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```
                else
                {
                        r = mid - 1;
                }

        }
        cout<<"Not present "<<count<<endl;
        return count;
}

int main()

        int test_case,array_size,key;
        cout<<"Input Number of test cases"<<endl;
        cin>>test_case;
        int count = 0 ;
        for(int i = 0; i < test_case; i++)
        {
                cin>> array_size;
                int array[array_size];
                for(int j = 0;j <array_size ; j++)
                {
                        cin>> array[j];
                }
                cout<<"Input element to search"<<endl;
                cin>> key;
                int l = 0;
                int r = array_size;
                ExponentialSearch(array,array_size,key);
        }
        return 0;
```

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```
#include<iostream>
using namespace std;

int Iterative_BinarySearch(int array[], int l ,int r,int key, int count);

int ExponentialSearch(int array[],int array_size,int key)
{
        int count = 1;
        if(array[0] == key)
        {
                cout<<"Present"<<count<<endl;
                return count;
        }
        int i = 1;
        while(i < array_size && array[i] <= key)
        {
                i = i * 2;
                count = count + 1;
        }
        return Iterative_BinarySearch(array, int(i/2) ,min(i,array_size -1), key,count);
}

int Iterative_BinarySearch(int array[], int l ,int r,int key,int count)
{
        while (l <= r)
        {
                int mid = l + (r-l)/2;
                count = count + 1;
                if(array[mid] == key)
                {
                        cout<<"Present "<<count<<endl;
                        return count;
                }
```

Type here to search

iterative binary search - Notepad

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```
#include<iostream>
using namespace std;

int Iterative_BinarySearch(int array[], int l ,int r,int key)
{
        int count = 0;
        while (l <= r)
        {
                int mid = l + (r-l)/2;
                count = count + 1;
                if(array[mid] == key)
                {
                        cout<<"Present "<<count<<endl;
                        return count;
                }
                else if (array[mid] < key)
                {
                        l = mid +1;
                }
                else
                {
                        r = mid - 1;
                }

        }
        cout<<"Not present "<<count<<endl;
        return count;
}

int main()
{
        int test_case,array_size,key;
        cout<<"Input Number of test cases"<<endl;
```

Type here to search

jump search - Notepad

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```
#include<iostream>
#include<bits/stdc++.h>
using namespace std;

int JumpSearch(int array[], int array_size,int key)
{
        int step = sqrt(array_size);
        int prev = 0,count = 0;
        while (array[min(step,array_size)-1] < key)
        {
                count = count +1;
                prev = step;
                step = step + sqrt(array_size);
                if(prev >= array_size)
                {
                        cout<<"Not present "<<endl;
                        return count;
                }

        }
        while(array[prev] < key)
        {

                prev = prev + 1;

                if (prev == min(step,array_size))
                {
                        cout<<"Not present "<<count<<endl;
                        return count;
                }
                count = count + 1;
        }
        if (array[prev] == key)
```

Type here to search

```
#include<iostream>
Using namespace std;

int main(){

    int n;
    cin>>n;
    int arr[n];
    for(int i=0;i<n;i++){
        cin>>arr[i];
    }
    cout<<"Enter the number you want to find..";
    int temp;
    cin>>temp;
    bool isfound = false;
    for(int i=0;i<n;i++){
        if(arr[i] == temp){
            isfound = true;
            break;
        }
    }
    if(isfound)
    {
        cout<<"The number is present in the array\n";
    }
    else
    {
        cout<<"The number is not present in the array\n";
    }
    return 0;
}
```

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```
                else
                {
                        r = mid - 1;
                }

        }
        cout<<"Not present "<<count<<endl;
        return count;
}

int main()
{
        int test_case,array_size,key;
        cout<<"Input Number of test cases"<<endl;
        cin>>test_case;
        int count = 0 ;
        for(int i = 0; i < test_case; i++)
        {
                cin>> array_size;
                int array[array_size];
                for(int j = 0;j <array_size ; j++)
                {
                        cin>> array[j];
                }
                cout<<"Input element to search"<<endl;
                cin>> key;
                int l = 0;
                int r = array_size;
                Iterative_BinarySearch(array,l,r-1,key);

        }
        return 0;
}
```