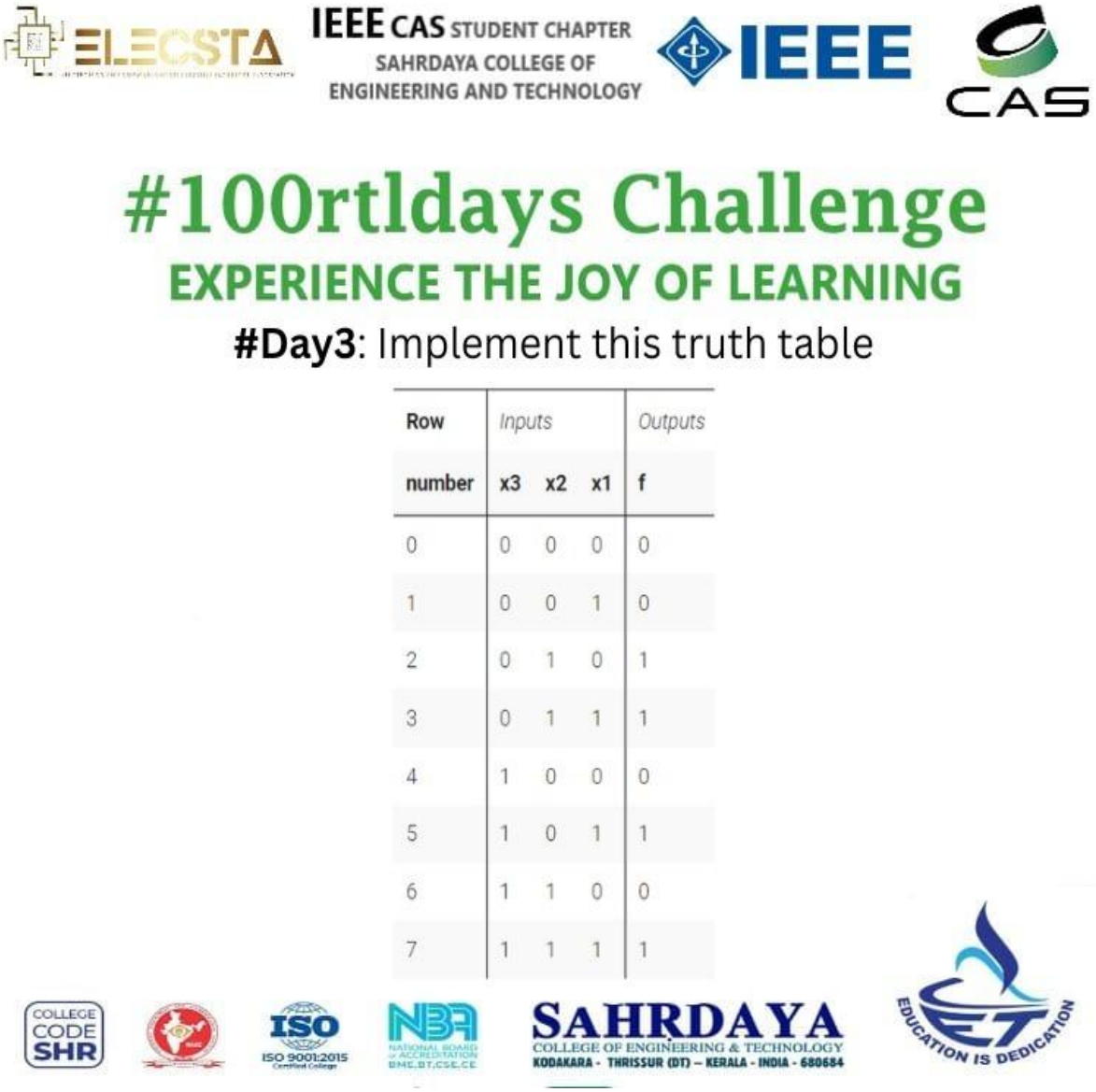


Row number	Inputs x3	x2	x1	Outputs f
0	0	0	0	0
1	0	0	1	0
2	0	1	0	1
3	0	1	1	1
4	1	0	0	0
5	1	0	1	1
6	1	1	0	0
7	1	1	1	1

