

Program 1: Linear Search Algorithm

```
package mounika1;
import java.util.Scanner;

public class linearSearch {

    public static void main(String[] args){

        int[] arr = {10,20,30,40,50};

        Scanner sc = new Scanner(System.in);
        System.out.println("Enter the element to be searched");
        int searchValue = sc.nextInt();
        int result = (int) linearing(arr,searchValue);

        if(result==-1){

            System.out.println("Element not in the array");
        } else {

            System.out.println("Element found at "+result+" and the search
key is "+arr[result]);
        }

    }

    public static int linearing(int arr[], int x) {

        int arrlength = arr.length;
        for (int i = 0; i < arrlength - 1; i++) {

            if (arr[i] == x) {

                return i;

            }

        }

        return -1;

    }

}
```

