

RITTVIK S 2024-CSE

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Week-10-Character Arrays and Strings

Coding

Question 1
Correct

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

Source code

Answer: (penalty regime: 0 %)

```
1  #include <stdio.h>
2  int main()
3  {
4      char str[1000];
5      scanf("%s",str);
6      int hash[10]={0,0,0,0,0,0,0,0,0,0};
7      int temp;
8      for(int i=0;str[i]!='\0';i++)
9      {
10         temp=str[i]-'0';
11         if(temp<=9&&temp>=0)
12         {
13             hash[temp]++;
14         }
15     }
16     for(int i=0;i<=9;i++)
17     {
18         printf("%d ",hash[i]);
19     }
20     return 0;
21 }
```

Output

	Input	Expected	Got	
✓	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! ✓

Result

The above program is executed successfully and provides the above output.

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'.

Source code

```
1 #include<stdio.h>
2 int main()
3 {
4     int t;
5     scanf("%d",&t);
6     while(t-->0)
7     {
8         char str[100000];
9         int count=0;
10        scanf("%s",str);
11        for(int i=0;str[i]!='\0';i++)
12        {
13            char c= str[i];
14            if((c=='a')||(c=='e')||(c=='i')||(c=='o')||(c=='u')||(c=='A')||(c=='E')||(c=='O')||(c=='I')||(c=='U'))
15                count++;
16        }
17        printf("%d\n",count);
18    }
19    return 0;
20 }
```

Output

	Input	Expected	Got	
✓	2	2	2	✓
	nBBZLaosnm	1	1	
	JHkIsnZtTL			
✓	2	2	2	✓
	nBBZLaosnm	1	1	
	JHkIsnZtTL			

Passed all tests! ✓

Result

The above program is executed successfully and provides the above output.

Question 3

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

Source code

Answer: (penalty regime: 0 %)

```
1 #include<stdio.h>
2 int main()
3 {
4     char s[1000];
5     scanf("%[^\n]s",s);
6     for (int i=0;s[i]!='\0';i++)
7     {
8         if(s[i]!=' ')
9             printf("%c",s[i]);
10        else
11            printf("\n");
12    }
13    return 0;
14 }
```

Output

	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! ✓

Result

The above program is executed successfully and provides the above output.

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').

Source code

```
1 #include <stdio.h>
2 int main()
3 {
4     char str1[10],str2[10],t;
5     int i=0,j=0;
6     int count1=0,count2=0;
7     scanf("%s",str1);
8     scanf("%s",str2);
9     while(str1[i]!='\0')
10    {
11        count1++;
12        i++;
13    }
14    while(str2[j]!='\0')
15    {
16        count2++;
17        j++;
18    }
19    printf("%d %d\n",count1,count2);
20    printf("%s%s\n",str1,str2);
21    t=str1[0];
22    str1[0]=str2[0];
23    str2[0]=t;
24    printf("%s %s", str1,str2);
25    return 0;
26 }
```

Output

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

Passed all tests! ✓