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

**Main Class:**

public class SimpleCounter {

private int count;

public SimpleCounter() {

count = 0;

}

public void increment() {

count++;

}

public void reset() {

count = 0;

}

public int getCount() {

return count;

}

}

**Test Class:**

import org.junit.After;

import org.junit.Before;

import org.junit.Test;

import static org.junit.Assert.\*;

public class SimpleCounterTest {

private SimpleCounter counter;

@Befor

public void setUp() {

counter = new SimpleCounter(); // Arrange

}

@After

public void tearDown() {

counter = null; // Cleanup

}

@Test

public void testIncrementOnce() {

// Act

counter.increment();

// Assert

assertEquals(1, counter.getCount());

}

@Test

public void testIncrementTwice() {

// Act

counter.increment();

counter.increment();

// Assert

assertEquals(2, counter.getCount());

}

@Test

public void testReset() {

// Act

counter.increment();

counter.reset();

// Assert

assertEquals(0, counter.getCount());

}

}

