

```

1 module REGISTER_SELECTOR(
2     input clk,
3     input [0:0]en,
4     input [0:0]rw,
5     input [15:0] fromMDDR,
6     output reg [5:0] toDecoder = 6'd0,
7     output reg [4:0] toBus = 4'd0
8 );
9 always @(*)
10 begin
11     if (en==0)
12         begin
13             toDecoder=0;
14             toBus=0;
15         end
16     else
17         begin
18             if(rw==0)
19                 begin
20                     toBus = fromMDDR[4:0];
21                     toDecoder = 6'd0;
22                 end
23             else if(rw==1)
24                 begin
25                     toDecoder = fromMDDR[5:0];
26                     toBus = 4'd0;
27                 end
28         end
29     end
30 endmodule

```