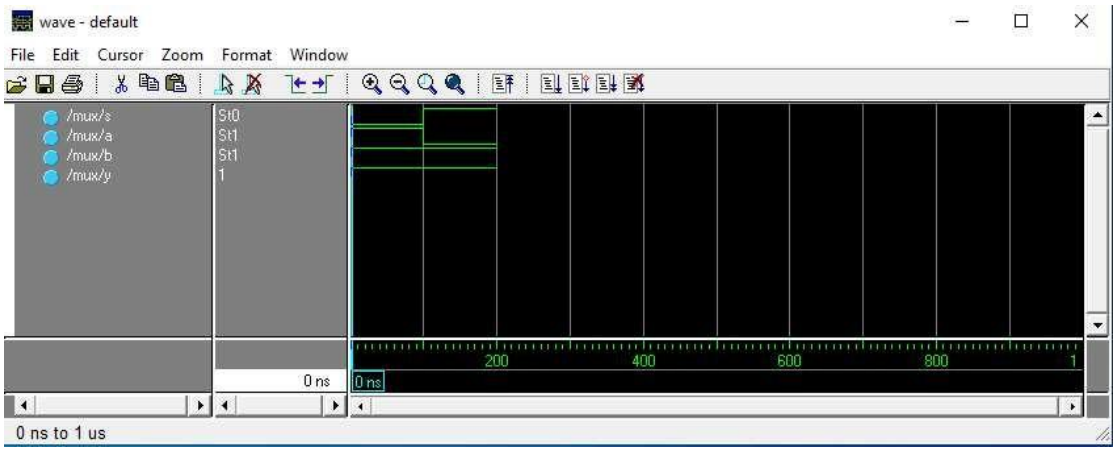
source - 2to1mux.v

File Edit Object Options Window

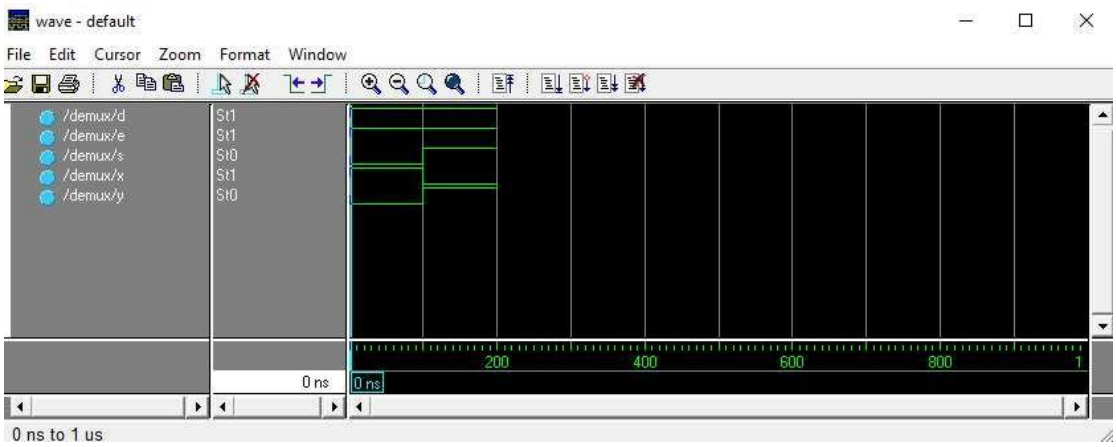
```
2   module mux(s,a,b,y);
3   input s,a,b;
4   output y;
5   reg y;
6   always @ (s or a or b)
7   begin
8   if (s==0)
9    begin
10  y=a;
11  end
12  else
13  begin
14  y=b;
15  end
16  end
17  endmodule
```



