UPES
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UNIVERSITY OF PETROLEUM & ENERGY STUDIES

College of Engineering Studies

Dehradun

LAB FILE

Programme   : B. Tech in Computer Science and Engineering with Specialization in DevOps

Course   : Build and Release Management Lab

No. of credits : 1

Semester   : IV

Session   : Jan-May 2020

Batch   : 2018-2022

Faculty   : Dr. Hitesh Kumar Sharma
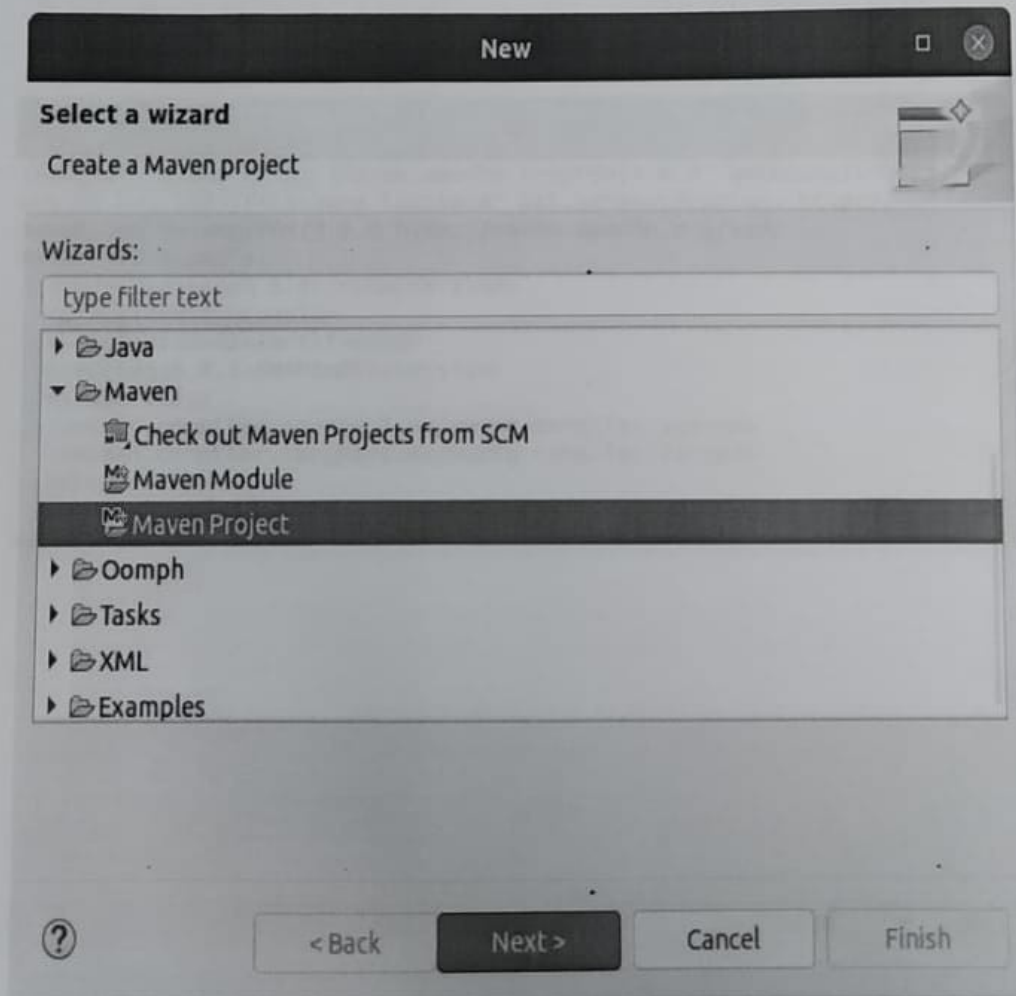
Submitted By:

Roll No _R171218016_

Name _Aman Kumar Gupta_

Faculty Signature

LAB EXERCISE 1

Aim:

1. Create a Java Project using Maven.
2. Run the following maven goals on the project:
   - Clean
   - Compile
   - Test-Compile
   - Install

New   ▢   ⊗

Select a wizard

Create a Maven project

Wizards:

type filter text

▶ 📂 Java
▼ 📂 Maven
    🖳 Check out Maven Projects from SCM
    📄 Maven Module
    📄 Maven Project
▶ 📂 Oomph
▶ 📂 Tasks
▶ 📂 XML
▶ 📂 Examples

⊙   < Back   Next >   Cancel   Finish

```java
package pkg1;

public class Calculation {
                public int multiply(int a, int b)
                {
                        int m=0;
                        m=a*b;
                        return m;
                }


}
```

```xml
<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">
  <modelVersion>4.0.0</modelVersion>
  <groupId>m1</groupId>
  <artifactId>A2</artifactId>
  <version>0.0.1-SNAPSHOT</version>
  <properties>
   <maven.compiler.source>1.6</maven.compiler.source>
   <maven.compiler.target>1.6</maven.compiler.target>
 </properties>

</project>
```

XML ▼   Tab Width: 8 ▼   Ln 5, Col 36   ▼   INS

```java
package pkg1;

public class Calculation {
                public int multiply(int a, int b)
                {
                        int m=0;
                        m=a*b;
                        return m;
                }


}
```
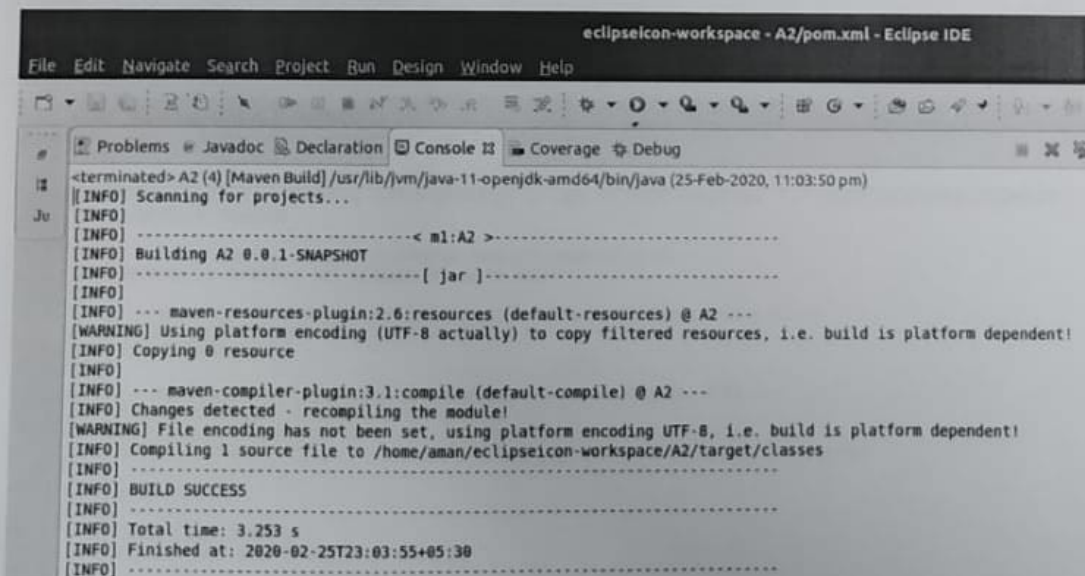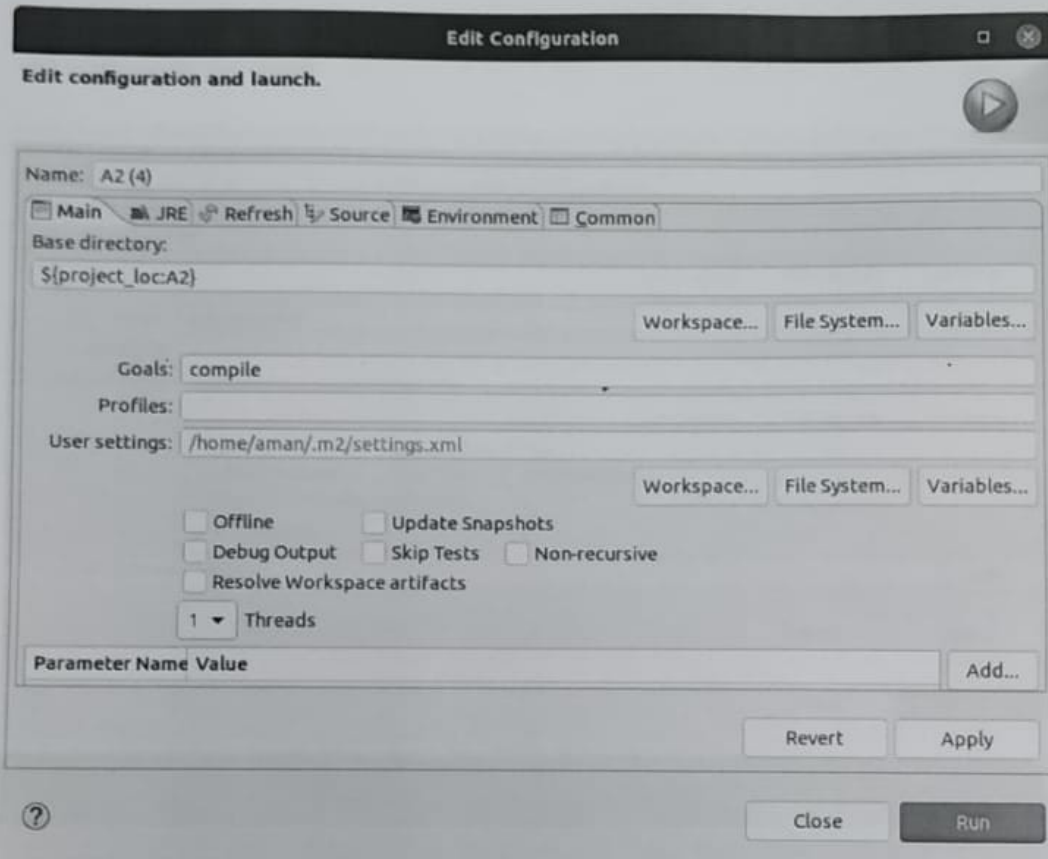
```xml
<project xmlns="http://maven.apache.org/POM/4.0.0" xmlns:xsi="http://
www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="http://
maven.apache.org/POM/4.0.0 http://maven.apache.org/xsd/
maven-4.0.0.xsd">
  <modelVersion>4.0.0</modelVersion>
  <groupId>m1</groupId>
  <artifactId>A2</artifactId>
  <version>0.0.1-SNAPSHOT</version>
  <properties>
   <maven.compiler.source>1.6</maven.compiler.source>
   <maven.compiler.target>1.6</maven.compiler.target>
  </properties>

</project>
```

