

BUILD AND RELEASE MANAGEMENT LAB FILE

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COURSE : Btech CSE DevOps(Semester -4th) (B1)

Experiment 3

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OBJECTIVE

1. To create a Maven project and create a Java class in it.
2. Make a program in Java class with specific method that returns value,when given valid inputs.
3. Create a Junit test case that utilises the method of java class and performs test on it.
4. Add Junit dependencies in 'pom.xml' file.
5. In Junit test case run maven build and run 'test' command in it.

IMPLEMENTATION

- Creating a maven project.

New Maven Project

New Maven project

Select project name and location

☒ Create a simple project (skip archetype selection)

☒ Use default Workspace location

Location:

☐ Add project(s) to working set

Working set:

▶ Advanced

New Maven Project

New Maven project

Configure project

Artifact

Group Id:

Artifact Id:

Version:

Packaging:

Name:

Description:

Parent Project

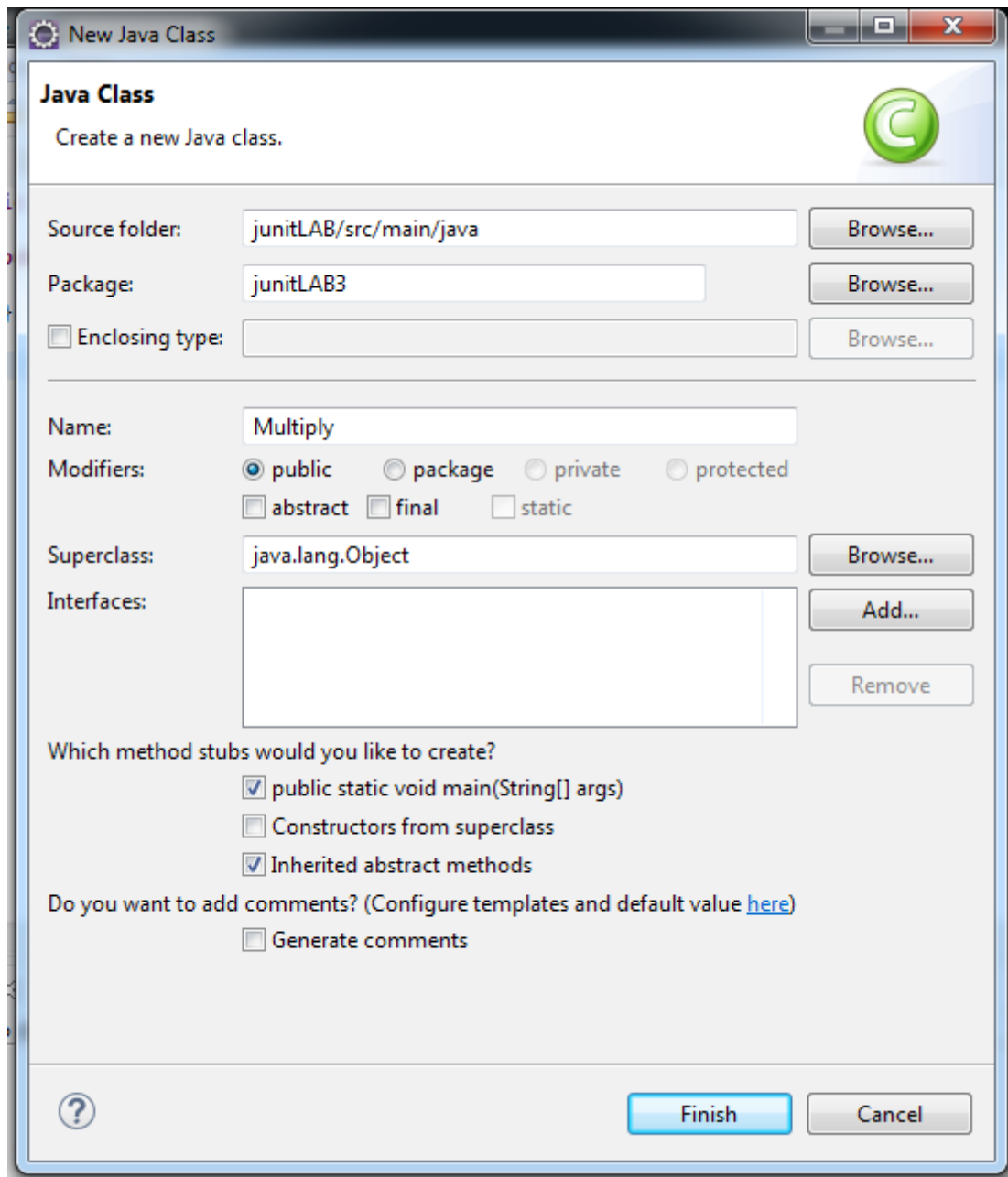
Group Id:

Artifact Id:

Version:

▶ Advanced

- Adding Java class in Maven project.



- Program in Java class with output.

```
Multiply.java
1 package junitLAB3;
2
3 public class Multiply {
4
5     Multiply()
6     {}
7
8     public int mul(int a,int b)
9     {
10         return a*b;
11     }
12
13     public static void main(String[] args) {
14         Multiply m=new Multiply();
15         System.out.println("Result =" +m.mul(7,8));
16     }
17 }
18
19
20
```

Console

<terminated> Multiply [Java Application] C:\Program Files\Java\jdk-11.0.9\bin\j
Result =56

- Adding Junit test case in Maven project.

New JUnit Test Case

Select the name of the new JUnit test case. You have the options to specify the class under test and on the next page, to select methods to be tested.

☐ New JUnit 3 test ☒ New JUnit 4 test ☐ New JUnit Jupiter test

Source folder:

Package:

Name:

Superclass:

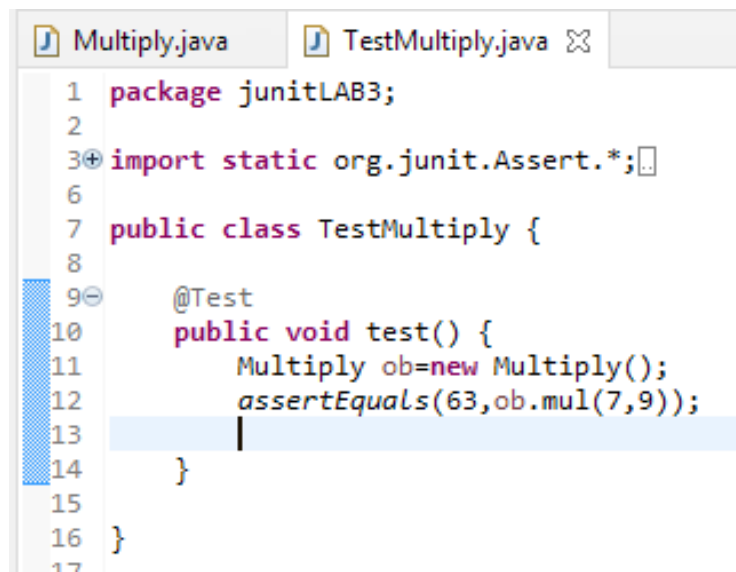
Which method stubs would you like to create?

☐ setUpBeforeClass() ☐ tearDownAfterClass()
☐ setUp() ☐ tearDown()
☐ constructor

Do you want to add comments? (Configure templates and default value [here](#))
☐ Generate comments

Class under test:

- Java program in Java test class.



```

1 package junitLAB3;
2
3 import static org.junit.Assert.*;
4
5
6
7 public class TestMultiply {
8
9     @Test
10    public void test() {
11        Multiply ob=new Multiply();
12        assertEquals(63,ob.mul(7,9));
13    }
14 }
15
16 }
17

```

- Adding dependencies of Junit in 'pom.xml' file of project.

