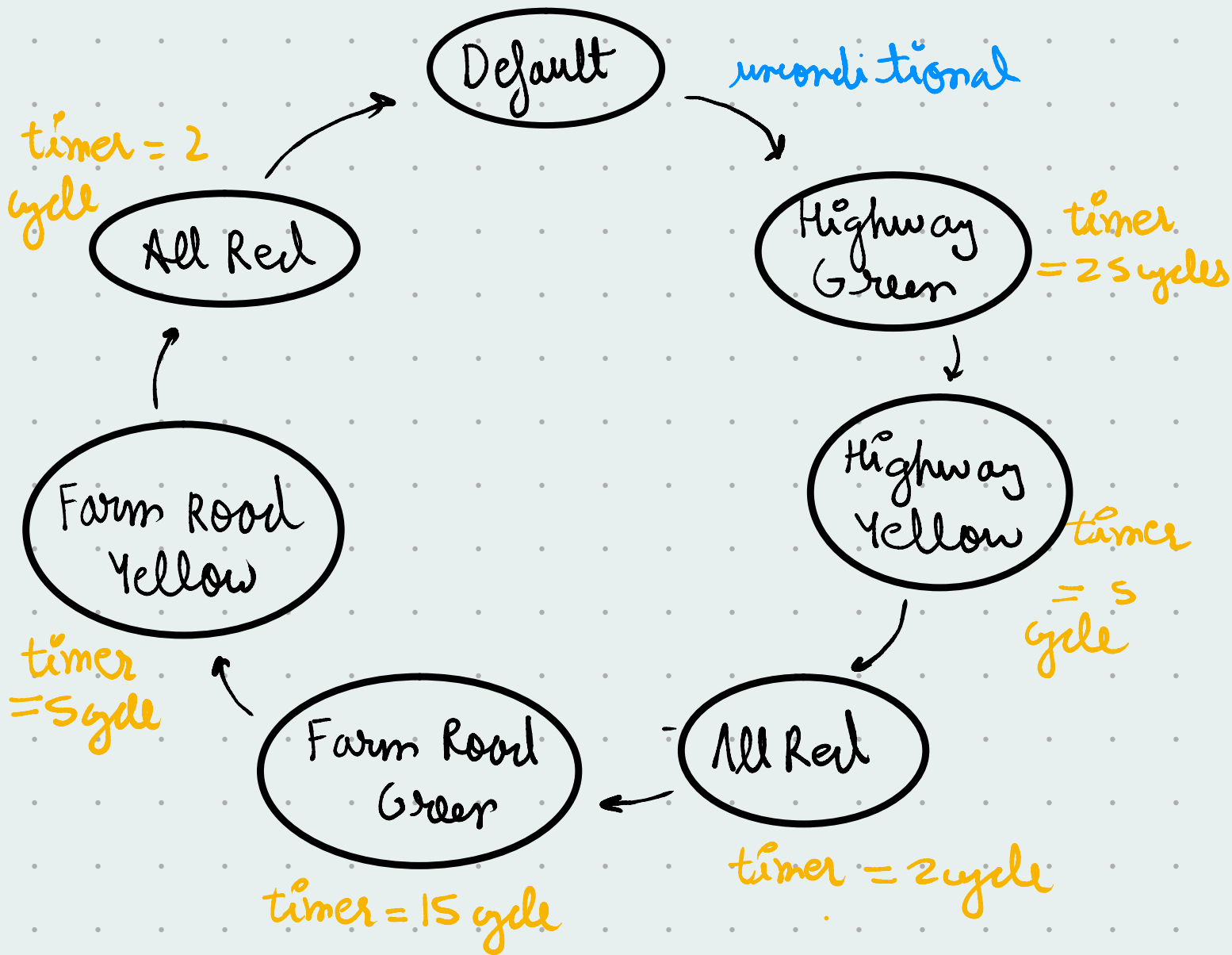


FSM



Moore-type FSM

Traffic Light Controller for a 4-way Intersection

- ↳ First we started with parameterization of states for simplicity of understanding
- ↳ Then our verilog module is divided into 4 primary logic blocks.

① State Registers (Sequential)

// just to implement async reset functionality. & to hold state-reg value

② Next-State Logic (Combinational)

// here wrote the condition for counter, after which next-state transition will take place

③ Counter Logic

// used 5 bit counter to manage the duration of each state. & a

combinational logic to detect change in state & reset the counter.

② Output Logic

// this block defines the traffic light output (highway & farm light) based on current state (moore output).

