



Department of Education

Lab Report On : **String**
Report No : 09
Course code : ICT 4154
Course Title : Introduction to programming Lab

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Question : **1. C program to print individual characters of string in reverse order**

Solve:

```
1 // Rony Ahmmed 2002035
2 #include<stdio.h>
3 #include<string.h>
4 int main(){
5     char a[100];
6     printf("Enter a string:\n");
7     gets(a);
8     int i = strlen(a);
9     while(i--){
10         printf("%c\t", a[i]);
11     }
12     return 0;
13 }
```

```
C:\Users\user\Desktop\lab9\1_individualReverse.exe
Enter a string:
I Love BDU
U      D      B      e      v      o      L      I
Process returned 0 (0x0)   execution time : 10.988 s
Press any key to continue.
```

Here a[100] is a string and i is the length of string and output print individual characters of string in reverse order

Question : **2. C Program to count total number of alphabets, digits.**

Solve: `a[100]` is string and `w` for alphabets and `n` for number variable

```
2alphabetsDigits.c.c

1 // Rony Ahmmmed 2002035
2 #include<stdio.h>
3 #include<string.h>
4 int main(){
5     char a[100];
6     printf("Enter a string:\n");
7     gets(a);
8     int i=0, w=0, n=0;
9     while( a[i] != '\0'){
10         if(a[i]>=48 && a[i]<=57){
11             n++;
12         }
13         if(a[i]>=65 && a[i]<=90 || a[i]>=97 && a[i]<=122){
14             w++;
15         }
16         i++;
17     }
18     printf("Alphabets is: %d\nNumber is: %d", w, n);
19     return 0;
20 }
21
```

```
C:\Users\user\Desktop\lab9\2alphabetsDigits.exe

Enter a string:
BDU 2018
Alphabets is: 3
Number is: 4
Process returned 0 (0x0)   execution time : 57.263 s
Press any key to continue.
```

Question : **3. C Program to count total number of vowel or consonant**

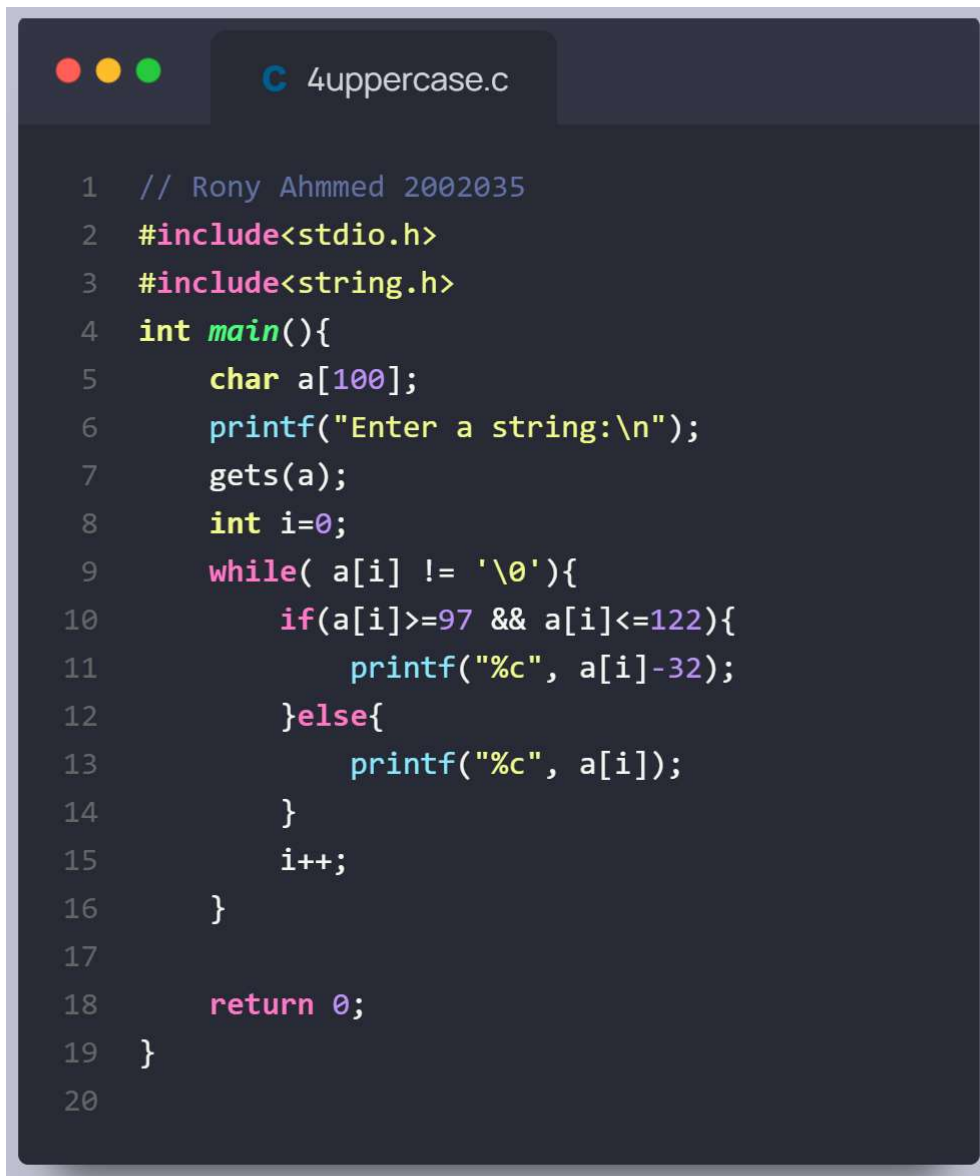
Solve: [here w](#) for all alphabets and [v](#) for vowel

```
1 // Rony Ahmmed 2002035
2 #include<stdio.h>
3 #include<string.h>
4 int main(){
5     char a[100];
6     printf("Enter a string:\n");
7     gets(a);
8     int i=0, w=0, v=0;
9     while( a[i] != '\0'){
10         if(a[i]=='a' || a[i]=='e' || a[i]=='i' || a[i]=='o' || a[i]=='u'
11            || a[i]=='A' || a[i]=='E' || a[i]=='I' || a[i]=='O' || a[i]=='U'){
12             v++;
13         }
14         if(a[i]>=65 && a[i]<=90 || a[i]>=97 && a[i]<=122){
15             w++;
16         }
17         i++;
18     }
19     printf("Vowel is: %d\nConsonent is: %d", v, w-v);
20     return 0;
21 }
22
```

