**PROGRAM TO CALCULATE NUMBER OF WORDS, CHARACTERS, VOWELS AND SPACES IN THE STRING**

#include<conio.h>

#include<stdio.h>

main()

{

Char str[25];

Int i,l,w=0,v=0,c=0,s=0;

printf("Enter the string:\n");

gets(str);

 l=strlen(str);

printf("%d",l);

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

 {

if(str[i]==' ')

s++;

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

v++;

 }

 w=s+1;

 c=l-s;

printf("\nIn entered string, there are %d words, %d characters, %d vowels and %d

spaces",w,c,v,s);

getch();

return 0;

}

**PROGRAM TO DETERMINE THE CHARACTER WHOSE FREQUENCY IS MAXIMUM IN ENTERD STRING**

#include<stdio.h>

#include<conio.h>

#include<string.h>

main()

{

int f=0,i,j,max=0,l;

char str[25],ch;

printf("Enter the string:");

gets(str);

 l=strlen(str);

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

 {

for(j=1;j<l;j++)

 {

if((str[i]==str[j])&&(str[i]!=' '))

 {

f++;

 }

 }

if(max<f)

 {

max=f;

ch=str[i];

 }

 f=0;

 }

printf("\nIn the string, %c appears at the max frequency of %d.",ch,max);

getch();

return 0;

}

**PROGRAM TO SEARCH AN ELEMENT OF AN ARRAY USING LINEAR SEARCH:**

#include<stdio.h>

#include<conio.h>

main()

{

int A[50],i,x,n,c=0;

printf("enter the limit of array:");

scanf("%d",&n);

printf("enter the elements:");

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

 {

scanf("%d",&A[i]);

 }

printf("enter the element which should be searched for:");

scanf("%d",&x);

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

 {

if(A[i]==x)

 {

c++;

printf("element is present at %dth position",i+1);

 }

 }

if(c==0)

printf("the element is not present");

getch();

return 0;

 }

**PROGRAM TO SEARCH AN ELEMENT OF AN ARRAY USING BINARY SEARCH:**

#include<stdio.h>

#include<conio.h>

main()

{

int A[50],i,x,n,f=0,l=0,mid,u;

printf("enter the limit of of ascending sorted array:");

scanf("%d",&n);

printf("enter the elements :");

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

 {

scanf("%d",&A[i]);

 }

printf("enter the element which should be searched for:");

scanf("%d",&x);

 u=n-1;

while(l<=u)

 {

mid=(l+u)/2;

if(A[mid]==x)

 {

f++;

printf("\nelement is present at %dth position",mid+1);

break;

 }

if(A[mid]>x)

 u=mid-1;

if(A[mid]<x)

 l=mid+1;

 }

if(f==0)

printf("the element is not present");

getch();

return 0;

}

**PROGRAM TO SORT AN ARRAY**

#include<stdio.h>

#include<conio.h>

main()

{

Int i,j,temp,a[10];

printf("Enter the array\n");

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

 {

scanf("%d",&a[i]);

 }

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

 {

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

 {

if(a[j]>a[j+1])

 {

temp=a[j];

a[j]=a[j+1];

a[j+1]=temp;

 }

 }

 }

printf("\nThe array in ascending order\n");

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

 {

printf("%d\t",a[i]);

 }

getch();

return 0;

}