```
1  //mux4to1.v
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4
5  //SW[3:0] data inputs
6  //SW[9:8] select signal
7
8  //LEDR[0] output display
9
10 module mux4to1(LEDR, SW);
11     input [9:0] SW;
12     output [9:0] LEDR;
13     wire [1:0] M;
14
15     mux2to1 u0(
16         .x(SW[0]), // input u
17         .y(SW[1]), // input x
18         .s(SW[9]), // input s0
19         .m(M[0])   // wire M[0]
20         );
21
22     mux2to1 u1(
23         .x(SW[2]), // input v
24         .y(SW[3]), // input w
25         .s(SW[9]), // input s0
26         .m(M[1])   // wire M[1]
27         );
28
29     mux2to1 u2(
30         .x(M[0]),  // output of M[0]
31         .y(M[1]),  // output of M[1]
32         .s(SW[8]), // input s1
33         .m(LEDR[0])// output m
34         );
35
36 endmodule
37
38 module mux2to1(x, y, s, m);
39     input x; //selected when s is 0
40     input y; //selected when s is 1
41     input s; //select signal
42     output m; //output
43
44     assign m = s & y | ~s & x;
45
46 endmodule
```