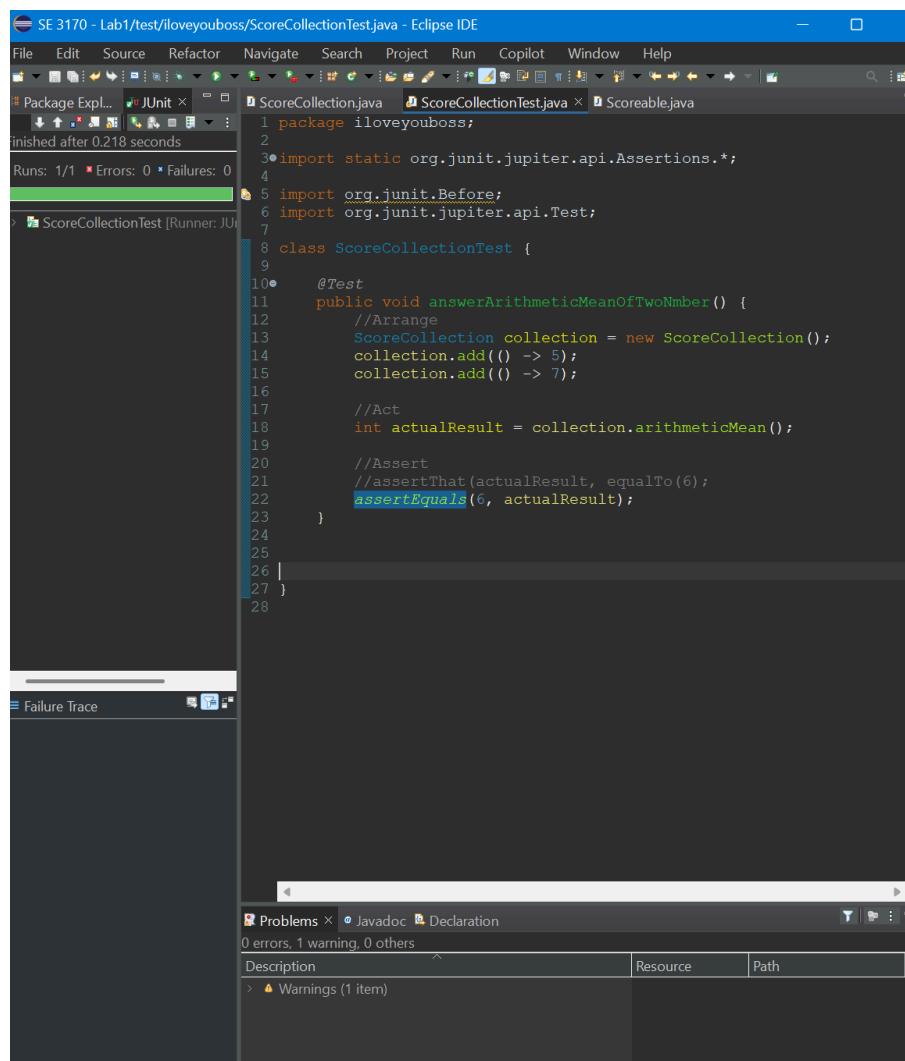


## Lab 1

### Part 1) Done

### Part 2)

- a) Done
- b) An assertion is a statement used in programming to check whether a condition is true. If the condition is false, the assertion typically causes the program to fail or throw an error. `AssertThat` is a method from a library that takes an actual value and expected value and expects different things such as "is", "contains", and "graterThan".
- c) Done
- d) Screenshot 1 is using `AssertEquals` which takes two values (expected and actual) and fails if they are not equal. Screenshot 2 is using `assert` that, but using `is` instead of `isEqual` because that is the correct syntax. This method fails if the two terms are not equal.



The screenshot shows the Eclipse IDE interface. The main editor displays the file `ScoreCollectionTest.java` with the following code:

```
1 package iloveyouboss;
2
3 import static org.junit.jupiter.api.Assertions.*;
4
5 import org.junit.Before;
6 import org.junit.jupiter.api.Test;
7
8 class ScoreCollectionTest {
9
10     @Test
11     public void answerArithmeticMeanOfTwoNmber() {
12         //Arrange
13         ScoreCollection collection = new ScoreCollection();
14         collection.add() -> 5);
15         collection.add() -> 7);
16
17         //Act
18         int actualResult = collection.arithmeticMean();
19
20         //Assert
21         //assertThat(actualResult, equalTo(6));
22         assertEquals(6, actualResult);
23     }
24
25
26 }
27
28
```

The left sidebar shows the Package Explorer with the project structure. The bottom status bar indicates "Runs: 1/1 Errors: 0 Failures: 0". The bottom right pane shows the Problems view with the following table:

Description	Resource	Path
> ⚠ Warnings (1 item)		

W

The screenshot shows the Eclipse IDE interface. The main editor displays the `ScoreCollectionTest.java` file, which is part of the `iloveyouboss` package. The code includes imports for JUnit and Hamcrest, and a test method `answerArithmeticMeanOfTwoNmber()` that uses `assertEquals` to verify the arithmetic mean of a collection.

```
1 package iloveyouboss;
2
3 import static org.junit.jupiter.api.Assertions.*;
4
5 import org.junit.Before;
6 import org.junit.jupiter.api.Test;
7 import static org.hamcrest.Matchers.*;
8 import static org.hamcrest.MatcherAssert.assertThat;
9
10
11
12 class ScoreCollectionTest {
13
14     @Test
15     public void answerArithmeticMeanOfTwoNmber() {
16         //Arrange
17         ScoreCollection collection = new ScoreCollection();
18         collection.add() -> 5;
19         collection.add() -> 7;
20
21         //Act
22         int actualResult = collection.arithmeticMean();
23
24         //Assert
25         assertThat(actualResult, equalTo(6));
26         assertEquals(6, actualResult);
27         assertThat(actualResult, is(6));
28     }
29 }
30
```

The left sidebar shows the Package Explorer with the `JUnit` package selected. Below it, the Run console displays the test results: "finished after 0.175 seconds", "Runs: 1/1", "Errors: 0", and "Failures: 0".

The bottom of the IDE shows the Problems view, which indicates "0 errors, 2 warnings, 0 others". The status bar at the bottom displays "Writable", "Smart Insert", and "30". The system tray at the bottom right shows the time as 10:28 AM on 1/30/2025.