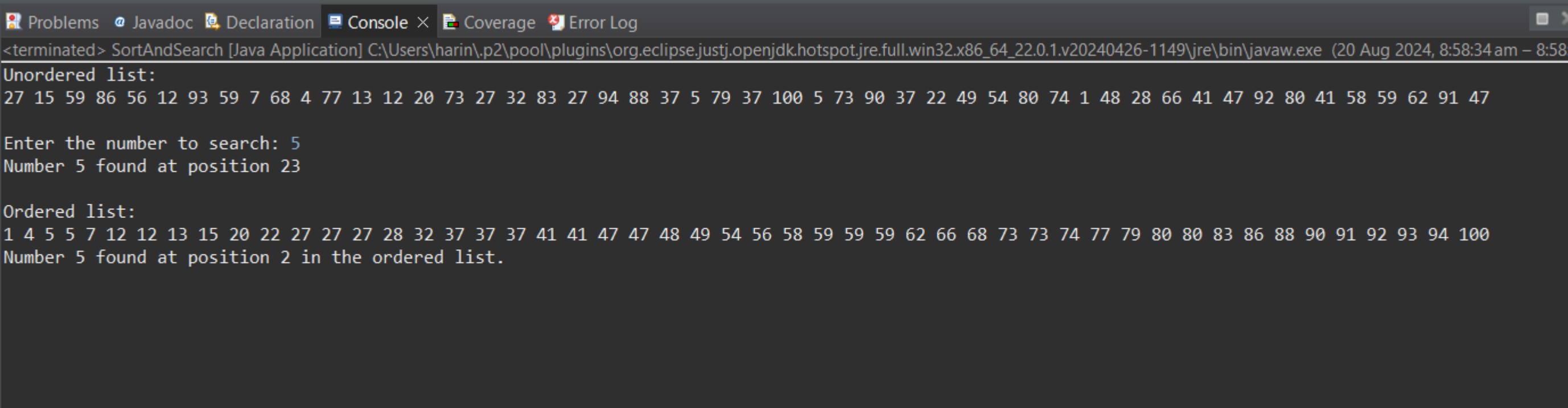


```

1 // Harini. R 192324108
2 //JP section-3 question-1
3 package test;
4
5 import java.util.Random;
6 import java.util.Scanner;
7
8 public class SortAndSearch {
9     public static void main(String[] args) {
10         int[] numbers = new int[50];
11         Random rand = new Random();
12         for (int i = 0; i < numbers.length; i++) {
13             numbers[i] = rand.nextInt(101);
14         }
15         System.out.println("Unordered list:");
16         displayArray(numbers);
17         Scanner scanner = new Scanner(System.in);
18         System.out.print("\nEnter the number to search: ");
19         int searchValue = scanner.nextInt();
20         int position = linearSearch(numbers, searchValue);
21         if (position != -1) {
22             System.out.println("Number " + searchValue + " found at position " + position);
23         } else {
24             System.out.println("Number " + searchValue + " not found.");
25         }
26         bubbleSort(numbers);
27         System.out.println("\nOrdered list:");
28         displayArray(numbers);
29         position = linearSearch(numbers, searchValue);
30         if (position != -1) {
31             System.out.println("Number " + searchValue + " found at position " + position + " in the ordered list.");
32         } else {
33             System.out.println("Number " + searchValue + " not found in the ordered list.");
34         }
35
36         scanner.close();
37     }
38     private static void displayArray(int[] array) {

```

```
39     }
40     System.out.println();
41 }
42 private static int linearSearch(int[] array, int value) {
43     for (int i = 0; i < array.length; i++) {
44         if (array[i] == value) {
45             return i;
46         }
47     }
48     return -1;
49 }
50 private static void bubbleSort(int[] array) {
51     int n = array.length;
52     for (int i = 0; i < n - 1; i++) {
53         for (int j = 0; j < n - 1 - i; j++) {
54             if (array[j] > array[j + 1]) {
55                 int temp = array[j];
56                 array[j] = array[j + 1];
57                 array[j + 1] = temp;
58             }
59         }
60     }
61 }
62 }
63 }
```



Problems Javadoc Declaration Console × Coverage Error Log

<terminated> SortAndSearch [Java Application] C:\Users\harin\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_22.0.1.v20240426-1149\jre\bin\javaw.exe (20 Aug 2024, 8:58:34 am - 8:58:34 am)

Unordered list:

27 15 59 86 56 12 93 59 7 68 4 77 13 12 20 73 27 32 83 27 94 88 37 5 79 37 100 5 73 90 37 22 49 54 80 74 1 48 28 66 41 47 92 80 41 58 59 62 91 47

Enter the number to search: 5

Number 5 found at position 23

Ordered list:

1 4 5 5 7 12 12 13 15 20 22 27 27 27 28 32 37 37 37 41 41 47 47 48 49 54 56 58 59 59 59 62 66 68 73 73 74 77 79 80 80 83 86 88 90 91 92 93 94 100

Number 5 found at position 2 in the ordered list.