BINARY SEARCH

```
#include <iostream>
using namespace std;
int binarySearch(int arr[], int n, int key) {
      int left = 0, right = n - 1;
   while (left <= right) {
            int mid = left + (right - left) / 2;
   if (arr[mid] == key)
                  return mid;    // Element found
   else if (arr[mid] < key)
                  left = mid + 1;
   else
                  right = mid - 1;
      }
return -1;   // Element not found
}
int main() {
      int n, key;
  cout << "Enter number of elements: ";
      cin >> n;
int arr[n];
   cout << "Enter sorted elements:\n";
      for (int i = 0; i < n; i++) {
            cin >> arr[i];
      }
   cout << "Enter element to search: ";
```

```
    cin >> key;
  int result = binarySearch(arr, n, key);
   if (result != -1)
        cout << "Element found at index " << result;
    else
        cout << "Element not found";
  return 0;
}
```

Output

```
Enter number of elements: 5
Enter sorted elements:
2 4 6 8 10
Enter element to search: 8
Element found at index 3

=== Code Execution Successful ===
```