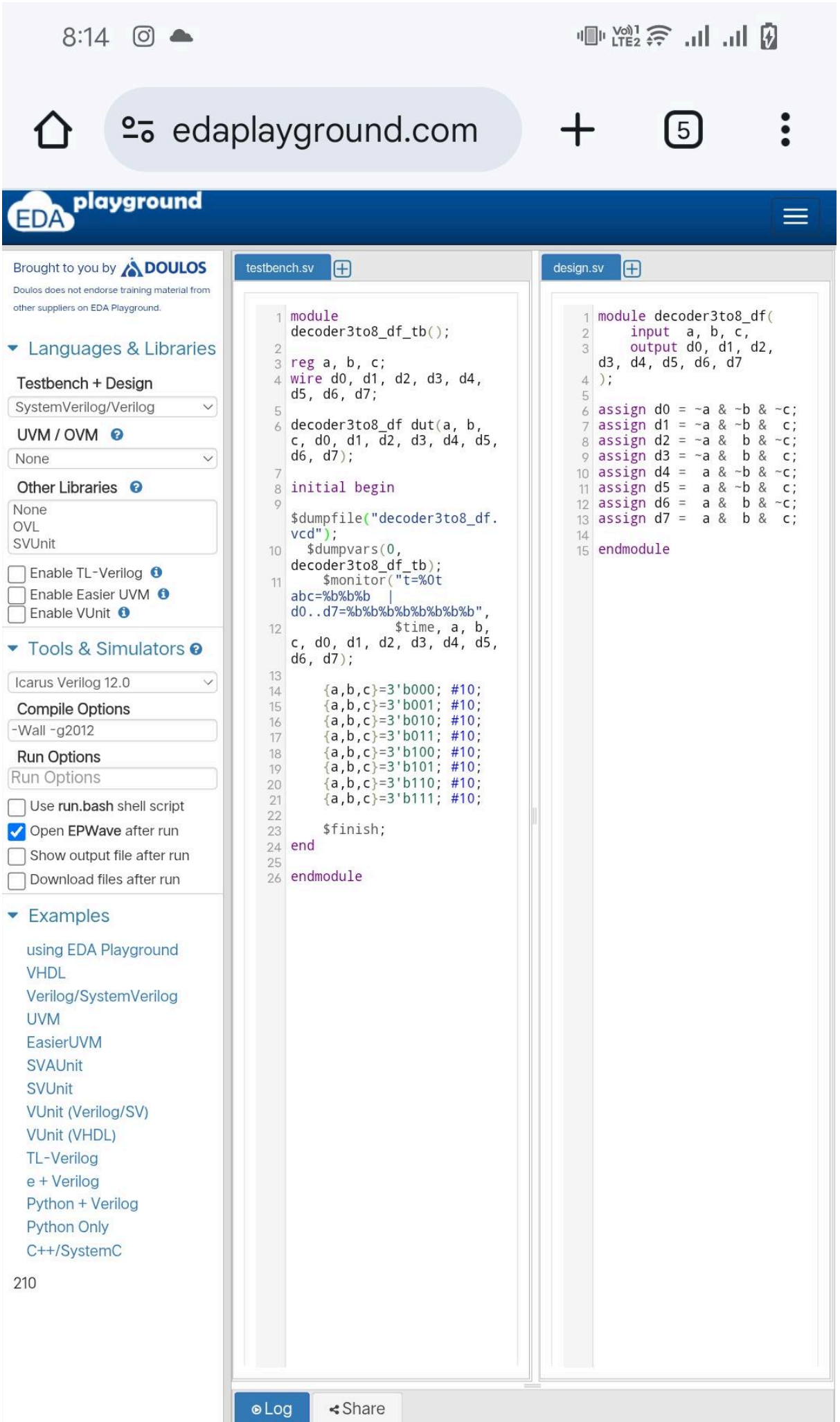
3 to 8 decoder




```
module
decoder3to8_df_tb();

reg a, b, c;
wire d0, d1, d2, d3, d4,
d5, d6, d7;

decoder3to8_df dut(a, b,
c, d0, d1, d2, d3, d4, d5,
d6, d7);

initial begin

$dumpfile("decoder3to8_df.
vcd");
  $dumpvars(0,
decoder3to8_df_tb);
    $monitor("t=%0t
abc=%b%b%b  |
d0..d7=%b%b%b%b%b%b%b%b",
              $time, a, b,
c, d0, d1, d2, d3, d4, d5,
d6, d7);

    {a,b,c}=3'b000; #10;
    {a,b,c}=3'b001; #10;
    {a,b,c}=3'b010; #10;
    {a,b,c}=3'b011; #10;
    {a,b,c}=3'b100; #10;
    {a,b,c}=3'b101; #10;
    {a,b,c}=3'b110; #10;
    {a,b,c}=3'b111; #10;

    $finish;
end

endmodule
```

```
module decoder3to8_df(
    input  a, b, c,
    output d0, d1, d2,
d3, d4, d5, d6, d7
);

assign d0 = ~a & ~b & ~c;
assign d1 = ~a & ~b &  c;
assign d2 = ~a &  b & ~c;
assign d3 = ~a &  b &  c;
assign d4 =  a & ~b & ~c;
assign d5 =  a & ~b &  c;
assign d6 =  a &  b & ~c;
assign d7 =  a &  b &  c;

endmodule
```

