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.

**Solution:**

1. **Class name ExternalApi.java**

public interface ExternalApi {

String getData();

}

**2.Class name MyService.java**

public class MyService {

private ExternalApi api;

public MyService(ExternalApi api) {

this.api = api;

}

public String fetchData() {

return api.getData();

}

}

**3.Test class name MyServiceTest.java**

import org.junit.jupiter.api.Test;

import static org.mockito.Mockito.\*;

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

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();

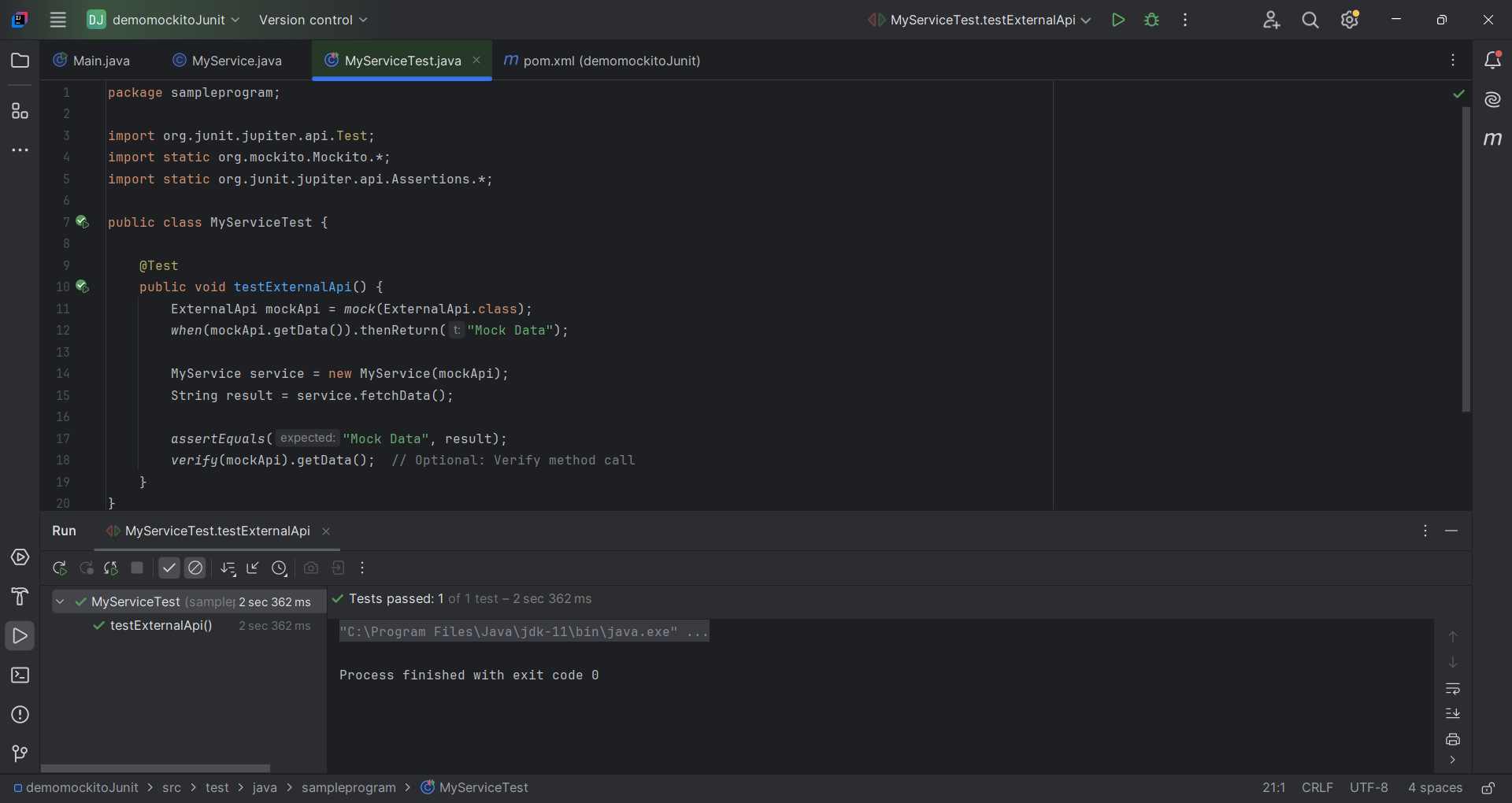
assertEquals("Mock Data", result);

verify(mockApi).getData(); // Optional: Verify method call

}

}

**Output:**

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