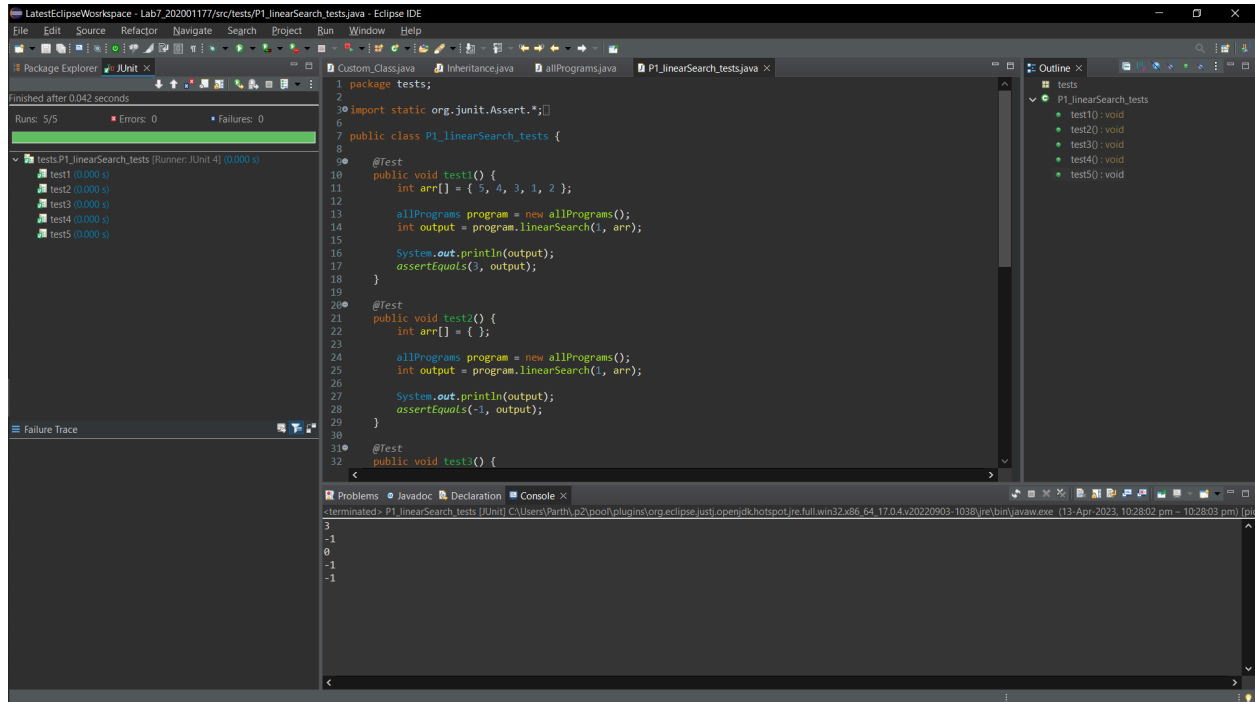


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## Program 1: LinearSearch



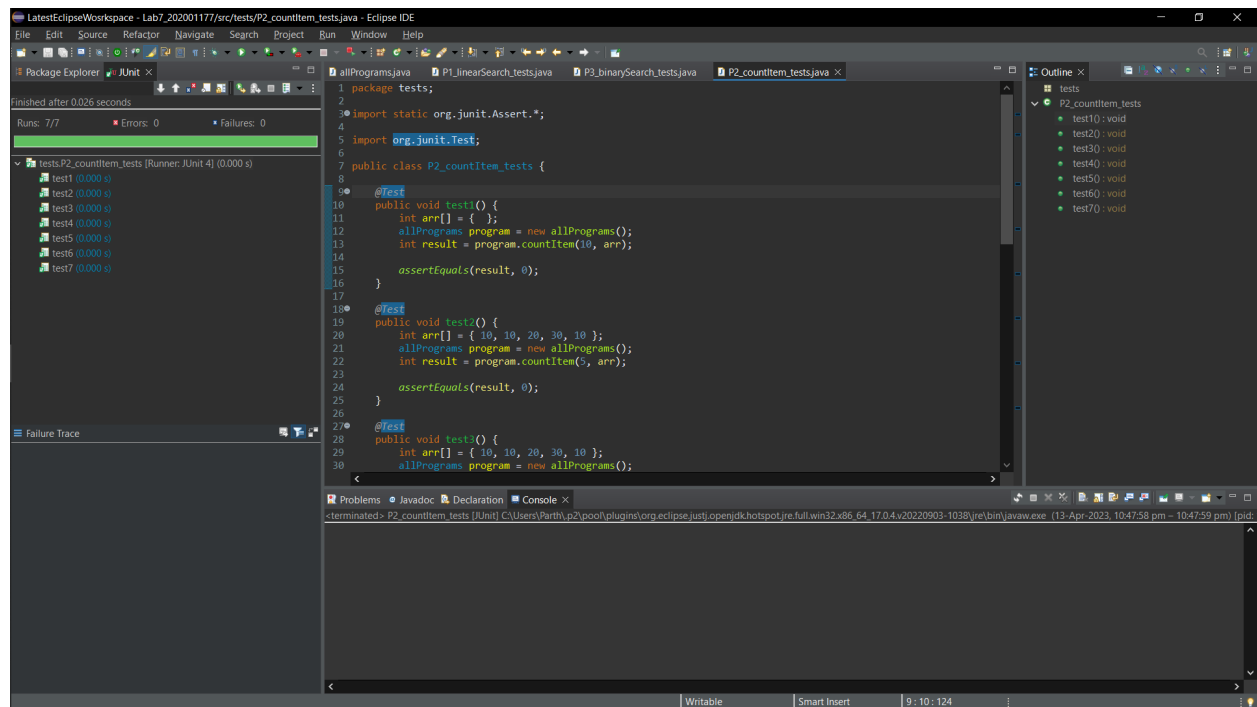
The screenshot displays the Eclipse IDE interface with the following components:

