

### 1- 2X1 MUX MODÜL KODU

```
module mux2x1 (out, in_0, in_1, s);  
input in_0, in_1, s;  
output out;  
wire not_s;  
wire state_0, state_1;  
not (not_s, s);  
and (state_0, in_0, not_s);  
and (state_1, in_1, s);  
or (out, state_0, state_1);  
endmodule
```

### 2- 4X1 MUX MODÜL KODU

```
module 4x1mux(out,in,s);  
input [3:0] in;  
input [1:0] s;  
output out;  
wire w1,w2;  
mux2x1 mux_1(w1,in[3],in[2],s[1]);  
mux2x1 mux_2(w2,in[1],in[0],s[1]);  
mux2x1 mux_3(out,w1,w2,s[0]);  
endmodule
```

### 3- 8 BİTLİK KAYDIRICI DEVRE MODÜL KODU

```
module shifter (out, in, shift);  
input [7:0] in, shift;  
output [7:0] out;  
input shift;  
mux4x1 m0(out[0], in[0], shift);  
mux4x1 m1(out[1], in[1], shift);  
mux4x1 m2(out[2], in[2], shift);  
mux4x1 m3(out[3], in[3], shift);  
mux4x1 m4(out[4], in[4], shift);  
mux4x1 m5(out[5], in[5], shift);  
mux4x1 m6(out[6], in[6], shift);  
mux4x1 m7(out[7], in[7], shift);  
endmodule
```