

halfAdder_top.v (~\Desktop\Engr433) - GVIM

File Edit Tools Syntax Buffers Window Help

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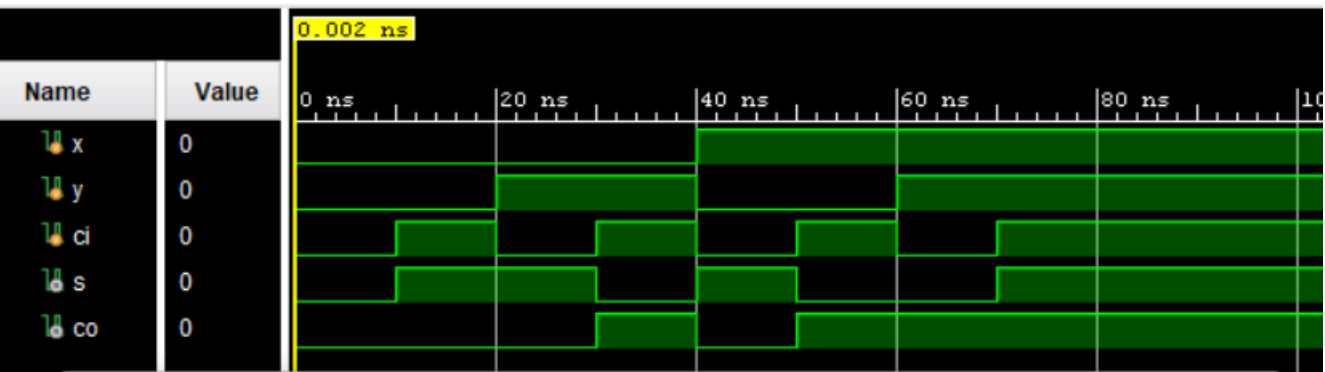
module oneBitHalfAdder_tb;
  reg x,y;
  wire s,co;
  initial begin
    x=0; y=0;
    #100;
    x=0; y=1;
    #100;
    x=1;y=0;
    #100;
    x=1; y=1;
  end
  oneBitHalfAdder UUT(.x(x),.y(y),.s(s),.co(co));
endmodule

```

```

module oneBitHalfAdder(s,co,x,y);
  input x,y;
  output s,co;
  assign co=x&y;
  assign s=x^y;
endmodule

```



```

module oneBitFullAdder_tb;
reg x, y, ci;
wire s, co;
initial begin
    x=0; y=0; ci=0;
    #10;
    x=0; y=0; ci=1;
    #10;
    x=0; y=1; ci=0;
    #10;
    x=0; y=1; ci=1;
    #10;
    x=1; y=0; ci=0;
    #10;
    x=1; y=0; ci=1;
    #10;
    x=1; y=1; ci=0;
    #10;
    x=1; y=1; ci=1;
    #10;
end
oneBitFullAdder UUT(.x(x),.y(y),.ci(ci),.s(s),.co(co));
endmodule

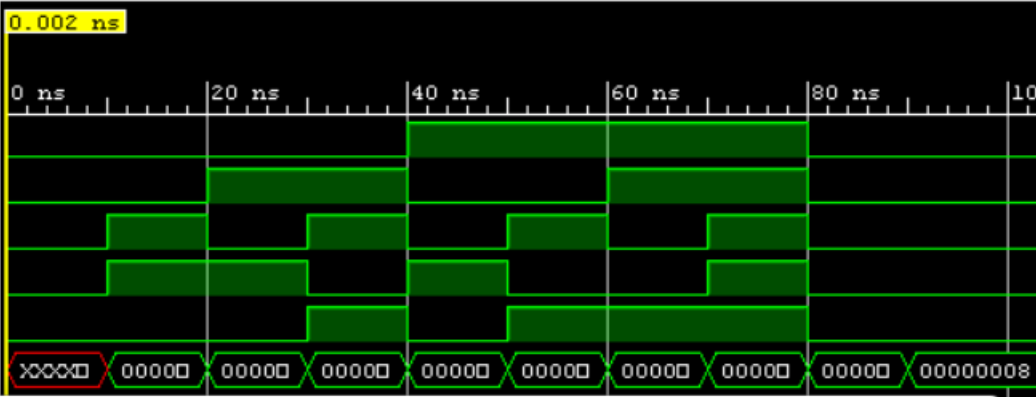
module oneBitFullAdder(s,co,x,y,ci
);
input x, y, ci;
output s, co;

assign co = (x&y) | (ci & (x^y));
assign s = x ^ y ^ ci;

endmodule

```

Name	Value
x	0
y	0
ci	0
s	0
co	0
i[31:0]	XXXXXXXX



```

module oneBitFullAdder_tb;
reg x, y, ci;
wire s, co;
integer i;
initial begin
    x=0;y=0;ci=0;
    #10;
    for (i=0;i<8;i=i+1)
    begin
        {x,y,ci}={x,y,ci}+1;
        #10;
    end
end
oneBitFullAdder UUT(.x(x),.y(y),.ci(ci),.s(s),.co(co));
endmodule
    
```

```

module oneBitFullAdder(s,co,x,y,ci
);
input x, y, ci;
output s, co;

assign co = (x&y) | (ci & (x^y));
assign s = x ^ y ^ ci;

endmodule
    
```