



HOME TOP CATALOG CONTESTS GYM PROBLEMSET GROUPS RATING EDU API CALENDAR HELP

PROBLEMS SUBMIT CODE MY SUBMISSIONS STATUS STANDINGS CUSTOM INVOCATION

# A. Registration system

time limit per test: 5 seconds<sup>2</sup> memory limit per test: 64 megabytes

A new e-mail service "Berlandesk" is going to be opened in Berland in the near future. The site administration wants to launch their project as soon as possible, that's why they ask you to help. You're suggested to implement the prototype of site registration system. The system should work on the following principle.

Each time a new user wants to register, he sends to the system a request with his name. If such a name does not exist in the system database, it is inserted into the database, and the user gets the response OK, confirming the successful registration. If the name already exists in the system database, the system makes up a new user name, sends it to the user as a prompt and also inserts the prompt into the database. The new name is formed by the following rule. Numbers, starting with 1, are appended one after another to name (name1, name2, ...), among these numbers the least i is found so that namei does not yet exist in the database.

#### Input

The first line contains number n ( $1 \le n \le 10^5$ ). The following n lines contain the requests to the system. Each request is a non-empty line, and consists of not more than 32 characters, which are all lowercase Latin letters.

#### Output

Print n lines, which are system responses to the requests: OK in case of successful registration, or a prompt with a new name, if the requested name is already taken.

#### **Examples**

input	Сору
4	
abacaba	
acaba	
abacaba	
acab	
output	Сору
OK	
OK	
abacaba1	
OK	
input	Сору
6	
first	
first	
second	
second	
third	
third	
output	Сору
OK	
first1	
OK	
second1	
OK	
third1	

#### → Attention

The package for this problem was not updated by the problem writer or Codeforces administration after we've upgraded the judging servers. To adjust the time limit constraint, a solution execution time will be multiplied by 2. For example, if your solution works for 400 ms on judging servers, then the value 800 ms will be displayed and used to determine the verdict.

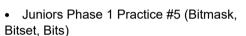
# ICPC Assiut University Training Juniors Phase 1 Sheets-2022

#### **Public**

## Participant



### → Group Contests



- Juniors Phase 1 Practice #4 ( Binary search , Two pointers )
- Juniors Phase 1 Practice #3 (STL 2)
- Juniors Phase 1 Practice #2 ( STL 1 )
- Juniors Phase 1 Practice #1 ( Prefix sum , Frequency Array )

# Juniors Phase 1 Practice #3 ( STL 2 )

# Finished

## Practice



# → About Time Scaling

This contest uses time limits scaling policy (depending on a programming language). The system automatically adjusts time limits by the following multipliers for some languages. Despite scaling (adjustment), the time limit cannot be more than 30 seconds. Read the details by the <a href="link">link</a>.

## → Virtual participation

Virtual contest is a way to take part in past contest, as close as possible to participation on time. It is supported only ICPC mode for virtual contests. If you've seen these problems, a virtual contest is not for you -solve these problems in the archive. If you just want to solve some problem from a contest, a virtual contest is not for you -solve this problem in the archive. Never use someone else's code, read the tutorials or communicate with other person during a

Start virtual contest

### → Submit?

virtual contest.

Language: GNU G++20 13.2 (64 bit, win ♥