




# 1. Write a program to apply binary search in array sorted in decreasing order.

```
binary search 2 >  assignment2.cpp >  main()
1  #include<iostream>
2  using namespace std;
3  int bs(int lo, int hi, int arr[], int t){
4      while(lo<=hi){
5          int mid = lo + (hi - lo)/2;
6          if(arr[mid]==t) return mid;
7          else if(arr[mid]>t) lo = mid + 1;
8          else hi = mid - 1;
9      }
10     return -1;
11 }
12 int main(){
13     int arr[] = {10,9,8,7,5,4,3,2,1};
14     int n = sizeof(arr)/4;
15     int t;
16     cout<<"enter the target: ";
17     cin>>t;
18     cout<<bs(0,n-1,arr,t);
19 }
```

## 2. You have a sorted array of infinite numbers, how would you search an element in the array?

binary search 2 >  assignment1.cpp > ...

```
1  #include<iostream>
2  using namespace std;
3  int main(){
4      int arr[]={10,9,8,7,6,5,4,3,2,1};
5      int n = 10;
6      int target = 6;
7      bool flag = false;
8      int low =0;
9      int high = n-1;
10     while(low<=high){
11         int mid = low + (high - low)/2;
12         if(arr[mid]==target)  flag = true;
13         else if(arr[mid]>target) high = mid -1;
14         else low = mid + 1;
15     }
16     if(flag==true) cout<<"the element is present.";
17     else cout<<"the element is not present.";
18 }
```