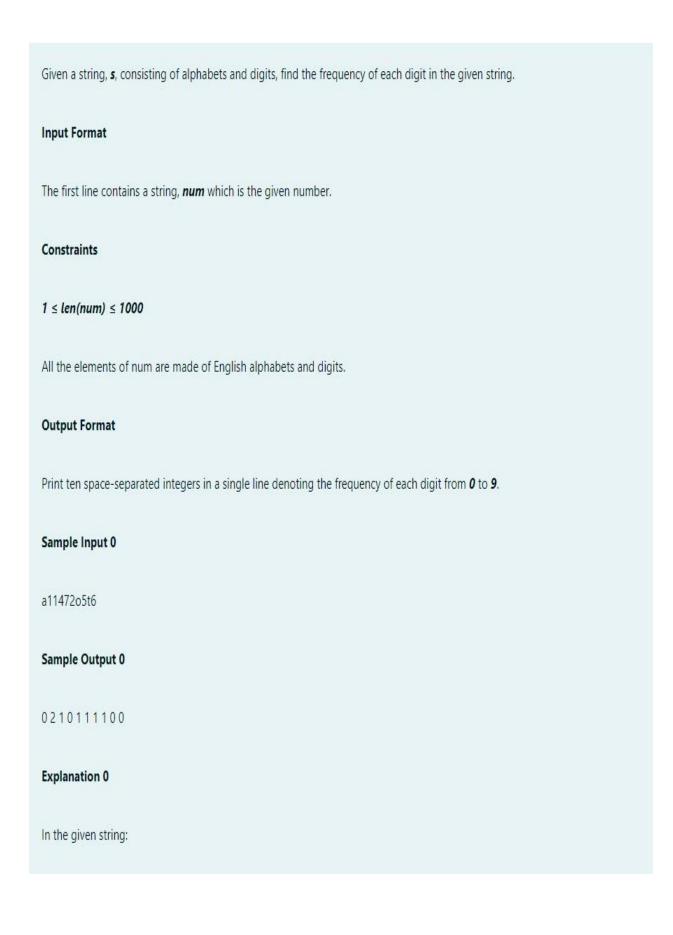
# **PROGRAMMING USING C**

## **WEEK 10 CHARACTER ARRAYS**

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#### **Explanation U**

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 %)

```
1 #include<stdio.h>
 2 int main()
 3 + {
 4
      char str[1000];
 5
      scanf("%s",str);
       int hash[10]={0,0,0,0,0,0,0,0,0,0,0,};
 6
 7
      int temp;
 8 +
      for(int i=0;str[i]!='\0';i++){
9
           temp=str[i]-'0';
10 .
           if(temp<=9&&temp>=0){
11
               hash[temp]++;
12
13
       for(int i=0;i<=9;i++){
14 +
15
           printf("%d ",hash[i]);
16
17
        return 0;
18 }
```

	Input		Expected								Got											
<b>V</b>	a11472o5t6	0	2	1	0	1	1	1	1	0	0	0	2	1	0	1	1	1	1	0	0	~
~	lw4n88j12n1	0	2	1	0	1	0	0	0	2	0	0	2	1	0	1	0	0	0	2	0	~
~	1v888861256338ar0ekk	1	1	1	2	0	1	2	0	5	0	1	1	1	2	0	1	2	0	5	0	~

Passed all tests! <

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 denoting 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 ≤ T ≤ 10

