**TDD using Junit5 and Mockito**

**EXERCISE 1: Mocking and Stubbing**

**CODE**

// File: MyServiceTest.java

import static org.mockito.Mockito.\*;

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

import org.junit.jupiter.api.Test;

import org.mockito.Mockito;

// External API class (to be mocked)

interface ExternalApi {

String getData();

}

// Service class that uses the external API

class MyService {

private ExternalApi api;

public MyService(ExternalApi api) {

this.api = api;

}

public String fetchData() {

return api.getData();

}

}

// Test class

public class MyServiceTest {

@Test

public void testExternalApi() {

// Step 1: Create mock object

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

// Step 2: Stub the method

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

// Step 3: Use the mock in service

MyService service = new MyService(mockApi);

String result = service.fetchData();

// Assertion

assertEquals("Mock Data", result);

// Print the result for screenshot proof

System.out.println("Test Passed! Output: " + result);

}

// Main method for running the test manually

public static void main(String[] args) {

MyServiceTest test = new MyServiceTest();

test.testExternalApi();

}

}

**OUTPUT**

