[B4] Mission Im Passable Too (500 pts)

Time Limit: 1s
Memory Limit: 512MB

IMPORTANT: Please use fast I/O (`scanf/printf` for C++, `BufferedReader/StringBuilder` for Java) to process the test cases.

Problem Description

Dum Dum Dum da dada Dum dum dum da dada dum dum dum da dada

Good morning Inspector Mont Blanc,

Your mission, should you choose to accept it, is to infiltrate the intelligence agency of ELDROW. In order to do so you will simply have to walk up to their door and type in the special word.

Our intelligence sources have narrowed down the special word into a small candidate list of seven-letter words, which you will find in the attached input. If the word used when you first walk up to their door is the correct special word, you will be allowed entry. If the word used is incorrect, their system is lenient and clues will be displayed on a nearby monitor for a second guess.

The word you typed will be displayed with additional marking for each letter:

- A letter that is in the special word and in the correct spot is marked in **green**.
- A letter that is in the special word but in the wrong spot is marked in **yellow**.
- A letter that is not in the special word is marked in **grey**.

You may then type in another attempt at the special word. If you fail at this round, their system is deadly and will self destruct in 5 seconds.

You may select any team members but it is essential that one of them is a programmer. Their task is to create a program that determines the ideal first word to use; such that a logical agent is 100% guaranteed to be able to input the "special" word after receiving feedback.

As always should you or any member of your team be caught or killed we will disavow all knowledge of your actions.

Dum Dum dada Dum

Input Specification

The first line contains a single integer T denoting the number of test cases. T test cases follow.

Each test case consists of a line with a single integer, N — the number of words in the candidate list. This is followed by N lines, each containing a 5-letter word W_i.

Output Specification

For each test case, output an ideal word in the candidate list to use as the first attempt. That is, choose the word which, if incorrect, would allow you to fully deduce the correct word given the feedback.

If there are multiple possible first words, select the lexicographically smallest one. If no word in the candidate list is a good first attempt, output "Abort Mission!!!"

Constraints

$1 \leq T \leq 10$
$1 \leq N \leq 10^5$
W_i contains exactly seven lowercase alphabet characters.
All letters within a word are unique, i.e. there are no repeating letters within a word.

Sample Input

```
2
5
capture
closure
failure
mixture
picture
4
warding
warling
warming
warping
```

Sample Output

```
capture
Abort Mission!!!
```

Explanation

In the first test case, by using capture as the first word, the possible feedback and logical next guess would be:

```
all is green => capture
c is green => closure
a is green => failure
c is grey =>  mixture
c is yellow, a is grey => picture
```

In the second test case, whatever word gets used as the first word is irrelevant. If the first attempt isn't the special word, the feedback would result with: `war-ing` in green. This leaves 3 possible choices left with no guarantee that the special word can be determined.