Assignment No:- 4
Assignment Name:- Write a program to find minimum and maximum form a given array.
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// MAXMIN
#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];
```

```cpp
                    }
                    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();
}
```