printf("hello, africa!");

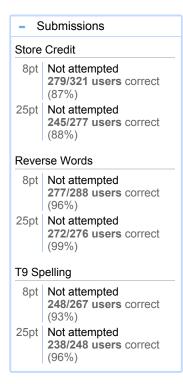
Qualification Round Africa 2010

A. Store Credit

B. Reverse Words

C. T9 Spelling

Questions asked 1

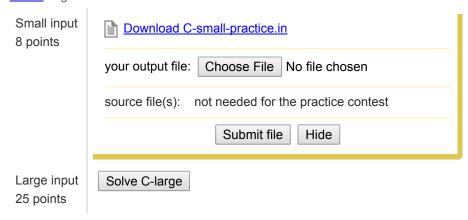


- Top Scores	
ahmed.aly	99
amrSamir	99
mkaimbi	99
Atef	99
MohamedMonem	99
mohamedafattah	99
II931110	99
ghooo	99
tamer.eldeeb	99
mohammad.kotb	99

Problem C. T9 Spelling

Practice Mode

This contest is open for practice. You can try every problem as many times as you like, though we won't keep track of which problems you solve. Read the <u>Quick-Start Guide</u> to get started.



Problem

The Latin alphabet contains 26 characters and telephones only have ten digits on the keypad. We would like to make it easier to write a message to your friend using a sequence of keypresses to indicate the desired characters. The letters are mapped onto the digits as shown below. To insert the character B for instance, the program would press 22. In order to insert two characters in sequence from the same key, the user must pause before pressing the key a second time. The space character ' ' should be printed to indicate a pause. For example, 2 2 indicates AA whereas 22 indicates B.



Input

The first line of input gives the number of cases, **N**. **N** test cases follow. Each case is a line of text formatted as

desired_message

Each message will consist of only lowercase characters a - z and space characters ' '. Pressing zero emits a space.

Output

For each test case, output one line containing "Case **#x**: " followed by the message translated into the sequence of keypresses.

Limits

 $1 \le N \le 100$.

Small dataset

 $1 \le \text{length of message in characters} \le 15$.

Large dataset

1 ≤ length of message in characters ≤ 1000.

Sample

Input Output

4 Case #1: 44 444 hi Case #2: 999337777

hello world

All problem statements, input data and contest analyses are licensed under the <u>Creative Commons Attribution License</u>.

© 2008-2015 Google
Google Home - Terms and Conditions - Privacy Policies and Principles

Powered by



Google Cloud Platform