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/*****
* Date: Aug. 28, 1999
* File: Mux 4 to 1.v    (440 Examples)
*
* Behavioral Model of a 4 to 1 MUX (16 data inputs)
*****/
//*****
module mux_4to1(Y, A, B, C, D, sel);
//*****

    output [15:0] Y;
    input  [15:0] A, B, C, D;
    input   [1:0] sel;
    reg     [15:0] Y;

    always @(A or B or C or D or sel)
        case ( sel )
            2'b00: Y = A;
            2'b01: Y = B;
            2'b10: Y = C;
            2'b11: Y = D;
            default: Y = 16'hxxxx;
        endcase

endmodule

```