Programs on Strings

Strings:

A String is a sequence of characters or collection of characters.

The character array which is terminated by null character at end is said to be string

For strings the memory can allocated in two ways

1.static memory char [100]

2.Dynamic memory char \*s;

1. Write a program to read and print the string

#include<stdio.h>

#include<conio.h>

void main()

{

char \*s;

int i;

gets(s);

for(i=0;s[i];i++)

printf("%c",s[i]);

getch();

}

Input:

Hello world

Output:

Hello world

1. Second way to read and print the string

#include<stdio.h>

#include<conio.h>

void main()

{

char s[10];

scanf("%s",s);

printf("%s",s);

getch();

}

1. Thrid way to read and print the string

#include<stdio.h>

#include<conio.h>

void main()

{

char \*s;

scanf("%[^\n]s",s);

for(i=0;s[i];i++)

printf("%c",s[i]);

getch();

}

1. Write a program to concatenate two strings by using predefind function

#include<stdio.h>

#include<string.h>

void main()

{

char s1[100],s2[100];

scanf("%s",s1);

scanf("%s",s2);

strcat(s1,s2);

printf("%s",s1);

}

Input:

Hello

World

Output:

Helloworld

1. Write a program to concatenate two strings without using predefind function

#include<stdio.h>

#include<string.h>

void main()

{

char s1[100],s2[100];

int i,j;

scanf("%s",s1);

scanf("%s",s2);

i=0;

while(s1[i]!='\0')

{

i++;

}

j=0;

while(s2[j]!='\0')

{

s1[i]=s2[j];

i++;

j++;

}

printf("%s",s1);

}

Input:

Welcome to

Java

Output:

Welcome to java

1. Write a program to print the count of the given string

#include<stdio.h>

#include<conio.h>

void main()

{

char \*s

int i,count=0;

clrscr();

scanf("%s",s);

for(i=0;s[i];i++)

count++;

printf("%d",count);

getch();

}

Output:

Hello

5

1. Write a program to print the given string in sorted order that means alphabetical order.

#include<stdio.h>

#include<conio.h>

void main()

{

char \*s,temp;

int i,j;

clrscr();

gets(s);

l1=strlen(s);

for(i=0;i<l1-1;i++)

{

for(j=i+1;j<l1;j++)

{

if(s[i]>s[j])

{

temp=s[i];

s[i]=s[j];

s[j]=temp;

}

}

}

printf("%s",s);

getch();

}

Input:

program

Output:  
agmrrop

1. Write a program to print the count of the substring present in the given string.

#include<stdio.h>

#include<conio.h>

void main()

{

char \*s1,\*s2;

int i,j,count=0;flag;

clrscr();

gets(s1);

gets(s2);

for(i=0;s[i];i++)

{

flag=1;

for(j=0;s[j];j++)

{

if(s1[i+j]!=s2[j])

{

flag=0;

break;

}

}

if(flag==1)

count++;

}

printf("%d",count);

getch();

}

Input:

Pace college is the best college

College

2

1. Write a program to print the count of given words in the given string

#include<stdio.h>

#include<conio.h>

void main()

{

char \*s1,\*s2;

int i,j,count=0;flag;

clrscr();

gets(s1);

gets(s2);

for(i=0;s[i];i++)

{

flag=1;

for(j=0;s[j];j++)

{

if(s1[i+j]!=s2[j])

{

flag=0;

break;

}

}

if(flag==1)

count++;

}

printf("%d",count);

getch();

}

Input:

My name is rahul

is

output:

1

Input:

collegecollegecollegecollege

college

output:

4

1. Write a program to print the string in line by line

#include<stdio.h>

void main()

{

char \*s;

int i;

scanf(“%[^\n]s”,s);

for(i=0;s[i];i++)

if(s[i]==32)

printf(“\n”);

else

printf(“%c”,s[i]);

}

Input:

Hello hai how are you

Output:

hello

hai

how

are

you

1. Write a program to print the count of spaces in the given string

#include<stdio.h>

#include<conio.h>

void main()

{

char \*s;

int i;

clrscr();

gets(s);

for(i=0;s[i];i++)

{

if(s[i]==' ')

{

count++;

printf("%d",count);

}

}

getch();

}

Input:

Hi hello how are you

Output:

4

1. Write a program to print all the characters and its ASCII values

#include<stdio.h>

void main()