8:14

edaplayground.com

EDA playground

EPWave

From:

0s

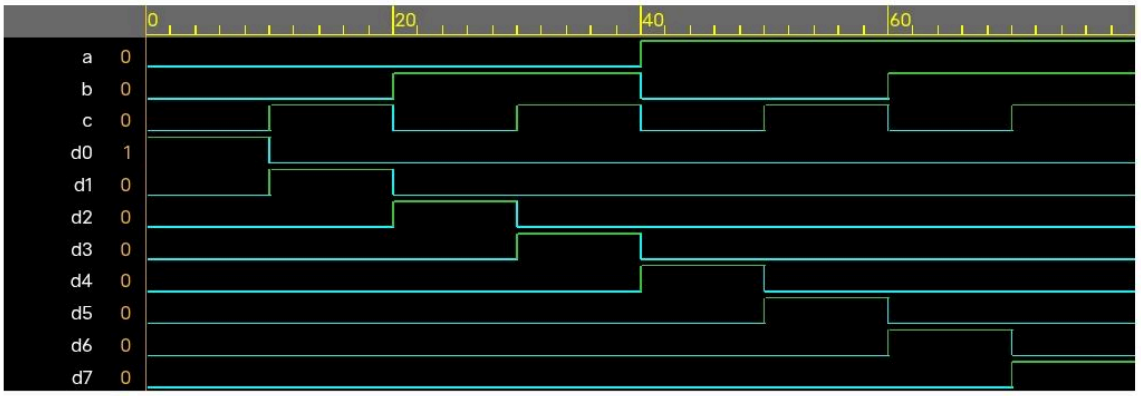
To:

80s

Instructions: x

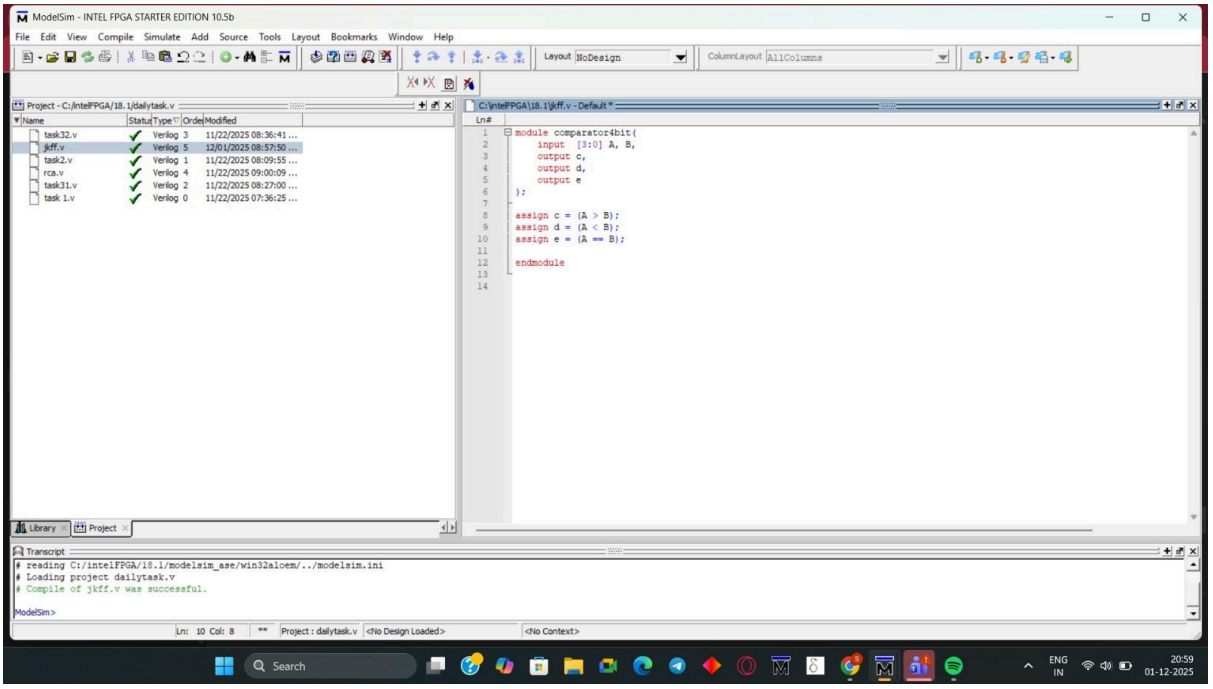
Click on an edge to display a cursor. CTRL-click on another edge to display a second cursor.
Note: To revert to EPWave opening in a new browser window, set that option on your profile page.

