

4017.v x

```
1 module clock( clk );
2   output clk;
3   reg clk;
4
5   --always-
6   begin
7     #10;
8     clk <= 1'b0;
9     #10;
10    clk <= 1'b1;
11  end
12 endmodule
13
14 module C4017( clk, out, res );
15   input clk;
16   input res;
17   output [9:0] out;
18   reg [9:0] out;
19   reg [3:0] m;
20
21   --initial-
22   begin
23     m = 4'b0000;
24     out = 10'b00000001;
25   end
26
27   always @(posedge clk or posedge res)
28   begin
29     m <= res ? 0 : ( m + 1 ) % 10;
30     out <= 1'b1 << m;
31   end
32 endmodule
33
34 module Fls( out );
35   output out;
36   reg out;
37   always
38   begin
39     out <= 1'b0;
40     #10;
41     out <= 1'b1;
42     #10;
43   end
44 endmodule
45
46 module Reset( out );
47   output out;
48   reg out;
49
50   --initial-
51   begin
52     out <= 1'b1;
53     #10;
54     out <= 1'b0;
55   end
56 endmodule
57
58 module main;
59   wire clk;
60   wire [9:0] out;
61   wire a;
62   wire fls;
63   wire r;
64   wire g;
65   wire v;
66   wire r1;
67   wire g1;
68   wire v1;
69   wire notc;
70   wire z;
71   reg dis;
72   wire res;
73
74   Reset rst( res );
75   Clock c( clk );
76   C4017 q( clk, out, res | dis );
77   Fls f( fls );
78
79   --initial-
80   begin
81     #0
82     dis <= 1'b0;
83     #1200;
84     dis <= 1'b1;
85     #1200;
86     $finish;
87   end
88
89   --initial-
90   begin
91     $dumpfile( "my_dumpfile.vcd" );
92     $dumpvars( 0, main );
93   end
94
95   --// SR-Latch --
96   nor n1( a, b, out[0] );
97   nor n2( b, a, out[5] );
98
99   //assign z = !( dis * clk );
100  assign z = !( dis * 1'b0 );
101  assign notc = !( dis * fls ); //{-1.NAND-}
102  assign r = !( !dis & a ); //{-2.NAND-}
103  assign g = !( notc * !( z * out[9] ) ); //{-2.NAND-}
104  assign v = !( !dis * b ); //{-2.NAND-}
105  assign r1 = v;
106  assign g1 = !( notc * !( z * out[4] ) ); //{-2.NAND-}
107  assign v1 = r;
108 endmodule
```

GTKWave - my_dumpfile.vcd

File Edit Search Time Markers View Help

From: 0 sec To: 2400 sec Marker: 700 sec Cursor: 2400 sec

SST

main

Signals

Time

res =
clk =
r =
g =
v =
r1 =
v1 =
fls =
dis =
out[9:0] =
out[9] =
out[8] =
out[7] =
out[6] =
out[5] =
out[4] =
out[3] =
out[2] =
out[1] =
out[0] =

Waves

1000 sec

001

Type Signals

Type	Signals
wire	a
wire	b
wire	clk
reg	dis
wire	fls
wire	g
wire	g1
wire	notc
wire	out[9:0]
wire	r
wire	r1
wire	res
wire	v
wire	v1

Filter:

Append Insert Replace