

May 2 Lab questions

#1. WAP to extract the last character of each word of a given string.

Code:

```
#include <stdio.h>
#include <string.h>
int main()
{
    int i_285,len_285;
    char A_285[30];
    printf("Please provide a short sentence\n");
    gets(A_285);
    len_285= strlen(A_285);
    for(i_285=0;i_285<(len_285+1);i_285++)
    {
        if(A_285[i_285]==' ' || A_285[i_285]=='\0')
        {
            printf("%c ",A_285[i_285-1]);
        }
    }
    return 0;
}
```

Output:

```
PS C:\Users\KIIT\Desktop\Programming\02_may functions> gcc last_character.c
PS C:\Users\KIIT\Desktop\Programming\02_may functions> ./a.exe
Please provide a short sentence
It has been a great day
t s n a t y
PS C:\Users\KIIT\Desktop\Programming\02_may functions> █
```

#2. WAP to replace all occurrences of a character in a string with the previous 3rd character if any of the character.

Code:

```
#include <stdio.h>
#include <string.h>
int main()
{
    int i_285,len_285;
    char A_285[30],B;
    printf("Please provide a short sentence\n");
    gets(A_285);
    len_285= strlen(A_285);
    printf("Which letter do you want to replace\n");
    scanf("%c",&B);
    for(i_285=0;i_285<=len_285;i_285++)
    {
```

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```
        if(A_285[i_285-2]>=0 && A_285[i_285]==B && A_285[i_285-2]!=' ')
            A_285[i_285]=A_285[(i_285-2)];
    }
    puts(A_285);
    return 0;
}
```

Output:

```
PS C:\Users\KIIT\Desktop\Programming\02_may functions> gcc last_character.c
PS C:\Users\KIIT\Desktop\Programming\02_may functions> ./a.exe
Please provide a short sentence
It has been a great day
t s n a t y
PS C:\Users\KIIT\Desktop\Programming\02_may functions> gcc previous.c
PS C:\Users\KIIT\Desktop\Programming\02_may functions> ./a.exe
Please provide a short sentence
Today is Friday sixth of may
Which letter do you want to replace
a
Today is Fridiy sixth of may
PS C:\Users\KIIT\Desktop\Programming\02_may functions> █
```

#3. Write a program to count the number of characters, alphabets, tabs, newlines, words, vowels, consonants present in a string.

Code:

```
#include <stdio.h>
#include <string.h>
int main()
{
    int i,j,len,ch,alpha,tabs,newl,word,digit,vowel,cons,space;
    char A[30];
    printf("Please provide a short sentence\n");
    gets(A);
    len=strlen(A);
    for(i=0;i<len;i++)
    {
        if(A[i]=='A' || A[i]=='a' || A[i]=='E' || A[i]=='e' || A[i]=='i' || A[i]=='I' ||
A[i]=='O' || A[i]=='o' || A[i]=='U' || A[i]=='u')
        {
            vowel++;
        }
    }
    for(i=0;i<len;i++)
    {
        if(A[i]==' ')
            space++;
    }
    cons= (len-1)-vowel;
    alph = vowel + cons;
    ch=vowel+cons+space;
    printf("Total number of space is %d\n",space);
    printf("Total number of vowels is %d\n",vowel);
    printf("Total number of consonants is %d\n",cons);
    printf("Total number of tabs is %d\n",tabs);
}
```

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```
printf("Total number of alphabets is %d\n",alph);
printf("Total number of character is %d\n",ch);
return 0;
}
```

Output:

```
PS C:\Users\KIIT\Desktop\Programming\02_may functions> gcc individual_ch.c
PS C:\Users\KIIT\Desktop\Programming\02_may functions> ./a.exe
Please provide a short sentence
Kidus Abebe Mekonen
Total number of space is 2
Total number of vowels is 8
Total number of consonants is 10
Total number of tabs is 1
Total number of alphabets is 18
Total number of character is 20
PS C:\Users\KIIT\Desktop\Programming\02_may functions> █
```

#4. WAP to replace all occurrences of a substring in a given string with a new one.

Code:

```
#include<stdio.h>
#include<string.h>

void replaceSubstring_285(char [],char[],char[]);
```

```
void main()
{
char string_285[100],sub_285[100],new_str_285[100];
printf("\nEnter a string: ");
gets(string_285);
printf("\nEnter the substring: ");
gets(sub_285);
printf("\nEnter the new substring: ");
gets(new_str_285);
replaceSubstring_285(string_285,sub_285,new_str_285);
printf("\nThe string after replacing : %s\n",string_285);
}
```

```
void replaceSubstring_285(char string_285[],char sub_285[],char new_str_285[])
{
int stringLen_285,subLen_285,newLen_285;
int i=0,j,k;
int flag_285=0,start_285,end_285;
stringLen_285=strlen(string_285);
subLen_285=strlen(sub_285);
newLen_285=strlen(new_str_285);
```

```
for(i=0;i<stringLen_285;i++)
{
flag_285=0;
start_285=i;
```

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```
for(j=0;string_285[i]==sub_285[j];j++,i++)
if(j==subLen_285-1)
flag_285=1;
end_285=i;
if(flag_285==0)
i-=j;
else
{
for(j=start_285;j<end_285;j++)
{
for(k=start_285;k<stringLen_285;k++)
string_285[k]=string_285[k+1];
stringLen_285--;
i--;
}
}
```

```
for(j=start_285;j<start_285+newLen_285;j++)
{
for(k=stringLen_285;k>=j;k--)
string_285[k+1]=string_285[k];
string_285[j]=new_str_285[j-start_285];
stringLen_285++;
i++;
}
}
}
}
```

Output:

```
PS C:\Users\KIIT\Desktop\Programming\28_april strings> gcc substring2.c
PS C:\Users\KIIT\Desktop\Programming\28_april strings> ./a.exe

Enter a string: This one took a great deal of time

Enter the substring: eal

Enter the new substring: EAL

The string after replacing : This one took a great dEAL of time
PS C:\Users\KIIT\Desktop\Programming\28_april strings> █
```

```
PS C:\Users\KIIT\Desktop\Programming\28_april strings> gcc substring2.c
PS C:\Users\KIIT\Desktop\Programming\28_april strings> ./a.exe

Enter a string: writing _285 in every variable is so exhausting and waste of time, we should find another way of authentication
Enter the substring: e
Enter the new substring: 00

The string after replacing : writing _285 in 00v00ry variabl00 is so 00xhausting and wast00 of tim00, w00 should find anoth00r way of auth00ntication
PS C:\Users\KIIT\Desktop\Programming\28_april strings> █
```