**Program for Array :**

#include "iostream.h"

#include "conio.h"

class LIST\_71

{

private:

int \*A,s,n;

public:

LIST\_71(int);

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\_71::LIST\_71(int par)

{

n=0,s=par;

A = new int[s+1];

}

void LIST\_71::ADD\_END(int ele)

{

if(n==s)

{

cout<<"\n List is full."<<endl;

return;

}

n=n+1;

A[n]=ele;

}

void LIST\_71::ADD\_BEG(int ele)

{

if(n==s)

{

cout<<"\n List is full"<<endl;

return;

}

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

{

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

}

A[i]=ele;

n++;

}

void LIST\_71::ADD\_POS(int ele,int pos)

{

if(n==s)

{

cout<<"\n List 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\_71::DEL\_END()

{

int ele;

if(n==0)

{

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

return NULL;

}

else

{

ele = A[n];

n=n-1;

return ele;

}

}

int LIST\_71::DEL\_BEG()

{

int ele;

if(n==0)

{

cout<<"\n List is empty:"<<endl;

return NULL;

}

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

{

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

}

n++;

return ele;

}

int LIST\_71::DEL\_POS(int pos)

{

int ele;

if(n==0)

{

cout<<"\n List 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\_71 :: 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\_71 obj(s);

do

{

cout<<"\n choose to------";

cout<<"\n 1.add at end:";

cout<<"\n 2.add at begining:";

cout<<"\n 3.add at position:";

cout<<"\n 4.delete from end:";

cout<<"\n 5.delete from begning:";

cout<<"\n 6.delete from position:";

cout<<"\n 7.list all elements:";

cout<<"\n 8.exit:";

cout<<"\n enter option:";

cin>>opt;

switch(opt)

{

case 1:

cout<<"\n enter element to add:";

cin>>ele;

obj.ADD\_END(ele);

break;

case 2:

cout<<"\n enter element to add:";

cin>>ele;

obj.ADD\_BEG(ele);

break;

case 3:

cout<<"\n enter element to add:";

cin>>ele;

cout<<"\n enter position:";

cin>>pos;

obj.ADD\_POS(ele,pos);

break;

case 4:

cout<<"\n enter element for delte end";

ele = obj.DEL\_END();

break;

case 5:

ele = obj.DEL\_END();

cout<<"Deleted element is "<<ele;

break;

case 6:

cout<<"enter the position:";

cin>>pos;

ele = obj.DEL\_POS(pos);

cout<<"Deleted element is "<<ele;

break;

case 7:

obj.DISPLAY();

break;

case 8:

return;

default:

cout<<"\n Invalid option";

}

} while(1);

}

void main()

{

int ele;

clrscr();

MENU();

getch();

}