

```

#include <iostream>
#include<stdlib.h>
using namespace std;
void At_Beg();
void At_end();
void At_pos();
void del_beg();
void del_end();
void del_pos();
void Search();
int main()
{ int ch;
  int val;
  do
  { system("cls");
    cout<<"1.Insertion"<<endl;
    cout<<"2.Deletion"<<endl;
    cout<<"3.Searching"<<endl;
    cout<<"enter choice:";
    cin>>ch;
    switch(ch)
    {
    case 1:
    { system("cls");
      int choice;
      cout<<"1.Insertion At beg"<<endl;
      cout<<"2.Insertion At end"<<endl;
      cout<<"3.Insertion At position"<<endl;
      cin>>choice;
      if(choice==1)
      {
        At_Beg();
      }
      else if(choice==2)
      {
        At_end();
      }
      else if(choice==3)
      {
        At_pos();
      }
      else
      {
        cout<<"Wrong choice";
      }
      break;
    }
    case 2:
    { system("cls");
      int d_pos;
      cout<<"1.Deletion At beg"<<endl;
      cout<<"2.Deletion At end"<<endl;
      cout<<"3.Deletion At position"<<endl;
      cin>>d_pos;
      if(d_pos==1)
      {
        del_beg();
      }
      else if(d_pos==2)
      {
        del_end();
      }
      else if(d_pos==3)
      {
        del_pos();
      }
    }
  }
}

```

```

        else
        {
            cout<<"Wrong choice";
        }
        break;
    }
case 3:
{
    system("cls");
    Search();
    break;
}
default:
    cout<<"Wrong choice:";
}
cout<<"\nDo you want to do other Array operation"<<endl;
cout<<"If yes then enter 1 otherwise 0"<<endl;
cin>>val;
}while(val==1);
    return 0;
}
void At_Beg()
{
    int a[20],i,ele,n;
    cout<<"enter no. of elements";
    cin>>n;
    cout<<"Enter array";
    for(i=0;i<n;i++)
    {
        cin>>a[i];
    }
    cout<<"enter element";
    cin>>ele;
    n++;
    for(i=n-1;i>0;i--)
    {
        a[i]=a[i-1];
    }
    a[0]=ele;
    cout<<"Array after insertion";
    for(i=0;i<n;i++)
    {
        cout<<a[i]<<"\t";
    }
}
void At_end()
{
    int a[20],i,n,ele;
    cout<<"enter no. of elements";
    cin>>n;
    cout<<"enter array";
    for(i=0;i<n;i++)
    {
        cin>>a[i];
    }
    cout<<"enter element";
    cin>>ele;
    n++;
    a[n-1]=ele;
    cout<<"Array after insertion";
    for(i=0;i<n;i++)
    {
        cout<<a[i]<<"\t";
    }
}
}

```

```

void At_pos()
{
    int a[20],i,n,ele,pos;
    cout<<"enter no. of elements";
    cin>>n;
    cout<<"Enter array:";
    for(i=0;i<n;i++)
    {
        cin>>a[i];
    }
    cout<<"enter position";
    cin>>pos;
    cout<<"enter element";
    cin>>ele;
    n++;
    for(i=n-1;i>(pos-1);i--)
    {
        a[i]=a[i-1];
    }
    a[pos-1]=ele;
    cout<<"Array after insertion";
    for(i=0;i<n;i++)
    {
        cout<<a[i]<<'\\t';
    }
}

void del_beg()
{ int a[20],i,n;
  cout<<"enter no. of elements:";
  cin>>n;
  cout<<"enter array:";
  for(i=0;i<n;i++)
  {
      cin>>a[i];
  }
  n--;
  for(i=0;i<n;i++)
  {
      a[i]=a[i+1];
  }
  cout<<"Array after deletion";
  for(i=0;i<n;i++)
  {
      cout<<a[i]<<'\\t';
  }
}

void del_end()
{
    int a[20],i,n;
    cout<<"enter no. of elements:";
    cin>>n;
    cout<<"enter array:";
    for(i=0;i<n;i++)
    {
        cin>>a[i];
    }
    n--;
    cout<<"Array after deletion";
    for(i=0;i<n;i++)
    {
        cout<<a[i]<<'\\t';
    }
}

void del_pos()
{

```

```

int a[20],i,n,pos;
cout<<"enter no. of elements:";
cin>>n;
cout<<"enter array:";
for(i=0;i<n;i++)
{
    cin>>a[i];
}
cout<<"enter position:";
cin>>pos;
n--;
for(i=pos-1;i<n;i++)
{
    a[i]=a[i+1];
}
cout<<"Array after deletion";
for(i=0;i<n;i++)
{
    cout<<a[i]<<"\t";
}
}

void Search( )
{
    int a[20],i,n,ele,flag=0,pos;
    cout<<"enter no. of elements";
    cin>>n;
    cout<<"enter array";
    for(i=0;i<n;i++)
    {
        cin>>a[i];
    }
    cout<<"enter element";
    cin>>ele;
    for(int i=0;i<n;i++)
    {
        if(a[i]==ele)
        {
            pos=i;
            flag=1;
            break;
        }
    }
    if(flag==1)
    {
        cout<<"Position:"<<pos+1;
    }
    else
    {
        cout<<"Element does not exist";
    }
}
}

```