



Vietnamese-German University

Programming 1 - 61CSE103
Assignment 4
Time: 13h30 – 15h45
Day: December 4, 2024

The lecture notes are allowed during the assignment. Student needs to comment in detail for all C code.

Question 1: (15 points)

Write a program in C to separate individual characters from a string.

For example:

```
Input the string : WelcometoVGU
The characters of the string are :
W e l c o m e t o V G U
```

Question 2: (15 points)

Write a program in C to print individual characters of a string in reverse order. For example:

```
Input the string : Welcome to VGU
The characters of the string in reverse are :

U G V   o t   e m o c l e W
```

Question 3: (15 points)

Write a program in C to read a sentence and replace lowercase characters with uppercase and vice versa.

```
Input the string : Welcome To VGU

The given sentence is : Welcome To VGU
After Case changed the string is: wELCOME tO vgu
```

Question 4: (15 points)

Write a program in C to find the number of times a given word 'the' appears in the given string.

```
Input the string : Welcome to the Programming 1 of the VGU
The frequency of the word 'the' is : 2
```

Question 5: (10 points)

Write a C program to check whether a substring is present in a string.

```
Input the string : Welcome to VGU
Input the substring to be searched : the
The substring does not exist in the string.
```

Question 6: (15 points)

Write a program in C to count the total number of alphabets, digits and special characters in a string

```
Input the string : Welcome to VGU @ 2024
Number of Alphabets in the string is : 12
Number of Digits in the string is : 4
Number of Special characters in the string is : 6
```

Question 7: (15 points)

Write a program in C to count the total number of vowels or consonants in a string.

```
Input the string : Welcome to VGU

The total number of vowel in the string is : 5
The total number of consonant in the string is : 7
```

End