

1. Write a Binary search program to search the elements of the integer Array.

```

1 package DataStructures;
2 public class BinarySearch {
3     static int binarySearch(int a[], int beg, int end, int val)
4     {
5         int mid;
6         if(end >= beg)
7         {
8             mid = (beg + end)/2;
9             if(a[mid] == val) {
10                 return mid+1; } /* if the item to be searched is present at middle */
11             /* if the item to be searched is smaller than middle, then it can only
12 be in left subarray */
13             else if(a[mid] < val) {
14                 return binarySearch(a, mid+1, end, val); }
15             /* if the item to be searched is greater than middle, then it can only be
16 in right subarray */
17             else {
18                 return binarySearch(a, beg, mid-1, val); } }
19         return -1;
20     }
21     public static void main(String[] args) {
22         int a[] = {8, 10, 22, 27, 37, 44, 49, 55, 69}; // given array
23         int val = 37; // value to be searched
24         int n = a.length; // size of array
25         int res = binarySearch(a, 0, n-1, val); // Store result
26         System.out.print("The elements of the array are: ");
27         System.out.println();
28         for (int i = 0; i < n; i++) {
29             System.out.print(a[i] + " "); }
30         System.out.println();
31         System.out.println("Element to be searched is: " + val);
32         if (res == -1)
33             System.out.println("Element is not present in the array");
34         else
35             System.out.println("Element is present at " + res + " position of array");
36     }
37 }

```

Console Output:

```

<terminated> BinarySearch Java Application C:\Program Files\Java\jdk-17.0.1\bin\javaw.exe (
The elements of the array are:
8 10 22 27 37 44 49 55 69
Element to be searched is: 37
Element is present at 5 position of array

```

2. Create a login page using the Bootstrap and also include the Typescript and ES6 features like Loops, If-else conditions.

