

Lab Activity - JUnit Testing and Eclipse

Note: This lab prepares you to create JUnit testing code in Assignment #1.

Part A - Getting Started.

1. Read Vogel's Tutorial on JUnit Testing: <http://www.vogella.com/tutorials/JUnit/article.html>.
2. Read the documentation of JUnit 4: <https://junit.org/junit4/>.

Part B.

1. Read the little example on the JUnit 4 website (Getting Started):
<https://github.com/junit-team/junit4/wiki/Getting-started>.
2. Use Eclipse to create the Java classes **Calculator** and **CalculatorTest**. You may use "lab4JUnit" as the package name.
3. Use Eclipse to run the JUnit test (CalculatorTest). Take a screenshot. Read Vogel's Tutorial for more information.
4. Do the exercise in Vogel's Tutorial on JUnit Testing (Section 8): <https://www.vogella.com/tutorials/JUnit/article.html>.
You may find the source code of **MyClass** (or similar version) here:
<https://github.com/vogellacompany/codeexamples-java/tree/master/com.vogella.junit.first>.
You are also welcome to create your own version of MyClass.
5. Use Eclipse to run the JUnit test (MyClassTest). Take a screenshot.

Part C.

1. Read about a **test suite** in Vogel's Tutorial on JUnit Testing (section 5).
2. Use Eclipse to create a test suite of at least two JUnit tests. You may choose Calculator or MyClass to be your class under test.
3. Use Eclipse to run the test suite. Take a screenshot.

Note: It is very important that you complete Parts D and E if you want to submit your Assignment #1 properly at Blackboard.

Part D – Export Java source files (and JUnit tests) to JAR files.

1. a) Right-click the "src" folder your Eclipse project. (Note: This folder has all the Java classes under test.)
b) Select "export."
c) Select "JAR files". Check the "src" box.
d) Check the option: export java SOURCE files and resources.
e) Select "Add directory entries."
f) Enter the name of the JAR file.
2. Right-click the "test" folder. (Note: This folder has all the JUnit tests.)
Repeat steps 1b) to 1e).

Note: It is very important that you check that the JAR files have the source code and proper directory structures!

3. Open a command prompt window and go to the directory that holds the JAR files.
4. Use following command two times to extract all the source files from the two JAR files:

```
>jar xvf xxxxx.jar
```
5. Use the File Explorer to check all the Java source files are stored at the right subfolders/directories.
6. Submit the two jar files at Blackboard.

Part E - Import JAR files into an Eclipse project.

1. a) Create a new Java project.
b) Create a new source folder named as “test”. (Note: Do not create a new folder!)
2. Right-click the “src” folder and import the corresponding JAR file.
3. Right-click the “test” folder and import the corresponding JAR file.

Part F - Submission Requirements.

Submit the screenshots and two JAR files at Blackboard.