4-input multiplexer X45339_en

Design a 4-input multiplexer. It has four input signals (*in0-in3*) and two selection signals (*sel* [1:0]). The output must be assigned the input signal corresponding to the selection.

Specification

```
module mux4(in0, in1, in2, in3, sel, out);
    input in0, in1, in2, in3;
    input [1:0] sel;
    output out;
```

Hint

Use 2-input multiplexers.

Input

- *in0*, *in1*, *in2* and *in3* are the inputs of the multiplexer.
- *sel* encodes the two selection signals.

Output

- *out* is the output of the multiplexer.

Problem information

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