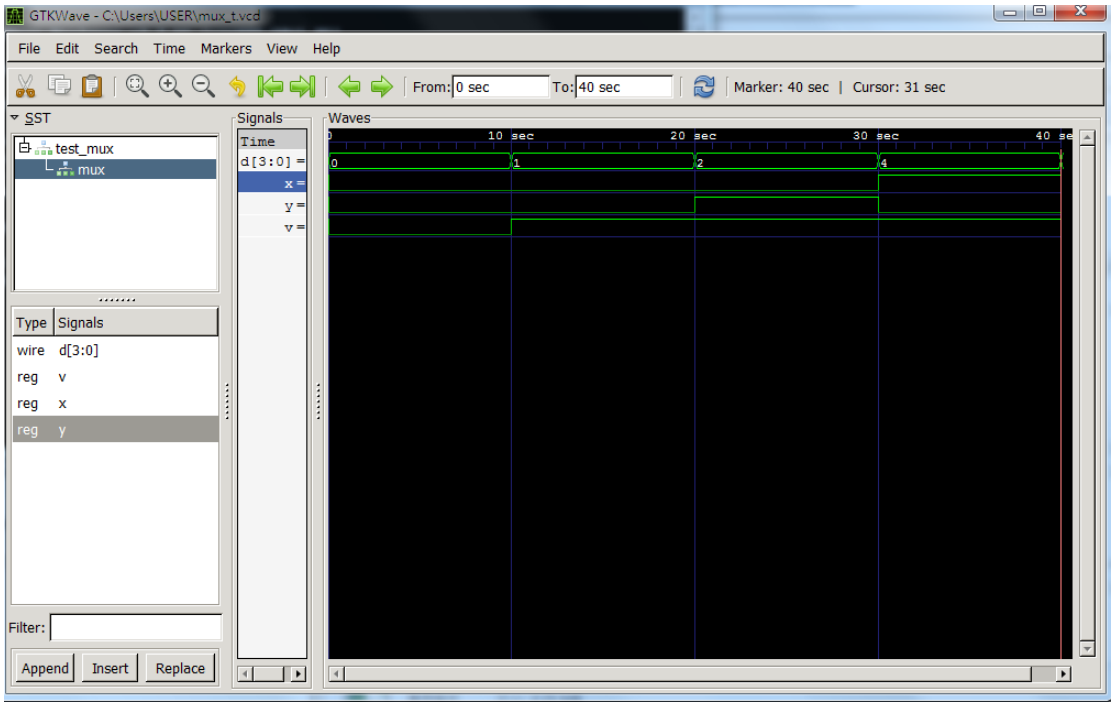
```
module mux2_1 (x,y,v,d) ;

output reg x , y , v ;

input [3:0] d ;


always@(d)

begin

x = d[2] | d[3];

y = d[1] | d[3];

v = d[0] | d[1] | d[2] | d[3];

end

endmodule

module test_mux ;

reg [3:0]d ;

mux2_1 mux (x , y , v ,d) ;

initial

begin

d[0]=0;d[1]=0;d[2]=0;d[3]=0;

    #10 d[0]=1 ; d[1]=0 ; d[2]=0 ; d[3]=0;

    #10 d[0]=0 ; d[1]=1 ; d[2]=0 ; d[3]=0;

    #10 d[0]=0 ; d[1]=0 ; d[2]=1 ; d[3]=0;
```

```
    #10 d[0]=0 ; d[1]=0 ; d[2]=0 ; d[3]=1;


end

initial

begin

$display(" time out x y v");

$monitor($time, " %b %b %b", x , y , v) ;

end

initial

begin

$dumpfile("mux_t.vcd");

$dumpvars;

end

endmodule
```


GTKWave - C:\Users\USER\mux_t.vcd
File Edit Search Time Markers View Help
From: 0 sec
To: 40 sec
Marker: 40 sec | Cursor: 31 sec
SST
test_mux
mux
Type Signals
wire d[3:0]
reg v
reg x
reg y
Filter:
Append Insert Replace
Signals
Time
d[3:0] =
x =
y =
v =
Waves
10 sec
20 sec
30 sec
40 se
0
1
2
4