## CS1020 Take-home Lab #3
## Exercise #1: Flip The List

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

**Objective:**

Implementing a **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.)

You are to write a program to flip a linked list at a particular index, that is, all the nodes from the specified index onwards are reversed. The first node of the list is said to be at index zero.

For example, given the linked list A → B → C → D → E → F → G, flipping it at index 3 would result in A → B → C → G → F → E → D. Continuing, if we flip the list at index 2, it would result in the list A → B → D → E → F → G → C.

**Input:**

The first line contains a positive integer *S* indicating the size of the list. Each list node contains a string that is a capital letter. The nodes appear in the list in alphabetical order. For example, if *S* is 3 the following linked list should be created: A → B → C. You may assume that *S* is not greater than 26.

The second line contains a positive integer *F* indicating the number of flips.

The third line contains *F* integers, in the range 0 through *S* – 1, each indicating the index position where the flip should start.

Below is a sample input:

```
5
3
2 1 3
```

**Output:**

The output shows the linked list after all the flip operations are performed. For the above sample input, after the 3 flip operations are performed, the linked list contains A → C → D → B → E, and hence the output is:

```
ACDBE
```

**Notes:**

- The skeleton program is given and you should stick to the given code. You are to use a **tailed linked list** so that creation of the linked list is simpler.
- **Number of submissions:** You are given **12** submissions. Only the final submission will be graded.