Edit Configuration

Edit configuration and launch.

Name: A2 (4)

☐ Main ☐ JRE ☐ Refresh ☐ Source ☐ Environment ☐ Common

Base directory:

${project_loc:A2}

| Workspace... | File System... | Variables... |

Goals: compile

Profiles:

User settings: /home/aman/.m2/settings.xml

| Workspace... | File System... | Variables... |

☐ Offline   ☐ Update Snapshots
☐ Debug Output   ☐ Skip Tests   ☐ Non-recursive
☐ Resolve Workspace artifacts

[1 ▼] Threads

Parameter Name Value   [Add...]

[Revert]   [Apply]

⑦   [Close]   [Run]

---

eclipseicon-workspace - A2/pom.xml - Eclipse IDE
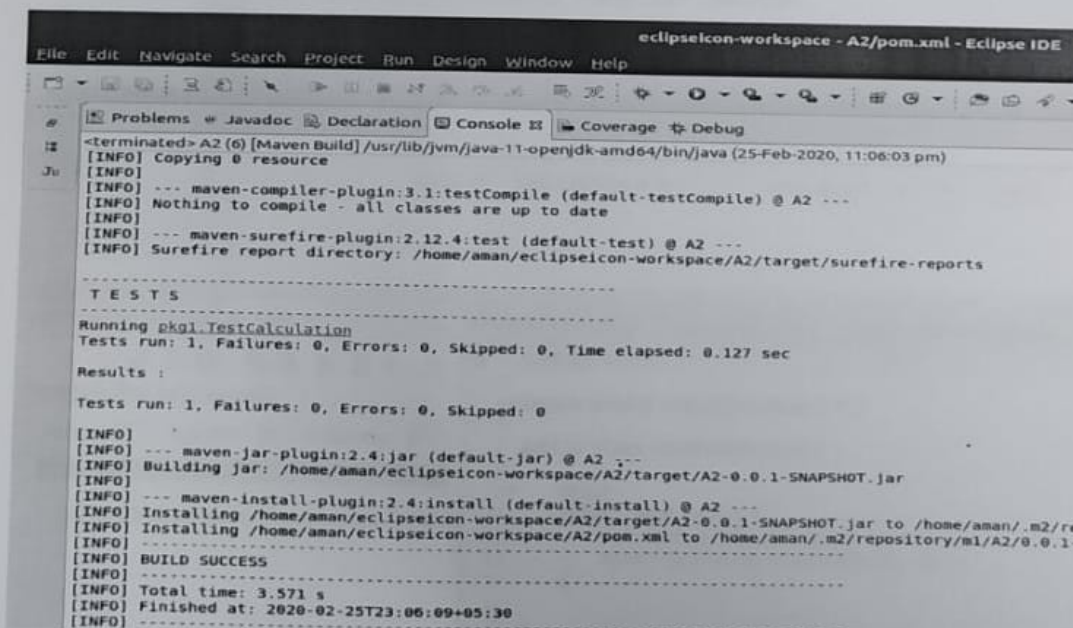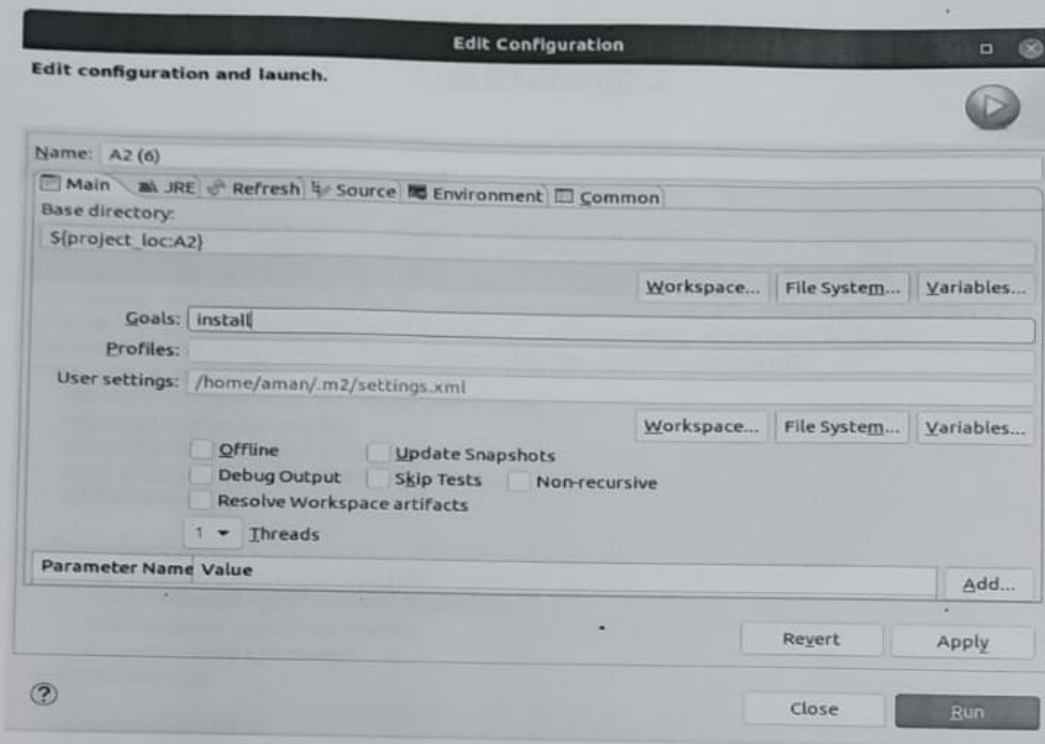
File Edit Navigate Search Project Run Design Window Help

