**Header File..**

#include<iostream>

using namespace std;

class ListArr

{

public:

ListArr(int Arrcap);

int Insert(int ele,int pos);

int Delet (int pos);

void Print();

~ListArr();

int FindByEle(int ele);

int FindByPos(int pos);

void GetData();

private:

int \*array,length,capacity;

};

**Implementation File..**

#include"hListarray.h"

ListArr :: ListArr(int Arrcap) //Constructor

{

capacity = Arrcap;

length=0;

array=new int [capacity];

}

ListArr :: ~ListArr() //Destructor

{

delete []array;

}

void ListArr :: GetData() //Geting Data for the List

{ char c;

do

{

if(length<=capacity)

{

cout<<"Enter the Element:";

cin>>array[length++];

}

else

cout << "Limit Exceeds....\n";

cout<<"\nPress Y to continue giving value or Press N to Stop ";

cin>>c;

}while(c == 'y');

cout<<"Total element in list "<< length<<"\n";

Print();

}

int ListArr :: Insert(int ele,int pos) // Insert the element in the list

{

if(pos==length+1 && pos<=capacity)

{

array[pos-1]=ele; //Inserting the element at last

length++;

Print();

return 1;

}

else

{

if(pos<=length)

{

for(int i=length-1;i>=pos-1;i--)

{

array[i+1]=array[i];

}

array[pos-1]=ele; // Inserting in the Middle

length++;

Print();

return 1;

}

else

return 0;

}

}

int ListArr :: Delet(int pos) // Deleting the element int the list

{

if(pos<=length)

{

int temp=array[pos-1];

for(int i=pos;i<length;i++)

array[i-1]=array[i];

length--;

Print();

return temp;

}

else

return -1;

}

int ListArr :: FindByEle(int ele) //Searching by element in the list

{

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

{

if(array[i]==ele)

return i;

}

return -1;

}

int ListArr :: FindByPos(int pos) //Searching the element at the given position

{

if(pos<=length)

return array[pos-1];

else

return -1;

}

void ListArr :: Print() //Printing the content in the list

{

cout<<"\nFrom Initial Position"<<endl;

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

{

cout<<array[i]<<" ";

}

cout<<"\nFrom Last Position\n";

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

{

cout<<array[i]<<" ";

}

cout <<"\nLength is "<<length;

cout <<endl;

}

**Application File .....**

#include"hListarray.h"

main()

{

int n,p,element,ch=1;

cout<<"Enter the Maximum No. Of Elements to Store ";

cin>>n;

ListArr l(n);

l.GetData();

while(ch!=6)

{

cout<<"\n1.Insert\n2.Delete\n3.Find by element\n4.Find by Position\n5.Print\n6.

Exit\nEnter your Choice:";

cin >> ch;

switch(ch)

{

case 1: cout<<"Enter the element to be inserted ";

cin>>element;

cout<<"Enter the Position ";

cin >> p;

int flag;

flag = l.Insert(element,p);

if(flag==1)

{

cout<<"Insertion is SUCCESS\n";

}

else

cout<<"Limit Exceeds\n";

break;

case 2: cout<<"Enter the Position to Delete the Element:";

cin>>p;

int d;

d=l.Delet(p);

if(d!=-1)

cout<<"Deleted Item is "<< d<<"\n";

else

cout<<"No such posotion in tha list\n";

break;

case 3: cout<<"Enter the Element to be found";

cin >> element;

int f;

f= l.FindByEle(element);

if(f!=-1)

{

cout<<"Given element is found at the Position "<< f+1<<endl;

}

else

cout<<"No such element if found\n ";

break;

case 4: cout<<"Enter the Position to retrive the element:";

cin >> p;

f=l.FindByPos(p);

if(f!=-1)

{

cout<<"Element at the position "<<p<<" is "<<f+1<<endl;

}

else

cout<<"No such position is found\n ";

break;

case 5: l.Print();

break;

case 6: cout<<"Thank You\n";

break;

default: cout << "Invalid Choice";

}

}

}