module muc\_new(a, b, clk, asign, bsign, m, sign);

input [1:0]a;

input [1:0]b;

input clk;

input asign;

input bsign;

output [3:0]m;

output sign;

wire h1,h2,h3,h4;

mul\_1bit M1(a[0],b[0],clk,m[0]);

mul\_1bit M2(a[0],b[1],clk,h1);

mul\_1bit M3(b[0],a[1],clk,h2);

mul\_1bit M4(b[1],a[1],clk,h3);

hal hh(h1,h2,m[1],h4);

hal hhh(h4,h3,m[2],m[3]);

xor(sign,asign,bsign);

endmodule