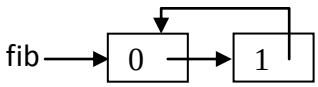
Link-list

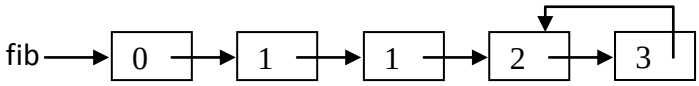
1.Lazy list

Let the circular linked list fib contain an initial sequence the Fibonacci numbers generated so far.
Let the function **take(fib,n)** take out the first n Fibonacci numbers from fib as follows:
Case 1: If the list fib already contains (more than) n elements, take(fib,n) simply takes the first n Fibonacci numbers out.
Case 2: If the list fib contains fewer than n elements, it is extended to include the first n Fibonacci numbers so that take(fib,n) has enough elements to take out.

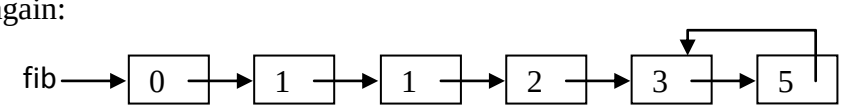
The list fib **initially contains the first 2** Fibonacci numbers and is initialized to:



The call take(fib,5) forces the list fib to be extended to



and produces the list [0,1,1,2,3].
Observe that the circular pointer makes the computation of the next Fibonacci number easy.
Next, the call take(fib,3) simply yields the list [0,1,1]; but the call take(fib,6) extends the list again:



Each time the function take is invoked, it reports the number of newly created nodes.

Input

The input consists of multiple datasets, followed by a line which contains only a single '.' (period). Each dataset contains a function. Each is represented by the form *take(fib,n)*, where n indicates the first Fibonacci numbers should be taken out. Each call may extend the previous resulting list. The initial list contains the first 2 Fibonacci numbers.

Output

For each case, the output should indicate the number of newly created nodes and the

output Fibonacci list.

Sample Input

take(fib,12)
take(fib,10)
.

Sample Output for the Sample Input

[0,1,1,2,3,5,8,13,21,34,55,89] create 10 nodes
[0,1,1,2,3,5,8,13,21,34] create 0 nodes

All inputs are from stdin and outputs to stdout.

2.

以 linked list implement 有續串列(sorted list)

問題：每一個 node 必須至少包含兩個資料欄位(key1, key2)，並以 key1 為主，key2 為副的遞增式排序(即 key1 小的要排在前面，若 key1 相同，則 key2 小的排在前面)

基本要求:

1. 插入資料
   - 給定新增的(key1,key2) pair，將此 pair 插入適當的位置
2. 刪除資料
   - 指定刪除的(key1,key2) pair
   - 指定欲刪除的 key1 (所有符合的皆要刪除)
   - 指定欲刪除的 key2 (所以符合的皆要刪除)
3. 搜尋資料
   - 給定(key1,key2)pair, 傳回位於第幾順位，若不存在，則傳回-1
4. 列印資料
   - 依有續串列的順序，將資料顯示於螢幕上

加分功能

增加可以任意更換 key1,key2 為主副的遞增排序方式