binary-search-algorithm.cpp

```
//write the binary search algorithm.

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

int binarysearch(int arr[], int k, int n);

int main(){
   int arr[] = {10,11,12,14,19,20,23,28,30};
   cout << "The element 19 is found at the index of " << binarysearch(arr,19,9);
   return 0;
}

int binarysearch(int arr[], int k, int n) {
   // code here
   int h = n-1;
   int l = 0;
   while(l <= h){
      n = l + (h - l) / 2;
      if(arr[n] == k){
         return n;
      }
      if(arr[n] < k){
         l = n+1;
      }else{
         h = n-1;
      }
   }
   return -1;
}
```

OUTPUT

```
PS S:\WorkSpace\CollegeWork\DataStructure> g++ .\binary-search-algorithm.cpp
PS S:\WorkSpace\CollegeWork\DataStructure> ./a
The element 19 is found at the index of 4
PS S:\WorkSpace\CollegeWork\DataStructure>
```