Lab2: Recursion Test

Lab2-1) Recursive & Iterative Addition

Let's assume n, m ≥ 0.

1) ***For Recursive Addition***: we can rewrite "***n+m ➔ (n-1)+(m+1)"***
   At each step, **subtract 1 from n** and **add 1 to m** until "**i is 0**".
   Then **return m**.

예) Using the substitution model,

add(3, 7) → add(2, 8) → add(1, 9) → add(0, 10) => 10

Input: integers m ≥ 0, n ≥ 0 **Output**: m + n

Function ***sum(m, n)***
  If n = 0 then return (m)
else return ***sum(***pred(n), succ(m)) //

2) For Iterative Addition:

While n > 0 do
{ m := succ(m); n := pred(n);
} Return (m)

Lab2-2) Find FIBONACCI number

Algorithm:

```
Fibo( n ) {
    If n=0, return 0
    Else if n = 1, return 1
    Else    return (fibo (n-1) + fibo(n-2))
  }
```

Condition: 1) input n from keyboard 2) print out only the final value