

# Project 1

- Finish **Tutorial 1** before starting Project 1.
- Project 1 is the design of a Fibonacci calculator using Verilog HDL.

# Fibonacci (cont.)

- $F(n) = 0$  when  $n=0$
- $F(n) = 1$  when  $n=1$
- $F(n) = F(n-1) + F(n-2)$  when  $n>1$
- Examples:

$F_0$	$F_1$	$F_2$	$F_3$	$F_4$	$F_5$	$F_6$	$F_7$	$F_8$	$F_9$
0	1	1	2	3	5	8	13	21	34

# Project 1 (cont.)

```
module fibonacci_calculator (  
    clk,  
    reset_n,  
    input_s,  
    begin_fibo,  
    done,  
    fibo_out  
);  
input [4:0] input_s;  
input reset_n ;  
Input begin_fibo ; // Start  
    calculation  
input clk ;  
output done ;  
output [15:0] fibo_out;  
// Put your code here  
//.....  
endmodule
```

