Half adder   X27385_en

Design a **half adder** that is a circuit that performs the addition of two binary digits, *a* and *b*. It outputs the *sum* and the output *carry*.

Specification

```
module halfadder (a, b, sum, carry);
    input a, b;
    output sum, carry;
```

Input

- *a* and *b* are the two input values.

Output

- *sum* is the least significant digit of $a + b$.

- *carry* is the output carry, i.e., the most significant digit of $a + b$.

Problem information

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