The Virtual Learning Environment for Computer Programming

Delayed sequence

X32741_en

Design a circuit that reads an input sequence and generates the same sequence delayed three cycles. The output sequence must be 0 during the first three cycles. Here is an example:

```
in: 1 1 0 0 1 0 0 1 1 1 0 1 0 0 1 ...
out: 0 0 0 1 1 0 0 1 0 1 1 1 0 1 0 1 ...
```

Specification

```
module delayed_seq (in, out, clk, rst);
input in, clk, rst;
output out;
```

Input

- *in* is the input that generates the input sequence
- *clk* is the clock signal.
- *rst* is the synchronous reset signal.

Output

• *out* is the output that produces the output sequence.

Problem information

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Generation: 2013-09-02 15:59:01

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