#include<iostream.h>

#include<conio.h>

#include<stdio.h>

int length (char a[])

{

int len=0;

for(int i=0;a[i]!='\0';i++)

{

len++;

}

return len;

}

void read(char a[])

{

puts("Enter the string") ;

gets(a);

}

void display(char a[])

{

puts(a);

}

void main()

{

char a[50];

read(a);

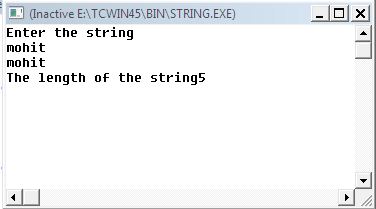
display(a);

int len;

len=length(a);

cout<<"The length of the string"<<len;

}



#include<iostream.h>

#include<string.h>

#include<stdio.h>

void revdisplay(char a[])

{

for(int i=strlen(a)-1;i>=0;i--)

cout<<a[i];

}

void reverse(char a[])

{

for(int i=0,j=strlen(a)-1;i<strlen(a)/2;i++,j--)

{

char temp;

temp=a[i];

a[i]=a[j];

a[j]=temp;

}

}

void main()

{

char a[50];

puts("Enter the string");

gets(a);

revdisplay(a);

puts("\nReversed string is:");

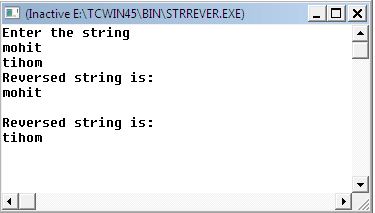
puts(a);

reverse(a);

puts("\nReversed string is:");

puts(a);

}



//PROGRAM TO INPUT AND DISPLAY OPERATION ON COMPLEX NUMBER

#include<iostream.h>

#include<stdio.h>

struct complex{int real; int img;};

void input(complex &s);

void add(complex,complex);

void subtract(complex,complex);

void multiply(complex,complex);

void main()

{complex c1,c2; int ch;

cout<<"1st complex no \t";input(c1);

cout<<"2nd complex no \t" ;input(c2);

cout<<"press 1-add, 2-subtract, 3-multiply ";

cin>>ch;

switch(ch)

{case 1:add(c1,c2);break;

case 2:subtract(c1,c1);break;

case 3:multiply(c1,c2);break;

}}

void input(complex &c)

{cout<<"real part ";

cin>>c.real;

cout<<"imaginary ";

cin>>c.img;}

void add(complex x,complex y)

{complex cx;

cx.real=x.real+y.real;

cx.img=x.img+y.img;

cout<<"complex number is "<<cx.real<<"+"<<cx.img ; }

void subtract(complex x,complex y)

{complex cx;

cx.real=x.real-y.real;

cx.img=x.img-y.img;

cout<<"complex number is "<<cx.real<<"+"<<cx.img; }

void multiply(complex x,complex y)

{complex cx;

cx.real=(x.real\*y.real)-(x.img\*y.img);

cx.img=(x.real\*y.img)+(x.img\*y.real);

cout<<"complex number is "<<cx.real<<"+"<<cx.img;}

OUTPUT:

1st complex no real part 2 imaginary 3

2nd complex no real part 3 imaginary 4

press 1-add, 2-subtract, 3-multiply>> 3

complex number is -6+17

#include<iostream.h>

#include<stdio.h>

#include<string.h>

struct student

{

int roll, marks;

char name[50];

};

void read(student s[], int n)

{

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

{

cout<<"Enter the roll no, marks and the name of the student "<<i+1<<" ";

cin>>s[i].roll>>s[i].marks;

gets(s[i].name);

}

}

void sort(student a[], int n)

{

for(int i=n-1;i>0;i--)

{

for(int j=0;j<i;j++)

{

if(strcmpi(a[j].name,a[i].name)>0)

{

student t=a[i];

a[i]=a[j];

a[j]=t;

}

}

}

}

void display(student s[],int n)

{

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

{

cout<<s[i].roll<<"\t"<<s[i].marks<<"\t";

puts(s[i].name);