source - 1to2demux.v

File Edit Object Options Window

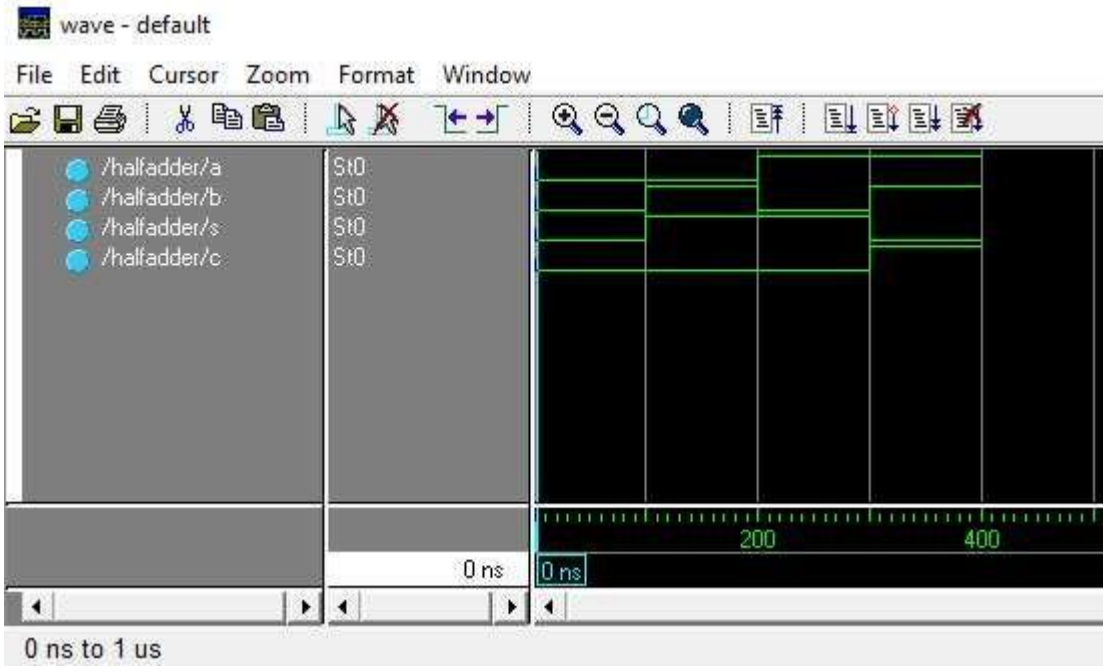
```
2   module demux(d,e,s,x,y);
3   input d,e,s;
4   output x,y;
5   assign x=(e & d & ~s);
6   assign y=(e & d & s);
    endmodule
```



source - halfadder.v

File Edit Object Options Window

```
2   module halfadder(a,b,s,c);
3   input a,b;
4   output s,c;
5   assign s=a^b;
6   assign c=a&b;
    endmodule
```



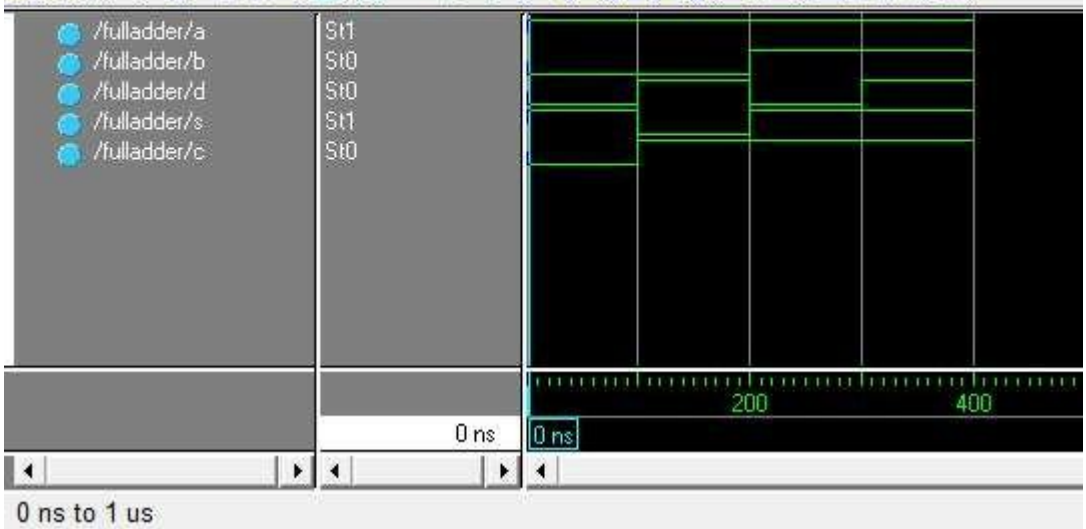
source - fulladder.v

File Edit Object Options Window

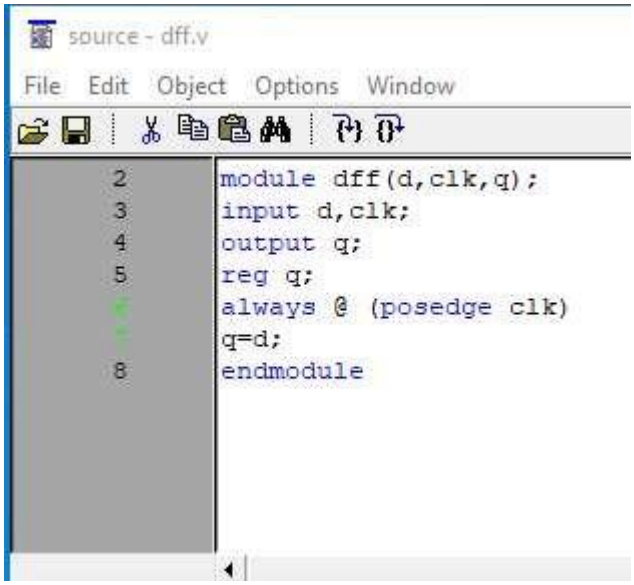
```
2  module fulladder(a,b,d,s,c);
3  input a,b,d;
4  output s,c;
5  assign s=a^b^c;
   assign c=a&b|b&d|a&d;
   endmodule
```

