Recognizing sequences   X60084_en

Design a sequential circuit with one binary input and one binary output. The output at time t is 1 when the input in the time interval $[t-3, t]$ is 0101 or 0110.

Specification

> **module** *sequence*(*in*, *out*, *clk*, *rst*);
>   **input** *in*, *clk*, *rst*;
>   **output** *out*;

Hint

The state machine can be implemented with 5 states.

Input

- *in* is the input of the state machine.

- *clk* is the clock signal.

- *rst* is the synchronous reset signal.

Output

- *out* is the output of the state machine.

Problem information

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