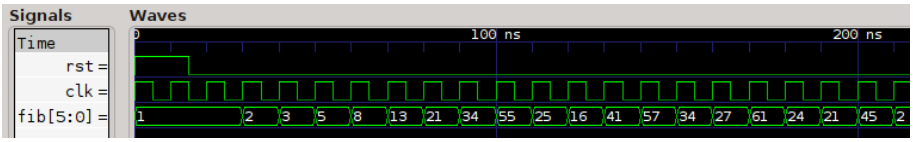
Fibonacci X95484_en

Design a sequential circuit that generates the Fibonacci series. The circuit will represent the numbers with n bits and will generate the Fibonacci numbers $mod\ 2^n$. At each cycle, a new number must be generated. The following waveform illustrates the behavior of the circuit.



The circuit must be designed to represent the numbers with 6 bits.

Specification

module *fibonacci*(*clk* , *rst* , *fib*);
input *clk* , *rst* ;
output [5:0] *fib* ;

Input

- *clk* is the clock signal.
- *rst* is the synchronous reset signal.

Output

- *fib* is the Fibonacci number generated at each cycle.

Problem information

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