

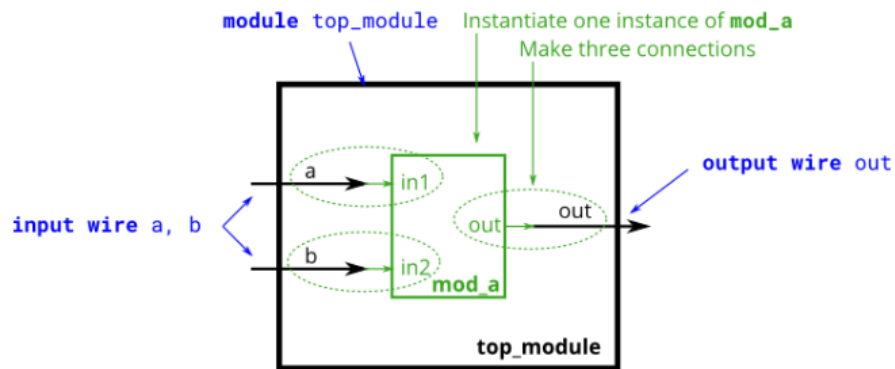
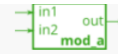
Example Of Modules & Hierarchy

1. Write the top_module that instantiates mod_a using:

Position-based connection

Name-based connection

```
module mod_a ( input in1, input in2, output out );  
    // Module body  
endmodule
```



```
1  module top_module (  
2      input a,  
3      input b,  
4      output out  
5  );  
6  
7      // Create an instance of "mod_a" named "inst1", and connect ports by name:  
8      mod_a inst1 (  
9          .in1(a), // Port "in1" connects to wire "a"  
10         .in2(b), // Port "in2" connects to wire "b"  
11         .out(out) // Port "out" connects to wire "out"  
12             // (Note: mod_a's port "out" is not related to top_module's wire "out".  
13             // It is simply coincidence that they have the same name)  
14     );  
15  
16     /*  
17     // Create an instance of "mod_a" named "inst2", and connect ports by position:  
18     mod_a inst2 ( a, b, out ); // The three wires are connected to ports in1, in2, and out, respectively.  
19     */  
20  
21 endmodule  
22
```