module barrelshifter(clk,rst,en,d,s,y);

input clk,rst;

input [7:0]d;

input [7:0]s;

input en;

output reg [7:0]y;

reg w0,w1,w2,w3,w4,w5,w6,w7;

reg [7:0]f;

always@(posedge clk)

begin

if(rst)

y=8'd0;

else

begin

if(en)

begin

f[0]=s[2]?d[4]:d[0];

f[1]=s[2]?d[5]:d[1];

f[2]=s[2]?d[6]:d[2];

f[3]=s[2]?d[7]:d[3];

f[4]=s[2]?d[0]:d[4];

f[5]=s[2]?d[1]:d[5];

f[6]=s[2]?d[2]:d[6];

f[7]=s[2]?d[3]:d[7];

w0=s[1]?f[6]:f[0];

w1=s[1]?f[7]:f[1];

w2=s[1]?f[0]:f[2];

w3=s[1]?f[1]:f[3];

w4=s[1]?f[2]:f[4];

w5=s[1]?f[3]:f[5];

w6=s[1]?f[4]:f[6];

w7=s[1]?f[5]:f[7];

y[0]=s[0]?w7:w0;

y[1]=s[0]?w0:w1;

y[2]=s[0]?w1:w2;

y[3]=s[0]?w2:w3;

y[4]=s[0]?w3:w4;

y[5]=s[0]?w4:w5;

y[6]=s[0]?w5:w6;

y[7]=s[0]?w6:w7;

end

end

end

endmodule