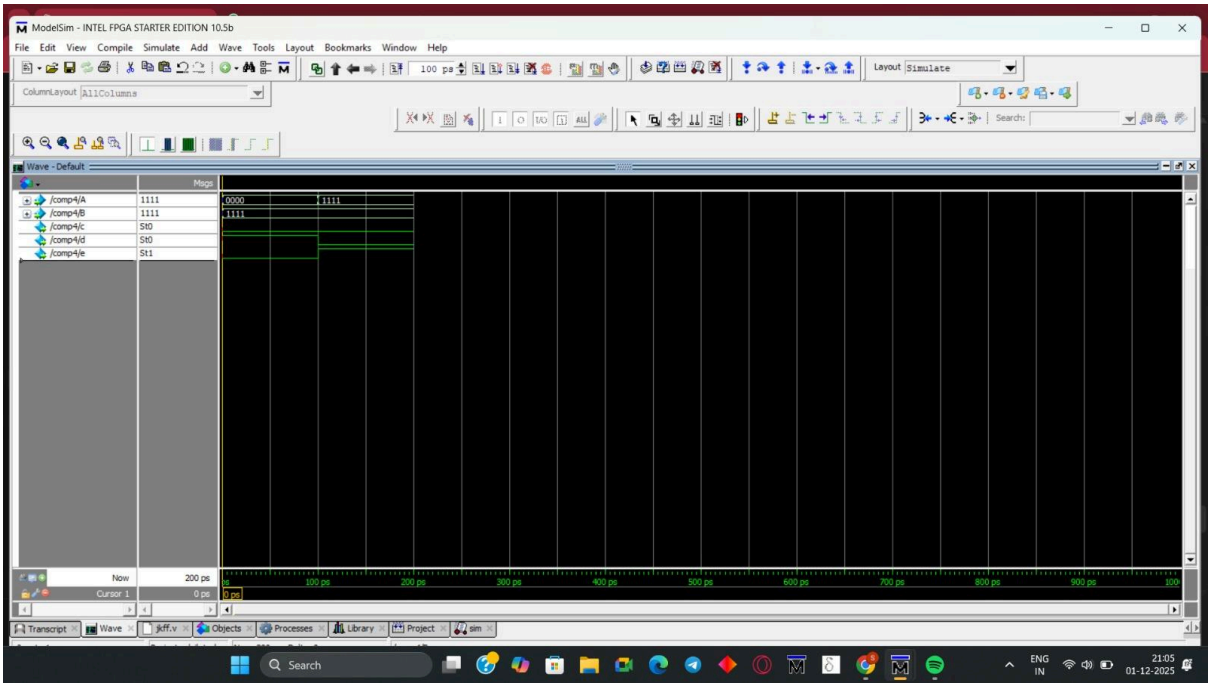
Get Signals | Radix | 100% | 0s



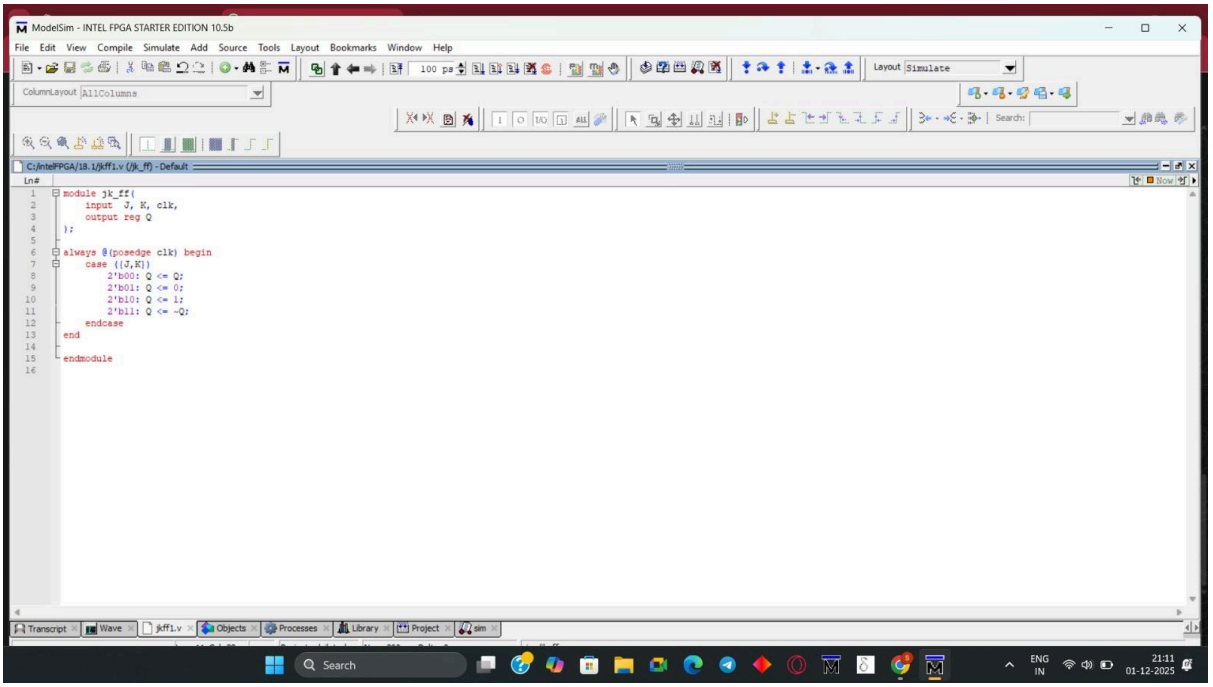

Note: To revert to EPWave opening in a new browser window, set that option on your profile page.

