POST LAB :

module decoder4x16 (

output reg [15:0] y,

input [3:0] select

);

always @\* begin

case (select)

4'b0000: y = 16'b0000000000000001; 4'b0001: y = 16'b0000000000000010;

4'b0010: y = 16'b0000000000000100; 4'b0011: y = 16'b0000000000001000;

4'b0100: y = 16'b0000000000010000; 4'b0101: y = 16'b0000000000100000;

4'b0110: y = 16'b0000000001000000; 4'b0111: y = 16'b0000000010000000;

4'b1000: y = 16'b0000000100000000; 4'b1001: y = 16'b0000001000000000;

4'b1010: y = 16'b0000010000000000; 4'b1011: y = 16'b0000100000000000;

4'b1100: y = 16'b0001000000000000; 4'b1101: y = 16'b0010000000000000;

4'b1110: y = 16'b0100000000000000; 4'b1111: y = 16'b1000000000000000;

endcase

end

endmodule

OUTPUT

