

# No Prefix Set

Given  $N$  strings. Each string contains only lowercase letters from  $a - j$ (both inclusive). The set of  $N$  strings is said to be **GOOD SET** if no string is **prefix** of another string else, it is **BAD SET**. (If two strings are identical, they are considered prefixes of each other.)

For example,  $aab, abcde, aabcd$  is **BAD SET** because  $aab$  is prefix of  $aabcd$ .

Print **GOOD SET** if it satisfies the problem requirement.  
Else, print **BAD SET** and the first string for which the condition fails.

## Input Format

First line contains  $N$ , the number of strings in the set.  
Then next  $N$  lines follow, where  $i^{th}$  line contains  $i^{th}$  string.

## Constraints

$1 \leq N \leq 10^5$   
 $1 \leq \text{Length of the string} \leq 60$

## Output Format

Output **GOOD SET** if the set is valid.  
Else, output **BAD SET** followed by the first string for which the condition fails.

## Sample Input00

```
7
aab
defgab
abcde
aabcde
cedaaa
bbbbbbbbbbb
jabjjjad
```

## Sample Output00

```
BAD SET
aabcde
```

## Sample Input01

```
4
aab
aac
aacghgh
aabghgh
```

## Sample Output01

```
BAD SET
aacghgh
```

## Explanation

**aab** is prefix of **aabcde**. So set is **BAD SET** and it fails at string **aabcde**.