☐ Problems ☐ Javadoc ☐ Declaration ☐ Console ☒ ☐ Coverage ☐ Debug

```
<terminated> A2 (4) [Maven Build] /usr/lib/jvm/java-11-openjdk-amd64/bin/java (25-Feb-2020, 11:03:50 pm)
[INFO] Scanning for projects...
[INFO]
[INFO] ------------------------------< m1:A2 >------------------------------
[INFO] Building A2 0.0.1-SNAPSHOT
[INFO] --------------------------------[ jar ]---------------------------------
[INFO]
[INFO] --- maven-resources-plugin:2.6:resources (default-resources) @ A2 ---
[WARNING] Using platform encoding (UTF-8 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) @ A2 ---
[INFO] Changes detected - recompiling the module!
[WARNING] File encoding has not been set, using platform encoding UTF-8, i.e. build is platform dependent!
[INFO] Compiling 1 source file to /home/aman/eclipseicon-workspace/A2/target/classes
[INFO] ------------------------------------------------------------------------
[INFO] BUILD SUCCESS
[INFO] ------------------------------------------------------------------------
[INFO] Total time: 3.253 s
[INFO] Finished at: 2020-02-25T23:03:55+05:30
[INFO] ------------------------------------------------------------------------
```

Edit Configuration   □ ⊗

Edit configuration and launch.   ▷

Name: A2 (5)

[▦ Main | ▦ JRE | ⌗ Refresh | ⅍ Source | ▦ Environment | ▭ Common]

Base directory:

S{project_loc:A2}

                                   Workspace...   File System...   Variables...

Goals: test-compile

Profiles:

User settings: /home/aman/.m2/settings.xml

                                   Workspace...   File System...   Variables...

      ☐ Offline   ☐ Update Snapshots

      ☐ Debug Output   ☐ Skip Tests   ☐ Non-recursive

      ☐ Resolve Workspace artifacts

      [1 ▾] Threads

Parameter Name Value   Add...

                                   Revert   Apply

 ⑦   Close   **Run**

---

eclipseicon-workspace - A2/pom.xml - Eclipse IDE

File   Edit   Navigate   Search   Project   Run   Design   Window   Help

[▦ Problems | ⚬ Javadoc | ▦ Declaration | ▣ Console ⋈ | ▦ Coverage | ✿ Debug]   ▬ ✕

```
<terminated> A2 (5) [Maven Build] /usr/lib/jvm/java-11-openjdk-amd64/bin/java (25-Feb-2020, 11:04:26 pm)
[INFO] Scanning for projects...
[INFO]
[INFO] ------------------------------< ml:A2 >------------------------------
[INFO] Building A2 0.0.1-SNAPSHOT
[INFO] --------------------------------[ jar ]---------------------------------
[INFO]
[INFO] --- maven-resources-plugin:2.6:resources (default-resources) @ A2 ---
[WARNING] Using platform encoding (UTF-8 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) @ A2 ---
[INFO] Nothing to compile - all classes are up to date
[INFO]
[INFO] --- maven-resources-plugin:2.6:testResources (default-testResources) @ A2 ---
[WARNING] Using platform encoding (UTF-8 actually) to copy filtered resources, i.e. build is platform dependent!
[INFO] Copying 0 resource
[INFO]
[INFO] --- maven-compiler-plugin:3.1:testCompile (default-testCompile) @ A2 ---
[INFO] Changes detected - recompiling the module!
[WARNING] File encoding has not been set, using platform encoding UTF-8, i.e. build is platform dependent!
[INFO] Compiling 1 source file to /home/aman/eclipseicon-workspace/A2/target/test-classes
[INFO] ------------------------------------------------------------------------
[INFO] BUILD SUCCESS
[INFO] ------------------------------------------------------------------------
[INFO] Total time: 2.606 s
[INFO] Finished at: 2020-02-25T23:04:31+05:30
[INFO] ------------------------------------------------------------------------
```

Edit Configuration

Edit configuration and launch.

▶

Name: A2 (6)

☐ Main | ▣ JRE | ⟳ Refresh | ⬆ Source | ▦ Environment | ☐ Common

Base directory:

${project_loc:A2}

| Workspace... | File System... | Variables... |

Goals: install

Profiles:

User settings: /home/aman/.m2/settings.xml

| Workspace... | File System... | Variables... |

☐ Offline ☐ Update Snapshots
☐ Debug Output ☐ Skip Tests ☐ Non-recursive
☐ Resolve Workspace artifacts

1 ▾ Threads

Parameter Name Value

Add...

| Revert | Apply |

⑦ | Close | Run |

File Edit Navigate Search Project Run Design Window Help

☒ Problems ⋒ Javadoc ▣ Declaration ▣ Console ☒ ⓘ Coverage ✦ Debug

```
<terminated> A2 (6) [Maven Build] /usr/lib/jvm/java-11-openjdk-amd64/bin/java (25-Feb-2020, 11:06:03 pm)
[INFO] Copying 0 resource
[INFO]
[INFO] --- maven-compiler-plugin:3.1:testCompile (default-testCompile) @ A2 ---
[INFO] Nothing to compile - all classes are up to date
[INFO]
[INFO] --- maven-surefire-plugin:2.12.4:test (default-test) @ A2 ---
[INFO] Surefire report directory: /home/aman/eclipseicon-workspace/A2/target/surefire-reports

-------------------------------------------------------
 T E S T S
-------------------------------------------------------
Running pkg1.TestCalculation
Tests run: 1, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.127 sec

Results :

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

[INFO]
[INFO] --- maven-jar-plugin:2.4:jar (default-jar) @ A2 ---
[INFO] Building jar: /home/aman/eclipseicon-workspace/A2/target/A2-0.0.1-SNAPSHOT.jar
[INFO]
[INFO] --- maven-install-plugin:2.4:install (default-install) @ A2 ---
[INFO] Installing /home/aman/eclipseicon-workspace/A2/target/A2-0.0.1-SNAPSHOT.jar to /home/aman/.m2/re
[INFO] Installing /home/aman/eclipseicon-workspace/A2/pom.xml to /home/aman/.m2/repository/m1/A2/0.0.1-
[INFO] -------------------------------------------------------
[INFO] BUILD SUCCESS
[INFO] -------------------------------------------------------
[INFO] Total time: 3.571 s
[INFO] Finished at: 2020-02-25T23:06:09+05:30
[INFO] -------------------------------------------------------
```

