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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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