⌄  Week-09-Two-Dimensional and Multi-dimensional Arrays

▤ Coding                                                                    ✓ Done

⌄  Assessment-09-Two-Dimensional and Multi-dimensional Arrays

⌄  Week-10-Character Arrays and Strings

▤ Coding                                                                    ✓ Done

⌄  Assessment-10-Character Arrays and Strings

⌄  Week-11-String Handling Functions

▤ Coding                                                                    ✓ Done

⌄  Assessment-11-String Handling Functions

# GE23131-Programming Using C -2024

**Status:** Finished
**Started:** Wednesday, 25 December 2024, 6:33 PM
**Completed:** Wednesday, 25 December 2024, 7:24 PM
**Duration:** 51 mins

## Question 1

Correct
Marked out of 1.00
Flag question

Given a string, s, consisting of alphabets and digits, find the frequency of each digit in the given string.

**Input Format**

The first line contains a string, num which is the given number.

**Constraints**

$1 \le len(num) \le 1000$

All the elements of num are made of English alphabets and digits.

**Output Format**

Print ten space-separated integers in a single line denoting the frequency of each digit from 0 to 9.

**Sample Input 0**

a11472bcdd

**Sample Output 0**

0 2 1 0 1 1 1 1 0 0

**Explanation 0**

In the given string

- 1 occurs two times.
- 2, 4, 5, 6 and 7 occur one time each.

The remaining digits 0, 3, 8 and 9 don't occur at all.

**Answer:** (penalty regime: 0 %)

```c
#include<stdio.h>
#include<string.h>
int main(){
    char num[1000];
    int freq[10]={0};
    scanf("%s",num);
    for(int i=0;num[i]!='\0';i++){
        if(num[i]>='0' && num[i]<='9'){
            freq[num[i]-'0']++;
        }
    }
    for(int i=0;i<=9;i++){
        printf("%d ",freq[i]);
    }
    printf("\n");
    return 0;
}
```

| Input | Expected | Got |
|---|---|---|
| ✓ a11472bcdd | 0 2 1 0 1 1 1 1 0 0 | 0 2 1 0 1 1 1 1 0 0 ✓ |
| ✓ 1a4b9922c3 | 0 1 2 1 1 0 0 0 0 2 | 0 1 2 1 1 0 0 0 0 2 ✓ |
| ✓ 1100661ccvbasbasdasd | 1 3 0 0 0 0 2 0 0 0 | 1 3 0 0 0 0 2 0 0 0 ✓ |

Passed all tests! ✓

## Question 2

Correct
Marked out of 1.00
Flag question

Today, Monk went for a walk in a garden. There are many trees in the garden and each tree has an English alphabet on it. While Monk was walking, he noticed that all trees with vowels on it are not in good state. He decided to take care of them. So, he asked you to tell him the count of such trees in the garden.

**Note:** The following letters are vowels: 'A', 'E', 'I', 'O', 'U', 'a', 'e', 'i', 'o' and 'u'.

**Input**

The first line consists of an integer T denoting the number of test cases.

Each test case consists of only one string, each character of string describing the alphabet (may be lowercase or uppercase) on a tree in the garden.

**Output**

For each test case, print the count in a new line.

**Constraints**

$1 \le T \le 10$
$1 \le length\ of\ string \le 10^5$

**SAMPLE INPUT**

2
nBbfTuonm
AYquzZTL

**SAMPLE OUTPUT**

2
3

**Explanation**

In test case 1, u and o are the only vowels. So, count=2

**Answer:** (penalty regime: 0 %)

```c
#include<stdio.h>
#include<string.h>
int main(){
    int T,i,count;
    char s[1000];
    char vow[]={"aeiouAEIOU"};
    scanf("%d",&T);
    for(i=0;i<T;i++){
        scanf("%s",s);
        count=0;
        for(j=0;j[j]!='\0';j++){
            for(int k=0;vow[k]!='\0';k++){
                if(s[j]==vow[k]){
                    count++;
                    break;
                }
            }
        }
        printf("%d\n",count);
    }
    return 0;
}
```

| Input | Expected | Got | |
|---|---|---|---|
| ✓ 2 nBbfTuonm AYquzZTL | 2 3 | 2 3 | ✓ |
| ✓ 1 nBbfTuonm AYquzZTL | 2 3 | 2 3 | ✓ |

Passed all tests! ✓

## Question 3

Correct
Marked out of 1.00
Flag question

Given a sentence, s, print each word of the sentence in a new line.

**Input Format**

The first and only line contains a sentence, s.

**Constraints**

$1 \le len(s) \le 1000$

**Output Format**

Print each word of the sentence in a new line.

**Sample Input 0**

This is C

**Sample Output 0**

This
is
C

**Explanation 0**

In the given string, there are three words ("This", "is", "C"). We have to print each of those words in a new line.

**Answer:** (penalty regime: 0 %)

```c
#include<stdio.h>
#include<string.h>
int main(){
    char sen[1000];
    scanf("%[^\n]",sen);
    char *word=strtok(sen," ");
    while(word!=NULL){
        printf("%s\n",word);
        word=strtok(NULL," ");
    }
    return 0;
}
```

| Input | Expected | Got | |
|---|---|---|---|
| ✓ This is C | This is C | This is C | ✓ |
| ✓ Learning C is fun | Learning C is fun | Learning C is fun | ✓ |

Passed all tests! ✓

## Question 4

Correct
Marked out of 1.00
Flag question

**Input Format**

You are given two strings, a and b, separated by a new line. Each string will consist of lower case Latin characters ('a'-'z').

**Output Format**

In the first line print two space-separated integers, representing the length of a and b respectively.

In the second line print the string produced by concatenating a and b (a + b).

In the third line print two strings separated by a space, a' and b' and b' are the same as a and b, respectively, except that their first characters are swapped.

**Sample Input**

abcd
ef

**Sample Output**

4 2
abcdef
ebcd af

**Explanation**

a = "abcd"
b = "ef"
|a| = 4
|b| = 2
a + b = "abcdef"
a' = "ebcd"
b' = "af"

**Answer:** (penalty regime: 0 %)

```c
#include<stdio.h>
#include<string.h>
int main(){
    char a[1000],b[1000];
    scanf("%s",a);
    scanf("%s",b);
    printf("%lu %lu\n",strlen(a),strlen(b));
    printf("%s%s\n",a,b);
    char temp=a[0];
    a[0]=b[0];
    b[0]=temp;
    printf("%s %s\n",a,b);
    return 0;
}
```

| Input | Expected | Got | |
|---|---|---|---|
| ✓ abcd ef | 4 2 abcdef ebcd af | 4 2 abcdef ebcd af | ✓ |

Passed all tests! ✓