**WEEK-2**

**MODULE-4**

**JUNIT TESTING EXERCISES**

**SUPERSET ID:6407550**

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

**pom.xml**

<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>com.example</groupId>

<artifactId>JUnitDemo</artifactId>

<version>0.0.1-SNAPSHOT</version>

<dependencies>

<dependency>

<groupId>junit</groupId>

<artifactId>junit</artifactId>

<version>4.13.2</version>

<scope>test</scope>

</dependency>

</dependencies>

<build>

<plugins>

<plugin>

<groupId>org.apache.maven.plugins</groupId>

<artifactId>maven-resources-plugin</artifactId>

<version>3.2.0</version>

</plugin>

</plugins>

</build>

</project>

**src/main/java/com.example**

**User.java**

package com.example;

public class User {

private String name;

private int age;

public User(String name, int age) {

this.name = name;

this.age = age;

}

public boolean isAdult() {

return age >= 18;

}

public String getGreeting() {

return "Hello, " + name + "!";

}

}

**src/test/java**

**UserTest.java**

package com.example;

import static org.junit.Assert.\*;

import org.junit.\*;

public class UserTest {

private static User adultUser;

private static User teenUser;

@BeforeClass

public static void setUpOnce() {

System.out.println("BeforeClass: Set up users once");

adultUser = new User("Alice", 25);

teenUser = new User("Bob", 15);

}

@AfterClass

public static void tearDownOnce() {

System.out.println("AfterClass: Clean up after all tests");

}

@Before

public void beforeEachTest() {

System.out.println("Before: Starting a test");

}

@After

public void afterEachTest() {

System.out.println("After: Finished a test\n");

}

@Test

public void testIsAdult() {

assertTrue(adultUser.isAdult());

assertFalse(teenUser.isAdult());

System.out.println("testIsAdult passed");

}

@Test

public void testGreeting() {

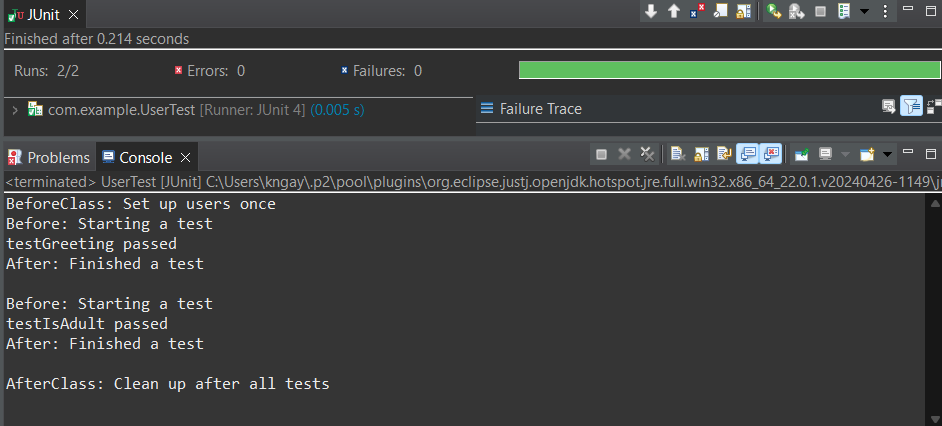
assertEquals("Hello, Alice!", adultUser.getGreeting());

System.out.println("testGreeting passed");

}

}

**OUTPUT:**

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