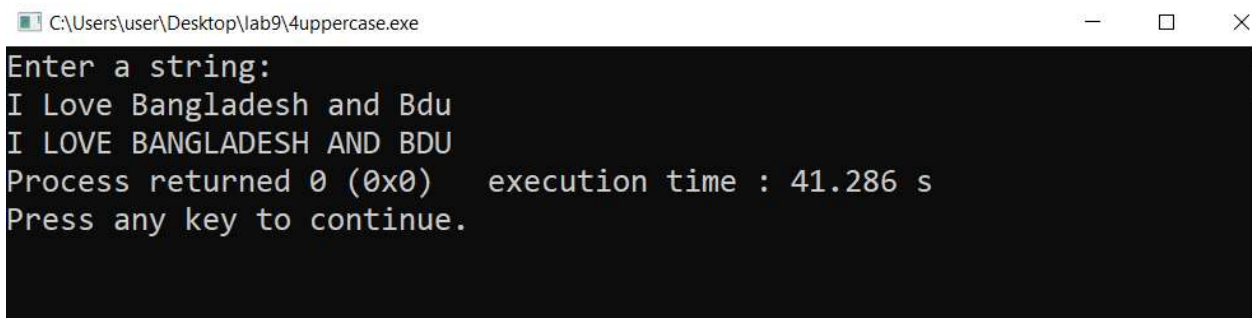
```
C:\Users\user\Desktop\lab9\3VowelConsonent.exe
Enter a string:
I Love BDU
Vowel is: 4
Consonent is: 4
Process returned 0 (0x0)   execution time : 10.209 s
Press any key to continue.
```

Question : **4. C program to convert a string to uppercase**

Solve: if the alphabets ASCII 97 to 122 (small) than will be uppercase

A screenshot of a code editor window titled '4uppercase.c'. The code is a C program that takes a string input and converts lowercase letters to uppercase. It uses a while loop to iterate through the string until the null terminator is reached. For each character, it checks if it is in the range of lowercase ASCII values (97-122). If so, it subtracts 32 to convert it to uppercase. Otherwise, it prints the character as is. The program includes standard headers for input/output and string handling.

```
1 // Rony Ahmmed 2002035
2 #include<stdio.h>
3 #include<string.h>
4 int main(){
5     char a[100];
6     printf("Enter a string:\n");
7     gets(a);
8     int i=0;
9     while( a[i] != '\0'){
10         if(a[i]>=97 && a[i]<=122){
11             printf("%c", a[i]-32);
12         }else{
13             printf("%c", a[i]);
14         }
15         i++;
16     }
17
18     return 0;
19 }
20
```

A screenshot of a command prompt window showing the execution of the program. The title bar indicates the file path 'C:\Users\user\Desktop\lab9\4uppercase.exe'. The program prompts the user to 'Enter a string:' and the user enters 'I Love Bangladesh and Bdu'. The output shows the string converted to all caps: 'I LOVE BANGLADESH AND BDU'. Below the output, it shows 'Process returned 0 (0x0)' and 'execution time : 41.286 s'. The prompt 'Press any key to continue.' is displayed at the bottom.

```
C:\Users\user\Desktop\lab9\4uppercase.exe
Enter a string:
I Love Bangladesh and Bdu
I LOVE BANGLADESH AND BDU
Process returned 0 (0x0)    execution time : 41.286 s
Press any key to continue.
```

Question : 5. C program to extract a substring from a given string

Solve:



The image shows a C program in a code editor and its execution in a terminal window. The code is a C program named '5substring.c' that extracts a substring from a given string. It uses `printf` and `scanf` for input/output, and `strcpy` for string manipulation. The program prompts the user to enter a string, then the position and length of the substring. It then prints the extracted substring. The execution output shows the user entering 'I Love Bangladesh', then '3' and '6', resulting in the output 'Love'.

```
1 // Rony Ahmmed 2002035
2 #include<stdio.h>
3 #include<string.h>
4 int main(){
5     char a[100], s[100];
6
7     printf("Enter a string:\n");
8     gets(a);
9
10    int x, z, i=0;
11    printf("Enter the position and length of substring\n");
12    scanf("%d%d", &x, &z);
13
14    for( x; x<=z; x++){
15        s[i]=a[x-1];
16        i++;
17    }
18    i=0;
19    while(s[i]!='\0'){
20        printf("%c", s[i]);
21        i++;
22    }
23
24    return 0;
25 }
26
27
```

C:\Users\user\Desktop\lab9\5substring.exe

Enter a string:
I Love Bangladesh
Enter the position and length of substring
3
6
Love
Process returned 0 (0x0) execution time : 16.376 s
Press any key to continue.

The End