

Build and Release Management LAB File

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LAB-3

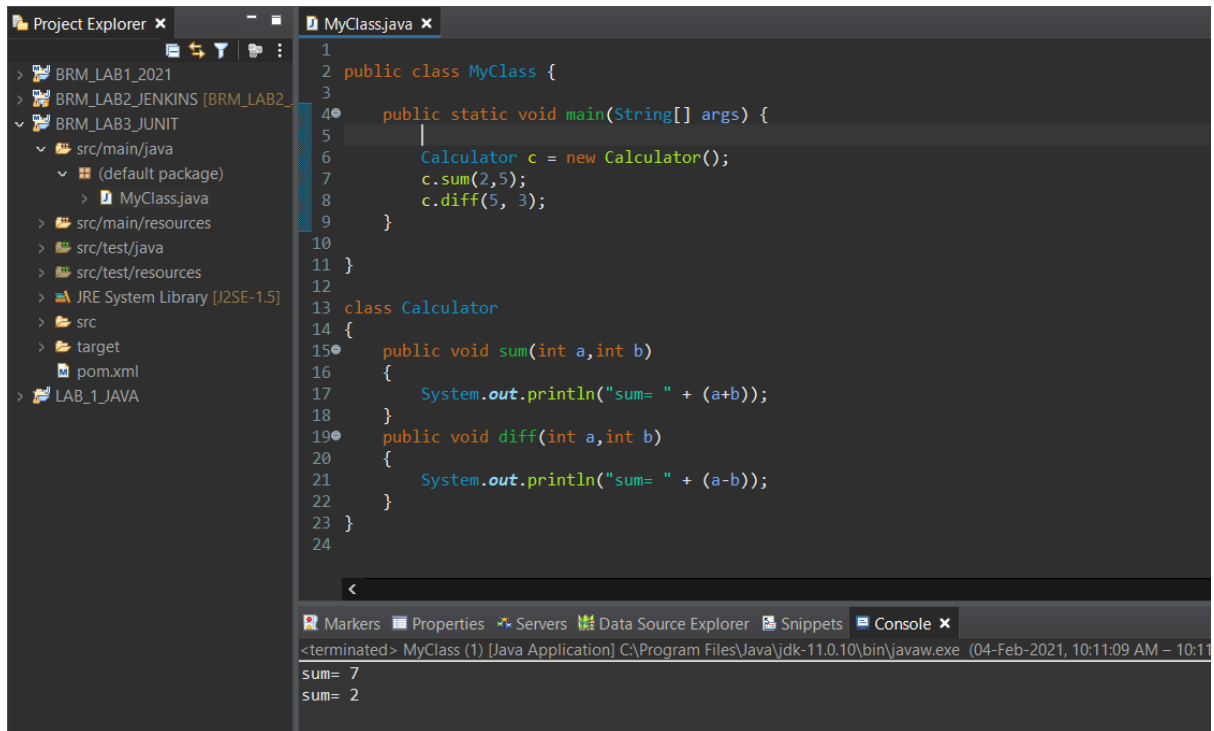
DATE : 04th FEB 2021

LAB 3:

Aim: Configuring Junit and running automated tests on the project.

Procedure:

