pd1 hw49   2021-12-09   **Ivan Chen**

worked with no one; advised by no one

Fibonacci, recursively

test cases and their answers

smallest case

0th: 0

next-to-smallest case

1st : 1
2nd : 1

larger case(s)

3rd : 2
4th : 3
5th : 5
6th : 8

the request that will start the processing

I am asked to calculate the *n*th element of the Fibonacci sequence: F_n

base case processing

0 and 1

decision rule

if n = 0
if n < 3

recursive case processing, in three sub-parts

recursive abstraction

When I am asked to calculate the *n*th element of the Fibonacci sequence F_n, the recursive abstraction can calculate F_{n-1} and F_{n-2}

the leftover piece

The sum of F_{n-1} and F_{n-2}

all the processing for a recursive case

When I am asked to calculate the *n*th element of the Fibonacci sequence F_n
and the recursive abstraction has provided F_{n-1} and F_{n-2},
then the remaining part of processing recursive cases requires the addition of F_{n-1} and F_{n-2}