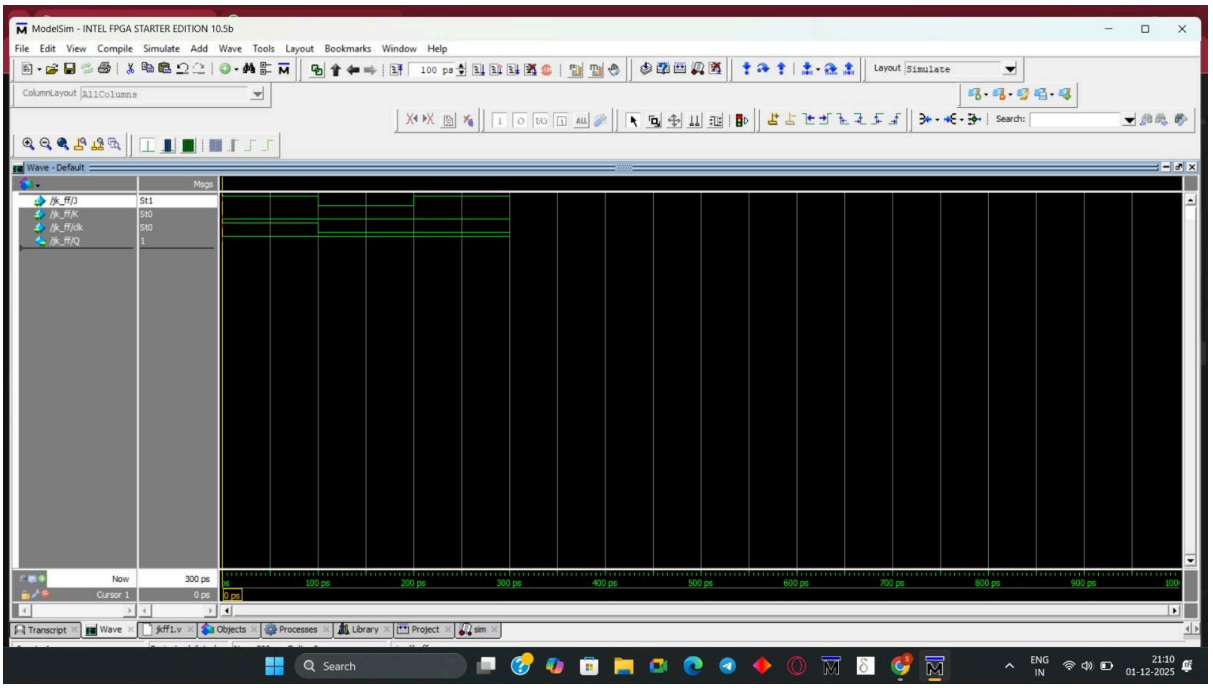
4 bit comparator



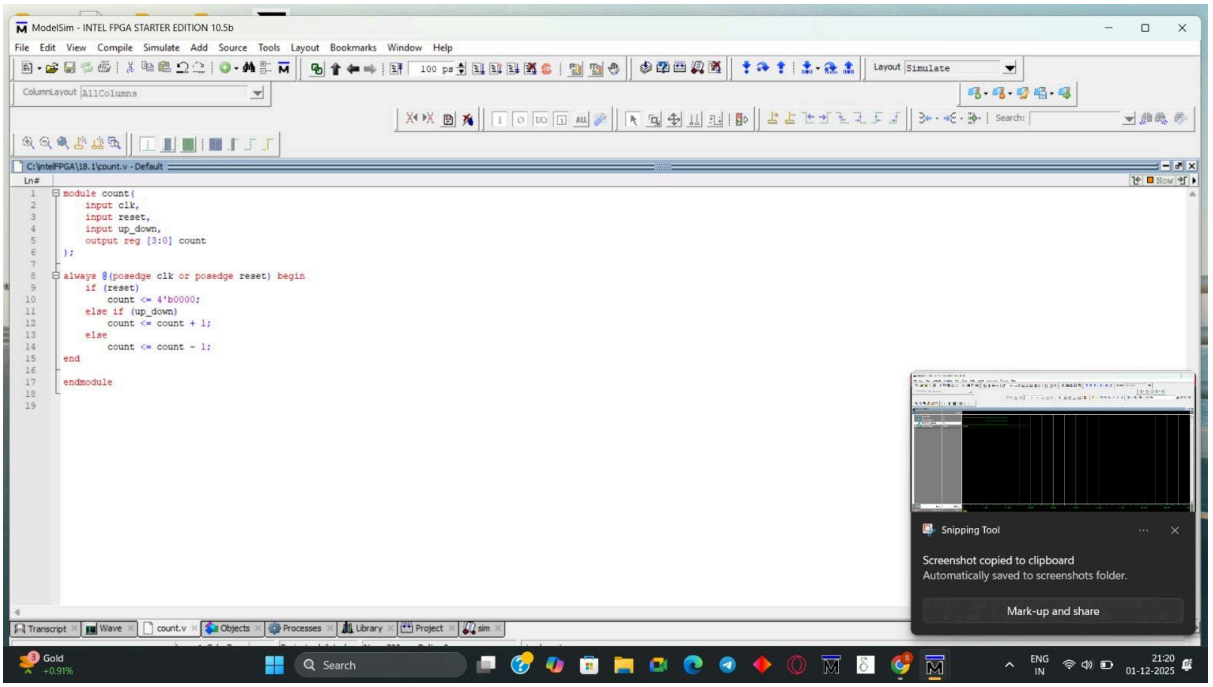



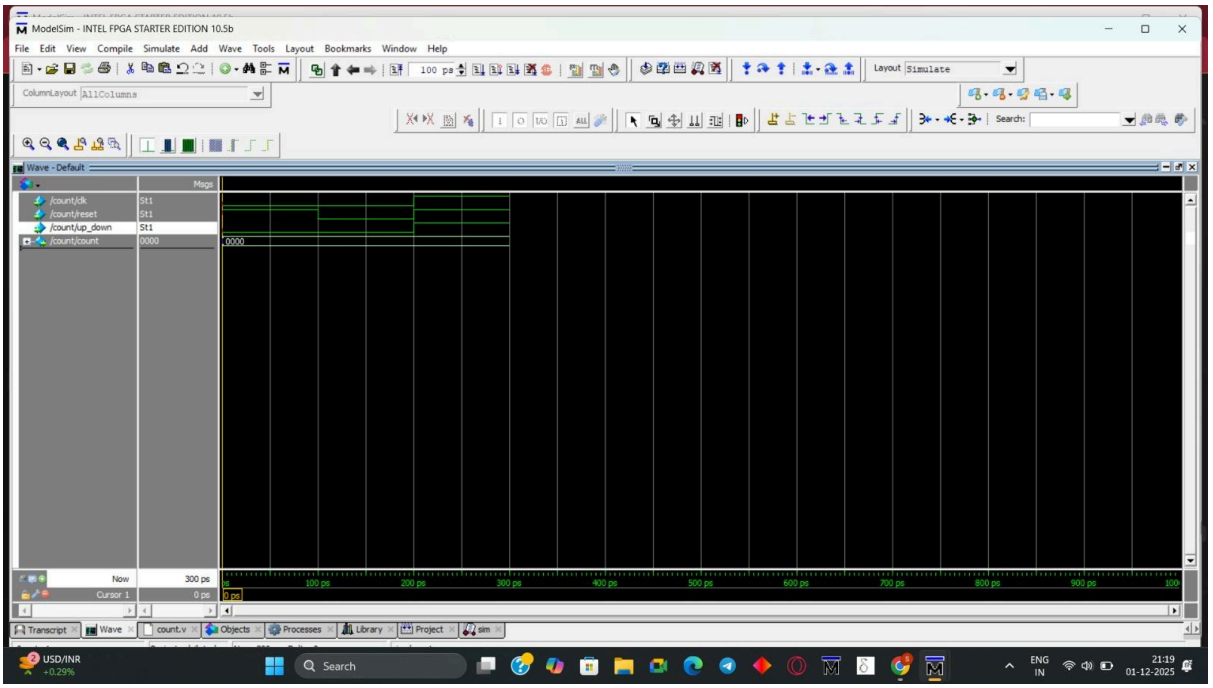

Jk ff




4 bit synchronous updowncounter




Led code

```
int LED = 13;
int delay_value = 500;

void setup() {
  pinMode(LED, OUTPUT);
}

void loop() {
  digitalWrite(LED, HIGH);
```

```
  delay(delay_value);

  digitalWrite(LED, LOW);
  delay(delay_value);
}
```