}

}

void main()

{

student satan[10];

cout<<"Enter the no. of students";

int n;

cin>>n;

read(satan,n);

sort(satan,n);

cout<<"The sorted array is \n";

display(satan,n);

}

/\* Output

Enter the no. of students3

Enter the roll no, marks and the name of the student 1 17

76

Suresh

Enter the roll no, marks and the name of the student 2 23

89

Karan

Enter the roll no, marks and the name of the student 3 8

56

Abhi

The sorted array is

8 56 Abhi

23 89 Karan

17 76 Suresh

\*/

#include<iostream.h>

void read(int A[][10], int r, int c)

{ for (int i=0;i<r;++i)

for(int j=0;j<c;++j)

cin>>A[i][j];

}

void display(int A[][10], int r, int c)

{

for (int i=0;i<r;++i)

for(int j=0;j<c;++j)

cout<<A[i][j];

}

void add(int A[][10],int B[][10],int r1,int c1)

{

int C[10][10];

for(int i=0;i<r1;++i)

for(int j=0;j<c1;++j)

C[i][j]=A[i][j]+B[i][j];

display(C,r1,c1);

}

void main()

{

int A[10][10],B[10][10],C[10][10],r1,c1,c2,r2;

cout<<"enter the dimensions of A \n";

cin>>r1>>c1;

cout<<"enter the dimensions of B \n";

cin>>r2>>c2;

if(r1==r2 && c1==c2)

{

read(A,r1,c1);

display(A,r1,c1);

read(B,r2,c2);

display(B,r2,c2);

add(A,B,r1,c1);

}

else

cout<<"addition not possible";

}

OUTPUT

enter the dimensions of A

5

6

enter the dimensions of B

7

2

addition not possible

#include <iostream.h>

void main()

{

int n,i,j,m,q,a;

cout<<"enter a number";

cin>>n;

for(i=n;i>=1;i--)

{

cout<<"\n";

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

cout<<"\*";

}

cout<<"\n"; cout<<"\n"; cout<<"\n";

for(i=1;i<=n;i++)

{

cout<<"\n";

for(j=i;j>=1;j--)

cout<<j;

}

for(m=1;m<=n-1;m++)

{

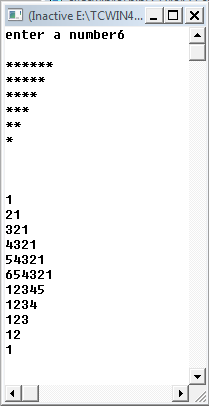
cout<<"\n";

for(q=1;q<=n-m;q++)

cout<<q;

}

}



#include <iostream.h>

void main()

{

int i,j,m,q,n;

cout<<"enter a number";

cin>>n;

char ch='a';

for(i=1;i<=n;i++)

{

ch='a';

ch+=(i-1);

cout<<"\n";

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

{

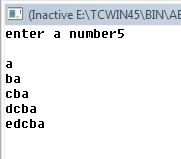
cout<<ch;

ch--;

}

}

}



#include<iostream.h>

#include<math.h>

void main()

{

int num,count=0,digit,sum=0,power,n;

cout<<"Enter a number";

cin>>num;

n=num;

do{

num=num/10;

count++;

}while(num!=0);

num=n;

do{

digit=num%10;

num=num/10;

power=pow(digit,count);

sum=sum+power ;

}while(num!=0);

cout<<"the number of digits of the entered number are"<<sum;

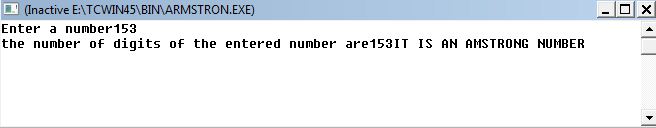
if(n==sum)

cout<<"IT IS AN AMSTRONG NUMBER";

else

cout<<" GET LOST IT'S A FAKE NUMBER";

}



#include<iostream.h>

void read(int a[],int n)

{

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

cin>>a[i];

}

void display(int a[],int n)

