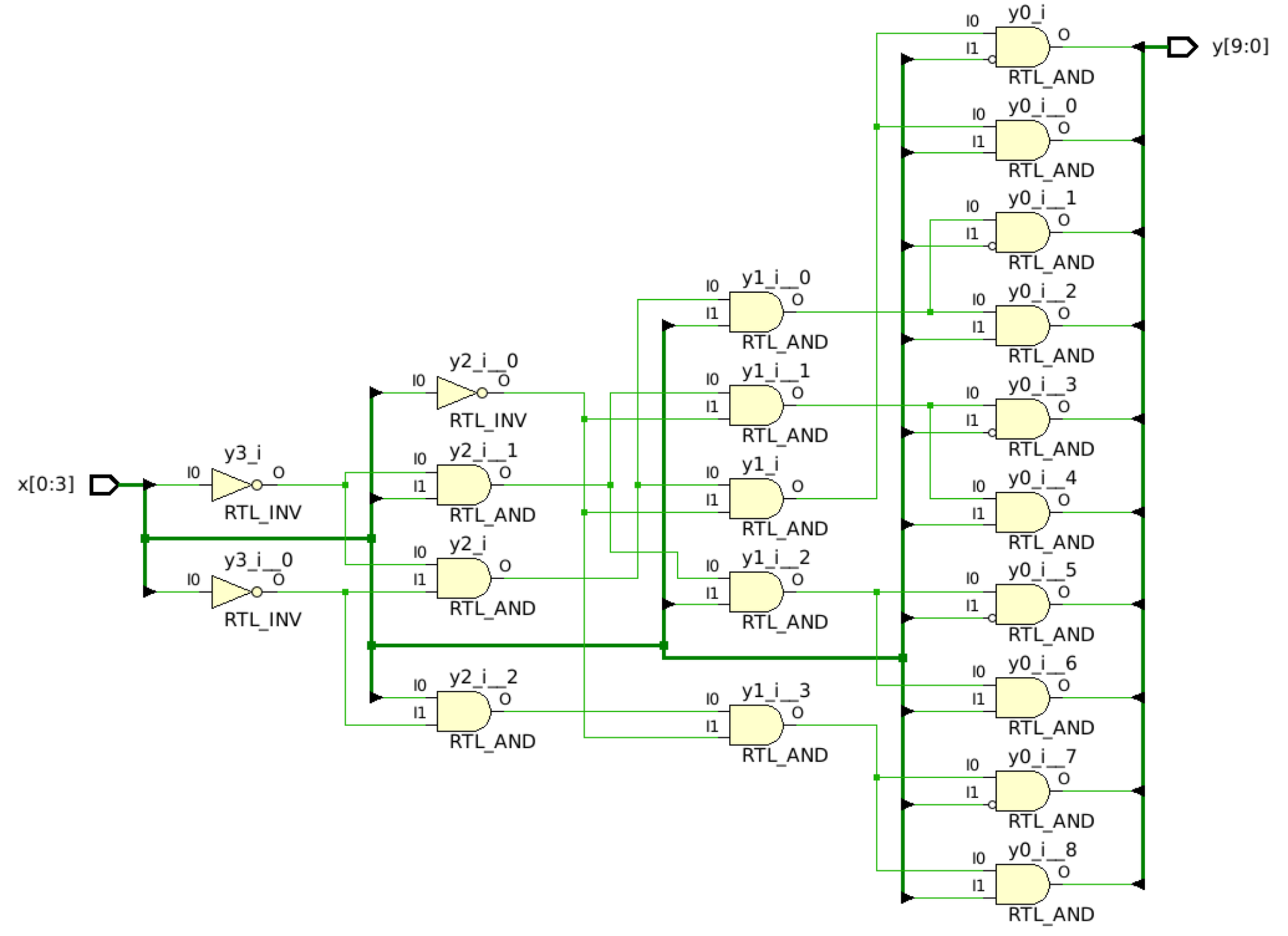