{

char I;

for(i=0;i<=255;i++)

printf(“%c - %d”,i,i);

}

1. Write a program to print the given string in lowercase not using the predefind function

#include<stdio.h>

#include<conio.h>

void main()

{

char \*s;

int i;

clrscr();

gets(s);

for(i=0;s[i];i++)

{

s[i]=s[i]-32;

printf("%c",s[i]);

}

getch();

}

Input:

HELLO

Output:

hello

1. Write a program to print the given string in lowercase but not using the predefind method

#include<stdio.h>

#include<conio.h>

void main()

{

char \*s;

int i;

clrscr();

gets(s);

for(i=0;s[i];i++)

{

s[i]=s[i]+32;

printf("%c",s[i]);

}

getch();

}

Input:

hello

Output

HELLO

1. Write a program to print string in reverse order

#include<stdio.h>

void main()

{

char s[100],I,len=0;

scanf(“%s”,s);

for(i=0;s[i];i++)

len++;

for(i=len-1;i>=0;i--)

printf(“%c”,s[i]);

}

Output:

hello

olleh

1. Write a program to find the frequency of each and every character from the given string

#include<stdio.h>

#include<conio.h>

void main()

{

char \*s;

int i,j,count;

clrscr();

gets(s);

for(i=0;s[i];i++)

{

count=1;

for(j=i+1;s[j];j++)

{

if(tolower(s[i])==tolower(s[j]))

{

count++;

s[j]=' ';

}

}

if(s[i]!=' ')

printf("\n %c - %d",s[i],count);

}

getch();

}

Input:

pace

Output:

p-1

a-1

c-1

e-1

1. Write a program to print only the alphabets counts in given string

#include<stdio.h>

#include<conio.h>

void main()

{

char \*s

int i,count=0;

clrscr();

scanf("%[^\n]",s);

for(i=0;ch[i];i++)

{

if((s[i]>=97 && s[i]<=122) || (ch>=65 && ch<=90))

count++;

}

printf("%d",count);

getch();

}

Input:

Pace123

Output:

4

1. Write a program to print the lowercase charcters into uppercase and uppercase to lower case.

#include<stdio.h>

#include<conio.h>

void main()

{

char \*s;

int i;

gets(s);

for(i=0;s[i];i++)

{

printf("%d",islower(s[i])?toupper(s[i]):tolower(s[i]));

getch();

}

Input: PAceCOllegE

Output:paCEcollEGe

1. Write a program to print only consonants in the given string

#include<stdio.h>

#include<conio.h>

void main()

{

char \*s;

int i;

scanf("%[^\n]s",s);

for(i=0;s[i];i++)

{

if(s[i]=='a' || s[i]=='e' || s[i]=='i' || s[i]=='o' || s[i]=='u')

continue;

else

printf("%c",s[i]);

}

getch();

}

Input:

Pace

Output:

Pc

1. Write a program to print only vowels in the given string

#include<stdio.h>

#include<conio.h>

void main()

{

char \*s;

int i;

scanf("%[^\n]s",s);

for(i=0;s[i];i++)

{

if(s[i]=='a' || s[i]=='e' || s[i]=='i' || s[i]=='o' || s[i]=='u')

printf("%c",s[i]);

}

getch();

}

Input:

Pace

Output:

ae

1. Write a program to print the vowels count in a given string

#include<stdio.h>

#include<conio.h>

void main()

{

char \*s;

int i,count=0;

get(s);

for(i=0;s[i];i++)

{

if(s[i]=='a' || s[i]=='e' || s[i]=='i' || s[i]=='o' || s[i]=='u')

count++;

}

printf("%d",count);

getch();

}

Input:

Hello hai

Output:

4

1. Write a program to print the count of consonants in given string

#include<stdio.h>

#include<conio.h>

void main()

{

char \*s;

int i,count=0;

get(s);

for(i=0;s[i];i++)

{

if(s[i]!='a' || s[i]!='e' || s[i]!='i' || s[i]!='o' || s[i]!='u')

count++;

}

printf("%d",count);

getch();

}

input:

hello hai

output:

4

1. Write a program to check the given string is palindrome or not

#include<stdio.h>

#include<conio.h>

void main()

{

char \*s;

int i,flag=0;

clrscr();

gets(s);

j=strlen(s-1);

while(i<=j)

{

if(s[i]==s[j])

flag=1;

break;