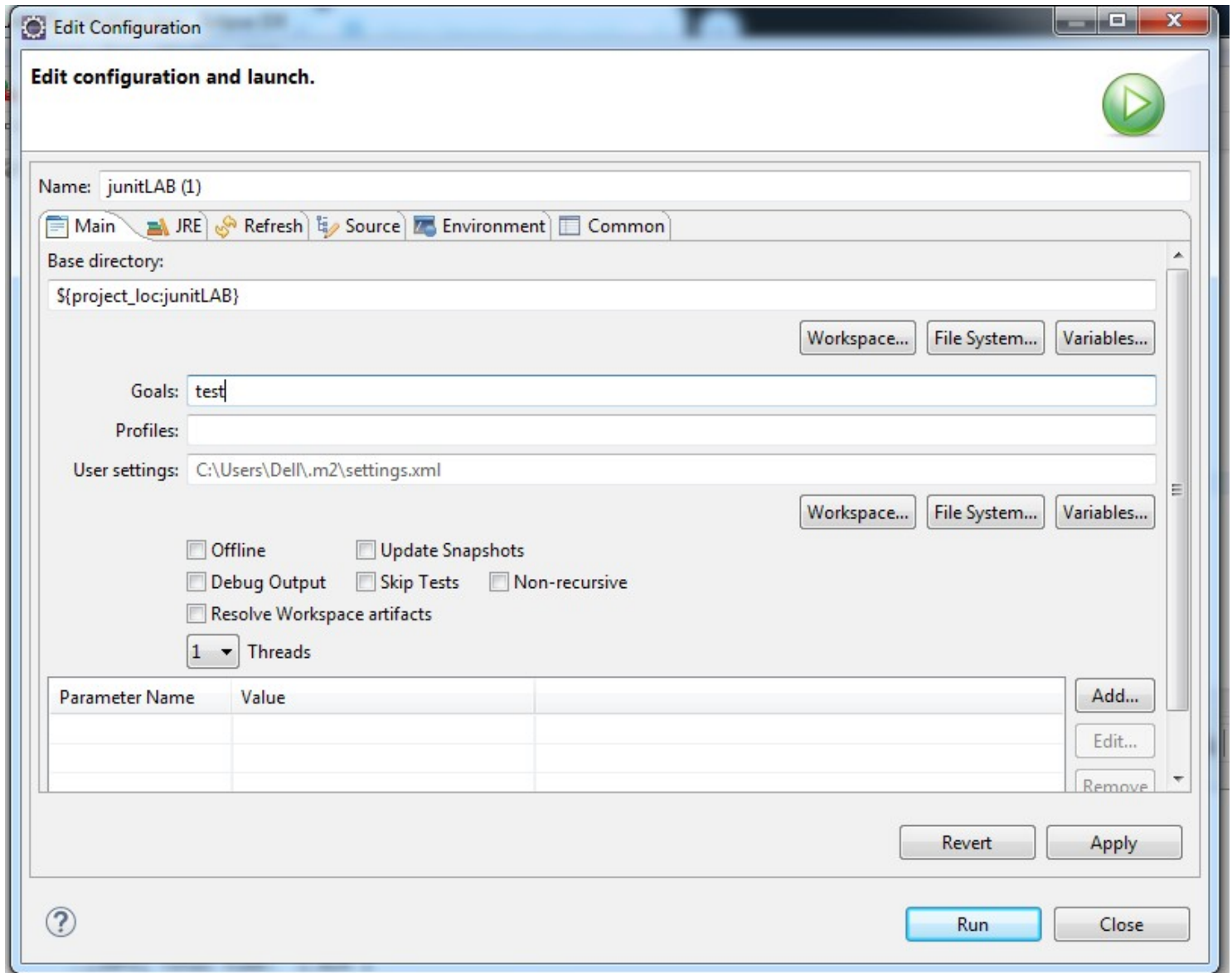


```

1 <project xmlns="http://maven.apache.org/POM/4.0.0" xmlns:xsi='
2   <modelVersion>4.0.0</modelVersion>
3   <groupId>Lab3</groupId>
4   <artifactId>junitLAB</artifactId>
5   <version>0.0.1-SNAPSHOT</version>
6   <dependencies>
7   <!-- https://mvnrepository.com/artifact/junit/junit -->
8   <dependency>
9       <groupId>junit</groupId>
10      <artifactId>junit</artifactId>
11      <version>4.13.1</version>
12      <scope>test</scope>
13  </dependency>
14  </dependencies>
15 </project>

```

- Running test command in Junit class in Maven build.



- Output of the test command.

```

Console
<terminated> junitLAB (6) [Maven Build] C:\Program Files\Java\jdk-11.0.9\bin\javaw.exe (Feb 10, 2021, 2:37:42 PM – 2:37:50 PM)
[INFO] Copying 0 resource
[INFO] --- maven-compiler-plugin:3.1:testCompile (default-testCompile) @ junitLAB ---
[INFO] Nothing to compile - all classes are up to date
[INFO] --- maven-surefire-plugin:2.12.4:test (default-test) @ junitLAB ---
[INFO] Surefire report directory: C:\Users\Dell\eclipse-workspace\junitLAB\target\surefire-reports

-----
T E S T S
-----

Running junitLAB3.TestMultiply
Tests run: 1, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.116 sec

Results :

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

[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 2.817 s
[INFO] Finished at: 2021-02-10T14:37:50+05:30
[INFO] -----

```