1. Create a simple project, with some functions.

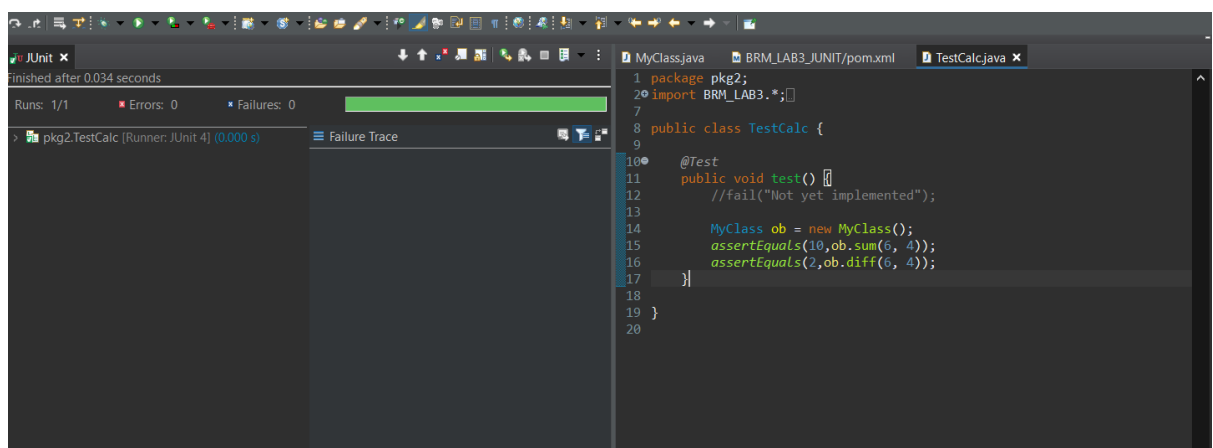


The screenshot shows an IDE with the Project Explorer on the left and the MyClass.java editor on the right. The Project Explorer shows a project structure with folders for BRM_LAB1_2021, BRM_LAB2_JENKINS, and BRM_LAB3_JUNIT. The MyClass.java file is open, showing a public class MyClass with a main method that creates a Calculator object and calls its sum and diff methods. The Calculator class has two methods: sum and diff. The console at the bottom shows the output of the program: sum= 7 and sum= 2.

```
1  
2 public class MyClass {  
3  
4     public static void main(String[] args) {  
5  
6         Calculator c = new Calculator();  
7         c.sum(2,5);  
8         c.diff(5, 3);  
9     }  
10  
11 }  
12  
13 class Calculator  
14 {  
15     public void sum(int a,int b)  
16     {  
17         System.out.println("sum= " + (a+b));  
18     }  
19     public void diff(int a,int b)  
20     {  
21         System.out.println("sum= " + (a-b));  
22     }  
23 }  
24
```

<terminated> MyClass (1) [Java Application] C:\Program Files\Java\jdk-11.0.10\bin\javaw.exe (04-Feb-2021, 10:11:09 AM - 10:11:10 AM)
sum= 7
sum= 2

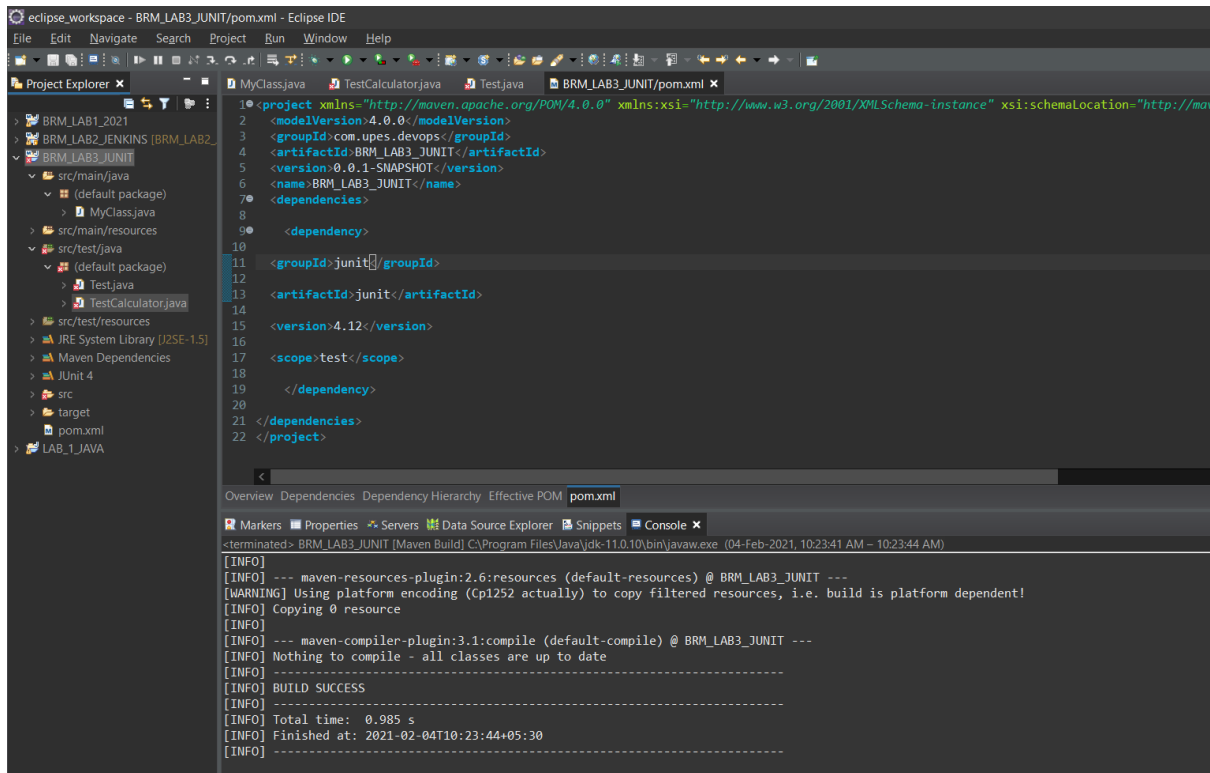
2. Making a new Junit class, to write the test cases



The screenshot shows an IDE with the JUnit test results on the left and the TestCalc.java file on the right. The JUnit test results show that the test passed successfully. The TestCalc.java file is open, showing a package declaration, imports, and a public class TestCalc with a test method. The test method creates a MyClass object and calls its sum and diff methods, asserting the results.

```
1 package pkg2;  
2 import BRM_LAB3.*;  
3  
4 public class TestCalc {  
5  
6     @Test  
7     public void test() {  
8         //fail("Not yet implemented");  
9  
10        MyClass ob = new MyClass();  
11        assertEquals(10,ob.sum(6, 4));  
12        assertEquals(2,ob.diff(6, 4));  
13    }  
14 }  
15
```

