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Roll no.-30

practical no.-1.1

practical name-Implementation of program based an Array.

#include<iostream.h>

#include<conio.h>

class LIST\_30

{

private:

int \*A,n,s;

public:

LIST\_30(int par);

void ADD\_END(int ele);

void ADD\_BEG(int ele);

void ADD\_POS(int ele,int pos);

int DEL\_END();

int DEL\_BEG();

int DEL\_POS(int pos);

void DISPLAY();

};

LIST\_30 :: LIST\_30(int par)

{

n=0, s=par;

A= new int[s+1];

}

void LIST\_30 :: ADD\_END(int ele)

{

if(n==s)

{

cout<<"\nList is full."<<endl;

return;

}

n=n+1;

A[n]=ele;

}

void LIST\_30 :: ADD\_BEG(int ele)

{

if(n==s)

{

cout<<"\nList is full"<<endl;

return;

}

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

{

A[i+1]=A[i];

}

A[1]=ele;

n++;

}

void LIST\_30 :: ADD\_POS(int ele,int pos)

{

if(n==s)

{

cout<<"\nList is full"<<endl;

return;

}

if(pos>=1 && pos<=n+1)

{

for(int i=n;i<=pos;i--)

{

A[i+1]=A[i];

}

A[pos]=ele;

}

else

{

cout<<"Position is invalid";

}

}

int LIST\_30 :: DEL\_END()

{

int ele;

if(n==0)

{

cout<<"\nList is empty."<<endl;

return NULL;

}

else

{

ele =A[n];

n=n-1;

return ele;

}

}

int LIST\_30 :: DEL\_BEG()

{

int ele;

if(n==0)

{

cout<<"\nList is empty."<<endl;

return NULL;

}

for(int i=2;i<=n;i++)

{

A[i-1]=A[i];

}

n++;

return ele;

}

int LIST\_30 :: DEL\_POS(int pos)

{

int ele;

if(n==0)

{

cout<<"\nList is empty"<<endl;

return NULL;

}

ele = A[pos];

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

{

A[i-1]=A[i];

}

n--;

return ele;

}

void LIST\_30 :: DISPLAY()

{

if (n==0)

{

cout<<"List is empty."<<endl;

return;

}

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

{

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

}

}

void MENU()

{

int opt, ele, pos,s;

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

cin>>s;

LIST\_30 obj(s);

do

{

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

cout<<"\n1. Add at end";

cout<<"\n2. Add at begining";

cout<<"\n3. Add at position";

cout<<"\n4. Delete from end";

cout<<"\n5. Delete from begining";

cout<<"\n6. Delete from position";

cout<<"\n7. List all element";

cout<<"\n8. Exit";

cout<<"\nEnter Option:";

cin>>opt;

switch(opt)

{

case 1:

cout<<"Enter the add at end ; ";

cin>>ele;

obj.ADD\_END(ele);

break;

case 2:

cout<<"Enter the element add at beg : ";

cin>>ele;

obj.ADD\_BEG(ele);

break;

case 3:

cout<<"Enter the element ; ";

cin>>ele;

cout<<"Enter the element position : ";

cin>>pos;

obj.ADD\_POS(ele,pos);

break;

case 4:

ele = obj.DEL\_END();

cout<<"Delete element is "<<ele;

break;

case 5:

ele= obj.DEL\_BEG();

cout<<"Delete elment is "<<ele;

break;

case 6:

cout<<"Enter the position :";

cin>>pos;

ele=obj.DEL\_POS(pos);

cout<<"Delete element is "<<ele;

break;

case 7:

obj.DISPLAY();

break;

case 8:

return;

default:

cout<<"----Invalid option----";

}

}while(1);

}

void main()

{

clrscr();

MENU();

getch();

}