



# ACM INTERNATIONAL COLLEGIATE PROGRAMMING CONTEST 2000-2001

SOUTHWESTERN EUROPEAN REGIONAL CONTEST

## Problem G Echo

### Background

In the Ancient Caves of Mystery (ACM), scientists have found another old computer. Surprisingly it still worked. The scientists started typing text at the keyboard which was shown immediately on the computer screen. But every now and again some characters were inserted – apparently out of nowhere. After a while they noticed that only characters were inserted which they had typed before. Andrew C. Matthews, a young and very ambitious theoretician, conjectured that the computer was connected to an interstellar computer network and the inserted characters were in fact an echo generated by some mysterious alien *Echo Race*. The scientists were very excited and immediately started chatting with whoever was sitting (or whatever was convenient to them) at the other side of the network.

They also suspected that such a system must have some finite buffer, so to avoid overloading the system they were careful to wait for a reply when ten characters were entered without remote echo.

Unfortunately, after several hours of work, one of the tired scientists spilled his cup of coffee all over the keyboard. That was too much for the old computer, and it just blew up and could not be revived.

All that the scientists can do now to verify their theory – and such prove the aliens' existence – is looking at their notes of the display contents.

### Problem

You are hired to check whether the scientists' notes are consistent with their theory, i.e., if a given string is an “echo string with buffer size ten”. Here, an “echo string”  $e$  is a merged version of a string  $s_1$  and its identical echo  $s_2$ . Note that the order in which the characters of  $s_1$  and  $s_2$  appear in  $e$  is not changed. The “buffer size ten” means, that a character in  $s_1$  is not separated by more than nine characters from its echo in  $s_2$ .

Due to the sudden end of the experiment, there are three cases:

- The system had echoed all characters when it blew up, so the string really is an echo string with buffer size ten.
- The system blew up before it could echo all characters that were entered, but up to that point its behaviour was consistent with the theory.
- The string cannot be completed by more output to form an echo string of buffer size ten, so the scientists must have entered too many characters at a time or their theory is wrong.

### The Input

The first line contains the number  $n$  of scenarios.

In each of the following  $n$  lines you will find one non-empty string to be examined, and it consists of letters and digits only. No line will contain more than 1000 characters.

## The Output

For each scenario, print one of the following, corresponding to the three cases described above:

- An echo string with buffer size ten
- Not an echo string, but still consistent with the theory
- Not consistent with the theory

## Sample Input

```
3
ACABCB
ABCAB
aa0123456789b
```

## Sample Output

```
An echo string with buffer size ten
Not an echo string, but still consistent with the theory
Not consistent with the theory
```