

$$\text{fib}(n) = \text{fib}(n-1) + \text{fib}(n-2)$$

$$\text{fib}(0) = 0$$

$$\text{fib}(1) = 1$$

$$\text{fib}(4) = \text{fib}(3) + \text{fib}(2)$$

$$\text{fib}(3) = \text{fib}(2) + \text{fib}(1)$$

$$\text{fib}(2) = \text{fib}(1) + \text{fib}(0)$$

$$\begin{array}{cc} \uparrow & \uparrow \\ 1 & 0 \end{array}$$

$$\text{fib}(2) = 1 + 0 = 1$$

$$\text{fib}(3) = 1 + 1 = 2$$

$$\text{fib}(4) = 2 + 1 = 3$$