

The following is the state transition table for a Moore state machine with one input, one output, and four states. Implement this state machine. Include an asynchronous reset that resets the FSM to state A.

| State | Next state |      | Output |
|-------|------------|------|--------|
|       | in=0       | in=1 |        |
| A     | A          | B    | 0      |
| B     | C          | B    | 0      |
| C     | A          | D    | 0      |
| D     | C          | B    | 1      |