LAB EXERCISE 2

Aim: Unit Testing using Junit tool
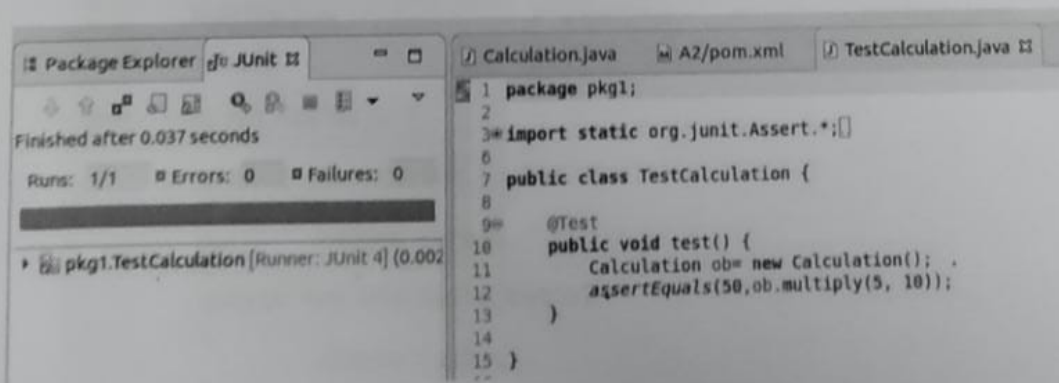
```
Open ▼   ⊓          pom.xml           Save  ≡  −  □  ⊗
                ~/eclipseicon-workspace/A2
<project xmlns="http://maven.apache.org/POM/4.0.0" xmlns:xsi="http://
www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="http://
maven.apache.org/POM/4.0.0 http://maven.apache.org/xsd/
maven-4.0.0.xsd">
  <modelVersion>4.0.0</modelVersion>
  <groupId>m1</groupId>
  <artifactId>A2</artifactId>
  <version>0.0.1-SNAPSHOT</version>
  <dependencies>

<dependency>
    <groupId>junit</groupId>
    <artifactId>junit</artifactId>
    <version>4.12</version>
    <scope>test</scope>
</dependency>

  </dependencies>
  <properties>
    <maven.compiler.source>1.6</maven.compiler.source>
    <maven.compiler.target>1.6</maven.compiler.target>
  </properties>

</project>
```

```
            XML ▼   Tab Width: 8 ▼        Ln 1, Col 1    ▼   INS
```

```
⠿ Package Explorer  ᵈᵘ JUnit ⛶        ⊟ ☐
  ◇ ⇧ ⌗ ⬓ ⬓  ⚲ ⚙ ▪ ⊟ ▼    ∨
Finished after 0.037 seconds

Runs:  1/1    ⊡ Errors:  0    ⊡ Failures:  0

▶ ⬚ pkg1.TestCalculation [Runner: JUnit 4] (0.002
```
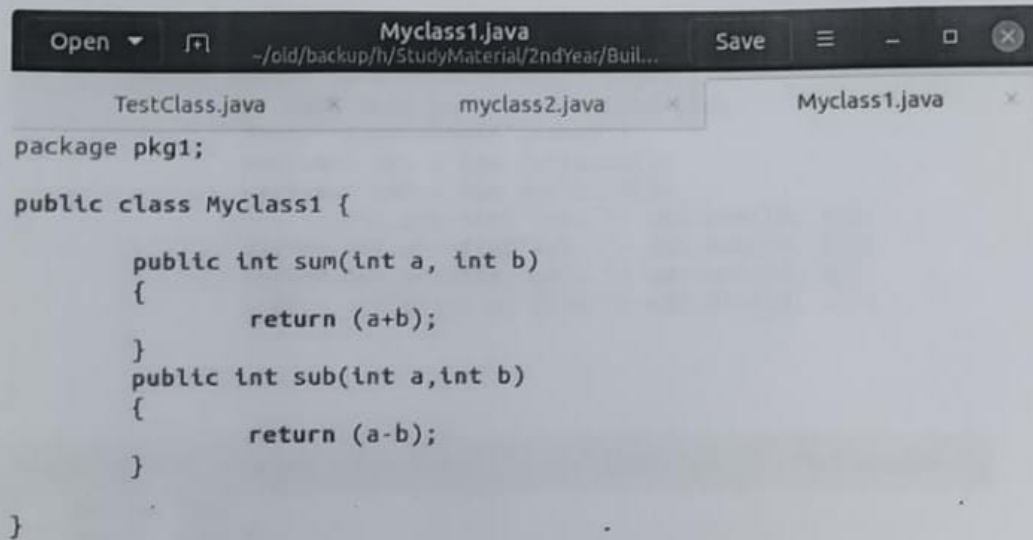
```
⊡ Calculation.java    ⊌ A2/pom.xml    ⊡ TestCalculation.java ⛶
1  package pkg1;
2
3⊕ import static org.junit.Assert.*;⛶
6
7  public class TestCalculation {
8
9⊕     @Test
10     public void test() {
11         Calculation ob= new Calculation();
12         assertEquals(50,ob.multiply(5, 10));
13     }
14
15 }
```

LAB EXERCISE 3

Aim: Maven Build and usage in other Java Project
1. Create a Build of java project using maven.
2. Use that build in some other Java Project.
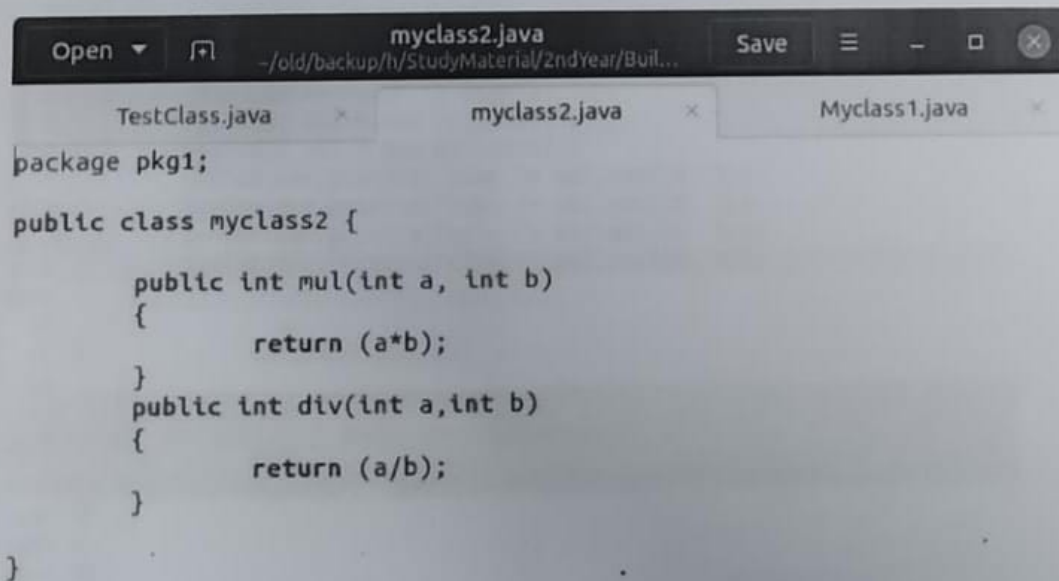
| TestClass.java | myclass2.java | Myclass1.java |

```java
package pkg1;

public class Myclass1 {

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

}
```

| TestClass.java | myclass2.java | Myclass1.java |

```java
package pkg1;

public class myclass2 {

        public int mul(int a, int b)
        {
                return (a*b);
        }
        public int div(int a,int b)
        {
                return (a/b);
        }

}
```

TestClass.java ×   myclass2.java ×   Myclass1.java ×

```java
package pkg2;
import   pkg1.*;

public class TestClass {

        public static void main(String[] args) {
                // TODO Auto-generated method stub
                @SuppressWarnings("unused")
                Myclass1 ob1 = new Myclass1();
                myclass2 ob2 = new myclass2();
                System.out.println("sum= "+ ob1.sum(10, 5));
                System.out.println("sub= "+ ob1.sub(10, 5));
                System.out.println("mul= "+ ob2.mul(10, 5));
                System.out.println("div= "+ ob2.div(10, 5));

        }

}
```

🗋 myclass2.java   Ⓜ brm_batch1_lab3   🗋 module-info.jav   🗋 TestClass.java ⊠

```java
 1  package pkg2;
 2  import   pkg1.*;
 3
 4  public class TestClass {
 5
 6⊖      public static void main(String[] args) {
 7              // TODO Auto-generated method stub
 8              @SuppressWarnings("unused")
 9              Myclass1 ob1 = new Myclass1();
10              myclass2 ob2 = new myclass2();
11              System.out.println("sum= "+ ob1.sum(10, 5));
12              System.out.println("sub= "+ ob1.sub(10, 5));
13              System.out.println("mul= "+ ob2.mul(10, 5));
14              System.out.println("div= "+ ob2.div(10, 5));
15      }
16
17  }
18
```

🗋 Problems ⓐ Javadoc 🔍 Declaration 🖥 Console ⊠

<terminated> TestClass [Java Application] /usr/lib/jvm/java-11-openjdk-amd64/bin/java (14

```
sum= 15
sub= 5
mul= 50
div= 2
```

LAB EXERCISE 4

Aim:
1. Install and Manage Maven Plugin
2. Install Site Plugin and use **mvn site** command and goal for generating documents for Maven Project.

