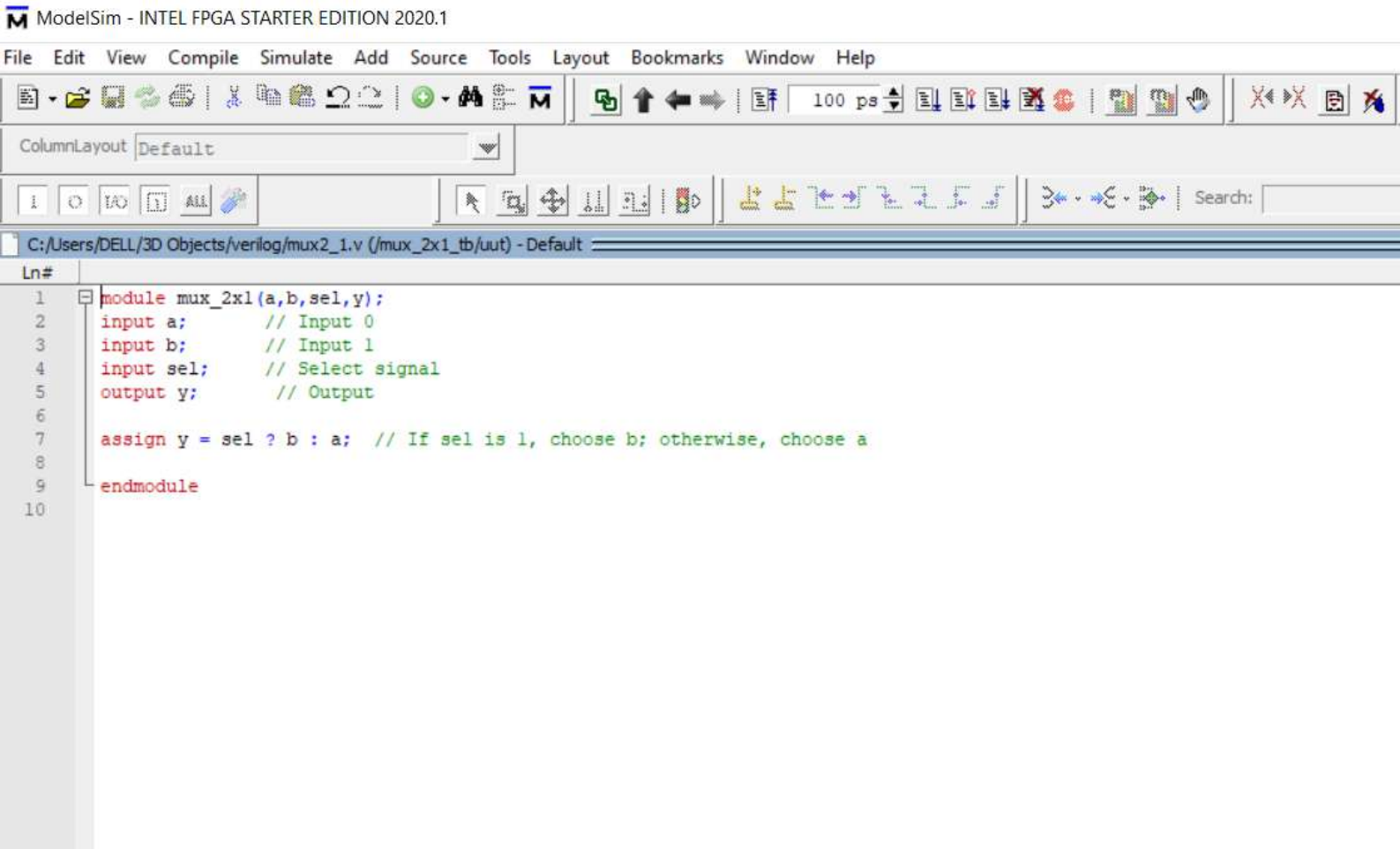
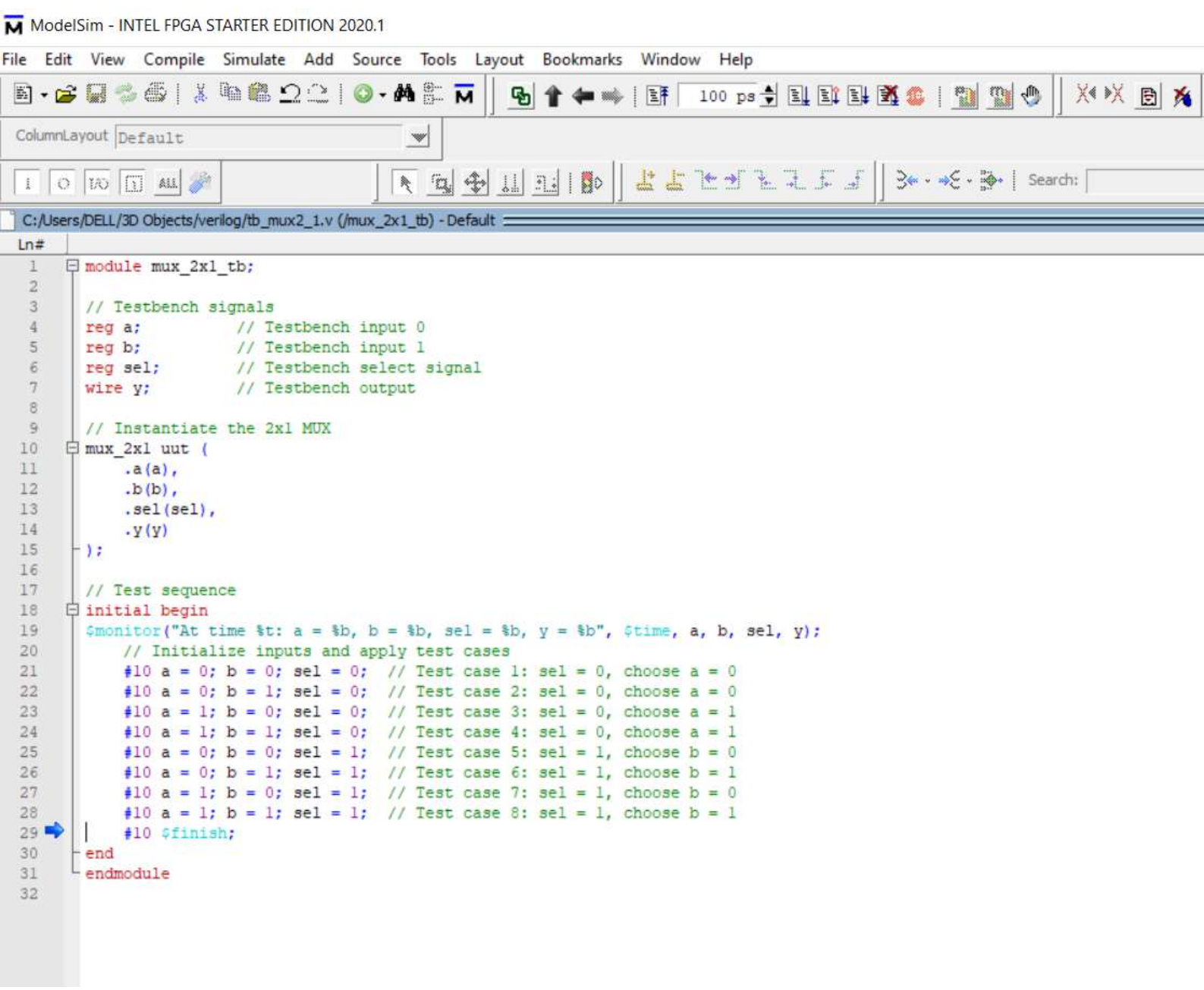
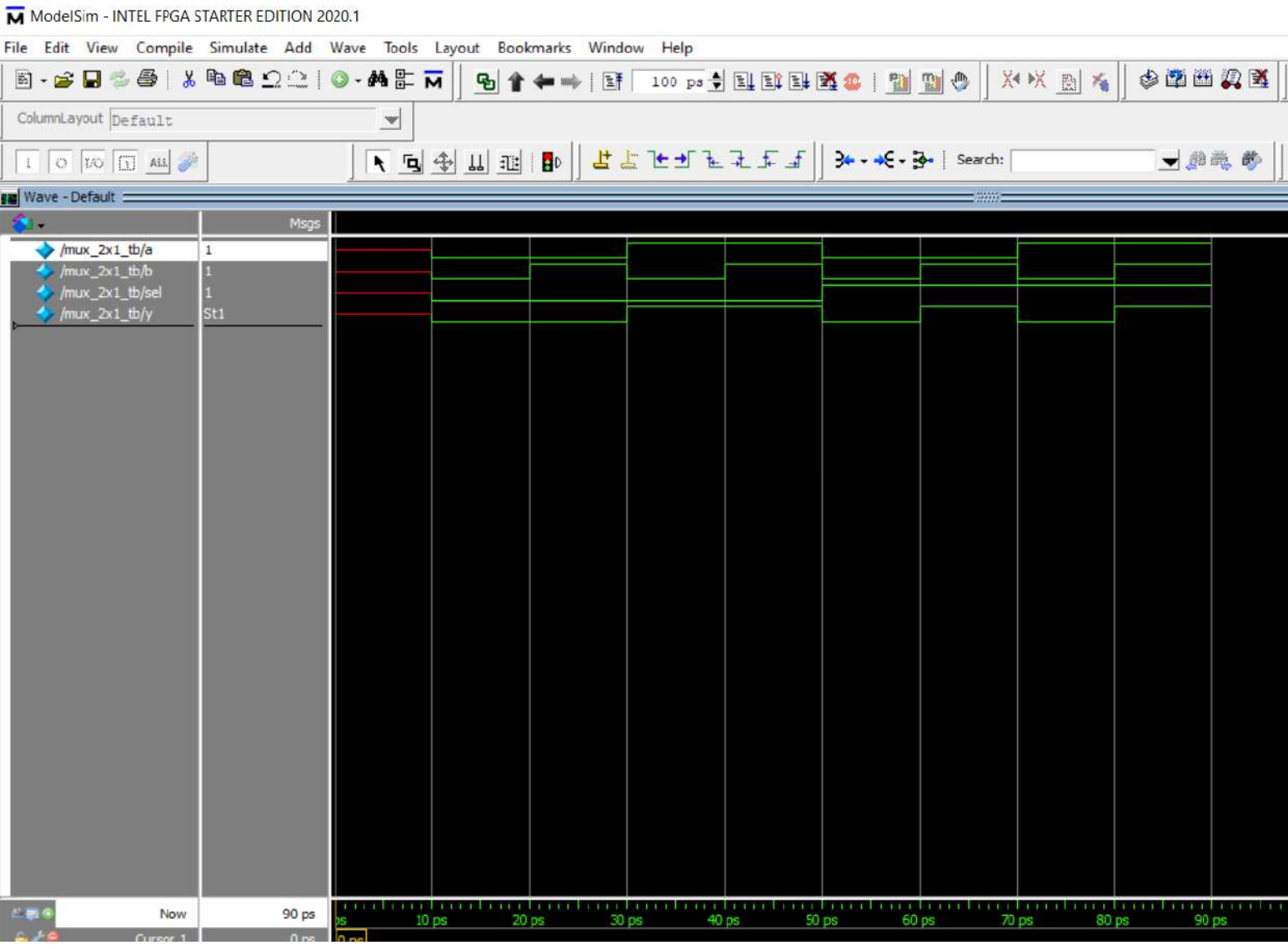

ModelSim - INTEL FPGA STARTER EDITION 2020.1
File Edit View Compile Simulate Add Source Tools Layout Bookmarks Window Help
100 ps
ColumnLayout Default
Search:
C:/Users/DELL/3D Objects/verilog/mux2_1.v (/mux_2x1_tb/uut) - Default
Ln#
1 module mux_2x1(a,b,sel,y);
2 input a; // Input 0
3 input b; // Input 1
4 input sel; // Select signal
5 output y; // Output
6
7 assign y = sel ? b : a; // If sel is 1, choose b; otherwise, choose a
8
9 endmodule
10


ModelSim - INTEL FPGA STARTER EDITION 2020.1
File Edit View Compile Simulate Add Source Tools Layout Bookmarks Window Help
100 ps