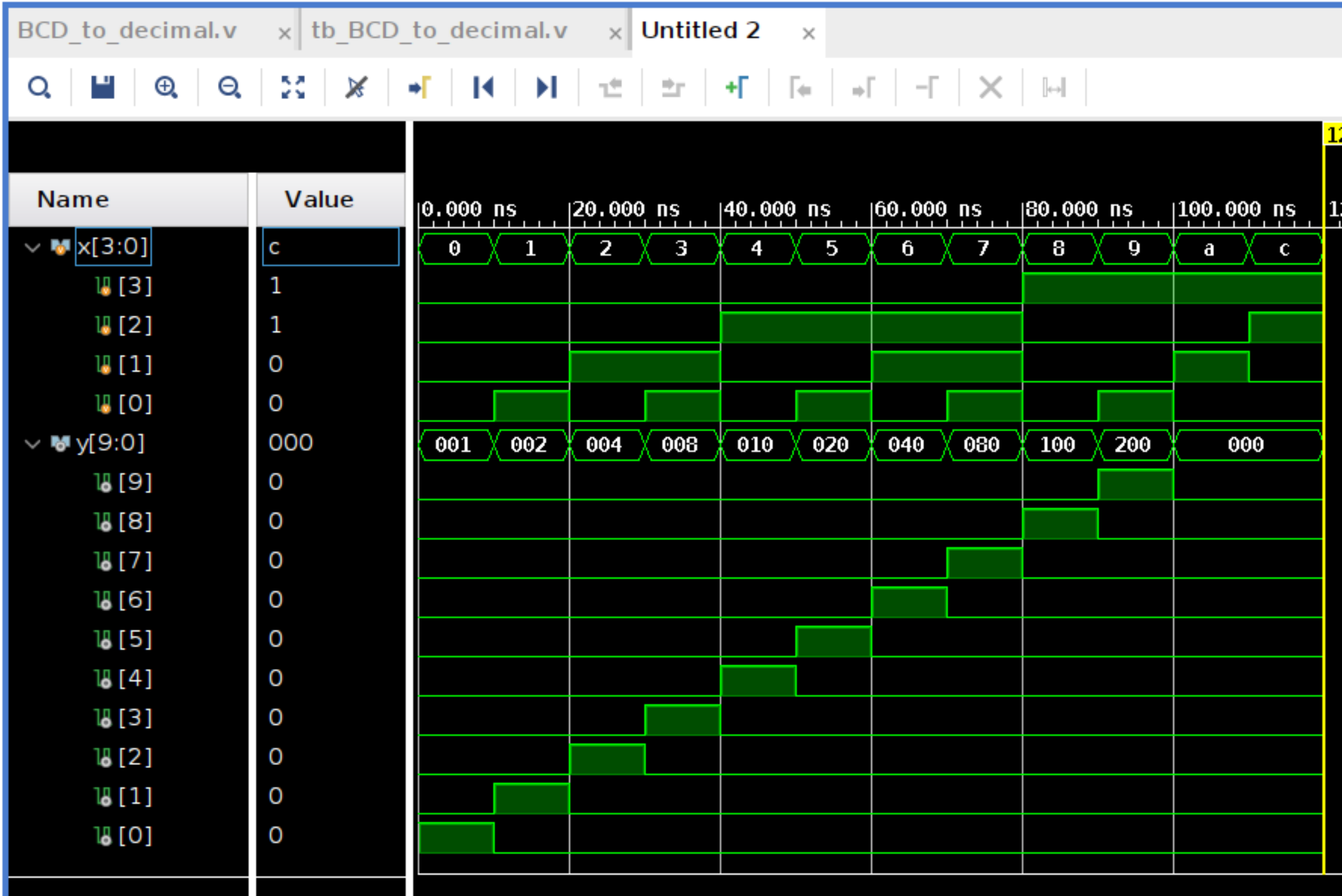
21 Cells 14 I/O Ports 25 Nets



