**Exercise – 1 Mocking and Stubbing**

**ExternalApi.java**

package com.example;

public interface ExternalApi {

    String getData();

}

**MyService.java**

package com.example;

public class MyService {

    private ExternalApi api;

    // Constructor injection

    public MyService(ExternalApi api) {

        this.api = api;

    }

    public String fetchData() {

        // Calls the real or mocked API

        return api.getData();

    }

}

**MyServiceTest.java**

package com.example;

import static org.mockito.Mockito.\*;

import static org.junit.Assert.\*;

import org.junit.Test;

import org.mockito.Mockito;

public class MyServiceTest {

    @Test

    public void testExternalApi() {

        //mock

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

        //Stub behavior

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

        //Use mock in your service

        MyService service = new MyService(mockApi);

        //Call method and verify result

        String result = service.fetchData();

        assertEquals("Mock Data", result);

    }

}

**Test Result using Mocking and Stubbing**