Design

```
module day3( input x3,x2,x1, output f);
  assign f=(x3&x1)|(~x3&x2);

endmodule
```

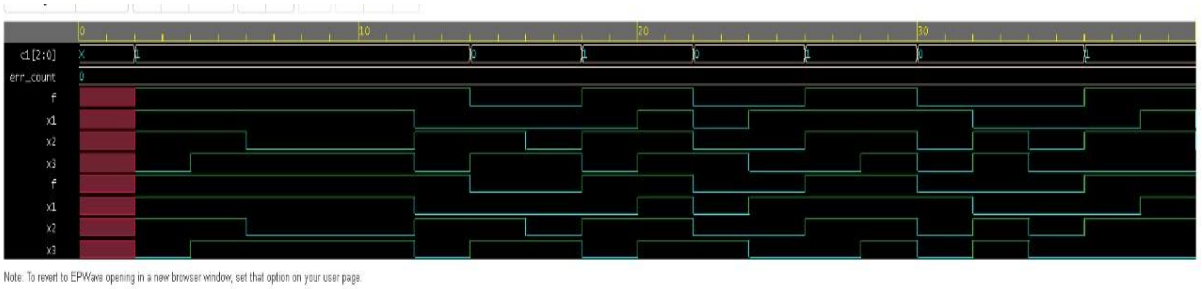
Testbench

```
module tb;
  reg x1,x2,x3;
  wire f;
  reg [2:0] c1;
  integer err_count=0;
  day3 a1(x3,x2,x1,f);

    covergroup cg @(x3,x2,x1);
    coverpoint {x3,x2,x1};
    endgroup

  cg cg_ins;

  initial begin
    $dumpfile("test.vcd");
    $dumpvars;
  end

  initial begin
    cg_ins=new();
    repeat (20)begin
      #2 x3={$random} % 2;x2={$random} % 2;x1={$random} % 2;
    end
    $display("\nerror count=%0d time=%0t\n",err_count,$time);
    $display("\n coverage=%0.2f %%\n",cg_ins.get_inst_coverage());
 $finish;
  end

  always @(x3,x2,x1) begin
    c1={x3,x2,x1};
    c1=(c1==2)|(c1==3)|(c1==5)|(c1==7);
    if(f==c1)
      $display("\nsucces1 time=%0t\n",$time);
    else begin
      $display("\nfail1 time=%0t\n",$time);
      err_count++;
    end
  end


endmodule
```

Console report

```
# KERNEL: succes1 time=26
# KERNEL:
# KERNEL:
# KERNEL: succes1 time=28
# KERNEL:
# KERNEL:
# KERNEL: succes1 time=30
# KERNEL:
# KERNEL:
# KERNEL: succes1 time=32
# KERNEL:
# KERNEL:
# KERNEL: succes1 time=34
# KERNEL:
# KERNEL:
# KERNEL: succes1 time=36
# KERNEL:
# KERNEL:
# KERNEL: succes1 time=38
# KERNEL:
# KERNEL:
# KERNEL: error count=0 time=40
# KERNEL:
# KERNEL:
# KERNEL:  coverage=100.00 %
# KERNEL:
# RUNTIME: Info: RUNTIME_0068 testbench.sv (28): $finish called.
# KERNEL: Time: 40 ns,  Iteration: 0,  Instance: /tb,  Process: @INITIAL#21_1@.
# KERNEL: stopped at time: 40 ns
# VSIM: Simulation has finished. There are no more test vectors to simulate.
# ACDB: Covergroup Coverage data has been saved to "fcover.acdb" database.
# VSIM: Simulation has finished.
```

Waveform



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