3 Questions Total Marks: 600.0

3 Programming Questions

1. Weekend planning + 300.0

2. Beautiful numbers + 100.0

3. playing with graphs! + 200.0

Question 3 Max. Marks 200.00

playing with graphs!

Alex likes graphs alot! this time he has a directed graph with N nodes and some edges. please note, any node in this graph will not have more than one outgoing edge. now he will do two kind of operations on it. which are defined as below:

- $1\ X$: he will start the walk from Xth node of the graph. you need to tell on which node he will stop.
- $2\ X$: he will remove the outgoing edge of the Xth node.

since alex is pretty lazy, he dont want to walk every time and figure out. so he needs you to answer these questions of him.

Input format

- First line will contain number of nodes in graph N
- Second line: N space-separated integers (where the j^{th} number denotes the index of the destination of the outgoing edge from the node with the index j. If this value is zero, then it indicates that there is no outgoing edge from the node with the index j)
- Third line will contain number of queries: Q
- Next Q lines: Query of either type

Output format

For a type 1 query, print the index of the node where you stop, in the order of execution of the queries. If you cannot stop, print the word **LOOP**.

Constraints

$1 \leq N \leq 3 \times 10^5$
$1 \leq Q \leq 3 \times 10^5$

Sample Input	Sample Output
3 2 3 1 6 1 2 2 1 1 2 1 1 2 2 1 2	LOOP 1 1 2

Explanation

Initial graph given is a cycle hence for first query we keep on moving in a LOOP.

Note: Your code should be able to convert the sample input into the sample output. However, this is not enough to pass the challenge, because the code will be run on multiple test cases. Therefore, your code must solve this problem statement.

Time Limit: 1.0 sec(s) for each input file
Memory Limit: 256 MB
Source Limit: 1024 KB
Marking Scheme: Marks are awarded if any testcase passes
Allowed Languages: Bash, C, C++, C++14, Clojure, C#, D, Erlang, F#, Go, Groovy, Haskell, Java, Java 8, JavaScript(Rhino), JavaScript(Node.js), TypeScript, Julia, Kotlin, Lisp, Lisp (SBCL), Lua, Objective-C, OCaml, Octave, Pascal, Perl, PHP, Python, Python 3, Racket, Ruby, Rust, Scala, Swift, Swift-4.1, Visual Basic

New Submission | All Submissions

Java 8 (oracle 1.8.0_131) Save

```java
import java.util.*;

class TestClass {
    public static void main(String args[] ) throws Exception {

        Scanner s = new Scanner(System.in);
        String name = s.nextLine();                 // Reading input from STDIN
        System.out.println("Hi, " + name + ".");    // Writing output to STDOUT
    }
}
```

Press Ctrl/Command+Spacebar for autocomplete suggestions (accuracy dependent on connection stability).

Provide custom input

COMPILE & TEST SUBMIT