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

Caluclator Class:

public class Caluclator {

    public int add(int a,int b)

    {

       return a+b;

    }

    public int subtract(int a,int b)

    {

        return a-b;

    }

    public int multiply(int a,int b)

    {

        return a\*b;

    }

}

Test Class:

import static org.junit.jupiter.api.Assertions.\*;

import org.junit.jupiter.api.AfterAll;

import org.junit.jupiter.api.BeforeAll;

import org.junit.jupiter.api.Test;

class TestCaluclator {

    static Caluclator calc=null;

    @BeforeAll

    static void setUp(){

        calc=new Caluclator();

        System.out.println("SetUp Method");

    }

    @Test

    void test1() {

        assertEquals(10, calc.add(7, 3));

    }

    @Test

    void test2()

    {

        assertEquals(-5, calc.subtract(10, 5));

    }

    @Test

    void test3()

    {

        assertEquals(55, calc.multiply(5, 11));

    }

    @AfterAll

    static void tearDownAfterClass(){

        calc=null;

        System.out.println("TearDown Method");

    }

}

Pom.xml file

<project xmlns="http://maven.apache.org/POM/4.0.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 https://maven.apache.org/xsd/maven-4.0.0.xsd">

<modelVersion>4.0.0</modelVersion>

<groupId>junit</groupId>

<artifactId>Junit5setup</artifactId>

<version>0.0.1-SNAPSHOT</version>

<dependencies>

<dependency>

<groupId>org.junit.jupiter</groupId>

<artifactId>junit-jupiter-api</artifactId>

<version>5.12.0</version>

<scope>test</scope>

</dependency>

</dependencies>

</project>

Output:

