**TDD using JUnit5 & Mockito**

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

## **Scenario:** I need to organise my tests using the Arrange-Act-Assert (AAA) pattern and use setup and teardown methods.

### ***Counter.java:***

| public class Counter {  private int count;   public Counter() {  count = 0;  }   public void increment() {  count++;  }  public int getCount() {  return count;  }   public void reset() {  count = 0;  } } |
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### ***CounterTest.java:***



| import org.junit.Test; import org.junit.Before; import org.junit.After; import static org.junit.Assert.\*;  public class CounterTest {  private Counter counter;   @Before  public void setUp() {  *// Arrange (partly): Initialize the Counter before each test*  counter = new Counter();  }   @After  public void tearDown() {  counter.reset();  }   @Test  public void testIncrement() {  *// Arrange: (The Counter is already set up in @Before)*  int initialCount = counter.getCount();   *//Act: Increment the counter*  counter.increment();   *//Assert: Check the count has increased by 1*  assertEquals(initialCount + 1, counter.getCount());  }   @Test  public void testReset() {  *// Arrange: (Counter is already set up in @Before)*  counter.increment(); *// Increment to change the state*   *// Act: Reset the counter*  counter.reset();   *// Assert: Check the count is back to 0*  assertEquals(0, counter.getCount());  } } |
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## **Output Screenshot:**