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1- YARI TOPLAYICI KODU

```
module ha(a,b,s,c);
input a,b;
output s,c;
xor(s,a,b);
and(c,a,b);
endmodule
```

2- TAM TOPLAYICI KODU

```
module fa(a,b,c_in,s,c_out);
input a,b,c_in;
output s, c_out;
wire h1_out_s, h1_out_c, h2_out_c;
ha h1(a,b,h1_out_s, h1_out_c);
ha h2(h1_out_s, c_in, s, h2_out_c);
or (c_out,h1_out_c, h2_out_c);
endmodule
```

3- 4 BİTLİK KODLAYICI KODU

```
module fba(a,b,c_in,s,c_out);
input [3:0] a,b;
input c_in;
output [3:0] s;
output c_out;
wire f1_out_c, f2_out_c,f3_out_c;
fa f1(a[0], b[0], c_in, s[0], f1_out_c);
fa f2(a[1], b[1], f1_out_c, s[1], f2_out_c);
fa f3(a[2], b[2], f2_out_c, s[2], f3_out_c);
fa f4(a[3], b[3], f3_out_c, s[3], c_out);
endmodule
```

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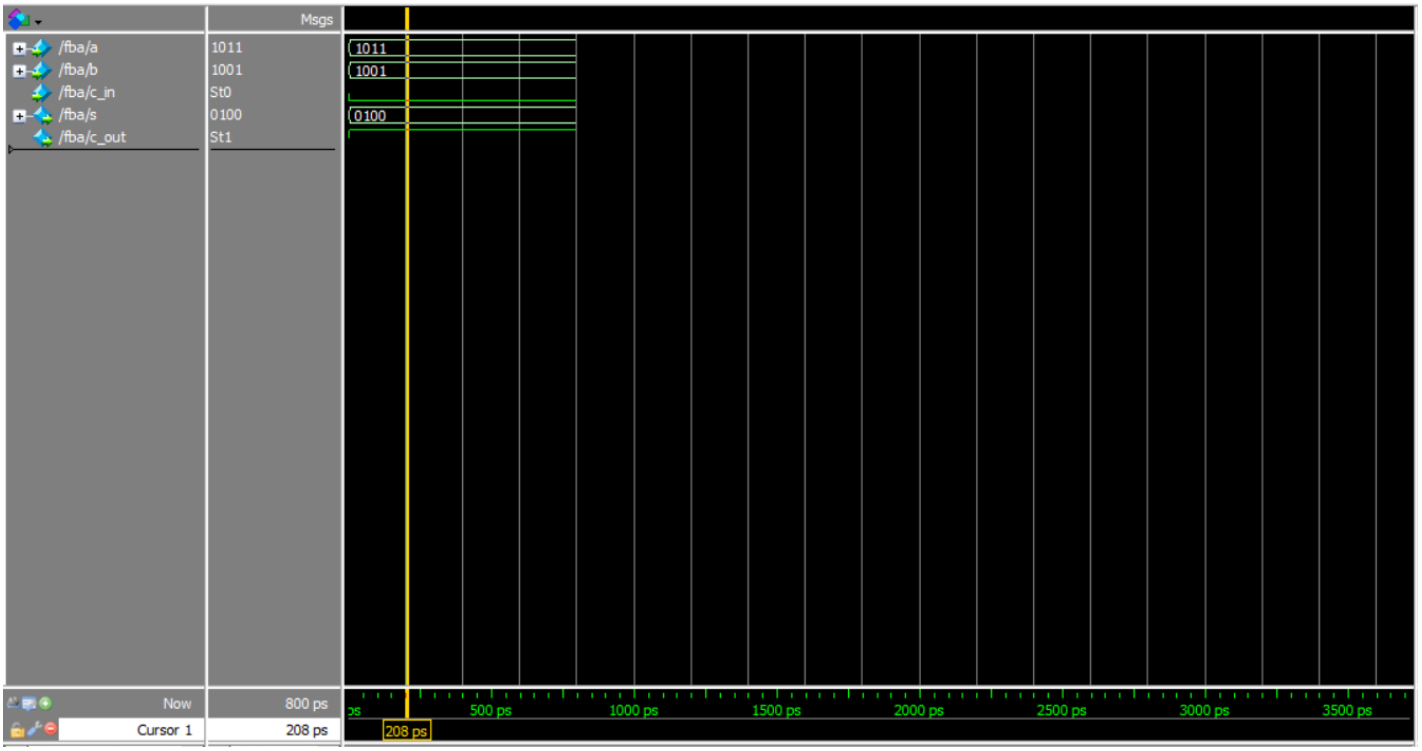
4- SİMÜLASYON GÖRÜNTÜLERİ

a- A = 1001, B = 0110, c_in = 0

b- A = 1011, B = 1001, c_in = 0



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c- A = 0110, B = 0010, c_in = 1