Experiment - 03

- Create a new Maven Project with a Java Class

```java
public class MyCalc {

    public int sum(int a,int b) {
        return (a+b);
    }

    public int diff(int a,int b) {
        return (a-b);
    }

    public static void main(String[] args) {
        MyCalc ob = new MyCalc();
        System.out.println("Sum = "+ob.sum(2,3));
        System.out.println("Difference = "+ob.diff(8, 5));
    }

}
```

Problems @ Javadoc Declaration Console × Git Staging
<terminated> TestMyCalc [JUnit] /Library/Java/JavaVirtualMachines/jdk-13.0.2.jdk/Contents/Home/bin/java (04-Feb-2021, 9:39:10 am – 9:39:11 am)

- Run the goals and build the maven project.

```java
1  import static org.junit.Assert.*;
4
5  public class TestMyCalc {
6
7      @Test
8      public void test() {
9          //fail("Not yet implemented");
10         MyCalc test = new MyCalc();
11         assertEquals(5,test.sum(2,3));
12         assertEquals(3,test.diff(8, 5));
13
14     }
15
16 }
17
```

Problems @ Javadoc Declaration Console Git Staging

<terminated> BRM_Lab3 (6) [Maven Build] /Library/Java/JavaVirtualMachines/jdk-13.0.2.jdk/Contents/Home/bin/java (14-Feb-2021, 10:06:38 pm – 10:06:41 pm)

```
SLF4J: Found binding in [file:/Users/sarthak/eclipse/jee-2020-12/Eclipse.app/Contents/
SLF4J: See http://www.slf4j.org/codes.html#multiple_bindings for an explanation.
SLF4J: Actual binding is of type [org.slf4j.impl.SimpleLoggerFactory]
[INFO] Scanning for projects...
[INFO]
[INFO] --------------------------< upes.ddn:BRM_Lab3 >--------------------------
[INFO] Building BRM_Lab3 0.0.1-SNAPSHOT
[INFO] --------------------------------[ jar ]---------------------------------
[INFO]
[INFO] --- maven-clean-plugin:2.5:clean (default-clean) @ BRM_Lab3 ---
[INFO] Deleting /Users/sarthak/eclipse-workspace/BRM_Lab3/target
[INFO] ------------------------------------------------------------------------
[INFO] BUILD SUCCESS
[INFO] ------------------------------------------------------------------------
[INFO] Total time:  0.222 s
[INFO] Finished at: 2021-02-14T22:06:41+05:30
[INFO] ------------------------------------------------------------------------
```

- We then change the pom.xml to include the JUnit testing dependancy.

```xml
1 <project xmlns="http://maven.apache.org/POM/4.0.0" xmlns:xsi="http://www.w3.org/2
2     <modelVersion>4.0.0</modelVersion>
3     <groupId>upes.ddn</groupId>
4     <artifactId>BRM_Lab3</artifactId>
5     <version>0.0.1-SNAPSHOT</version>
6
7     <properties>
8         <maven.compiler.source>1.8</maven.compiler.source>
9         <maven.compiler.target>1.8</maven.compiler.target>
10    </properties>
11    <!-- https://mvnrepository.com/artifact/junit/junit -->
12    <dependencies>
13 <dependency>
14        <groupId>junit</groupId>
15        <artifactId>junit</artifactId>
16        <version>4.12</version>
17        <scope>test</scope>
18    </dependency>
19    </dependencies>
20
21 </project>
```

- We create a JUnit test class and run goals

```java
1 import static org.junit.Assert.*;
4
5 public class TestMyCalc {
6
7     @Test
8     public void test() {
9         //fail("Not yet implemented");
10        MyCalc test = new MyCalc();
11        assertEquals(5,test.sum(2,3));
12        assertEquals(3,test.diff(8, 5));
13
14    }
15
16 }
17
```

TestMyCalc

Runs: 1/1   ✕ Errors: 0   ✕ Failures: 0

TestMyCalc [Runner: JUnit 4] (0.003 s)
   test (0.003 s)

Failure Trace

Problems @ Javadoc Declaration Console ✕ Git Staging
<terminated> TestMyCalc [JUnit] /Library/Java/JavaVirtualMachines/jdk-13.0.2.jdk/Contents/Home/bin/java (04-Feb-2021, 9:39:10 am – 9:39:11 am)

- After the test is successful we run Maven goals on the JUnit TestClass.

```
<terminated> BRM_Lab3 (5) [Maven Build] /Library/Java/JavaVirtualMachines/jdk-13.0.2.jdk/Contents/Home/bin/java  (04-Feb-2021, 10:13:29 am – 10:13:34 am)
-------------------------------------------------------
Running TestMyCalc
Tests run: 1, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.063 sec

Results :

Tests run: 1, Failures: 0, Errors: 0, Skipped: 0

[INFO] ------------------------------------------------------------------------
[INFO] BUILD SUCCESS
[INFO] ------------------------------------------------------------------------
[INFO] Total time:  3.322 s
[INFO] Finished at: 2021-02-04T10:13:34+05:30
[INFO] ------------------------------------------------------------------------
```