**Mockito exercises**

**Exercise 1: Mocking and Stubbing**

***Scenario:***

You need to test a service that depends on an external API. Use Mockito to mock the external API and stub its methods.

***Steps:***

1. Create a mock object for the external API.
2. Stub the methods to return predefined values.
3. Write a test case that uses the mock object.

**Code:**

import static org.mockito.Mockito.\*;

import org.junit.jupiter.api.Test;

import org.mockito.Mockito;

public class MyServiceTest {

@Test

public void testExternalApi() {

ExternalApi mockApi = Mockito.mock(

ExternalApi.class

);

when(mockApi.getData()).thenReturn("Mock Data");

MyService service = new MyService(mockApi);

String result = service.fetchData();

assertEquals("Mock Data", result);

}

}

**Exercise 2: Verifying Interactions**

***Scenario:***

You need to ensure that a method is called with specific arguments.

***Steps:***

1. Create a mock object.
2. Call the method with specific arguments.
3. Verify the interaction.

**Code:**

import static org.mockito.Mockito.\*;

import org.junit.jupiter.api.Test;

import org.mockito.Mockito;

public class MyServiceTest {

@Test

public void testVerifyInteraction() {

ExternalApi mockApi = Mockito.mock(ExternalApi.class);

MyService service = new MyService(mockApi);

service.fetchData();

verify(mockApi).getData();

}

}

**SOLUTION CHECKLIST (COMBINED EX\_1 & EX\_2)**

* Interface/class ExternalApi created with a method getData()
* Class MyService implemented with:
  + Constructor that accepts an ExternalApi instance
  + Method **fetchData**() that calls **externalApi.getData**()
* Test class **MyServiceTest** created under **src/test/java/com/cognizant**

***Exercise 1: Mocking and Stubbing***

* In **testExternalApi**():
  + Created mock object using **Mockito.mock**(ExternalApi.class)
  + Stubbed **getData**() to return "Mock Data" using **when**(...).**thenReturn**(...)
  + Created a **MyService** instance using the mock Called **fetchData**() and asserted result with:
* **assertEquals**("Mock Data", result);

***Exercise 2: Verifying Interactions***

* In **testVerifyInteraction**():
  + Created mock object of **ExternalApi**
  + Passed it to **MyService** and called **fetchData**()
  + Verified interaction using:
* **verify**(mockApi).getData();
* Required imports added:

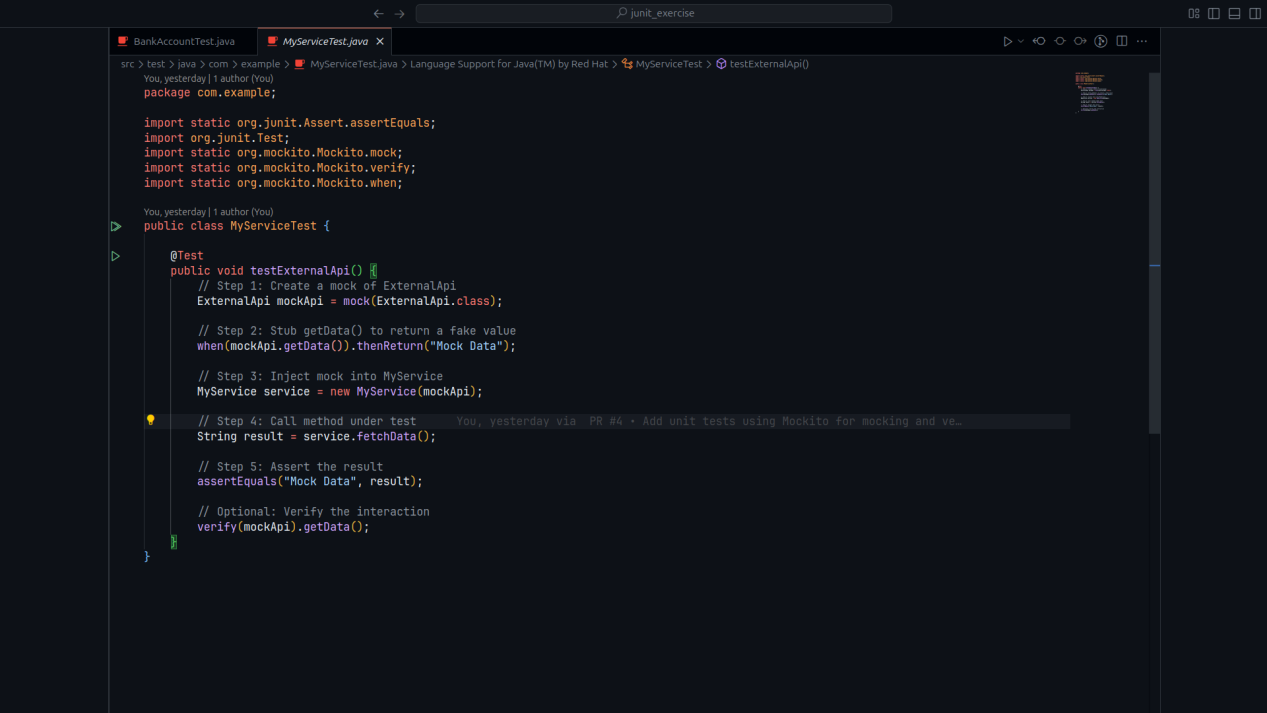
import static org.mockito.Mockito.\*;