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

#### SAMPLE INPUT

2

nBBZLaosnm

JHklsnZtTL

#### SAMPLE OUTPUT

2

1

#### Explanation

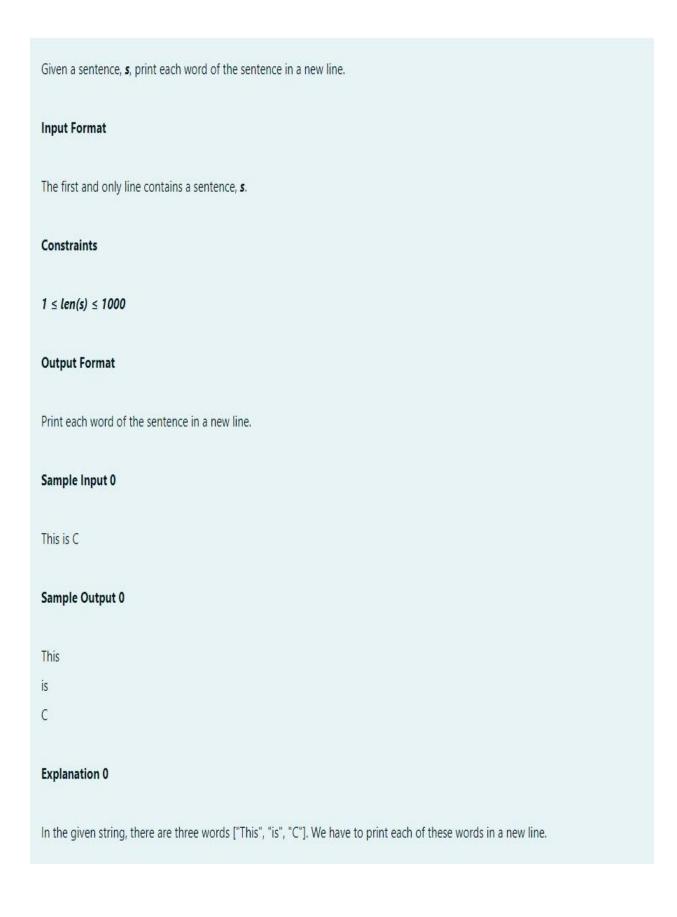
In test case 1, a and o are the only vowels. So, count=2

Answer: (penalty regime: 0 %)

```
1 #include<stdio.h>
 2 int main()
3 + {
 4
       int t;
       scanf("%d",&t);
5
6 +
     while(t--){
7
          char str[100000];
8
           int count =0;
 9
          scanf("%s",str);
          for(int i=0;str[i]!='\0';i++){
10 +
11
               char c=str[i];
               if((c=-'a')||(c=-'e')||(c=-'i')||(c=-'o')||(c=-'u')||(c=-'A')||(c=-'E')||(c=-'I')||(c=-'O')|
12
13
14
15
           printf("%d\n",count);
16
17
18
       return 0;
19 }
```

	Input	Expected	Got	
~	2	2	2	~
	nBBZLaosnm JHkIsnZtTL	1	1	
<b>V</b>	2	2	2	~
	nBBZLaosnm JHkIsnZtTL	1	1	

Passed all tests! <



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

Answer: (penalty regime: 0 %)

```
1 #include<stdio.h>
 2 int main()
3 v {
 4
      char s[1000];
      scanf("%[^\n]s",s);
 5
      for(int i=0;s[i]!='\0';i++){
6 v
          if(s[i]!=' ')
 7
          printf("%c",s[i]);
8
9
          else
          printf("\n");
10
11
12 }
```

	Input	Expected	Got	
<b>V</b>	This is C	This	This	~
		is	is	
		С	С	
<b>V</b>	Learning C is fun	Learning	Learning	~
		С	С	
		is	is	
		fun	fun	

Passed all tests! <

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  $\boldsymbol{a}$  and  $\boldsymbol{b}$  respectively.

In the second line print the string produced by concatenating  $\boldsymbol{a}$  and  $\boldsymbol{b}$  ( $\boldsymbol{a} + \boldsymbol{b}$ ).

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

## Sample Input

abcd

ef

## Sample Output

42

abcdef

ebcd af

#### Explanation

```
a = "abcd"
```

b = "ef"

|a| = 4

|b| = 2

a + b = "abcdef"

a' = "ebcd"

b' = "af"

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

```
1 #include<stdio.h>
 2 int main()
 3 + {
       char str1[10],str2[10],t;
 4
     int i=0,j=0;
 5
 6
     int count1=0, count2=0;
      scanf("%s",str1);
 7
 8
      scanf("%s",str2);
       while(str1[i]!='\0'){
 9 ,
10
           count1++;
11
           i++;
12
13 ,
       while(str2[j]!='\0'){
14
           count2++;
15
           j++;
16
       printf("%d %d\n",count1,count2);
17
       printf("%s%s\n",str1,str2);
18
19
      t=str1[0];
     str1[0]=str2[0];
20
21
      str2[0]=t;
       printf("%s %s",str1,str2);
22
23
       return 0;
24 }
```

	Input	Expected	Got	
<b>~</b>	abcd ef	4 2 abcdef ebcd af	4 2 abcdef ebcd af	~

Passed all tests! ✓