CASE STUDY

#GROUP 7

COUNTRY LEADER

GROUP MEMBERS

M1 :- Pavan

M2 :- Sameer Shaik

M3 :- Yogesh Patel

M4 :- Chandana Sathwika

M5 :- Michael Yali

INTRODUCTION

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 - Z.) For example, the name GOOGLE has four different alphabet letters: E, G, L, and O. The name TCS has three different letters. If the country only consists of these 2 persons, GOOGLE would be the leader. If there is a tie, the person whose name comes earliest in alphabetical order is the leader.

Given a list of names of the citizens of the country, can you determine who the leader is ?

ALGORITHM

1. START
2. ENTER THE COUNTRY LEADER NAMES
3. ADD THE NAMES INTO AN ARRAY LIST
4. FIND LEADER(NAMES) IS CALLED
5. LEADER IS DECLARED AS A STRING AND ASSIGNED AS NULL.
6. REMOVE ALL WHITE SPACES USING REPLACE ALL
7. MAP THE CHARACTERS USING HASHMAP
8. COUNT THE DIFFERENT CHARACTERS IN THE INPUT NAME
9. COMPARE THE COUNT OF DIFFERENT CHARACTERS OF BOTH NAMES AND PRINT THE LEADER NAME.
10. STOP

INPUT

2 → TOTAL TEST CASES YOU WANT

2 → Total Entries in First Case

PYTHON
JAVA
} → Insert Citizen Names

2 → Total Entries in Second Case

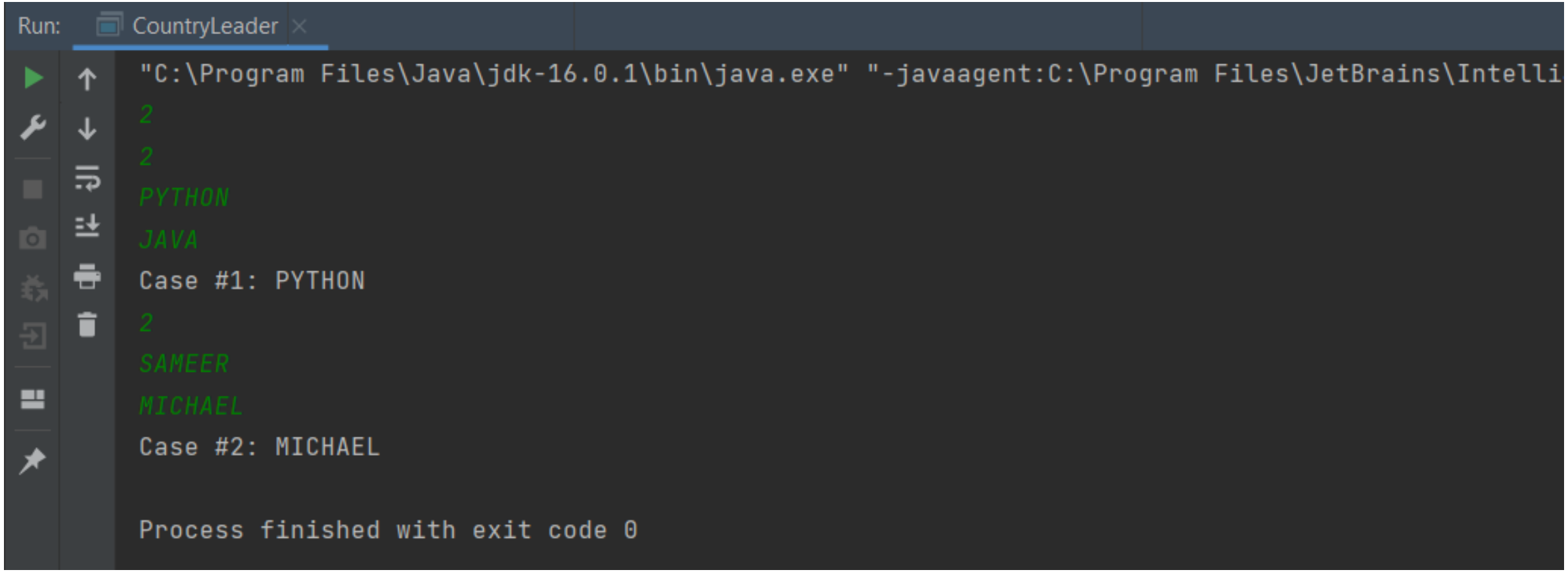
SAMEER
MICHAEL
} → Insert Citizen Names

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

```
system.out.println("THANK YOU");
```