Edit Configuration ☐ ⊗

Edit configuration and launch. ▶

Name: lab5 (4)

☐ Main ▲ JRE ⟳ Refresh ⬚ Source ⬛ Environment ☐ Common

Base directory:

${project_loc:lab5}

Workspace... File System... Variables...

Goals: site

Profiles:

User settings: /home/aman/.m2/settings.xml

Workspace... File System... Variables...

☐ Offline   ☐ Update Snapshots
☐ Debug Output   ☐ Skip Tests   ☐ Non-recursive
☐ Resolve Workspace artifacts

[1 ▼] Threads

Parameter Name Value   Add...

Revert   Apply

②   Close   Run

```
<terminated> lab5 (3) [Maven Build] /usr/lib/jvm/java-11-openjdk-amd64/bin/java (25-Feb-2020, 11:37:31 pm)
[INFO] Scanning for projects...
[INFO]
[INFO] -----------------------------< devops1:lab5 >-----------------------------
[INFO] Building lab5 0.0.1-SNAPSHOT
[INFO] --------------------------------[ jar ]---------------------------------
[INFO]
[INFO] --- maven-site-plugin:3.7.1:site (default-site) @ lab5 ---
[WARNING] Report plugin org.apache.maven.plugins:maven-project-info-reports-plugin has an empty version.
[WARNING]
[WARNING] It is highly recommended to fix these problems because they threaten the stability of your build.
[WARNING]
[WARNING] For this reason, future Maven versions might no longer support building such malformed projects.
[INFO] configuring report plugin org.apache.maven.plugins:maven-project-info-reports-plugin:3.0.0
[INFO] 15 reports detected for maven-project-info-reports-plugin:3.0.0: ci-management, dependencies, dependency-info
[INFO] Rendering site with default locale English (en)
[INFO] Relativizing decoration links with respect to localized project URL: http://maven.apache.org
[INFO] Rendering content with org.apache.maven.skins:maven-default-skin:jar:1.2 skin.
[INFO] Generating "Dependencies" report          --- maven-project-info-reports-plugin:3.0.0:dependencies
[INFO] Generating "Dependency Information" report --- maven-project-info-reports-plugin:3.0.0:dependency-info
[INFO] Generating "About" report                 --- maven-project-info-reports-plugin:3.0.0:index
[INFO] Generating "Plugin Management" report      --- maven-project-info-reports-plugin:3.0.0:plugin-management
[INFO] Generating "Plugins" report               --- maven-project-info-reports-plugin:3.0.0:plugins
[INFO] Generating "Summary" report               --- maven-project-info-reports-plugin:3.0.0:summary
[INFO] ------------------------------------------------------------------------
[INFO] BUILD SUCCESS
[INFO] ------------------------------------------------------------------------
[INFO] Total time: 7.511 s
[INFO] Finished at: 2020-02-25T23:37:40+05:30
[INFO] ------------------------------------------------------------------------
```

```
Open ▼  🗐                                                          pom.xml
                                      ~/old/backup/h/StudyMaterial/2ndYear/Build_and_Release_management/lab/lab4
<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">
  <modelVersion>4.0.0</modelVersion>

  <groupId>devops1</groupId>
  <artifactId>lab5</artifactId>
  <version>0.0.1-SNAPSHOT</version>
  <packaging>jar</packaging>
  <build>

<pluginManagement>

<plugins>

<plugin>

<groupId>org.apache.maven.plugins</groupId>

<artifactId>maven-site-plugin</artifactId>

<version>3.7.1</version>

</plugin>

</plugins>

</pluginManagement>

</build>


  <name>lab5</name>
  <url>http://maven.apache.org</url>

  <properties>
    <project.build.sourceEncoding>UTF-8</project.build.sourceEncoding>
  </properties>
```

eclipseicon-workspace - file:/home/aman/eclipseicon-workspace/lab5/target/site/dependencies.html - Eclipse IDE

File   Edit   Navigate   Search   Project   Run   Window   Help

MonthName.java   lab5/pom.xml   lab5 – Project Dependencies

file:///home/aman/eclipseicon-workspace/lab5/target/site/dependencies.html

lab5

Project Documentation
- Project Information
  - Dependencies
  - Dependency Information
  - About
  - Plugin Management
  - Plugins
  - Summary

Built by: **maven**

Project Dependencies

test

The following is a list of test dependencies for this project. These dependencies are only required to compile and run unit tests for the application:

GroupId	ArtifactId	Version	Type	Licenses
junit	junit	3.8.1	jar	Common Public License Version 1.0

Project Transitive Dependencies

No transitive dependencies are required for this project.

Project Dependency Graph

Dependency Tree

---

eclipseicon-workspace - file:/home/aman/eclipseicon-workspace/lab5/target/site/summary.html - Eclipse IDE

File   Edit   Navigate   Search   Project   Run   Window   Help

MonthName.java   lab5/pom.xml   lab5 – Project Dependencies   lab5 – About   lab5 – Project Summary

file:///home/aman/eclipseicon-workspace/lab5/target/site/summary.html

lab5

Project Documentation
- Project Information
  - Dependencies
  - Dependency Information
  - About
  - Plugin Management
  - Plugins
  - Summary

Built by: **maven**

Project Summary

Project Information

Field	Value
Name	lab5
Description	-
Homepage	http://maven.apache.org

Project Organization

This project does not belong to an organization.

Build Information

Field	Value
GroupId	devops1
ArtifactId	lab5

Experiment 5

Aim: Working with Maven Repository
1. Add Central Repository (Hibernate)
2. Add Remote Repository (Atlassian Mail)

```xml
 1 <project xmlns="http://maven.apache.org/POM/4.0.0" xmlns:xsi="http://www.w3.org/2001/XM
 2   <modelVersion>4.0.0</modelVersion>
 3   <groupId>upes.devops</groupId>
 4   <artifactId>BRM_Remote</artifactId>
 5   <version>0.0.1-SNAPSHOT</version>
 6
 7 <dependencies>
 8 <dependency>
 9     <groupId>org.hibernate</groupId>
10     <artifactId>hibernate-core</artifactId>
11     <version>5.4.14.Final</version>
12 </dependency>
13
14 <dependency>
15     <groupId>com.atlassian.mail</groupId>
16     <artifactId>atlassian-mail</artifactId>
17     <version>4.0.6</version>
18 </dependency>
19
20 </dependencies>
21 <repositories>
22 <repository>
23 <id>atlassian</id>
24 <name>Atlassian Mail </name>
25 <url>https://maven.atlassian.com/content/repositories/atlassian-public/ </url>
26 </repository>
27 </repositories>
28
```

