

Day 10 – (Strings)  
ASSIGNMENT NO: 95

Enter a sentence and find the number of vowels, consonants, space and special characters.

**Program code:**

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

int main()
{
    char s[20];
    int l,i,vowel=0,consonant=0,space=0,sc=0;
    printf("Enter the string: ");
    gets(s);
    l=strlen(s);
    for(i=0;i<l;i++)
    {
        if(s[i]=='a' || s[i]=='e' || s[i]=='i' || s[i]=='o' || s[i]=='u')
            vowel++;
        else if(s[i]=='A' || s[i]=='E' || s[i]=='I' || s[i]=='O' || s[i]=='U')
            vowel++;
        else if((s[i]>'a' && s[i]<='z') || (s[i]>'A' && s[i]<='Z'))
            consonant++;
        else if(s[i]==' ')
            space++;
        else
            sc++;
    }
    printf("No. of vowels= %d",vowel);
    printf("\nNo. of consonants= %d",consonant);
    printf("\nNo. of spaces= %d",space);
    printf("\nNo. of special characters= %d",sc);
    return 0;
}
```

**Output:**

Enter the string: i am akash  
No. of vowels= 4  
No. of consonants= 4  
No. of spaces= 2  
No. of special characters= 0

## ASSIGNMENT NO: 96

Input a string that contains digits as well as character find the sum of the digits

**Program code:**

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

int main()
{
    char s[50];
    int l,i,d,sum=0;
    printf("Enter a string: ");
    gets(s);
    l=strlen(s);
    for(i=0;i<l;i++)
    {
        if(s[i]>='0' && s[i]<='9')
        {
            d=(int)s[i];
            d=d-48;
            sum+=d;
        }
    }

    printf("The sum of the digits present in the string= %d",sum);
    return 0;
}
```

**Output:**

Enter a string: Aka8765s87h

The sum of the digits present in the string= 41

## ASSIGNMENT NO: 97

**Input a string and find the sum of the ASCII values of all characters**

***Program code:***

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

int main()
{
    char s[20],ch;
    int l,i,sum=0;
    printf("Enter a string: ");
    gets(s);
    l=strlen(s);
    for(i=0;i<l;i++)
    {
        ch=s[i];
        sum+=(int)ch;
    }
    printf("Sum of the ASCII of all characters in string=%d",sum);
    return 0;
}
```

***Output:***

Enter a string: akAsh

Sum of the ASCII of all characters in string=488

## ASSIGNMENT NO: 98

Input a string and replace each character by the character two places ahead of it, for e.g. a by c, b by d, z by d:

**Program code:**

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

int main()
{
    char s[20];
    int l,i;
    printf("Enter a string: ");
    gets(s);
    l=strlen(s);
    for(i=0;i<l;i++)
    {
        if((s[i]>='a' && s[i]<='x')||(s[i]>='A' && s[i]<='X'))
            s[i]=s[i]+2;
        else if(s[i]=='y'||s[i]=='z'||s[i]=='Y'||s[i]=='Z')
            s[i]=s[i]-24; //s[i]=s[i]-26+2
    }
    puts(s);
    return 0;
}
```

**Output:**

Enter a string: Akash Patra  
Cmcuj Rcvtc

## ASSIGNMENT NO:99

**Input a word and print it vertically:**

***Program code:***

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

int main()
{
    char s[20];
    int l,i;
    printf("Enter a string: ");
    gets(s);
    l=strlen(s);
    for(i=0;i<l;i++)
    {
        putchar(s[i]);
        putchar('\n');
    }
    return 0;
}
```

***Output:***

Enter a string: Akash Patra

A  
k  
a  
s  
h  
  
P  
a  
t  
r  
a

## ASSIGNMENT NO: 100

**Input a string and check if it is a palindrome or not:**

***Program code:***

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

int main()
{
    char s[20];
    int i,l;
    printf("Enter a string: ");
    gets(s);
    l=strlen(s);
    for(i=0;s[i]!='\0';i++)
    {
        if(s[i]!=s[l-i-1])
        {
            printf("\nNot palindrome!");
            return 0;
        }
    }
    printf("\nPalindrome!");
    return 0;
}
```

***Output:***

Enter a string: Akash

Not palindrome!

Enter a string: madam

Palindrome!

