



```

21
22
23 module test_01(
24     input wire in0,
25     input wire in1,
26     input wire in2,
27     output wire out0,
28     output wire out1,
29     output wire out2,
30     output wire out3,
31     output wire out4,
32     output wire out5,
33     output wire out6,
34     output wire out7
35 );
36 assign out7 = (in2 & in1) & in0;
37 assign out6 = (in2 & in1) & !in0;
38 assign out5 = (in2 & !in1) & in0;
39 assign out4 = (in2 & !in1) & !in0;
40 assign out3 = (!in2 & in1) & in0;
41 assign out2 = (!in2 & in1) & !in0;
42 assign out1 = (!in2 & !in1) & in0;
43 assign out0 = (!in2 & !in1) & !in0;
44 endmodule
45

```

```
22
23 module tb_test_01(
24
25 );
26     reg in0;
27     reg in1;
28     reg in2;
29     wire out0;
30     wire out1;
31     wire out2;
32     wire out3;
33     wire out4;
34     wire out5;
35     wire out6;
36     wire out7;
37     initial
38     begin
39         in0 <= 0;
40         in1 <= 0;
41         in2 <= 0;
42         #100
43         in0 <= 1;
44         in1 <= 0;
45         in2 <= 0;
46         #100
47         in0 <= 0;
48         in1 <= 1;
49         in2 <= 0;
50         #100
51         in0 <= 1;
52         in1 <= 1;
```

Source File Properties

E:/project_b/project_b.srcs/sim_1/new/tb_test_01.v

```
43         in0 <= 1;
44         in1 <= 0;
45         in2 <= 0;
46         #100
47         in0 <= 0;
48         in1 <= 1;
49         in2 <= 0;
50         #100
51         in0 <= 1;
52         in1 <= 1;
53         in2 <= 0;
54         #100
55         in0 <= 0;
56         in1 <= 0;
57         in2 <= 1;
58         #100
59         in0 <= 1;
60         in1 <= 0;
61         in2 <= 1;
62         #100
63         in0 <= 0;
64         in1 <= 1;
65         in2 <= 1;
66         #100
67         in0 <= 1;
68         in1 <= 1;
69         in2 <= 1;
70     end
71
72     test_01 mytest(
73         .in2(in2),
```

Sol

```
60         in1 <= 0;
61         in2 <= 1;
62     #100
63         in0 <= 0;
64         in1 <= 1;
65         in2 <= 1;
66     #100
67         in0 <= 1;
68         in1 <= 1;
69         in2 <= 1;
70     end
71
72     test_01 mytest(
73         .in2(in2),
74         .in1(in1),
75         .in0(in0),
76         .out0(out0),
77         .out1(out1),
78         .out2(out2),
79         .out3(out3),
80         .out4(out4),
81         .out5(out5),
82         .out6(out6),
83         .out7(out7)
84     );
85 endmodule
86
```