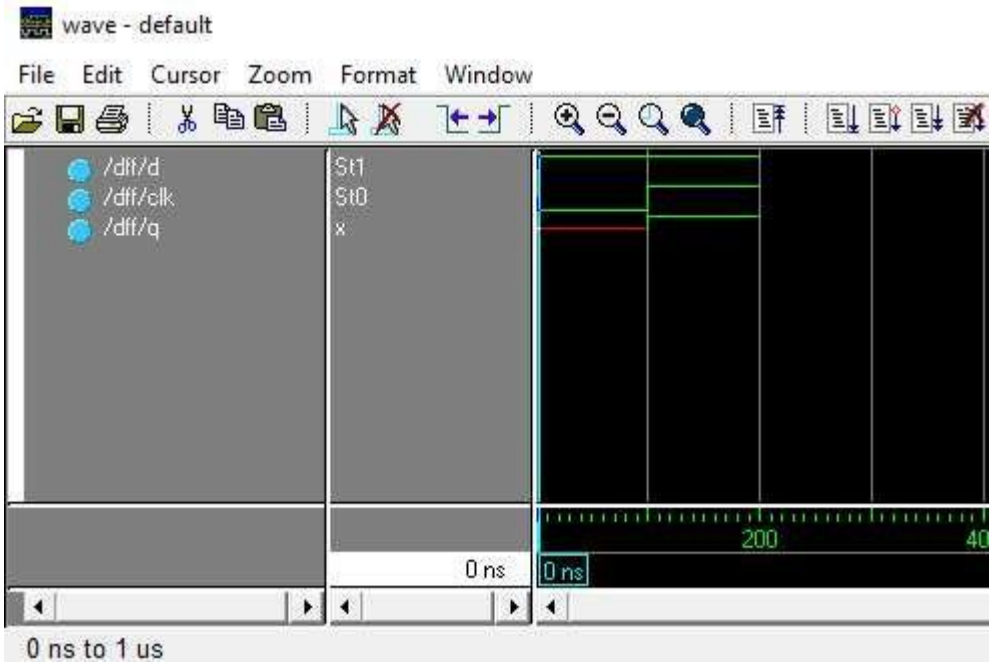
wave - default

File Edit Cursor Zoom Format Window



0 ns to 1 us


source - dff.v
File Edit Object Options Window
2 module dff(d,clk,q);
3 input d,clk;
4 output q;
5 reg q;
always @ (posedge clk)
q=d;
8 endmodule


wave - default
File Edit Cursor Zoom Format Window
/dff/d
/dff/clk
/dff/q
St1
St0
x
200
0 ns
0 ns
0 ns to 1 us

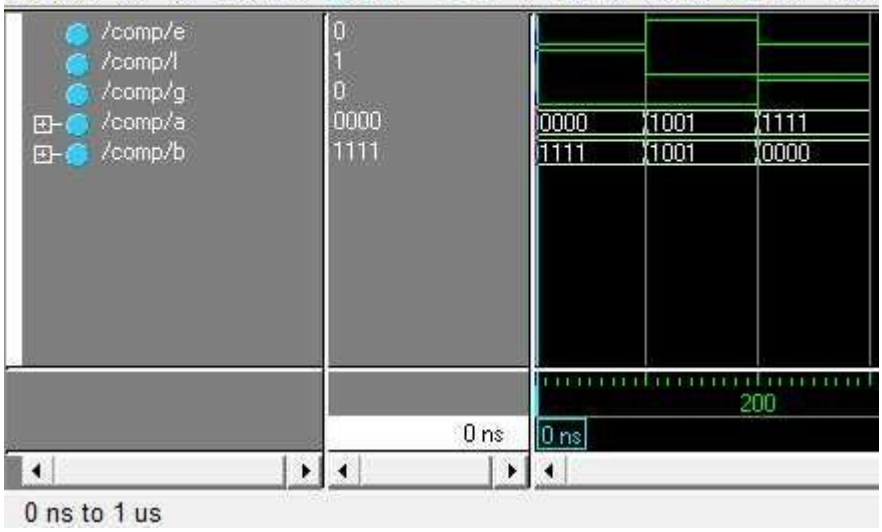
source - comp.v

File Edit Object Options Window

```
2   module comp(a,b,e,l,g);
3   output e,l,g;
4   reg e,l,g;
5   input[3:0]a,b;
6   wire [3:0]a,b;
7   always @(a or b)begin
8   if(a<b)begin
9   e=0;
10  l=1;
11  g=0;
12  end else if (a==b)begin
13  e=1;
14  l=0;
15  g=0;
16  end else begin
17  g=1;
18  e=0;
19  l=0;
20  end
21  end
    endmodule
```