## ASSIGNMENT NO: 101

**Input a string and count the number of words in it:**

***Program code:***

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

int main()
{
    char s[20];
    int i,l,count=0;
    printf("Enter a string: ");
    gets(s);
    l=strlen(s);
    for(i=0;i<l-1;i++)
    {
        if(s[i]==' ' && s[i+1]!=' ')
            count++;
    }
    printf("\nThe string has %d number of words!",count+1);
    return 0;
}
```

***Output:***

Enter a string: i am akash patra

The string has 4 number of words!

## ASSIGNMENT NO:102

**Input a string and reverse it using recursion:**

***Program code:***

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

void swap(char *x, char *y)
{
    char temp = *x;
    *x = *y;
    *y = temp;
}

void reverse(char str[], int l, int h)
{
    if (l < h)
    {
        swap(&str[l], &str[h]);
        reverse(str, l + 1, h - 1);
    }
}

int main()
{
    char s[20];
    int l;
    printf("Enter a string: ");
    gets(s);
    l=strlen(s);
    reverse(s,0,l-1);
    puts(s);
    return 0;
}
```

***Output:***

Enter a string: Akash Patra  
artaP hsakA



## ASSIGNMENT NO: 103

**Input a sentence and find the number of words starting with 'S'.**

***Program code:***

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

int main()
{
    char s[50];
    int i,l,count=0;
    printf("Enter a string: ");
    gets(s);
    l=strlen(s);
    if(s[0]=='s' || s[0]=='S')
        count++;
    for(i=0;i<l-1;i++)
    {
        if(s[i]==' ' && (s[i+1]=='s' || s[i+1]=='S'))
            count++;
    }
    printf("\nThe number of words starting with S=%d",count);
    return 0;
}
```

***Output:***

Enter a string: spiderman batman superman

The number of words starting with S=2

## ASSIGNMENT NO: 105

Input a number (<=99999) and print it in a word (e.g. 87629 should be printed as Eight Seven Six Two Nine):

### **Program code:**

```
#include <stdio.h>
int main()
{
    int n, num = 0;
    printf("Enter any number to print in words: ");
    scanf("%d", &n);
    if(n<=99999{
        while(n != 0){
            num = (num * 10) + (n % 10);
            n /= 10;
        }
        while(num != 0){
            switch(num % 10)
            {
                case 0:
                    printf("Zero ");
                    break;
                case 1:
                    printf("One ");
                    break;
                case 2:
                    printf("Two ");
                    break;
                case 3:
                    printf("Three ");
                    break;
                case 4:
                    printf("Four ");
                    break;
                case 5:
                    printf("Five ");
                    break;
                case 6:
                    printf("Six ");
                    break;
                case 7:
                    printf("Seven ");
                    break;
                case 8:
                    printf("Eight ");
                    break;
                case 9:
                    printf("Nine ");
                    break;
            }
            num = num / 10;
        }
        else
            printf("Invalid number!");
    }
    return 0;
}
```

### **Output:**

Enter any number to print in words: 1234  
One Two Three Four

## ASSIGNMENT NO: 107

**Input a name and find its initial(e.g.Subhash Chandra Bose should be printed S.C.B)**

***Program code:***

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

int main()
{
    char s[30];
    int i,l;
    printf("Enter a string: ");
    gets(s);
    l=strlen(s);
    if(s[0]!=' ')
        printf("%c.",s[0]);
    for(i=0;i<l-1;i++)
    {
        if(s[i]==' ' && s[i+1]!=' ')
            printf("%c.",s[i+1]);
    }
    return 0;
}
```

***Output:***

Enter a string: Akash Patra  
A.P.

## ASSIGNMENT NO: 108

**INPUT A NAME AND FINF ITS INITIAL (E.g.,Subhash Chandra Bose should be printed as S.C.Bose)**

***Program code:***

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

int main()
{
    char s[30],surname[15];
    int i,l,j,k=0;
    printf("Enter a string: ");
    gets(s);
    l=strlen(s);
    for(i=l-1;s[i]!=' ';i--);
    for(j=i+1;s[j]!='\0';j++)
        surname[k++]=s[j];
    surname[k]='\0';
    printf("%c.",s[0]);
    for(k=1;k<i;k++)
    {
        if(s[k]==' ' && s[k+1]!=' ')
            printf("%c.",s[k+1]);
    }
    puts(surname);
    return 0;
}
```

***Output:***

Enter a string: Akash Kumar Patra  
A.K.Patra

## ASSIGNMENT NO: 114

A Pig Latin word is a word that begins with consonant sound; all letters before the initial vowel are placed at the end of the word sequence. Then "ay" is added ,as in the following example:  
"pig" "igpy"

### **Program code:**

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

int main()
{
    char s[20],s1[10],s2[8];
    int i=0,l,j=0,k=0;
    printf("Enter a string: ");
    gets(s);
    l=strlen(s);
    if(s[0]=='a' || s[0]=='e' || s[0]=='i' || s[0]=='o' || s[0]=='u')
        puts(s);
    else
    {
        for(i=0;i<l;i++)
        {
            if(s[i]=='a' || s[i]=='e' || s[i]=='i' || s[i]=='o' || s[i]=='u')
                break;
            else
                s1[i]=s[i];
        }
        s1[i]='\0';
        for(j=i;s[j]!='\0';j++)
        {
            s2[k++]=s[j];
        }
        s2[k]='\0';
        puts(strcat((strcat(s2,s1)),"ay"));
    }
    return 0;
}
```

### **Output:**

Enter a string: Akash  
ashAkay