**ROLL NO:-45**

**NAME : Harshit Atul Chilvirwar**

**PRACTICAL NO:-**

**PRACTICAL NAME :- IMPLEMENTATION OF SELECTION SORT**

#include "iostream.h"

#include "conio.h"

#include "stdlib.h"

class LIST

{

int \*A,size;

public:

LIST(int);

void SET\_LIST();

void VIEW\_LIST();

int MIN(int);

void SELECTION\_SORT();

void SWAP(int,int);

};

LIST::LIST(int par)

{

size=par;

A =new int[size+1];

}

void LIST::SET\_LIST()

{

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

A[i]=random(1000);

}

void LIST::VIEW\_LIST()

{

cout<<"List elements are : ";

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

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

}

int LIST::MIN(int i)

{

int min=A[i], pos=i;

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

{

if(A[j]<min)

{

min=A[j]; pos=j;

}

}

return pos;

}

void LIST::SWAP(int i, int j)

{

int temp= A[i];

A[i]=A[j];

A[j]=temp;

}

void LIST::SELECTION\_SORT()

{

for(int i=1;i<=size-1;i++)

{

int min\_pos = MIN();

SWAP(i,min\_pos);

}

}

void main()

{

int n;

clrscr();

cout<<"\n Enter size of array : ";

cin>>n;

LIST obj(n);

obj.SET\_LIST();

cout<<endl<<"List before sorting : \n";

obj.VIEW\_LIST();

obj.SELECTION\_SORT();

cout<<endl<<"List after sorting : \n";

obj.VIEW\_LIST();

getch();

}