4 位加法器

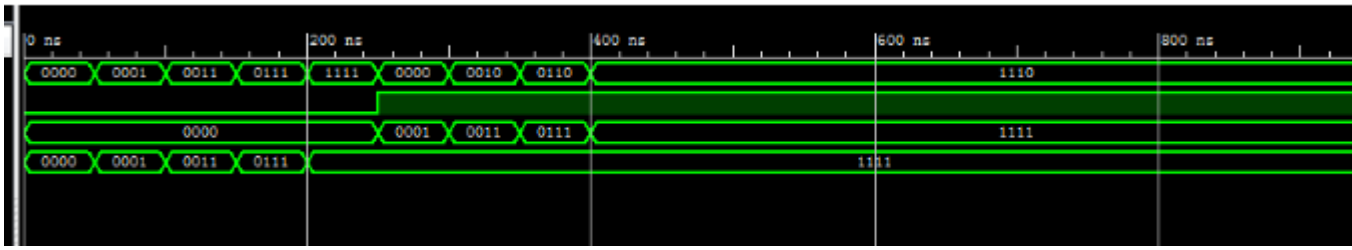
```
module add4
(
        input[3:0] a,b,
        output[3:0] sum,
        output cout
);
assign {cout,sum} = a + b;
endmodule
```

测试程序

```
module adder4();
reg [3:0] a,b;
wire  [3:0] sum;
wire cout;
initial
    begin
        a = 0;  b = 0;  #50;
        a = 0;  b = 1;  #50;
        a = 0;  b = 3;  #50;
        a = 0;  b = 7;  #50;
        a = 0;  b = 15; #50;
        a = 1;  b = 15; #50;
        a = 3;  b = 15; #50;
        a = 7;  b = 15; #50;
        a = 15; b = 15; #50;

    end
add4 u2(a,b,sum,cout);
endmodule
```

测试结果


0 ns
200 ns
400 ns
600 ns
800 ns
0000
0001
0011
0111
1111
0000
0010
0110
1110
0000
0001
0011
0111
1111
0000
0001
0011
0111
1111