**Roll No- 82**

**Assignment No:-**

**Assignment Name:- Write a program to find minimum and maximum form a given array.**

#include<iostream.h>

#include<conio.h>

#include<stdlib.h>

class LIST

{

private:

int \*A,n;

public:

LIST(int);

void READ();

void DISPLAY();

void MAXMIN(int,int,int&,int&);

};

LIST::LIST(int par)

{

n=par;

A=new int[n+1];

}

void LIST::READ()

{

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

A[i]=random(999);

}

void LIST::DISPLAY()

{

cout<<endl;

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

cout<<A[i]<<" ";

}

void LIST::MAXMIN(int p,int q,int &max,int &min)

{

int fmax,fmin,hmax,hmin;

if(p==q)

max=min=A[p];

else

{

if(p==q-1)

{

if(A[p]>A[q])

{

max=A[p];min=A[q];

}

else

{

max=A[q];min=A[p];

}

}

else

{

int m=(p+q)/2;

MAXMIN(p,m,fmax,fmin);

MAXMIN(m+1,q,hmax,hmin);

if(fmax>hmax)

max=fmax;

else

max=hmax;

if(fmin<hmin)

min=fmin;

else

min=hmin;

}

}

}

void main()

{

clrscr();

int size,max,min;

cout<<"Enter the size of list: ";

cin>>size;

LIST obj(size);

cout<<"You entered elements are:";

obj.READ();

obj.DISPLAY();

obj.MAXMIN(1,size,max,min);

cout<<"\n\n Max ="<<max<<"\t Min ="<<min;

getch();

}