Ex4-Organize your **JUnit tests** using:

1. The **AAA pattern**: Arrange → Act → Assert.
2. @Before and @After annotations for **setup** and **teardown** methods.

**Calculator.java (Class under test)**

1. java
2. CopyEdit
3. public class Calculator {
4. public int add(int a, int b) {
5. return a + b;
6. }
7. }

**CalculatorTest.java (JUnit Test with AAA & Setup/Teardown)**

1. java
2. CopyEdit
3. import org.junit.Before;
4. import org.junit.After;
5. import org.junit.Test;
6. import static org.junit.Assert.\*;
7. public class CalculatorTest {
8. private Calculator calculator;
9. @Before // Setup method
10. public void setUp() {
11. calculator = new Calculator(); // Arrange
12. System.out.println("Setting up test environment");
13. }
14. @Test
15. public void testAddition() {
16. // Act
17. int result = calculator.add(2, 3);
18. // Assert
19. assertEquals(5, result);
20. }
21. @After // Teardown method
22. public void tearDown() {
23. calculator = null;
24. System.out.println("Tearing down test environment");
25. }
26. }

