

JUnit Testing Exercises

Exercise 1: Setting Up JUnit

Scenario:

You need to set up JUnit in your Java project to start writing unit tests.

Steps:

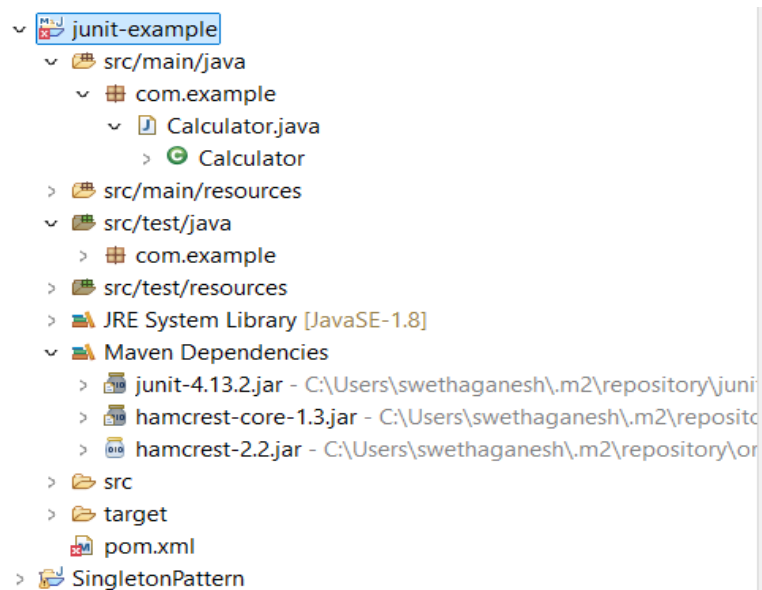
1. Create a new Java project in your IDE (e.g., IntelliJ IDEA, Eclipse).
2. Add JUnit dependency to your project. If you are using Maven, add the following to your

pom.xml:

```
<dependency>
<groupId>junit</groupId>
<artifactId>junit</artifactId>
<version>4.13.2</version>
<scope>test</scope>
</dependency>
```

3. Create a new test class in your project.

Project Structure:



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  
    https://maven.apache.org/xsd/maven-4.0.0.xsd">
```

```
<modelVersion>4.0.0</modelVersion>
```

```
<groupId>com.example</groupId>
```

```
<artifactId>junit-example</artifactId>
```

```
<version>0.0.1-SNAPSHOT</version>
```

```
<dependencies>
```

```
<dependency>
```

```
<groupId>junit</groupId>
```

```
<artifactId>junit</artifactId>
```

```
<version>4.13.2</version>
```

```
<scope>test</scope>
```

```
</dependency>
```

```
<dependency>
```

```
<groupId>org.hamcrest</groupId>
```

```
<artifactId>hamcrest</artifactId>
```

```
<version>2.2</version>
```

```
</dependency>
```

```
</dependencies>
```

```
</project>
```

Calculator.java:

```
package com.example;
```

```
public class Calculator {  
    public int add(int a, int b) {  
        return a + b;  
    }  
}
```

CalculatorTest.java:

```
package com.example;
```

```
import org.junit.Test;
```

```
import static org.junit.Assert.assertEquals;
```

```
public class CalculatorTest {
```

```
    @Test
```

```
    public void testAdd() {
```

```
        Calculator calc = new Calculator();
```

```
        int result = calc.add(2, 3);
```

```
        assertEquals(5, result); //  Test passes if 2+3 = 5
```

```
    }
```

```
}
```

OUTPUT:

