## 1-bit comparator                                              X60848_en

Design a circuit that compares two bits and indicates whether the first is greater than, equal to or smaller than the second.

The top module must be called *cmp*.

```
module cmp(a, b, eq, gt, lt );
    input a, b;
    output eq, gt, lt ;
```

### Input

- *a* and *b* are the input bits

### Output

- *eq* indicates that *a*=*b*.

- *gt* indicates that *a*>*b*.

- *lt* indicates that *a*<*b*.

### Problem information

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