**TDD using Junit5 and Mockito**

**Exercise 4: Arrange-Act-Assert (AAA) Pattern, Test Fixtures, Setup and Teardown Methods in Junit**

**Calculator.java**

package ArrangeActAssert;

public class Calculator {

public int add(int a, int b) {

return a + b;

}

public int subtract(int a, int b) {

return a - b;

}

}

**CalculatorTest.java**

package ArrangeActAssert;

import org.junit.Before;

import org.junit.After;

import org.junit.Test;

import static org.junit.Assert.\*;

public class CalculatorTest {

private Calculator calculator;

// Setup method: runs before each test

@Before

public void setUp() {

System.*out*.println("Setting up test...");

calculator = new Calculator();

}

// Teardown method: runs after each test

@After

public void tearDown() {

System.*out*.println("Cleaning up after test...");

calculator = null;

}

@Test

public void testAddition() {

// Arrange

int a = 5;

int b = 3;

// Act

int result = calculator.add(a, b);

// Assert

*assertEquals*(8, result);

}

@Test

public void testSubtraction() {

// Arrange

int a = 10;

int b = 4;

// Act

int result = calculator.subtract(a, b);

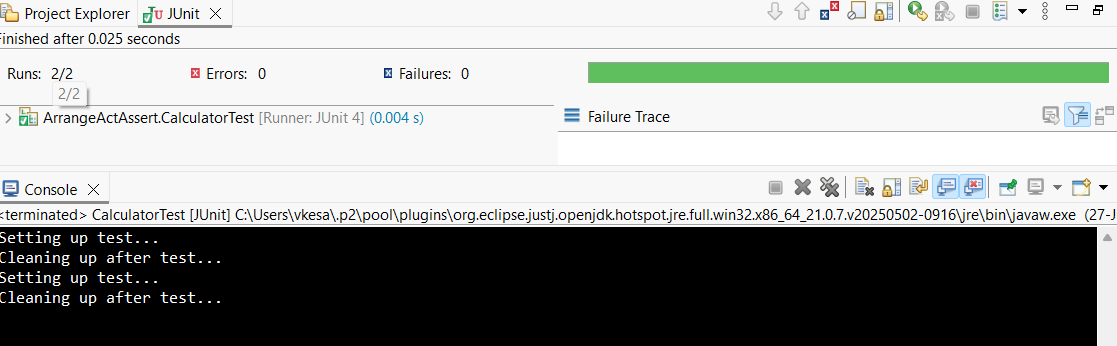
// Assert

*assertEquals*(6, result);

}

}

**OUTPUT**

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