

```
`timescale 1ns / 1ps
///////////////////////////////
// Company:
// Engineer:
//
// Create Date: 04/27/2022 02:42:07 PM
// Design Name:
// Module Name: Selector
// Project Name:
// Target Devices:
// Tool Versions:
// Description:
//
// Dependencies:
//
// Revision:
// Revision 0.01 - File Created
// Additional Comments:
//
///////////////////////////////

module Selector(
    input [3:0] sel,
    input [15:0] N,
    output [3:0] H
);
    // sel 1000 sel 0100  sel 0010 sel 0001
    assign H[3:0] = (N[15:12] & {sel[3], sel[3], sel[3], sel[3]}) | (N[11:8] &
{sel[2], sel[2], sel[2], sel[2]}) | (N[7:4] & {sel[1], sel[1], sel[1], sel[1]}) |
(N[3:0] & {sel[0], sel[0], sel[0], sel[0]});
endmodule
```