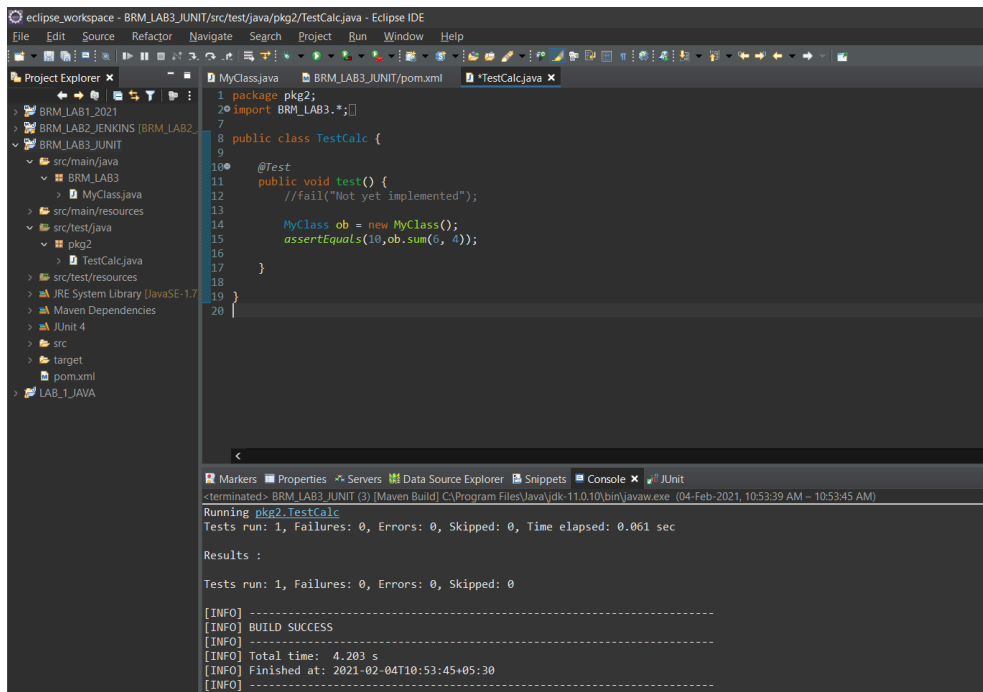
3. Adding Junit dependencies in the pom.xml file



```
1 <?xml version="1.0" encoding="UTF-8"?>
2 <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">
3   <groupId>com.upes.devops</groupId>
4   <artifactId>BRM_LAB3_JUNIT</artifactId>
5   <version>0.0.1-SNAPSHOT</version>
6   <name>BRM_LAB3_JUNIT</name>
7   <dependencies>
8
9     <dependency>
10
11       <groupId>junit</groupId>
12
13       <artifactId>junit</artifactId>
14
15       <version>4.12</version>
16
17       <scope>test</scope>
18
19     </dependency>
20
21   </dependencies>
22 </project>
```

```
[INFO]
[INFO] --- maven-resources-plugin:2.6:resources (default-resources) @ BRM_LAB3_JUNIT ---
[WARNING] Using platform encoding (Cp1252 actually) to copy filtered resources, i.e. build is platform dependent!
[INFO] Copying 0 resource
[INFO]
[INFO] --- maven-compiler-plugin:3.1:compile (default-compile) @ BRM_LAB3_JUNIT ---
[INFO] Nothing to compile - all classes are up to date
[INFO]
[INFO] BUILD SUCCESS
[INFO]
[INFO] Total time: 0.985 s
[INFO] Finished at: 2021-02-04T10:23:44+05:30
[INFO]
```

4. Building the project with automated tests written in Junit class.



```
1 package pkg2;
2 import BRM_LAB3.*;
3
4 public class TestCalc {
5
6     @Test
7     public void test() {
8         //fail("Not yet implemented");
9
10        MyClass ob = new MyClass();
11        assertEquals(10, ob.sum(6, 4));
12    }
13 }
14
15
16
17
18
19
20
```

```
<terminated> BRM_LAB3_JUNIT (3) [Maven Build] C:\Program Files\Java\jdk-11.0.10\bin\javaw.exe (04-Feb-2021, 10:53:39 AM - 10:53:45 AM)
Running pkg2.TestCalc
Tests run: 1, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.061 sec

Results :

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

[INFO]
[INFO] BUILD SUCCESS
[INFO]
[INFO] Total time: 4.203 s
[INFO] Finished at: 2021-02-04T10:53:45+05:30
[INFO]
```

RESULT:

Thus, successfully, committed and pushed our project in the GitHub repository.