CS1020 Take-home Lab #3
Exercise #2: Kallang Wave

http://www.comp.nus.edu.sg/~cs1020/3_ca/labs.html

Objective:

Implementing a **circular linked list** and using it to solve a problem.

Task statement:

(Note that unless otherwise stated, you may assume that all input data are valid and hence there is no need for you to perform input data validation.)

To commemorate Singapore's 50th birthday, this year's National Day will be held in the Padang. The organizers plan to include the *Kallang Wave* in some fashion, but they need a simulation to visualize how the *Kallang Wave* might look like over a certain period of time.

(Watch http://imgur.com/igDo8Ih if you have no clue what a *Kallang Wave* is.)

You have been tasked with crafting the simulation. Assume that the *Kallang Wave* has already started, and that the "wave" rises up and down in the same manner throughout. Also, assume that the length of the "wave" never changes. It is also possible that there are multiple "waves" at once, all travelling throughout the stadium at the same time.

Input:

The input starts with the current state of the *Kallang Wave* in one line. After that line, lines containing one non-negative number each will follow. The number indicates the number of moments that have passed after the current state of the *Kallang Wave*. A moment is defined as the time it takes for the "wave" to move forward by one person.

Below is a sample input:

```
...,;'''';;,,,,...'..
3
2
0
1
4
```

Output:

For every one of the numbered lines, the state of the *Kallang Wave* must be printed. The numbers are also cumulative, i.e. the number indicates the number of moments after the state of the *Kallang Wave* from the previous line, if available. The program must exit when there are no more lines to be read.

Below is the sample output for the given sample input:

```
 '.....;'''';;,,,,...
..'.....;'''';;,,,,.
..'.....;'''';;,,,,.
...'.....;'''';;,,,,
;,,,,...'.....;''''; 
```

Notes:

- The skeleton program is given and you should stick to the given code. You are to use the provided **CircularLinkedList** class, but you must complete the code so that it will function.
- **Number of submissions:** You are given **12** submissions. Only the final submission will be graded.