Exercise 3: Assertions in JUnit

# Scenario:

You need to use different types of assertions in JUnit to validate the behavior of your code.

# Step 1: Add JUnit to Maven Project

In your pom.xml, add the following dependency:  
  
<dependency>  
 <groupId>junit</groupId>  
 <artifactId>junit</artifactId>  
 <version>4.13.2</version>  
 <scope>test</scope>  
</dependency>

# Step 2: Create the Test Class

Create a new file named AssertionsTest.java inside:  
src/test/java/com/example/  
  
Paste the following code:

# JUnit Test Code:

package com.example;  
  
import org.junit.Test;  
import static org.junit.Assert.\*;  
  
public class AssertionsTest {  
  
 @Test  
 public void testAssertions() {  
 // Assert equals  
 assertEquals(5, 2 + 3);  
  
 // Assert true  
 assertTrue(5 > 3);  
  
 // Assert false  
 assertFalse(5 < 3);  
  
 // Assert null  
 assertNull(null);  
  
 // Assert not null  
 assertNotNull(new Object());  
 }  
}

# Step 3: Run the Test in Eclipse

1. Right-click on AssertionsTest.java  
2. Select 'Run As' > 'JUnit Test'  
3. If all assertions are correct, you will see a green bar in the JUnit panel.

# Assertion Methods Used:

- assertEquals(expected, actual): Passes if expected == actual  
- assertTrue(condition): Passes if condition is true  
- assertFalse(condition): Passes if condition is false  
- assertNull(obj): Passes if obj is null  
- assertNotNull(obj): Passes if obj is not null

# Expected Output:

✓ testAssertions(com.example.AssertionsTest)  
  
Green bar indicates all tests passed successfully.