**Exercise 1: Mocking and Stubbing**

**ExternalApi.java**

public interface ExternalApi {

String getData();

void performAction();

}

MyService.java

public class MyService {

private final ExternalApi api;

public MyService(ExternalApi api) {

this.api = api;

}

public String fetchData() {

return api.getData();

}

public void doAction() {

api.performAction();

}

}

**MyServiceTest.java**

import com.mycompany.mavenproject3.ExternalApi;

import com.mycompany.mavenproject3.MyService;

import static org.junit.jupiter.api.Assertions.assertEquals;

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);

}

}

**Output**

