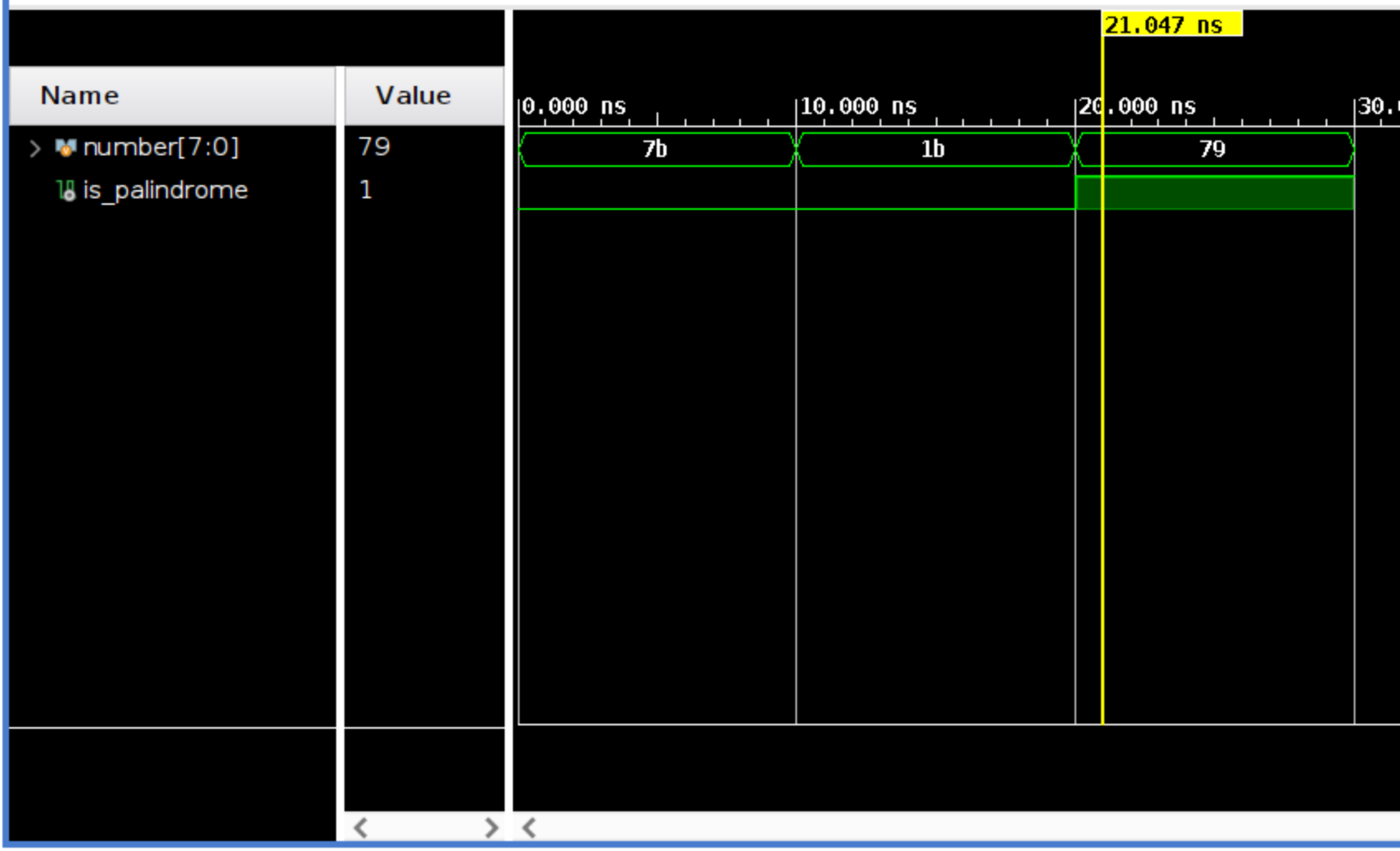
palindrome_checker.v | tb_palindrome_checker.v | Untitled 5



Tcl Console | Messages | Log

```
# }
# run 1000ns
Time    Number  Is_Palindrome
10000   123     0
20000    27     0
30000   121     1
$finish called at time : 30 ns : File "/home/itzzinfinity/Cozy Drive/100daysofRTL/day_079/
INFO: [USF-XSim-96] XSim completed. Design snapshot 'tb_palindrome_checker_behav' loaded
```

