dsa\binary_search.cpp

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

int binarySearch(int arr[], int n, int key)
{
    int start= 0;
    int end= n-1 ;
    int mid= start + (end - start)/2 ;
    while(start<=end)
    {
        if(arr[mid]==key)
        return mid;

        if(key> arr[mid])  //go to right part of mid
        {
            start= mid+1 ;
        }
        else{              // go to left part of mid
          end= mid-1 ;
        }
        mid= start + (end - start)/2 ;   // updating the mid
    }
    return -1 ;
}

int main()
{
    int even[6]={2,4,5,9,12,18};  //even and odd arrays must be either in increasing order or in decreasing order
    int odd[5]={3,8,11,14,16};

    int evenIndex= binarySearch(even,6,12);
    cout<<"index of 12 is= "<<evenIndex<<endl;


    int oddIndex= binarySearch(odd,5,8);
    cout<<"index of 8 is= "<<oddIndex<<endl;

    return 0;
}
```