- Maven Dependencies
  - hibernate-core-5.4.14.Final.jar - C:\Users\Lenovo\.m2\repository\org\hi
  - jboss-logging-3.3.2.Final.jar - C:\Users\Lenovo\.m2\repository\org\jbos
  - javax.persistence-api-2.2.jar - C:\Users\Lenovo\.m2\repository\javax\pe
  - javassist-3.24.0-GA.jar - C:\Users\Lenovo\.m2\repository\org\javassist\j
  - byte-buddy-1.10.7.jar - C:\Users\Lenovo\.m2\repository\net\bytebuddy
  - antlr-2.7.7.jar - C:\Users\Lenovo\.m2\repository\antlr\antlr\2.7.7
  - jboss-transaction-api_1.2_spec-1.1.1.Final.jar - C:\Users\Lenovo\.m2\rep
  - jandex-2.1.1.Final.jar - C:\Users\Lenovo\.m2\repository\org\jboss\jande
  - classmate-1.5.1.jar - C:\Users\Lenovo\.m2\repository\com\fasterxml\cl
  - javax.activation-api-1.2.0.jar - C:\Users\Lenovo\.m2\repository\javax\ac
  - dom4j-2.1.1.jar - C:\Users\Lenovo\.m2\repository\org\dom4j\dom4j\2.
  - hibernate-commons-annotations-5.1.0.Final.jar - C:\Users\Lenovo\.m2\
  - jaxb-api-2.3.1.jar - C:\Users\Lenovo\.m2\repository\javax\xml\bind\jax
  - jaxb-runtime-2.3.1.jar - C:\Users\Lenovo\.m2\repository\org\glassfish\j
  - txw2-2.3.1.jar - C:\Users\Lenovo\.m2\repository\org\glassfish\jaxb\txw
  - istack-commons-runtime-3.0.7.jar - C:\Users\Lenovo\.m2\repository\cc
  - stax-ex-1.8.jar - C:\Users\Lenovo\.m2\repository\org\jvnet\staxex\stax-
  - FastInfoset-1.2.15.jar - C:\Users\Lenovo\.m2\repository\com\sun\xml\f
  - atlassian-mail-4.0.6.jar - C:\Users\Lenovo\.m2\repository\com\atlassiar
  - commons-beanutils-1.6.1.jar - C:\Users\Lenovo\.m2\repository\commc
  - commons-collections-3.1.jar - C:\Users\Lenovo\.m2\repository\commc
  - commons-digester-1.4.1.jar - C:\Users\Lenovo\.m2\repository\commor
  - xml-apis-1.0.b2.jar - C:\Users\Lenovo\.m2\repository\xml-apis\xml-api
  - commons-lang-2.4.jar - C:\Users\Lenovo\.m2\repository\commons-lar
  - commons-logging-1.0.4.jar - C:\Users\Lenovo\.m2\repository\commor
  - commons-io-1.4.jar - C:\Users\Lenovo\.m2\repository\commons-io\cc
  - javax.mail-api-1.5.6.jar - C:\Users\Lenovo\.m2\repository\javax\mail\ja\
  - javax.mail-1.5.6.jar - C:\Users\Lenovo\.m2\repository\com\sun\mail\ja\
  - activation-1.1.jar - C:\Users\Lenovo\.m2\repository\javax\activation\ac
  - slf4j-api-1.7.22.jar - C:\Users\Lenovo\.m2\repository\org\slf4j\slf4j-api\
  - log4j-1.2.7.jar - C:\Users\Lenovo\.m2\repository\log4j\log4j\1.2.7
  - guava-18.0.jar - C:\Users\Lenovo\.m2\repository\com\google\guava\g
  - jsoup-1.8.3.jar - C:\Users\Lenovo\.m2\repository\org\jsoup\jsoup\1.8.3

Lab Exercise 6

Aim: Create a simple Maven Project using CLI.

```
[INFO] -----------------------------[ jar ]-----------------------------
[INFO]
[INFO] --- maven-site-plugin:3.7.1:site (default-site) @ my-app ---
[INFO] configuring report plugin org.apache.maven.plugins:maven-project-info-reports-plugin:3.0.0
[INFO] 15 reports detected for maven-project-info-reports-plugin:3.0.0: ci-management, dependencies, dependency-info, d
ependency-management, distribution-management, index, issue-management, licenses, mailing-lists, modules, plugin-manage
ment, plugins, scm, summary, team
[INFO] Rendering site with default locale English (en)
[INFO] Relativizing decoration links with respect to localized project URL: http://www.example.com
[INFO] Rendering content with org.apache.maven.skins:maven-default-skin:jar:1.2 skin.
[INFO] Generating "Dependencies" report   --- maven-project-info-reports-plugin:3.0.0:dependencies
[INFO] Generating "Dependency Information" report --- maven-project-info-reports-plugin:3.0.0:dependency-info
[INFO] Generating "About" report         --- maven-project-info-reports-plugin:3.0.0:index
[INFO] Generating "Plugin Management" report --- maven-project-info-reports-plugin:3.0.0:plugin-management
[INFO] Generating "Plugins" report        --- maven-project-info-reports-plugin:3.0.0:plugins
[INFO] Generating "Summary" report        --- maven-project-info-reports-plugin:3.0.0:summary
[INFO] -------------------------------------------------------------------------
[INFO] BUILD SUCCESS
[INFO] -------------------------------------------------------------------------
[INFO] Total time:  13.840 s
[INFO] Finished at: 2020-04-01T11:10:13+05:30
aman@amanlaptop:~/old/backup/h/StudyMaterial/2ndYear/Build_and_Release_manaman@aamaaaamaamamaaaaaamaamaaaaaaaaaamaaaaa
aman@amanlaptop:~/old/backup/h/StudyMaterial/2ndYear/Build_and_Release_management/lab/lab6/my-app$
```

```
[INFO] Using following parameters for creating project from Archetype: maven-archetype-quickstart:1.4
[INFO] -------------------------------------------------------------------------
[INFO] Parameter: groupId, Value: com.mycompany.app
[INFO] Parameter: artifactId, Value: my-app
[INFO] Parameter: version, Value: 1.0-SNAPSHOT
[INFO] Parameter: package, Value: com.mycompany.app
[INFO] Parameter: packageInPathFormat, Value: com/mycompany/app
[INFO] Parameter: package, Value: com.mycompany.app
[INFO] Parameter: groupId, Value: com.mycompany.app
[INFO] Parameter: artifactId, Value: my-app
[INFO] Parameter: version, Value: 1.0-SNAPSHOT
[INFO] Project created from Archetype in dir: /home/aman/old/backup/h/StudyMaterial/2ndYear/Build_and_Release_managemen
t/lab/lab6/my-app
[INFO] -------------------------------------------------------------------------
[INFO] BUILD SUCCESS
[INFO] -------------------------------------------------------------------------
[INFO] Total time:  01:00 min
[INFO] Finished at: 2020-04-01T10:59:47+05:30
[INFO] -------------------------------------------------------------------------
aman@amanlaptop:~/old/backup/h/StudyMaterial/2ndYear/Build_and_Release_management/lab/lab6$ cd my-app/
aman@amanlaptop:~/old/backup/h/StudyMaterial/2ndYear/Build_and_Release_management/lab/lab6/my-app$ ls
pom.xml  src
aman@amanlaptop:~/old/backup/h/StudyMaterial/2ndYear/Build_and_Release_management/lab/lab6/my-app$ cd ..
```

```
aman@amanlaptop:~/old/backup/h/StudyMaterial/2ndYear/Build_and_Release_management/lab/lab6/my-app$ mvn package
WARNING: An illegal reflective access operation has occurred
WARNING: Illegal reflective access by com.google.inject.internal.cglib.core.$ReflectUtils$1 (file:/usr/share/maven/lib/
guice.jar) to method java.lang.ClassLoader.defineClass(java.lang.String,byte[],int,int,java.security.ProtectionDomain)
WARNING: Please consider reporting this to the maintainers of com.google.inject.internal.cglib.core.$ReflectUtils$1
```

```
[INFO] -------------------------------------------------------
[INFO] Running com.mycompany.app.AppTest
[INFO] Tests run: 1, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.108 s - in com.mycompany.app.AppTest
[INFO]
[INFO] Results:
[INFO]
[INFO] Tests run: 1, Failures: 0, Errors: 0, Skipped: 0
[INFO]
[INFO]
[INFO] --- maven-jar-plugin:3.0.2:jar (default-jar) @ my-app ---
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/shared/maven-shared-utils/3.0.1/maven-s
hared-utils-3.0.1.jar
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/shared/maven-shared-utils/3.0.1/maven-sh
ared-utils-3.0.1.jar (154 kB at 198 kB/s)
[INFO] Building jar: /home/aman/old/backup/h/StudyMaterial/2ndYear/Build_and_Release_management/lab/lab6/my-app/target/
my-app-1.0-SNAPSHOT.jar
[INFO] -------------------------------------------------------
[INFO] BUILD SUCCESS
[INFO] -------------------------------------------------------
[INFO] Total time:  42.319 s
[INFO] Finished at: 2020-04-01T11:05:49+05:30
[INFO] -------------------------------------------------------
aman@amanlaptop:~/old/backup/h/StudyMaterial/2ndYear/Build_and_Release_management/lab/lab6/my-app$ java -cp target/my-a
```

```
[INFO]
[INFO] -------------------------------------------------------
[INFO]  T E S T S
[INFO] -------------------------------------------------------
[INFO] Running com.mycompany.app.AppTest
[INFO] Tests run: 1, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.102 s - in com.mycompany.app.AppTest
[INFO]
[INFO] Results:
[INFO]
[INFO] Tests run: 1, Failures: 0, Errors: 0, Skipped: 0
[INFO]
[INFO]
[INFO] --- maven-jar-plugin:3.0.2:jar (default-jar) @ my-app ---
[INFO] Building jar: /home/aman/old/backup/h/StudyMaterial/2ndYear/Build_and_Release_management/lab/lab6/my-app/target/
my-app-1.0-SNAPSHOT.jar
[INFO] -------------------------------------------------------
[INFO] BUILD SUCCESS
[INFO] -------------------------------------------------------
[INFO] Total time:  01:03 min
[INFO] Finished at: 2020-04-01T11:08:04+05:30
[INFO] -------------------------------------------------------
aman@amanlaptop:~/old/backup/h/StudyMaterial/2ndYear/Build_and_Release_management/lab/lab6/my-app$ mvn site
WARNING: An illegal reflective access operation has occurred
```

```
[INFO] Total time:  42.319 s
[INFO] Finished at: 2020-04-01T11:05:49+05:30
[INFO] ------------------------------------------------------------------------
aman@amanlaptop:~/old/backup/h/StudyMaterial/2ndYear/Build_and_Release_management/lab/lab6/my-app$ java -cp target/my-a
pp-1.0-SNAPSHOT.jar com.mycompany.app.AppHello World!
aman@amanlaptop:~/old/backup/h/StudyMaterial/2ndYear/Build_and_Release_management/lab/lab6/my-app$ mvn clean dependency
:copy-dependencies package
WARNING: An illegal reflective access operation has occurred
WARNING: Illegal reflective access by com.google.inject.internal.cglib.core.$ReflectUtils$1 (file:/usr/share/maven/lib/
guice.jar) to method java.lang.ClassLoader.defineClass(java.lang.String,byte[],int,int,java.security.ProtectionDomain)
WARNING: Please consider reporting this to the maintainers of com.google.inject.internal.cglib.core.$ReflectUtils$1
WARNING: Use --illegal-access=warn to enable warnings of further illegal reflective access operations
WARNING: All illegal access operations will be denied in a future release
[INFO] Scanning for projects...
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-clean-plugin/3.1.0/maven-
clean-plugin-3.1.0.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-clean-plugin/3.1.0/maven-c
lean-plugin-3.1.0.pom (5.2 kB at 2.5 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-clean-plugin/3.1.0/maven-
clean-plugin-3.1.0.jar
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-clean-plugin/3.1.0/maven-c
lean-plugin-3.1.0.jar (30 kB at 40 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-install-plugin/2.5.2/mave
```

```
aman@amanlaptop:~/old/backup/h/StudyMaterial/2ndYear/Build_and_Release_management/lab/lab6/my-app$ mvn site
WARNING: An illegal reflective access operation has occurred
WARNING: Illegal reflective access by com.google.inject.internal.cglib.core.$ReflectUtils$1 (file:/usr/share/maven/lib/
guice.jar) to method java.lang.ClassLoader.defineClass(java.lang.String,byte[],int,int,java.security.ProtectionDomain)
WARNING: Please consider reporting this to the maintainers of com.google.inject.internal.cglib.core.$ReflectUtils$1
WARNING: Use --illegal-access=warn to enable warnings of further illegal reflective access operations
WARNING: All illegal access operations will be denied in a future release
[INFO] Scanning for projects...
[INFO]
[INFO] --------------------< com.mycompany.app:my-app >--------------------
[INFO] Building my-app 1.0-SNAPSHOT
[INFO] --------------------------------[ jar ]--------------------------------
[INFO]
[INFO] --- maven-site-plugin:3.7.1:site (default-site) @ my-app ---
[INFO] configuring report plugin org.apache.maven.plugins:maven-project-info-reports-plugin:3.0.0
[INFO] 15 reports detected for maven-project-info-reports-plugin:3.0.0: ci-management, dependencies, dependency-info, d
ependency-management, distribution-management, index, issue-management, licenses, mailing-lists, modules, plugin-manage
ment, plugins, scm, summary, team
[INFO] Rendering site with default locale English (en)
[INFO] Relativizing decoration links with respect to localized project URL: http://www.example.com
[INFO] Rendering content with org.apache.maven.skins:maven-default-skin:jar:1.2 skin.
[INFO] Generating "Dependencies" report  --- maven-project-info-reports-plugin:3.0.0:dependencies
[INFO] Generating "Dependency Information" report --- maven-project-info-reports-plugin:3.0.0:dependency-info
```

```
[INFO] --------------------< com.mycompany.app:my-app >--------------------
[INFO] Building my-app 1.0-SNAPSHOT
[INFO] --------------------------------[ jar ]---------------------------------
[INFO]
[INFO] --- maven-site-plugin:3.7.1:site (default-site) @ my-app ---
[INFO] configuring report plugin org.apache.maven.plugins:maven-project-info-reports-plugin:3.0.0
[INFO] 15 reports detected for maven-project-info-reports-plugin:3.0.0: ci-management, dependencies, dependency-info, d
ependency-management, distribution-management, index, issue-management, licenses, mailing-lists, modules, plugin-manage
ment, plugins, scm, summary, team
[INFO] Rendering site with default locale English (en)
[INFO] Relativizing decoration links with respect to localized project URL: http://www.example.com
[INFO] Rendering content with org.apache.maven.skins:maven-default-skin:jar:1.2 skin.
[INFO] Generating "Dependencies" report        --- maven-project-info-reports-plugin:3.0.0:dependencies
[INFO] Generating "Dependency Information" report --- maven-project-info-reports-plugin:3.0.0:dependency-info
[INFO] Generating "About" report               --- maven-project-info-reports-plugin:3.0.0:index
[INFO] Generating "Plugin Management" report --- maven-project-info-reports-plugin:3.0.0:plugin-management
[INFO] Generating "Plugins" report             --- maven-project-info-reports-plugin:3.0.0:plugins
[INFO] Generating "Summary" report             --- maven-project-info-reports-plugin:3.0.0:summary
[INFO] ------------------------------------------------------------------------
[INFO] BUILD SUCCESS
[INFO] ------------------------------------------------------------------------
[INFO] Total time:  13.840 s
[INFO] Finished at: 2020-04-01T11:10:13+05:30
```

My Blackboard Content   ×   my-app – Project Depende   ×   +

File | /home/aman/old/backup/h/StudyMaterial/2ndYear/Build_and_Release_management/lab/lab6/my-app/target/site/dependencies.html

Apps   Gmail   YouTube   Maps   Translate   Operating Sys...   I'm Learning |...   srgnk/Hacker...   CodeSurfer30...   2.2. PAM Confi...

my-app

Last Published: 2020-04-01 | Version: 1.0-SNAPSHOT   my-app

Project Documentation
- ▾ Project Information
  - **Dependencies**
  - Dependency Information
  - About
  - Plugin Management
  - Plugins
  - Summary

Built by:
maven

Project Dependencies

test

The following is a list of test dependencies for this project. These dependencies are only required to compile and run unit tests for the application:

GroupId	ArtifactId	Version	Type	Licenses
junit	junit ⧉	4.11	jar	Common Public License Version 1.0 ⧉

Project Transitive Dependencies

The following is a list of transitive dependencies for this project. Transitive dependencies are the dependencies of the project dependencies.

test

The following is a list of test dependencies for this project. These dependencies are only required to compile and run unit tests for the application:

GroupId	ArtifactId	Version	Type	Licenses
org.hamcrest	hamcrest-core ⧉	1.3	jar	New BSD License ⧉

DCNlab-mer....pdf   ∧   Show all   ×

Experiment 7

Experiment 8

Aim: Selenium IDE. Perform Automation testing using Selenium IDE for testing a web page.