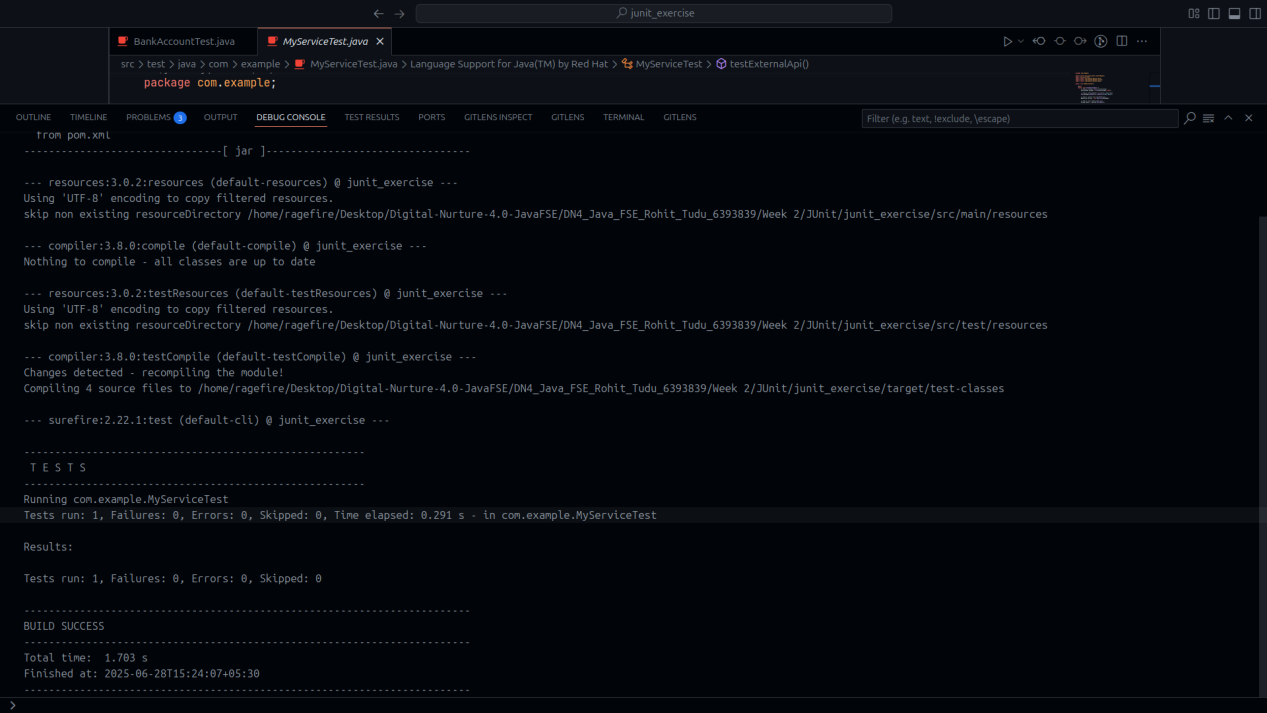
import static org.junit.Assert.assertEquals;

import org.junit.Test;

* Tests executed using mvn test and passed successfully

**OUTPUT**



**RUNNING TEST:**