Post lab exp 9:
Saja asfour 1210737
Sec 8

-write code for 7 segment drivers working on common anode

```
1   module segment(a,b,c,d,e,f,g,anode,seg);
2    // Inputs
3    input a;
4    input b;
5    input c;
6    input d;
7    input e;
8    input f;
9    input g;
10   input anode;
11
12   // Outputs
13   output [7:0] seg;
14
15   // Internal signals
16   reg [7:0] seg;
17
18   // Logic
19   always @ (a or b or c or d or e or f or g or anode)
20   begin
21       seg = 8'b11111111;
22       if (anode == 1) begin
23           if (a == 1) seg[0] = 0;
24           if (b == 1) seg[1] = 0;
25           if (c == 1) seg[2] = 0;
26           if (d == 1) seg[3] = 0;
27           if (e == 1) seg[4] = 0;
28           if (f == 1) seg[5] = 0;
29           if (g == 1) seg[6] = 0;
30       end else begin
31           if (a == 0) seg[0] = 1;
32           if (b == 0) seg[1] = 1;
33           if (c == 0) seg[2] = 1;
```

```
10       input anode;
11
12       // Outputs
13       output [7:0] seg;
14
15       // Internal signals
16       reg [7:0] seg;
17
18       // Logic
19       always @ (a or b or c or d or e or f or g or anode)
20       begin
21           seg = 8'b11111111;
22           if (anode == 1) begin
23               if (a == 1) seg[0] = 0;
24               if (b == 1) seg[1] = 0;
25               if (c == 1) seg[2] = 0;
26               if (d == 1) seg[3] = 0;
27               if (e == 1) seg[4] = 0;
28               if (f == 1) seg[5] = 0;
29               if (g == 1) seg[6] = 0;
30           end else begin
31               if (a == 0) seg[0] = 1;
32               if (b == 0) seg[1] = 1;
33               if (c == 0) seg[2] = 1;
34               if (d == 0) seg[3] = 1;
35               if (e == 0) seg[4] = 1;
36               if (f == 0) seg[5] = 1;
37               if (g == 0) seg[6] = 1;
38           end
39       end
40   endmodule
41
```