





/home/itzzinfinity/Cozy Drive/100daysofRTL/day\_068/project\_1/project\_1.srscs/sources\_1/new/ring\_counter.v



```
1  `timescale 1ns / 1ps
2  //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
3  // Engineer: Anjan Prasad
4  // Create Date: 11/28/2024 08:58:07 AM
5  // Module Name: ring_counter
6  //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
7
8
9  module ring_counter #(parameter N=8)
10     (input clk, reset,
11      output reg [N-1:0] counter );
12
13  always @(posedge clk)
14      begin
15
16      if (reset)
17          counter <= 1;
18
19      else
20          counter <= {counter[0], counter[N-1:1]};
21
22      end
23  endmodule
24
```

/home/itzzinfinity/Cozy Drive/100daysofRTL/day\_068/project\_1/project\_1.srscs/sim\_1/new/ring\_counter\_tb.v



```
1  `timescale 1ns / 1ps
2  ///////////////////////////////////////////////////////////////////
3  // Engineer: Anjan Prasad
4  // Create Date: 11/28/2024 04:45:04 AM
5  // Module Name: ring_counter_tb
6  ///////////////////////////////////////////////////////////////////
7
8  module ring_counter_tb;
9      parameter N=8;
10
11      reg clk, reset;
12      wire [N-1:0] counter;
13
14      ring_counter DUT(clk, reset, counter);
15
16  initial begin
17      clk= 1'b0;
18      forever #5 clk= ~clk;
19  end
20
21  initial begin
22      reset = 1;
23      #10;
24      reset = 0;
25  end
26
27  initial begin
28      $monitor("\t\t counter: %d", counter);
29      #90 $finish;
30  end
31  endmodule
32
```