{

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

cout<<a[i]<<endl;

}

void insertion(int a[],int n)

{

for(int i=1;i<n;i++)

{

int temp,j;

temp=a[i] ;

j=i-1;

while (temp<a[j] && j>=0)

{

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

j--;

}

a[j+1]=temp;

}

}

void main()

{

int n,a[1000];

cout<<"Enter the size";

cin>>n;

read(a,n);

cout<<"BEFORE SORTING";

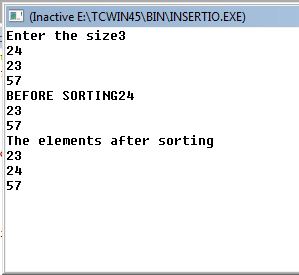
display(a,n);

insertion(a,n);

cout<<"The elements after sorting"<<endl;

display(a,n);

}



#include<iostream.h>

void read(int[],int);

void display(int[],int);

int large (int[],int) ;

void main()

{

int a[100],n,lar;

cout<<"enter no. of elements";

cin>>n;

read(a,n);

display(a,n) ;

lar=large(a,n) ;

cout<<lar;

}

void read(int a[],int n)

{

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

{

cout<<"Enter the "<<(i+1)<<"th element\t";

cin>>a[i];

}

}

void display(int a[],int n)

{

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

cout<<"The"<<(i+1)<<"\t"<<a[i]<<endl;

}

int large (int a[],int n)

{

int lar = a[0];

for(int i=1;i<n;i++)

{

if(a[i]>lar)

{

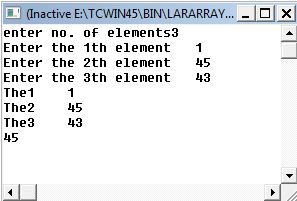
lar=a[i];

}

}

return lar;

}



#include<iostream.h>

void read(int [],int);

void display(int [],int);

void selection(int [],int);

int bsearch(int [],int,int);

void main()

{

int a[1000],n,element;

cout<<"Enter the size";

cin>>n;

read(a,n);

cout<<"Before sorting";

display(a,n);

selection(a,n);

cout<<"After sorting";

display(a,n);

int pos;

cout<<" Enter the search item";

cin>>element;

pos=bsearch(a,n,element);

if(pos==-1)

{

cout<<"NOT FOUND ";

}

else

{

cout<<"found at:"<<pos<<endl;

}

}

void read(int marks[],int n)

{

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

cin>>marks[i];

}

void display(int marks[],int n)

{

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

cout<<marks[i]<<endl;

}

void selection(int a[],int n)

{

int temp;

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

{

for(int j=i+1;j<n;j++)

{

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

{

temp=a[i];

a[i]=a[j];

a[j]=temp;

}

}

}

}

int bsearch(int a[],int n,int element)

{

int beg=0,mid,last=n-1,p=-1;

while(beg<=last && p==-1)

{

mid=(beg+last)/2;

if(element==a[mid])

{

p=mid+1;

}

else if(element>a[mid])

{

beg=mid+1;

}

else

{

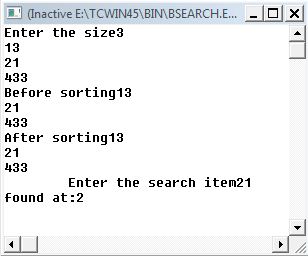
last=mid-1;

}

}

return p;

}



#include<iostream.h>

void bubble(int a[],int n)

{

for(int i=0;i<n-1;i++)

{

int temp;

for(int j=0;j<n-1-i;j++)

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

{

temp=a[j];

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

a[j+1]=temp;

}

}

}

void read(int a[],int n)

{

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

cin>>a[i];

}

void display(int a[],int n)

{

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

cout<<a[i]<<endl;

}

void main()

{

int n,a[1000];

cout<<"Enter the size";

cin>>n;

read(a,n);

cout<<"BEFORE SORTING";

display(a,n);

bubble(a,n);

cout<<"The elements after sorting"<<endl;

display(a,n);

}