BCD_to_decimal.v | tb_BCD_to_decimal.v | Untitled 2



Tcl Console × Messages | Log

```
# run 1000ns
Time = 0, BCD = 0000, Decimal = 0000000001
Time = 10000, BCD = 0001, Decimal = 0000000010
Time = 20000, BCD = 0010, Decimal = 0000000100
Time = 30000, BCD = 0011, Decimal = 0000001000
Time = 40000, BCD = 0100, Decimal = 0000010000
Time = 50000, BCD = 0101, Decimal = 0000100000
Time = 60000, BCD = 0110, Decimal = 0001000000
Time = 70000, BCD = 0111, Decimal = 0010000000
Time = 80000, BCD = 1000, Decimal = 0100000000
Time = 90000, BCD = 1001, Decimal = 1000000000
Time = 100000, BCD = 1010, Decimal = 0000000000
Time = 110000, BCD = 1100, Decimal = 0000000000
$finish called at time : 120 ns : File "/home/itzzinfinity/Cozy
```

BCD_to_decimal.v | tb_BCD_to_decimal.v | Untitled 2

/home/itzzinfinity/Cozy Drive/100daysofRTL/day_038/project_1/project_1.srcs/sources_1/new/BCD_to_decimal.v

```
1   `timescale 1ns / 1ps
2   //////////////////////////////////////////////////////////////////////////////////
3   // Engineer: Anjan Prasad
4   // Create Date: 10/29/2024 06:40:20 AM
5   // Module Name: BCD_to_decimal
6   //////////////////////////////////////////////////////////////////////////////////
7
8
9   module BCD_to_decimal(
10  input [0:3] x,
11  output [9:0] y
12      );
13      assign y[0] = ~x[0] & ~x[1] & ~x[2] & ~x[3];
14      assign y[1] = ~x[0] & ~x[1] & ~x[2] &  x[3];
15      assign y[2] = ~x[0] & ~x[1] &  x[2] & ~x[3];
16      assign y[3] = ~x[0] & ~x[1] &  x[2] &  x[3];
17      assign y[4] = ~x[0] &  x[1] & ~x[2] & ~x[3];
18      assign y[5] = ~x[0] &  x[1] & ~x[2] &  x[3];
19      assign y[6] = ~x[0] &  x[1] &  x[2] & ~x[3];
20      assign y[7] = ~x[0] &  x[1] &  x[2] &  x[3];
21      assign y[8] =  x[0] & ~x[1] & ~x[2] & ~x[3];
22      assign y[9] =  x[0] & ~x[1] & ~x[2] &  x[3];
23
24  endmodule
25
```

BCD_to_decimal.v × | tb_BCD_to_decimal.v × | Untitled 2 ×

/home/itzzinfinity/Cozy Drive/100daysofRTL/day_038/project_1/project_1.srcs/sim_1/new/tb_BCD_to_decimal.v

```
1   `timescale 1ns / 1ps
2   //////////////////////////////////////////////////////////////////////////////////
3   // Engineer: Anjan Prasad
4   // Create Date: 10/29/2024 06:51:38 AM
5   // Module Name: tb_BCD_to_decimal
6   //////////////////////////////////////////////////////////////////////////////////
7
8
9   module tb_BCD_to_decimal;
10
11      reg [3:0] x;          // Input to the DUT
12      wire [9:0] y;         // Output from the DUT
13
14      // Instantiate the BCD_to_decimal module
15      BCD_to_decimal uut (.x(x),.y(y));
16   initial begin
17
18          $monitor("Time = %0t, BCD = %b, Decimal = %b", $time, x, y);
19          x = 4'b0000; #10;   // BCD 0
20          x = 4'b0001; #10;  // BCD 1
21          x = 4'b0010; #10;  // BCD 2
22          x = 4'b0011; #10;  // BCD 3
23          x = 4'b0100; #10;  // BCD 4
24          x = 4'b0101; #10;  // BCD 5
25          x = 4'b0110; #10;  // BCD 6
26          x = 4'b0111; #10;  // BCD 7
27          x = 4'b1000; #10;  // BCD 8
28          x = 4'b1001; #10;  // BCD 9
29
30          // Test for invalid BCD codes
31          x = 4'b1010; #10;  // Invalid BCD
32          x = 4'b1100; #10;  // Invalid BCD
33
34          $finish;
35      end
36
37  endmodule
38
```