File   Edit   Source   Refactor   Source   Navigate   Search   Project   Run   Window   Help

Package Explorer
- bikeproject
- dharshinij
- jav_pro
- javapro
- orcale

SortAndSearch.java

```java
1  package javapro;
2
3  import java.util.Random;
4  import java.util.Scanner;
5
6  public class SortAndSearch {
7      private static final int SIZE = 50;
8      private static int[] numbers = new int[SIZE];
9
10     public static void main(String[] args) {
11         fillArray();
12         displayArray("Unordered list");
13         int key = getSearchKey();
14         int position = linearSearch(key);
15         System.out.println(position != -1 ? "Found at position: " + position : "Not found");
16         bubbleSort();
17         displayArray("Ordered list");
18         position = linearSearch(key);
19         System.out.println(position != -1 ? "Found at position: " + position : "Not found");
20     }
21
22     private static void fillArray() {
23         Random rand = new Random();
24         for (int i = 0; i < SIZE; i++) {
25             numbers[i] = rand.nextInt(101);
26         }
27     }
28
29     private static void displayArray(String title) {
30         System.out.println(title);
31         for (int num : numbers) {
32             System.out.print(num + " ");
33         }
34         System.out.println();
35     }
36
37     private static int getSearchKey() {
38         Scanner scanner = new Scanner(System.in);
```

Task List

Find ... > All > Activate...

Outline
- javapro
  - SortAndSearch
    - SIZE : int
    - numbers : int[]
    - main(String[]) : void
    - fillArray() : void
    - displayArray(String) : void
    - getSearchKey() : int
    - linearSearch(int) : int
    - bubbleSort() : void

Problems   Javadoc   Declaration   Console

<terminated> SortAndSearch [Java Application] C:\Users\rjana\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_22.0.2.v20240802-1626\jre\bin\javaw.exe (20 Aug 2024, 8:59:21 am – 8:59:31 am) [pid: 9780]
Unordered list

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SortAndSearch.java

```java
37     private static int getSearchKey() {
38         Scanner scanner = new Scanner(System.in);
39         System.out.print("Enter a number to search: ");
40         return scanner.nextInt();
41     }
42
43     private static int linearSearch(int key) {
44         for (int i = 0; i < SIZE; i++) {
45             if (numbers[i] == key) return i;
46         }
47         return -1;
48     }
49
50     private static void bubbleSort() {
51         for (int i = 0; i < SIZE - 1; i++) {
52             for (int j = 0; j < SIZE - 1 - i; j++) {
53                 if (numbers[j] > numbers[j + 1]) {
54                     int temp = numbers[j];
55                     numbers[j] = numbers[j + 1];
56                     numbers[j + 1] = temp;
57                 }
58             }
59         }
60     }
61 }
62
```

Task List

Find   All   Activate...

Outline

- javapro
- SortAndSearch
  - SIZE : int
  - numbers : int[]
  - main(String[]) : void
  - fillArray() : void
  - displayArray(String) : void
  - getSearchKey() : int
  - linearSearch(int) : int
  - bubbleSort() : void

Problems @ Javadoc Declaration Console

<terminated> SortAndSearch [Java Application] C:\Users\rjana\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_22.0.2.v20240802-1626\jre\bin\javaw.exe (20 Aug 2024, 8:59:21 am – 8:59:31 am) [pid: 9780]

```
Unordered list
7 2 49 8 58 28 75 54 60 17 61 72 61 77 57 59 85 94 88 1 47 78 9 68 53 7 98 34 13 88 55 47 79 92 67 75 70 45 48 11 46 48 11 50 16 0 71 8 51 18
Enter a number to search: 61
Found at position: 10
Ordered list
0 1 2 7 7 8 8 9 11 11 13 16 17 18 28 34 45 46 47 47 48 48 49 50 51 53 54 55 57 58 59 60 61 61 67 68 70 71 72 75 75 77 78 79 85 88 88 92 94 98
Found at position: 32
```