	Command	Target	Value
1	open	/	
2	set window size	974x1047	
3	click	name=q	
4	type	name=q	devops
5	send keys	name=q	${KEY_ENTER}

Google   devops   ✕   🎤   🔍

🔍 All   📰 News   🖼 Images   📖 Books   ▶ Videos   ⋮ More   Settings   Tools

About 6,66,00,000 results (0.61 seconds)

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People also ask

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What is DevOps and how it works?	⌄
What is DevOps and why Devops?	⌄

Feedback

---

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What is DevOps? | Atlassian

DevOps is a set of practices that works to automate and integrate the processes between software development and IT teams, so they can build, test, and release software faster and more reliably.

Agile and DevOps · Chef evolves DevOps with ... · DevOps Maturity Model · Blog

---

aws.amazon.com › devops › what-is-devops ▼

Project: TP101*

Tests   +

https://www.google.com

	Command	Target	Value
1	open	/	
2	click	name=q	
3	type	name=q	engineer
4	click	name=btnK	

Command

Target

Value

Description

Log   Reference

1. open on / OK   19:02:05
2. click on name=q OK   19:02:05
3. type on name=q with value engineer OK   19:02:06
4. click on name=btnK OK   19:02:06
'Test102' completed successfully   19:02:06

Test101

Test102*

Search tests...

engineer

About 4,39,00,00,000 results (0.69 seconds)

Dictionary

Search for a word

🔊 **engineer**

/ɛndʒɪˈnɪə/

See definitions in:

All   Civil Engineering   Professions   Railways   Biology

noun

1. a person who designs, builds, or maintains engines, machines, or structures.

   Similar: designer   planner   builder   architect   producer   fabricator   ⌄

2. a person who controls an engine, especially on an aircraft or ship.

   Similar: engineering officer   controller   handler   driver   operator   ⌄

verb

1. design and build (a machine or structure).
   "the men who engineered the tunnel"

2. skilfully arrange for (something) to occur.
   "she engineered another meeting with him"

   Similar: bring about   cause   arrange   pull off   bring off   fix   set up   ⌄

Experiment 9

```
[INFO]
[INFO] --- maven-compiler-plugin:3.8.0:testCompile (default-testCompile) @ my-app ---
[INFO] Nothing to compile - all classes are up to date
[INFO]
[INFO] --- maven-surefire-plugin:2.22.1:test (default-test) @ my-app ---
[INFO]
[INFO] -------------------------------------------------------
[INFO]  T E S T S
[INFO] -------------------------------------------------------
[INFO] Running com.mycompany.app.AppTest
[INFO] Tests run: 1, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.057 s - in com.mycompany.app.AppTest
[INFO]
[INFO] Results:
[INFO]
[INFO] Tests run: 1, Failures: 0, Errors: 0, Skipped: 0
[INFO]
[INFO]
[INFO] --- maven-antrun-plugin:1.1:run (default) @ my-app ---
[INFO] Executing tasks
     [echo] This is Profile 1 Task
     [copy] Copying 1 file to F:\2nd Year\4TH SEMESTER\Build And Release\Eclipse\DevOps\my-app\src\test
[INFO] Executed tasks
[INFO] ------------------------------------------------------------------------
[INFO] BUILD SUCCESS
[INFO] ------------------------------------------------------------------------
[INFO] Total time:  5.194 s
[INFO] Finished at: 2020-04-26T19:21:08+05:30
[INFO] ------------------------------------------------------------------------
```

```
[INFO]
[INFO] --- maven-compiler-plugin:3.8.0:testCompile (default-testCompile) @ my-app ---
[INFO] Nothing to compile - all classes are up to date
[INFO]
[INFO] --- maven-surefire-plugin:2.22.1:test (default-test) @ my-app ---
[INFO]
[INFO] -------------------------------------------------------
[INFO]  T E S T S
[INFO] -------------------------------------------------------
[INFO] Running com.mycompany.app.AppTest
[INFO] Tests run: 1, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.064 s - in com.mycompany.app.AppTest
[INFO]
[INFO] Results:
[INFO]
[INFO] Tests run: 1, Failures: 0, Errors: 0, Skipped: 0
[INFO]
[INFO]
[INFO] --- maven-antrun-plugin:1.1:run (default) @ my-app ---
[INFO] Executing tasks
     [echo] This is Profile 2
     [copy] Copying 1 file to F:\2nd Year\4TH SEMESTER\Build And Release\Eclipse\DevOps\my-app\src\test
[INFO] Executed tasks
[INFO] ------------------------------------------------------------------------
[INFO] BUILD SUCCESS
[INFO] ------------------------------------------------------------------------
[INFO] Total time:  3.233 s
[INFO] Finished at: 2020-04-26T19:22:25+05:30
[INFO] ------------------------------------------------------------------------
```

```
F:\2nd Year\4TH SEMESTER\Build And Release\Eclipse\DevOps\my-app>mvn test
[INFO] Scanning for projects...
[INFO]
[INFO] --------------------< com.mycompany.app:my-app >---------------------
[INFO] Building my-app 1.0-SNAPSHOT
[INFO] --------------------------------[ jar ]---------------------------------
[INFO]
[INFO] --- maven-resources-plugin:3.0.2:resources (default-resources) @ my-app ---
[INFO] Using 'UTF-8' encoding to copy filtered resources.
[INFO] skip non existing resourceDirectory F:\2nd Year\4TH SEMESTER\Build And Release\Eclipse\DevOps\my-app\src\main\resources
[INFO]
[INFO] --- maven-compiler-plugin:3.8.0:compile (default-compile) @ my-app ---
[INFO] Nothing to compile - all classes are up to date
[INFO]
[INFO] --- maven-resources-plugin:3.0.2:testResources (default-testResources) @ my-app ---
[INFO] Using 'UTF-8' encoding to copy filtered resources.
[INFO] skip non existing resourceDirectory F:\2nd Year\4TH SEMESTER\Build And Release\Eclipse\DevOps\my-app\src\test\resources
[INFO]
[INFO] --- maven-compiler-plugin:3.8.0:testCompile (default-testCompile) @ my-app ---
[INFO] Nothing to compile - all classes are up to date
[INFO]
[INFO] --- maven-surefire-plugin:2.22.1:test (default-test) @ my-app ---
[INFO]
[INFO] -------------------------------------------------
[INFO]  T E S T S
[INFO] -------------------------------------------------
[INFO] Running com.mycompany.app.AppTest
[INFO] Tests run: 1, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.202 s - in com.mycompany.app.AppTest
[INFO]
[INFO] Results:
[INFO]
[INFO] Tests run: 1, Failures: 0, Errors: 0, Skipped: 0
[INFO]
[INFO]
[INFO] --- maven-antrun-plugin:1.1:run (default) @ my-app ---
[INFO] Executing tasks
    [echo] This is Profile 2
[INFO] Executed tasks
[INFO] ------------------------------------------------------------------------
[INFO] BUILD SUCCESS
[INFO] ------------------------------------------------------------------------
[INFO] Total time:  3.825 s
[INFO] Finished at: 2020-04-27T11:46:00+05:30
[INFO] ------------------------------------------------------------------------
```

Experiment 10

Aim: Integration using GitHub Create a complete Maven project and push in GitHub repository for Continuous Integration.

<mark>Pushed every commit via a post-commit hook</mark>