

Practical No. 1 (Binary Search)

Code:

```
1- class Main {
2-     public static int binarySearch(int numbers[], int key) {
3-         int start = 0;
4-         int end = numbers.length-1;
5-
6-         while(start <= end) {
7-             int mid = (start + end) / 2;
8-
9-             // Compare
10-            if(numbers[mid] == key) {
11-                return mid; // Found at mid
12-            }
13-            if(numbers[mid] < key) { // Check 2nd half
14-                start = mid + 1;
15-            } else { // Check 1st half
16-                end = mid - 1;
17-            }
18-        }
19-        return -1;
20-    }
21-
22-    public static void main(String[] args) {
23-        int nums[] = {2, 4, 6, 8, 10, 12, 14};
24-
25-        System.out.println("Key is at index: " + binarySearch(nums,
26-            50));
27-        System.out.println("Key is at index: " + binarySearch(nums,
28-            12));
29-    }
30-}
```

Output:

```
Key is at index: -1
Key is at index: 5
```

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