

```

1 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
2 //                                                                                               //
3 // File name : env.sv                                                                                               //
4 // Author    : G. Andres Mancera                                                                                               //
5 // License   : GNU Lesser General Public License                                                                                               //
6 // Course    : Advanced Verification with SystemVerilog OOP                                                                                               //
7 //           : Testbench - UCSC Silicon Valley Extension                                                                                               //
8 //                                                                                               //
9 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
10
11 class env;
12
13     driver                drv;
14     monitor               mon;
15     scoreboard            scbd;
16     mailbox               drv2scbd;
17     mailbox               mon2scbd;
18     virtual xge_mac_interface drv_vi;
19     virtual xge_mac_interface mon_vi;
20
21     // Constructor
22     function new( input virtual xge_mac_interface dvif,
23                  input virtual xge_mac_interface mvif );
24         $display("ENV :: inside new() function");
25         this.drv_vi = dvif;
26         this.mon_vi = mvif;
27         drv2scbd    = new();
28         mon2scbd    = new();
29         drv         = new(dvif, drv2scbd);
30         mon         = new(mvif, mon2scbd);
31         scbd        = new(drv2scbd, mon2scbd);
32     endfunction : new
33
34
35     // Class methods
36     task run(int num_packets=4);
37
38         // Fork off two threads
39         fork
40             // Driver thread will send the packets.
41             begin
42                 drv.send_packet(num_packets);
43             end
44             // Monitor thread will collect the packets.
45             begin
46                 mon.collect_packet();
47             end
48             // Scoreboard thread to make the comparison.
49             begin
50                 scbd.compare(drv2scbd, mon2scbd);
51             end
52         join_any
53
54     endtask : run
55
56 endclass
57

```