- Package Explorer:** Shows the project structure with a package named `tests`.
- JUnit Runner:** Indicates that the tests passed successfully. It shows "Runs: 5/5", "Errors: 0", and "Failures: 0". The execution time for the tests is 0.042 seconds.
- Source Editor:** Contains the Java code for `P1_linearSearch_tests.java`. The code includes three test methods: `test1`, `test2`, and `test3`. Each test method calls `linearSearch` on an array and asserts the result.
- Outline:** Lists the methods in the `P1_linearSearch_tests` class: `test10`, `test20`, `test30`, `test40`, and `test50`.
- Console:** Shows the output of the tests, including the array values and the results of the `linearSearch` method.

```
1 package tests;
2
3 import static org.junit.Assert.*;
4
5 public class P1_linearSearch_tests {
6
7     @Test
8     public void test1() {
9         int arr[] = { 5, 4, 3, 1, 2 };
10
11         allPrograms program = new allPrograms();
12         int output = program.linearSearch(1, arr);
13
14         System.out.println(output);
15         assertEquals(3, output);
16     }
17
18     @Test
19     public void test2() {
20         int arr[] = { };
21
22         allPrograms program = new allPrograms();
23         int output = program.linearSearch(1, arr);
24
25         System.out.println(output);
26         assertEquals(-1, output);
27     }
28
29     @Test
30     public void test3() {
```

```
3
-1
0
-1
-1
```

## Program 2 : countItem



## Program 3 : BinarySearch

```
1 package tests;
2
3 import static org.junit.Assert.*;
4
5 import org.junit.Test;
6
7 public class P3_binarySearch_tests {
8
9     @Test
10    public void test1() {
11        int arr[] = { 1,2,3,4,5 };
12        allPrograms program = new allPrograms();
13        int result = program.binarySearch(3, arr);
14
15        assertEquals(2, result);
16    }
17
18    @Test
19    public void test2() {
20        int arr[] = { 1,2,3,4,5 };
21        allPrograms program = new allPrograms();
22        int result = program.binarySearch(1, arr);
23
24        assertEquals(0, result);
25    }
26
27    @Test
28    public void test3() {
29        int arr[] = { 1,2,3,4,5 };
30        allPrograms program = new allPrograms();
31    }
```

tests.P3\_binarySearch\_tests (Runner: JUnit 4) (0.001 s)

- test1 (0.000 s)
- test2 (0.000 s)
- test3 (0.001 s)
- test4 (0.000 s)
- test5 (0.000 s)
- test6 (0.000 s)
- test7 (0.000 s)

Failure Trace

Problems Javadoc Declaration Console

<terminated> P3\_binarySearch\_tests [JUnit] C:\Users\Parth\p2\pool\plugins\org.eclipse.justi.openjdk.hotspot.jre.full.win32.x86\_64.17.0.4.v20220903-1038\jre\bin\javaw.exe (13-Apr-2023, 10:54:10 pm - 10:54:11 pm) [pid: 22]

## Program 4 : Triangle

```
1 package tests;
2
3 import static org.junit.Assert.*;
4
5 import org.junit.Test;
6
7 public class P4_triangle_tests {
8
9     @Test
10    public void test1() {
11        int a = 2, b = 2, c = 2;
12        allPrograms program = new allPrograms();
13        int result = program.triangle(a, b, c);
14
15        assertEquals(result, 0);
16    }
17
18    @Test
19    public void test2() {
20        int a = 3, b = 3, c = 4;
21        allPrograms program = new allPrograms();
22        int result = program.triangle(a, b, c);
23
24        assertEquals(result, 1);
25    }
26
27    @Test
28    public void test3() {
29        int a = 6, b = 5, c = 4;
30        allPrograms program = new allPrograms();
31        int result = program.triangle(a, b, c);
32
33        assertEquals(result, 2);
34    }
35 }
```

tests.P4\_triangle\_tests (Runner: JUnit 4) (0.000 s)

- test1 (0.000 s)
- test2 (0.000 s)
- test3 (0.000 s)
- test4 (0.000 s)
- test5 (0.000 s)
- test6 (0.000 s)
- test7 (0.000 s)
- test8 (0.000 s)
- test9 (0.000 s)
- test10 (0.000 s)
- test11 (0.000 s)
- test12 (0.000 s)
- test13 (0.000 s)

Failure Trace

Problems Javadoc Declaration Console

<terminated> P4\_triangle\_tests [JUnit] C:\Users\Parth\p2\pool\plugins\org.eclipse.justi.openjdk.hotspot.jre.full.win32.x86\_64.17.0.4.v20220903-1038\jre\bin\javaw.exe (13-Apr-2023, 11:09:24 pm - 11:09:25 pm) [pid: 22]

## Program 5 : Prefix