}

if(flag==1)

printf("Given string is palindrome");

else

printf("Not a palindrome");

getch();

}

Input:

Madam

Output:

Given string is palindrome

1. Write a program to print characters from the string two that are not present in string one

#include<stdio.h>

#include<conio.h>

int unmatchedchar(char,char \*,int);

void main()

{

char \*s1,\*s2;

int l1,l2;

clrscr();

gets(s1);

l1=strlen(s1);

gets(s2);

l2=strlen(s2);

if(unmatchedchar(s2[i],s1,l1))

printf("%c",s2[i]);

getch();

}

int unmatchedchar(char ch,char \*s1,int l1)

{

int i;

for(i=0;i<l1;i++)

{

if(tolower(ch[i])==tolower(s1[i]))

return 0;

}

return 1;

}

Input:

Programming

Computer

Output:

Cute

1. Write a program to convert lower case to upper case

#include<stdio.h>

#include<conio.h>

void main()

{

char \*s;

int i;

gets(s);

for(i=0;s[i];i++)

{

printf("%d",islower(s[i])?toupper(s[i]):tolower(s[i]));

getch();

}

Input:

HELlo Hai

Output:

helLO hAI

1. Write a program to print the maximum occurring character in string

#include<stdio.h>

#include<conio.h>

void main()

{

char \*s;

int i,j,count;maxcount=0;

char maxchar;

clrscr();

gets(s);

for(i=0;s[i];i++)

{

count=0;

for(j=0;j<strlen(s);j++)

{

if(s[i]==s[j])

count++;

}

if(maxcount>count)

{

maxcount=count;

maxchar=s[i];

}

}

printf("%c",maxchar);

getch();

}

Output:

Hello

Output:

l

1. Implementation of real time application of strings

Title :: Encrypted string

You are given a string s and key value.your task is to generate the cipher text using given string s and key.

#include<stdio.h>

#include<conio.h>

void main()

{

char \*s;

int i,key;

clrscr();

gets(s);

scanf("%d",&key);

for(i=0;s[i];i++)

{

if(s[i]>='a' && s[i]<='z')

{

s[i]=((s[i]-97)+key)%26+97;

}

else if(s[i]>='A' && s[i]<='Z')

{

s[i]=((s[i]-65)+key)%26+65;

}

else if(s[i]>='0' && s[i]<='9')

{

s[i]=((s[i]-48)+key)%10+48;

}

else

s[i]=s[i];

}

printf("%s",s);

getch();

}

Input1:

abc

56

Output:

efg

Input2:

123

128

Output:

901

Input3:

acs123

512

Output:

Suk345

1. Write a program to generate the plain text by using cipher text and key value

Title:: Decrypted string

#include<stdio.h>

#include<conio.h>

void main()

{

char \*s;

int i,key;

clrscr();

gets(s);

scanf("%d",key);

for(i=0;s[i];i++)

{

if(s[i]>='a' && s[i]<='z')

s[i]=122-(122-s[i]+key)%26;

else if(s[i]>='A' && s[i]<='Z')

s[i]=90-(90-s[i]+key)%26;

else if(s[i]>='0' && s[i]<='9')

s[i]=57-(57-s[i]+key)%10;

else

s[i]=s[i];

}

printf("%s",s);

getch();

}

Input1:

efg

56

Output:

abc

input2:

12345

256

Output:

56789

Input3:

rahul@123

512

Output;

xcrqb@901

Input4:

!@#$

56

Output:

!@#$

1. Write a program to print any special character in place of vowels in given string

#include<stdio.h>

void main()

{

char s[100];

int i;

scanf("%[^\n]s",s);

for(i=0;s[i];i++)

{

if(s[i]=='a' || s[i]=='e' || s[i]=='i' || s[i]=='o' || s[i]=='u')

s[i]='\*';

printf("%c",s[i]);

}

}

Input:

Pace college

Output:

P\*c\*c\*ll\*g\*

1. Write a program to print the starting character was capital in a given string

#include<stdio.h>

void main()

{

char s[100];

int i,j;

scanf("%[^\n]s",s);

for(i=0;s[i];i++)

{

if(i==0) \\ to check the first character is lowercase

{

if(s[i]>='a' && s[i]<='z')

{

s[i]=s[i]-32;

continue;

}

}

if(s[i]==' ')

{

++i; \\ to check next character is lowercase

if(s[i]>='a' && s[i]<='z')

{

s[i]=s[i]-32;

continue;