ColumnLayout Default
Search:
C:/Users/DELL/3D Objects/verilog/tb_mux2_1.v (/mux_2x1_tb) - Default
Ln#
1 module mux_2x1_tb;
2
3 // Testbench signals
4 reg a; // Testbench input 0
5 reg b; // Testbench input 1
6 reg sel; // Testbench select signal
7 wire y; // Testbench output
8
9 // Instantiate the 2x1 MUX
10 mux_2x1 uut (
11 .a(a),
12 .b(b),
13 .sel(sel),
14 .y(y)
15);
16
17 // Test sequence
18 initial begin
19 $monitor("At time %t: a = %b, b = %b, sel = %b, y = %b", $time, a, b, sel, y);
20 // Initialize inputs and apply test cases
21 #10 a = 0; b = 0; sel = 0; // Test case 1: sel = 0, choose a = 0
22 #10 a = 0; b = 1; sel = 0; // Test case 2: sel = 0, choose a = 0
23 #10 a = 1; b = 0; sel = 0; // Test case 3: sel = 0, choose a = 1
24 #10 a = 1; b = 1; sel = 0; // Test case 4: sel = 0, choose a = 1
25 #10 a = 0; b = 0; sel = 1; // Test case 5: sel = 1, choose b = 0
26 #10 a = 0; b = 1; sel = 1; // Test case 6: sel = 1, choose b = 1
27 #10 a = 1; b = 0; sel = 1; // Test case 7: sel = 1, choose b = 0
28 #10 a = 1; b = 1; sel = 1; // Test case 8: sel = 1, choose b = 1
29 #10 $finish;
30 end
31 endmodule
32


ModelSim - INTEL FPGA STARTER EDITION 2020.1
File Edit View Compile Simulate Add Wave Tools Layout Bookmarks Window Help
100 ps
ColumnLayout Default
Search:
Wave - Default
Msgs
/mux_2x1_tb/a
/mux_2x1_tb/b
/mux_2x1_tb/sel
/mux_2x1_tb/y
1
1
1
St1
Now
90 ps
10 ps
20 ps
30 ps
40 ps
50 ps
60 ps
70 ps
80 ps
90 ps