## Prime number X07160_en

Design a circuit that has a 4-bit number as input. The output of the circuit must be 1 if the number represented by the input in binary code is prime, and 0 otherwise (0 and 1 are not prime).

### Specification

**module** *prime* (*n*, *is_prime*);
  **input** [3:0] *n*;
  **output** *is_prime*;

### Input

- *n* is the 4-bit input number.

### Output

- *is_prime* is the output indicating whether the number is prime or not.

### Problem information

Author: Jordi Cortadella

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