

SearchAlgorithms.java

```
1 /*
2  * Written by JJ Shepherd
3  */
4 public class SearchAlgorithms {
5
6     public static void main(String[] args)
7     {
8         int[] array = {5,6,7,8,9,10,11,12};
9         System.out.println(binarySearch(array,11,0,array.length-1));
10
11     }
12     public static boolean linearSearch(int[] a, int target)
13     {
14         for(int i=0;i<a.length;i++)
15             if(a[i] == target)
16                 return true;
17         return false;
18     }
19     public static boolean binarySearch(int[] a, int target, int start, int end)
20     {
21         if(start > end)
22             return false;
23         int mid = (start+end)/2;
24         if(a[mid] == target)
25             return true;
26         else if(a[mid] > target)
27             return binarySearch(a,target,start,mid-1);
28         else
29             return binarySearch(a,target,mid+1,end);
30     }
31 }
32 }
33
```