SBA-10 Abdul Javid - 210932

1.write a binary search program to search the elements of the
Integer Array.

```java
import java.util.Scanner;

public class BinarySearch {

    static int binarySearch(int a[],int beg, int end, int val)
    {
        int mid;
        if(end>=beg)
        {
            mid = (beg + end)/2;
            if(a[mid] == val)
            {
                return mid+1;
            }
            else if(a[mid] < val)
            {
                return binarySearch(a,mid+1,end,val);
            }
            else
            {
                return binarySearch(a,beg,mid-1,val);
            }
        }
        return -1;
    }

    public static void main(String args[])
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter the size of array: ");
        int n = sc.nextInt();
        int a[] = new int[n];
        System.out.println("Enter the sorted array: ");
        for(int i=0;i<n;i++)
        {
            a[i] = sc.nextInt();
        }
        System.out.println("Element to be searched is : ");
        int val = sc.nextInt();
        int res = binarySearch(a,0,n-1,val);
        if(res==-1)
            System.out.println("Element is not present in array");
        else
            System.out.println("Element is present at "+res+" position of array");
    }
}
```

Output:

```
Enter the size of array:
6
Enter the sorted array:
1 8 14 21 27 39
Element to be searched is :
27
Element is present at 5 position of array
```