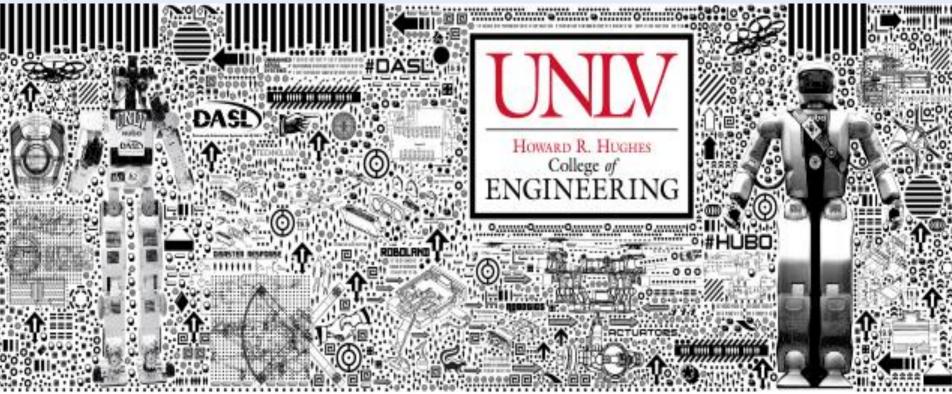


## UNIVERSITY OF NEVADA LAS VEGAS DRONES AND AUTONOMOUS SYSTEMS LAB (DASL@UNLV)





**C PROGRAMING / LINUX [DASL-100]** 

### WEEK 4 [Section 8]

**INSTRUCTOR: JEAN CHAGAS VAZ** 





Thursday, June 15, 2017, 10:14

# > C program to count the number of vowels, consonants and so on

This program counts the number of vowels, consonants, digits and whitespaces in a string which is entered by the user.

```
Enter a line of string: adfslkj34 341kj343 341k
Vowels: 1
Consonants: 11
Digits: 9
White spaces: 2
```

```
#include <stdio.h>
int main()
     char line[150];
     int i, vowels, consonants, digits, spaces;
     vowels = consonants = digits = spaces = 0;
     printf("Enter a line of string: ");
     scanf("%[^\n]", line);
     for(i=0; line[i]!='\0'; ++i)
          if(line[i]=='a' || line[i]=='e' || line[i]=='i' ||
              line[i]=='o' || line[i]=='u' || line[i]=='A' ||
              line[i]=='E' || line[i]=='I' || line[i]=='0' ||
              line[i]=='U')
               ++vowels;
          else if((line[i]>='a'&& line[i]<='z') || (line[i]>='A'&& line[i]<='Z'))
               ++consonants;
          else if(line[i]>='0' && line[i]<='9')
               ++digits;
          else if (line[i]==' ')
               ++spaces;
     printf("Vowels: %d",vowels);
     printf("\nConsonants: %d",consonants);
     printf("\nDigits: %d",digits);
     printf("\nWhite spaces: %d", spaces);
     return 0;
```





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#### > C Program to Find the Length of a String

➤In this article, you'll learn to find the length of a string without using strlen() function.

```
#include <stdio.h>
int main()
{
    char s[1000], i;

    printf("Enter a string: ");
    scanf("%s", s);

    for(i = 0; s[i] != '\0'; ++i);

    printf("Length of string: %d", i);
    return 0;
}
```

Enter a string: Programiz Length of string: 9





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#### C Program to Concatenate Two Strings

➤In this article, you'll learn to easily concatenate two strings without using standard library function strcat().

➤ You can concatenate two strings easily using standard library function <u>strcat()</u> but, this program concatenates two strings manually without using strcat() function.

```
Enter first string: lol
Enter second string: :)
After concatenation: lol:)
```

```
#include <stdio.h>
int main()
     char s1[100], s2[100], i, j;
     printf("Enter first string: ");
     scanf("%s", s1);
     printf("Enter second string: ");
     scanf("%s", s2);
    // calculate the length of string s1
    // and store it in i
    for(i = 0; s1[i] != '\0'; ++i);
    for(j = 0; s2[j] != '\0'; ++j, ++i)
          s1[i] = s2[j];
     s1[i] = '\0';
     printf("After concatenation: %s", s1);
     return 0;
```





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#### > C Programming Structure

➤Structure is a collection of variables of different types under a single name.

#### > Syntax of structure

```
struct structure_name
{
    data_type member1;
    data_type member2;
    .
    .
    data_type memeber;
};
```

#### Declaration

```
struct person
{
    char name[50];
    int citNo;
    float salary;
};
```

#### > Full Example

```
struct person
{
    char name[50];
    int citNo;
    float salary;
};

int main()
{
    struct person person1, person2, person3[20];
    return 0;
}
```





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#### > To do List

➤ Create a program to add two distances(x1 and x2) entered by user. The user must also indicate the time along side with the distances(t1 and t2). Finally present the velocity for (v1 and v2). Measurement of: distance should be in [m] or [foot]; time in sec and speed on [m/s] or [foot/sec].(20hours QUIZ)

➤ Research and write a brief summary on "Structure" applied to C and C++ Language [Make sure to give two examples] (DUE NEXT SECTION)