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

**Teardown Methods in JUnit**

**Scenario:**

You need to organize your tests using the Arrange-Act-Assert (AAA) pattern and use setup

and teardown methods.

**Code:**

**Calculator.java**package com.example;

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 com.example;

import org.junit.Before;

import org.junit.After;

import org.junit.Test;

import static org.junit.Assert.\*;

public class CalculatorTest {

private Calculator calculator;

**@Before**

    public void setUp() {

        calculator = new Calculator();

        System.out.println("Setup complete");

    }

**@After**

    public void tearDown() {

        System.out.println("Cleanup complete");

    }

**@Test**

    public void testAddition() {

        // Arrange

        int a = 10;

        int b = 5;

// Act

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

// Assert

        assertEquals(15, result);

    }

**@Test**

    public void testSubtraction() {

        // Arrange

        int a = 10;

        int b = 3;

// Act

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

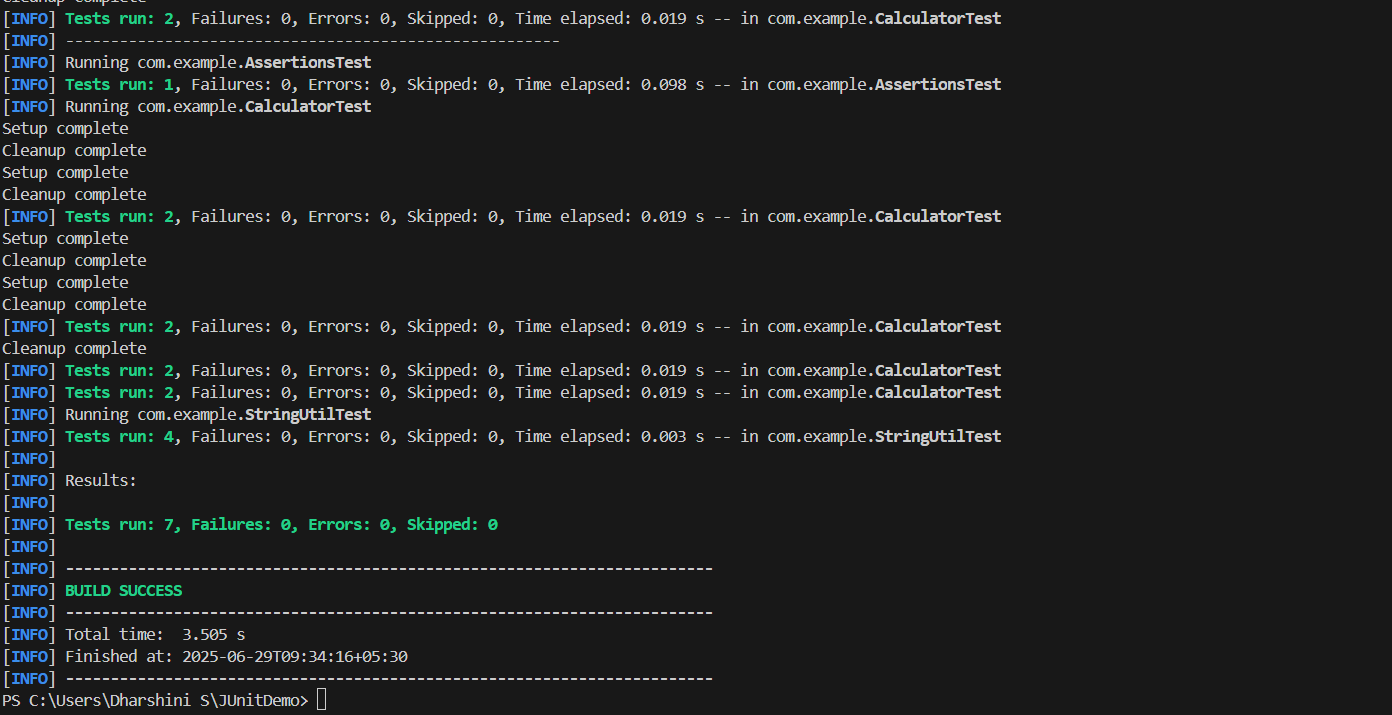
// Assert

        assertEquals(7, result);

    }

}

**Output:**

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