## 4-bit adder                                                    X64833_en

Design a circuit that performs the addition of two 4-bit numbers. The result (mod 16) must be represented in 4 bits also.

The top module must be called *adder4*.

```
module adder4(a, b, sum);
    input [3:0] a, b;
    output [3:0] sum;
```

### Hint

You may want to use several instances of a 1-bit full adder.

### Input

- *a* and *b* are the two 4-bit number.

### Output

- *sum* is the 4-bit output representing $(a + b)$ mod 16.

### Problem information

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