**Exercise 1: Mocking and Stubbing**

**ExternalApi.java**

public interface ExternalApi {  
 String getData();  
}

**MyService.java**

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

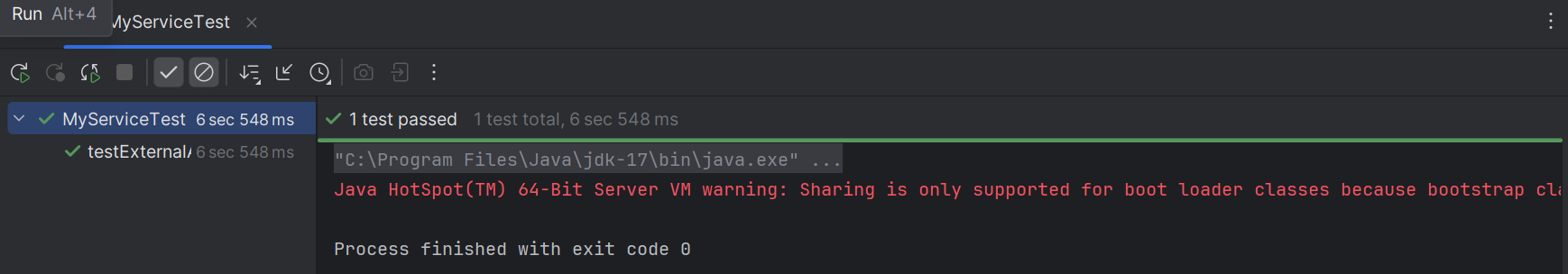
**MyServiceTest.java**

import org.example.\*;  
  
import org.junit.jupiter.api.Test;  
import org.mockito.Mockito;  
import static org.mockito.Mockito.\*;  
import static org.junit.jupiter.api.Assertions.\*;  
  
public class MyServiceTest {  
  
 @Test  
 void testExternalApi() {  
 // Step 1: Create mock object  
 ExternalApi mockApi = Mockito.*mock*(ExternalApi.class);  
  
 // Step 2: Stub method  
 *when*(mockApi.getData()).thenReturn("Mock Data");  
  
 // Step 3: Create service with mock  
 MyService service = new MyService(mockApi);  
  
 // Step 4: Call method and assert  
 String result = service.fetchData();  
 *assertEquals*("Mock Data", result);  
 }  
}

**pom.xml**

<?xml version="1.0" encoding="UTF-8"?>  
<project xmlns="http://maven.apache.org/POM/4.0.0"  
 xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"  
 xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 http://maven.apache.org/xsd/maven-4.0.0.xsd">  
 <modelVersion>4.0.0</modelVersion>  
  
 <groupId>org.example</groupId>  
 <artifactId>MockitoExample</artifactId>  
 <version>1.0-SNAPSHOT</version>  
  
 <!-- Mockito -->  
 <dependencies>  
 <dependency>  
 <groupId>org.junit.jupiter</groupId>  
 <artifactId>junit-jupiter-api</artifactId>  
 <version>5.10.0</version>  
 <scope>test</scope>  
 </dependency>  
  
 <dependency>  
 <groupId>org.junit.jupiter</groupId>  
 <artifactId>junit-jupiter-engine</artifactId>  
 <version>5.10.0</version>  
 <scope>test</scope>  
 </dependency>  
 <dependency>  
 <groupId>org.mockito</groupId>  
 <artifactId>mockito-core</artifactId>  
 <version>5.12.0</version>  
 <scope>test</scope>  
 </dependency>  
 </dependencies>  
  
  
 <properties>  
 <maven.compiler.source>17</maven.compiler.source>  
 <maven.compiler.target>17</maven.compiler.target>  
 <project.build.sourceEncoding>UTF-8</project.build.sourceEncoding>  
 </properties>  
  
</project>

**OutPut:**

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