**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;

}

**O*utput:***

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