Problem F
Line Them Up
Time limit: 1 second

An eccentric coach asks players on the team to line up alphabetically at the start of practice. The coach does not tell the players whether they need to line up in increasing or decreasing order, so they guess. If they guess wrong, the coach makes them run laps before practice. Given a list of names, you are to determine if the list is in increasing alphabetical order, decreasing alphabetical order or neither.

Input

The input consists of a single test case. The first line will contain the number N of people on the team ($2 \leq N \leq 20$). Following that are N lines, each containing the name of one person. A name will be at least two characters and at most 12 characters in length and will consist only of capital letters, and with no white spaces (sorry BILLY BOB and MARY JOE). Duplicates names will not be allowed on a team.

Output

Output a single word: `INCREASING` if the list is in increasing alphabetical order, `DECREASING` if it is in decreasing alphabetical order, and otherwise `NEITHER`.

Sample Input 1

```
5
JOE
BOB
ANDY
AL
ADAM
```

Sample Output 1

```
DECREASING
```

Sample Input 2

```
11
HOPE
ALI
BECKY
JULIE
MEGHAN
LAUREN
MORGAN
CARLI
MEGAN
ALEX
TOBIN
```

Sample Output 2

```
NEITHER
```

Sample Input 3	Sample Output 3
4 GEORGE JOHN PAUL RINGO	INCREASING