}

}

else

{

if(s[i]>='A' && s[i]<='Z')

{

s[i]=s[i]+32;

}

}

}

printf("%s",s);

}

Input:

hello student welcome to school

Output: Hello Student Welcome To School

1. Write a program to print the special characters count in given string

#include<stdio.h>

#include<conio.h>

void main()

{

char \*s;

int i,count=0;

clrscr();

gets(s);

for(i=0;s[i];i++)

{

if(s[i]>='a' && s[i]<='z')

continue;

if(s[i]>='A' && s[i]<='Z')

continue;

if(s[i]>='0' && s[i]<='9')

continue;

else

count++;

}

printf("%d",count);

getch();

}

Input:

hello@#$!

Output:

4

1. TCS Ninja question

Sample input:

He\*\*po##

Sample output:

0

Sample input:

Hsbhb\*\*\*\*nm##

Sample output:

-1

#include<stdio.h>

#include<conio.h>

void main()

{

char \*s;

int i,hcount=0,scount=0;

gets(s);

for(i=0;s[i];i++)

{

if(s[i]=='\*')

scount++;

if(s[i]=='#')

hcount++;

}

if(hcount==scount)

printf("0");

else

printf("-1");

getch();

}

Input:

Jry\*\*33##

Output:

0

1. Write a program to whether the given string is keyword or not

#include<stdio.h>

#include<conio.h>

void main()

{

char s[10][10]={"if","while","case","break","continue","goto","struct","union","static","else"};

char inpstr[10];

int i,flag=0;

gets(inpstr);

for(i=0;i<10;i++)

{

if(stricmp(inpstr,s[i]))

{

flag==;

break;

}

}

if(flag==1)

printf("Yes");

else

printf("No);

getch();

}

Input:

If

Yes

Input:

Hello

Output:

No

1. Write a program to remove the duplicate characters in the given string

#include<stdio.h>

#include<conio.h>

void main()

{

char \*s;

int i,j,k;

clrscr();

gets(s);

for(i=0;s[i];i++)

{

for(j=i+1;s[j];j++)

{

if(s[j]==s[i])

{

for(k=j;s[k];k++)

{

s[k]=s[k+1];

}

}

}

}

printf("%s",s);

getch();

}

Input:

helloo worldrd

Output:

helo world

1. Write a program to print the given string is panagram or not

#include<stdio.h>

#include<conio.h>

void main()

{

char \*s;

int i,j,k;

clrscr();

gets(s);

for(i=0;s[i];i++)

{

for(j=i+1;s[j];j++)

{

if(s[j]==s[i])

{

for(k=j;s[k];k++)

{

s[k]=s[k+1];

}

}

}

}

printf("%s",s);

if(strlen(s)==26)

printf("panagram");

else

printf("not a panagram");

getch();

}

Input:

Pujithaa

Not a panagram

Input:

1. Write a program to check given strings are anagram or not

#include<stdio.h>

#include<conio.h>

void main()

{

char \*s1,\*s2,temp;

int i,j;

clrscr();

gets(s1);

gets(s2);

if(strlen(s1)==strlen(s2)

{

for(i=0;s1[i];i++)

{

for(j=0;s1[j];j++)

{

if(s1[i]<s1[j])

{

temp=s1[i];

s1[i]=s1[j];

s1[j]=temp;

}

}

}

for(i=0;s2[i];i++)

{

for(j=0;s2[j];j++)

{

if(s2[i]<s2[j])

{

temp=s2[i];

s2[i]=s2[j];

s2[j]=temp;

}

}

}

if(stricmp(s1,s2)==0)

{

flag=1;

}

else

{

flag=0'

}

else

{

flag=0;

}

}

if(flag==1)

printf("anagram");

else

printf("not an anagram");

getch();

}

Input1:

listen

silent

Output:

Anagram

Input2:

word

bird

Output:

Not an anagram

Input3:

Word

Board

Output:

Not an anagram

1. Write a program to print the given string after removing the white spaces .

#include<stdio.h>

#include<string.h>

void main()

{

char s[100];

int i,j,l;

scanf("%[^\n]s",s);

l=strlen(s);

for(i=0;i<l;i++)

{

if(s[i]==' ')

{

for(j=i;j<l;j++)

{

s[j]=s[j+1];

}

l--;

}

}

printf("%s",s);

}

Input:

hello world

Output:

helloworld