Browser History

Problem Statement

You are given a doubly linked list of unique string values. These strings refer to web **addresses** without any spaces. You will be given Q queries. In each query you will be given some commands. Type of commands are -

1. **visit address** - You need to go to that address from where you are in that list and print that **address** if it is in the list. Otherwise print "**Not Available**".

2. **next** - You need to go to the next address from where you are in that list and print that **address** if it is in the list. Otherwise print "**Not Available**".

3. **prev** - You need to go to the previous address from where you are in that list and print that **address** if it is in the list. Otherwise print "**Not Available**".

One more thing, if the address isn't available make sure you don't move from your current position. You are at the head initially.

Note: You can use **Singly/Doubly Linked List** or **STL List** to solve this problem.

Input Format

- First line will contain the values of the doubly linked list, and will terminate with the string "**end**".

- Second line will contain **Q**.

- Next Q lines will contain the commands. It is guranteed that you will get "**visit address**" command at first which will contain a valid address. It will not contain valid address everytime!

Constraints

1. 1 <= **N** <= 1000; Here **N** is the maximum number of nodes of the linked list.

2. 1 <= **Q** <= 1000;

3. 1 <= |Address| <= 100; Here |Address| is the length of the string address.

Output Format

- For each query output as asked.

Sample Input 0

```
facebook google phitron youtube twitter end
12
visit phitron
prev
prev
prev
prev
next
visit twitter
next
next
prev
```

```
visit django
prev
```

Sample Output 0

```
phitron
google
facebook
Not Available
Not Available
google
twitter
Not Available
Not Available
youtube
Not Available
phitron
```

Sample Input 1

```
a b c d e f g h i j k l m n o p q r s t u v w x y z end
7
visit s
next
visit zz
next
visit z
next
prev
```

Sample Output 1

```
s
t
Not Available
u
z
Not Available
y
```