**Exercise 3: Mocking File I/O**

**ExternalApi.java**

public interface ExternalApi {

String read();

void write(String content);

}

**MyService.java**

public class MyService {

private final ExternalApi fileReader;

private final ExternalApi fileWriter;

public MyService(ExternalApi fileReader, ExternalApi fileWriter) {

this.fileReader = fileReader;

this.fileWriter = fileWriter;

}

public String processFile() {

String content = fileReader.read();

fileWriter.write(content);

return "Processed " + content;

}

}

**MyServiceTest.java**

import static org.mockito.Mockito.\*;

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

import org.junit.jupiter.api.Test;

public class MyServiceTest {

@Test

public void testServiceWithMockFileIO() {

ExternalApi mockFileReader = mock(ExternalApi.class);

ExternalApi mockFileWriter = mock(ExternalApi.class);

when(mockFileReader.read()).thenReturn("Mock File Content");

MyService fileService = new MyService(mockFileReader, mockFileWriter);

String result = fileService.processFile();

assertEquals("Processed Mock File Content", result);

System.out.println("Result: " + result);

}

}

