COUNTRY LEADER

M1 – Pavan Polabathula
M2 – Sameer Shaik
M3 – Yogesh Patel
M4 – Chandana Sathwika
M5 – Michael Bekele Yali

Abstract:

A collaborative project to learn open-source applications and implement them.
Country Leader is an interactive coding question that we have used to analyse it and use it as an aid to learn other open-source applications such as git and GitHub.
We have also used other open-source applications such as emacs and libre office to complete this project.

Problem:

The Constitution of a certain country states that the leader is the person with the name containing the greatest number of different alphabet letters. (The country uses the uppercase English alphabet from A through Z.) For example, the name GOOGLE has four different alphabet letters: E, G, L, and O. The name APAC CODE JAM has eight different letters. If the country only consists of these 2 persons, APAC CODE JAM would be the leader.
If there is a tie, the person whose name comes earliest in alphabetical order is the leader.

Input:

The first line of the input gives the number of test cases, T. T test cases follow. Each test case starts with a line with an interger N, the number of people in the country. Then N lines follow. The i-th line represents the name of the i- th person. Each name contains at most 20 characters and contains at least one alphabet letter

Output:

For each test case, output one line containing Case #x: y, where x is the test case number (starting from 1) and y is the name of the leader.

Sample Input/Output

Input
2
3
ADAM
BOB
JOHNSON
2
A AB C
DEF

Sample Output

Case #1: JOHNSON
Case #2: A AB C

Sample case #1:

JOHNSONcontains 5 different alphabet letters('H', 'J', 'N', 'O', 'S'), so he is the leader.

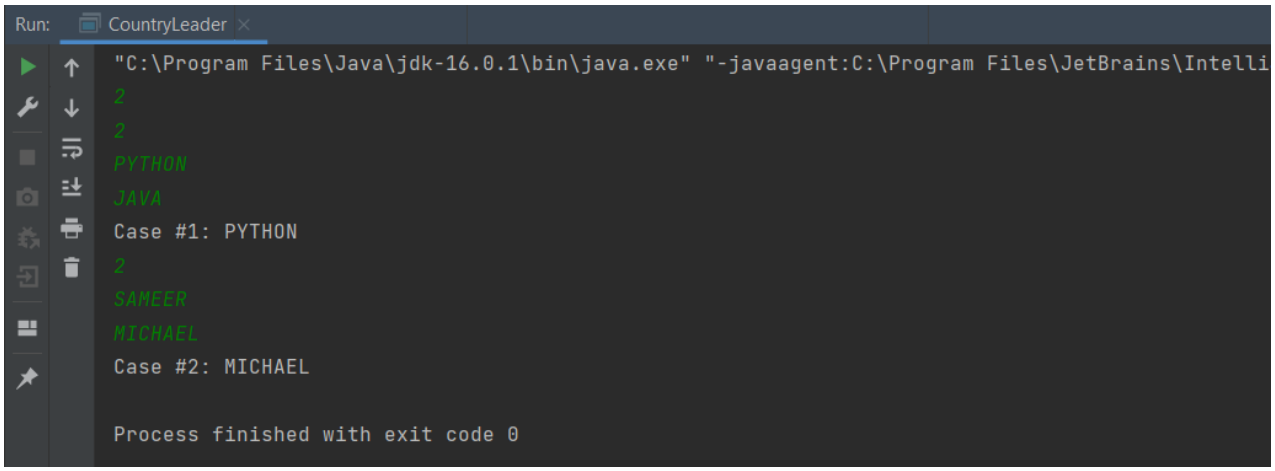
Sample case #2:

The nameDEFcontains 3 different alphabet letters, the nameA AB Calso contains 3 different alphabet letters.A AB Ccomes alphabetically earlier so he is the leader.

Program:

```
package com.company;

import java.io.*;
import java.util.*;

public class CountryLeader {
   public static void main(String[] args)
    {
      Scanner in = new Scanner(new BufferedReader(new
InputStreamReader(System.in)));
      System.out.println("v");
      int t = in.nextInt();
      in.nextLine();

      for (int i = 1; i <= t; ++i)
        {
         int n = in.nextInt();
         in.nextLine();
         List<String> names = new ArrayList<String>();
         for (int j = 0; j < n; ++j) {
            names.add(in.nextLine());
         }

         System.out.println("Case #" + i + ": " + findLeader(names));
      }

   }
public static String findLeader(List<String> names) {
      String leader = "";
      int maxCount = 0;

      for (String name : names) {
         String current = name.replaceAll(" ","");;
         char[] charArr = current.toCharArray();
         int counter = 0;
         Map<Character, Boolean> charMap = new HashMap<Character,
Boolean>();
         for (Character ch : charArr) {
            if (charMap.containsKey(ch))  {
               continue;
            } else {
               charMap.put(ch, true);
               counter++;
            }
         }
         if (maxCount < counter) {
            leader = name;
            maxCount = counter;
         }
      }
      return leader;
}}
```

Output:


Run:
CountryLeader
"C:\Program Files\Java\jdk-16.0.1\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\Intelli
2
2
PYTHON
JAVA
Case #1: PYTHON
2
SAMEER
MICHAEL
Case #2: MICHAEL
Process finished with exit code 0