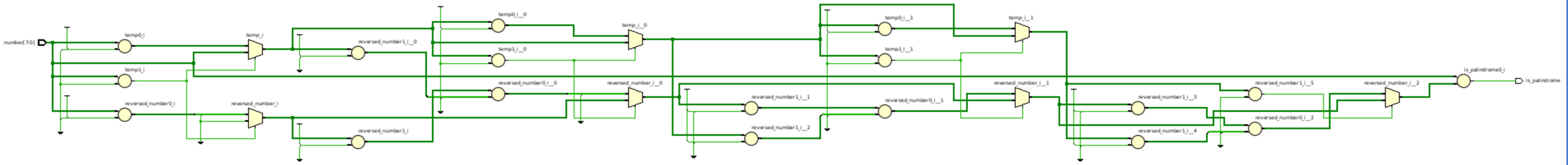
Type a Tcl command here

palindrome_checker.v | tb_palindrome_checker.v * | Untitled 5

/home/itzzinfinity/Cozy Drive/100daysofRTL/day_079/project_1/project_1.srcs/sim_1/new/tb_palindrome_checker.v

```
1   `timescale 1ns / 1ps
2   //////////////////////////////////////////////////////////////////////////////////
3   // Engineer: Anjan Prasad
4   // Create Date: 12/09/2024 07:07:06 AM
5   // Module Name: tb_palindrome_checker
6   //////////////////////////////////////////////////////////////////////////////////
7
8   module tb_palindrome_checker;
9
10      reg [7:0] number;
11      wire is_palindrome;
12
13      palindrome_checker DUT (
14          .number(number),
15          .is_palindrome(is_palindrome)
16      );
17
18      initial begin
19
20          $display("Time\tNumber\tIs_Palindrome");
21
22          number = 8'b01111011; #10; // Decimal 123 is not a palindrome
23          $display("%0t\t%d\t\t%b", $time, number, is_palindrome);
24
25          number = 8'b00011011; #10; // Decimal 27 is not a palindrome
26          $display("%0t\t%d\t\t%b", $time, number, is_palindrome);
27
28          number = 8'b01111001; #10; // Decimal 121 is a palindrome
29          $display("%0t\t%d\t\t%b", $time, number, is_palindrome);
30          $finish;
31      end
32
33  endmodule
34
35
```

Tcl Console | Messages | Log


number[7:0]
temp0_i
temp1_i
reversed_number0_i
temp_i
reversed_number_i
reversed_number1_i__0
reversed_number1_i
temp0_i__0
temp1_i__0
reversed_number0_i__0
temp_i__0
reversed_number_i__0
reversed_number1_i__1
reversed_number1_i__2
temp0_i__1
temp1_i__1
reversed_number0_i__1
temp_i__1
reversed_number_i__1
reversed_number1_i__3
reversed_number1_i__4
reversed_number1_i__5
reversed_number0_i__2
reversed_number_i__2
is_palindrome0_i
is_palindrome

Project Summary | palindrome_checker.v | tb_palindrome_checker.v

/home/itzzinfinity/Cozy Drive/100daysofRTL/day_079/project_1/project_1.srcs/sources_1/new/palindrome_ch

```
1  `timescale 1ns / 1ps
2  //////////////////////////////////////////////////////////////////////////////////
3  // Engineer: Anjan Prasad
4  // Create Date: 12/09/2024 07:04:44 AM
5  // Module Name: palindrome_checker
6  //////////////////////////////////////////////////////////////////////////////////
7
8  module palindrome_checker (
9      input [7:0] number,
10     output reg is_palindrome   // Output: 1 if palindrome, 0 otherwise
11 );
12
13     reg [7:0] reversed_number;
14     reg [7:0] temp;
15     reg [3:0] i;
16     integer digit;
17
18     always @(*) begin
19         reversed_number = 0;
20         temp = number;
21
22         for (i = 0; i < 4; i = i + 1) begin
23             if (temp > 0) begin
24                 digit = temp % 10;
25                 reversed_number = (reversed_number * 10) + digit;
26                 temp = temp / 10;
27             end
28         end
29
30         // Check if the number is equal to its reversed version
31         if (number == reversed_number)
32             is_palindrome = 1;
33         else
34             is_palindrome = 0;
35     end
36 endmodule
37
```

Tcl Console | Messages | Log | Reports | Design Runs