wave - default

File Edit Cursor Zoom Format Window

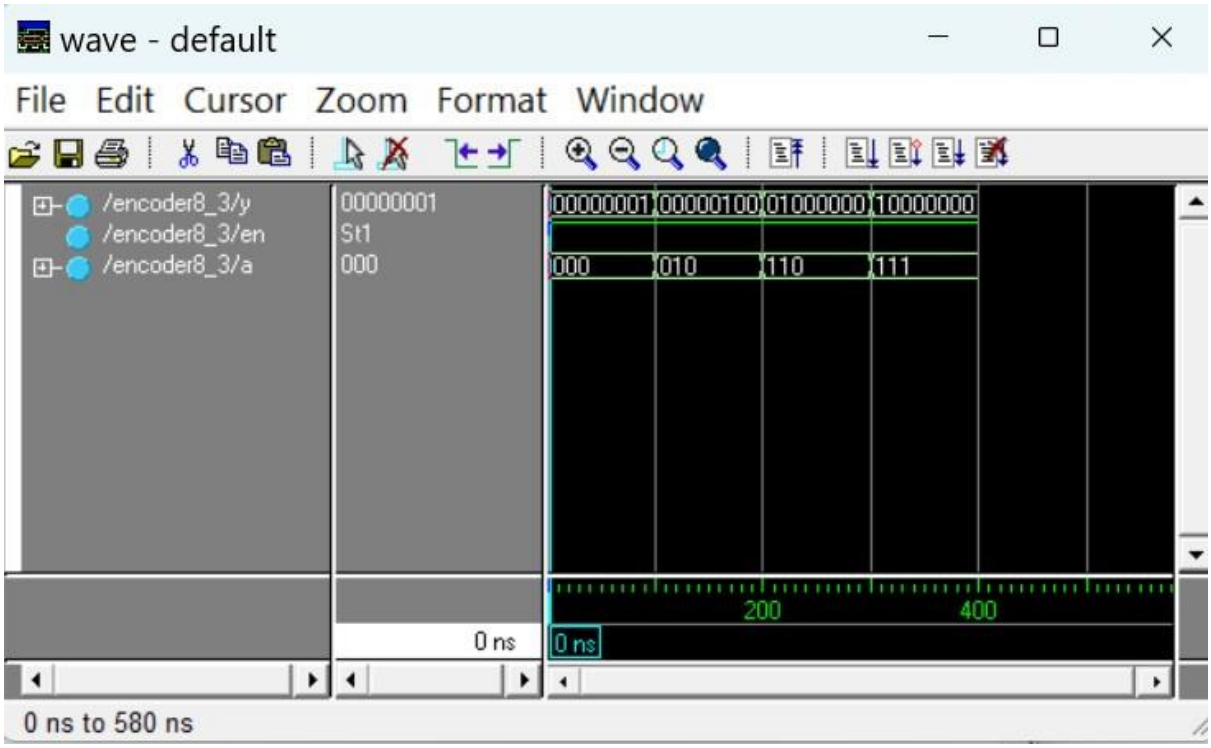


0 ns to 1 us

source_edit - 8to3encoder.v

File Edit Object Options Window

```
1   module encoder8_3( y,en,a);
2   input [7:0]y;
3   input en ;
4   output a ;
5   reg [2:0]a;
6   always @(y or en)
7   begin
8   if (en)
9   case (y)
10  8'b0000_0001: a=3'd0;
11  8'b0000_0010: a=3'd1;
12  8'b0000_0100: a=3'd2;
13  8'b0000_1000: a=3'd3;
14  8'b0001_0000: a=3'd4;
15  8'b0010_0000: a=3'd5;
16  8'b0100_0000: a=3'd6;
17  8'b1000_0000: a=3'd7;
18  endcase
20  else ;
21  end
22  endmodule
```



File Edit Object Options Window

```
1   module decoder2_4(en,a,b,y);
2   input en,a,b;
3   output y;
4   reg [3:0]y;
5   always @(en or a or b)
6   begin
7          if(en==0)
8            begin
9              if(a==1'b0 & b==1'b0) y=4'bl110;
10             else if(a==1'b0 & b==1'bl) y=4'bl101;
11             else if(a==1'bl & b==1'b0) y=4'bl011;
12             else if(a==1 & b==1) y=4'b0111;
13             else y=4'bxxxx;
14           end
15         else
16          y=4'bllll;
17       end
18  endmodule
19
```