**Exercise 1: Mocking and Stubbing**

**ExternalApi.java**

package com.exc.jtest;

public interface ExternalApi {

String getData();

}

**MyService.java**

package com.exc.jtest;

public class MyService {

private ExternalApi api;

public MyService(ExternalApi api) {

this.api = api;

}

public String fetchData() {

return api.getData();

}

}

**MyServiceTest.java**

package com.example;

import org.junit.jupiter.api.Test;

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

import static org.mockito.Mockito.\*;

import com.exc.jtest.ExternalApi;

import com.exc.jtest.MyService;

public class MyServiceTest {

@Test

public void testExternalApi() {

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

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

MyService service = new MyService(mockApi);

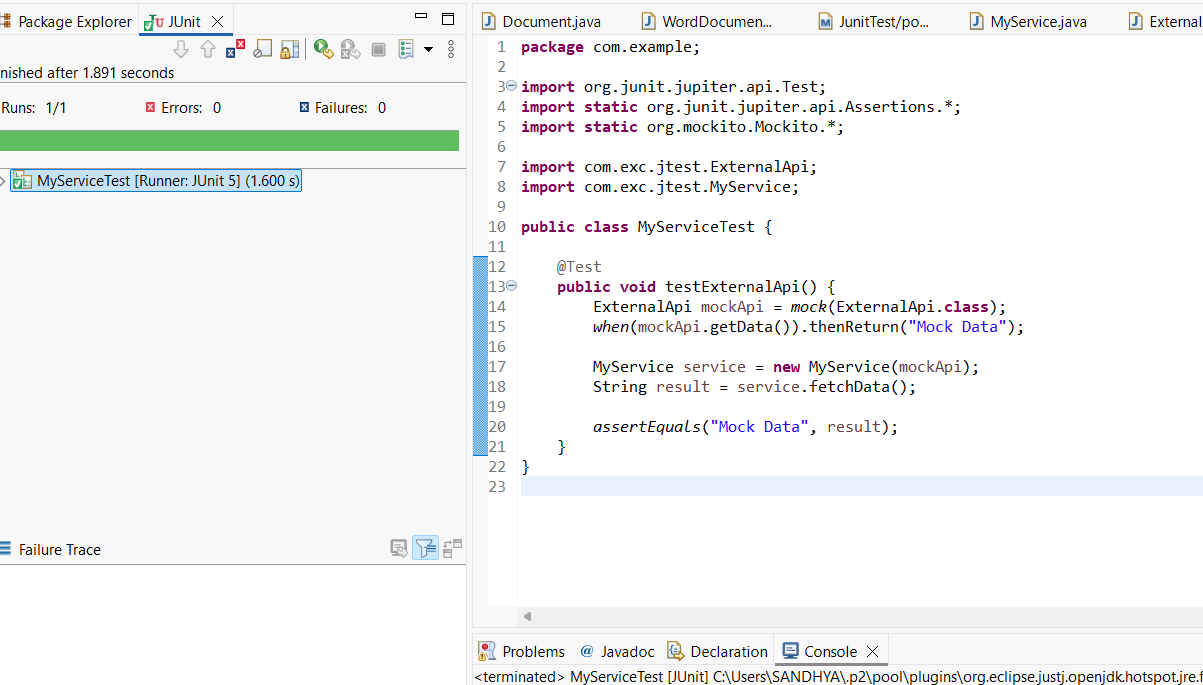
String result = service.fetchData();

*assertEquals*("Mock Data", result);

}

}

**OUTPUT:**



**Exercise 2: Verifying Interactions**

**ExternalApi.java**

package com.exc.jtest;

public interface ExternalApi {

String getData();

}

**MyService.java**

package com.exc.jtest;

public class MyService {

private ExternalApi api;

public MyService(ExternalApi api) {

this.api = api;

}

public String fetchData() {

return api.getData();

}

}

**MyServiceTest.java**

package com.example;

import org.junit.jupiter.api.Test;

import static org.mockito.Mockito.\*;

import com.exc.jtest.ExternalApi;

import com.exc.jtest.MyService;

public class MyServiceTest {

@Test

public void testVerifyInteraction() {

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

MyService service = new MyService(mockApi);

service.fetchData();

*verify*(mockApi).getData();

}

}

**OUTPUT:**

