

LAB 11

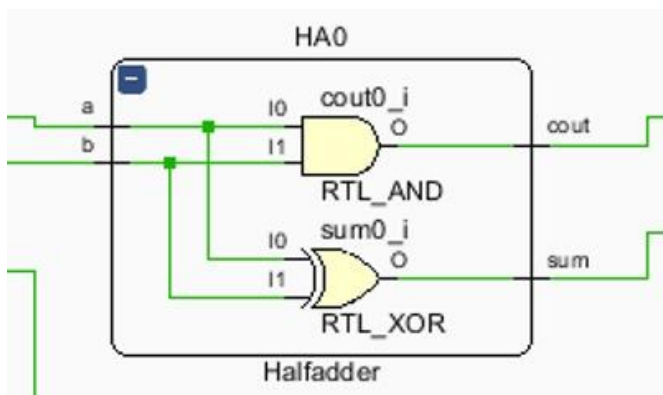
OBJECTIVE

Reproduce and implement Half Adder by using FPGA Kit.

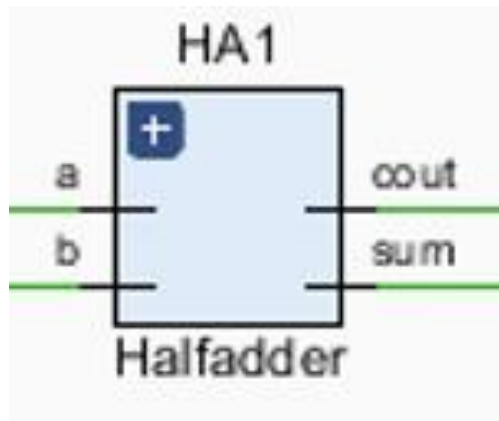
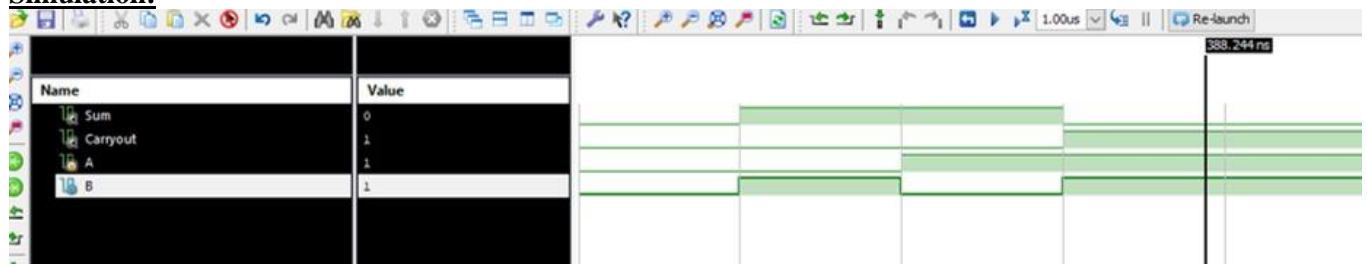
Verilog Module Code:

```
21 module Halfadder(  
22     input a,  
23     input b,  
24     output sum,  
25     output cout  
26 );  
27  
28  
29     reg sout,c;  
30  
31     always@(*)  
32     begin  
33         sout<=a*b;  
34         c=a&b;  
35     end  
36  
37     assign sum=sout;  
38     assign cout=c;  
39 endmodule
```

Design Schematic 01:



Design Schematic 02:

**Simulation:****Conclusion:**

In this lab we learn how to Reproduce and implement Half Adder by using FPGA Kit.