

## **ASSIGNMENT-7**

[27-11-2025]

### **1)Program to count number of vowels , consonants ,digits and white spaces?**

```
#include <stdio.h>

int main()
{
    char str[200];

    int i, vowels = 0, consonants = 0, digits = 0, spaces = 0;
    printf("Enter a string: ");
    fgets(str, sizeof(str), stdin);
    for (i = 0; str[i] != '\0'; i++)
    {
        char ch = str[i];
        // Check for vowels
        if (ch=='a'|| ch=='e'|| ch=='i'|| ch=='o'|| ch=='u' ||
            ch=='A'|| ch=='E'|| ch=='I'|| ch=='O'|| ch=='U') {
            vowels++;
        }
        // Check for consonants (alphabet but not vowel)
        else if ((ch >= 'a' && ch <= 'z') || (ch >= 'A' && ch <= 'Z'))
        {
            consonants++;
        }
        // Check for digits
        else if (ch >= '0' && ch <= '9')
        {
            digits++;
        }
        // Check for white spaces
    }
}
```

```

else if (ch == ' ') {
    spaces++;
}

printf("Vowels: %d\n", vowels);
printf("Consonants: %d\n", consonants);
printf("Digits: %d\n", digits);
printf("White spaces: %d\n", spaces);

return 0;
}

```

## 2)Describe about different functions in strings ?

**ANS:** String Functions in C (with Description)

### 1)strlen()

Purpose:

Returns the length of a string (number of characters excluding \0).

Example:

```
strlen("hello"); // Output: 5
```

---

### 2)strcpy()

Purpose:

Copies one string into another.

Example:

```
strcpy(dest, src);
```

---

### 3)strncpy()

Purpose:

Copies n characters from source string to destination.

Example:

```
strncpy(dest, src, 3); // copies first 3 chars
```

---

#### **4) strcat()**

Purpose:

Joins (concatenates) two strings.

Example:

```
strcat(str1, str2); // str1 = str1 + str2
```

---

#### **5) strncat()**

Purpose:

Concatenates n characters of string2 to string1.

---

#### **6) strcmp()**

Purpose:

Compares two strings lexicographically.

- Returns 0 if both strings are equal
  - Returns positive if str1 > str2
  - Returns negative if str1 < str2
- 

#### **7) strncmp()**

Purpose:

Compares first n characters of two strings.

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#### **8) strlwr() (*not standard, works in Turbo C / Windows compilers*)**

Purpose:

Converts all characters of a string to lowercase.

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#### **9) strupr() (*not standard*)**

Purpose:

Converts string to uppercase.

---

#### **[10] strchr()**

Purpose:

Finds the first occurrence of a character in a string.

Example:

```
strchr("apple", 'p'); // points to first 'p'
```

---

### **11 strrchr()**

Purpose:

Finds the last occurrence of a character.

---

### **12 strstr()**

Purpose:

Finds the first occurrence of a substring inside another string.

Example:

```
strstr("Hello World", "World");
```

---

### **13 strdup()**

Purpose:

Creates a duplicate copy of a string using dynamic memory.

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### **14 strtok()**

Purpose:

Used to split a string into tokens using a delimiter.

Example:

```
strtok(str, " .-");
```