Exercise 1: Mocking and Stubbing

package org.example;  
  
public interface ExternalApi {  
 String getData();  
}

package org.example;  
  
public class MyService {  
 private ExternalApi api;  
  
 public MyService(ExternalApi api) {  
 this.api = api;  
 }  
  
 public String fetchData() {  
 return api.getData();  
 }  
}

package org.example;  
  
import org.junit.Test;  
import static org.junit.Assert.*assertEquals*;  
import static org.mockito.Mockito.\*;  
  
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);  
 }  
}

Exercise 2: Verifying Interactions

package org.example;  
  
import org.junit.Test;  
import static org.mockito.Mockito.\*;  
  
public class MyServiceTest {  
  
 @Test  
 public void testVerifyInteraction() {  
 // Step 1: Create a mock  
 ExternalApi mockApi = *mock*(ExternalApi.class);  
  
 // Step 2: Call the method  
 MyService service = new MyService(mockApi);  
 service.fetchData();  
  
 // Step 3: Verify the interaction  
 *verify*(mockApi).getData(); // ✅ Passes if getData() was called once  
 }  
}