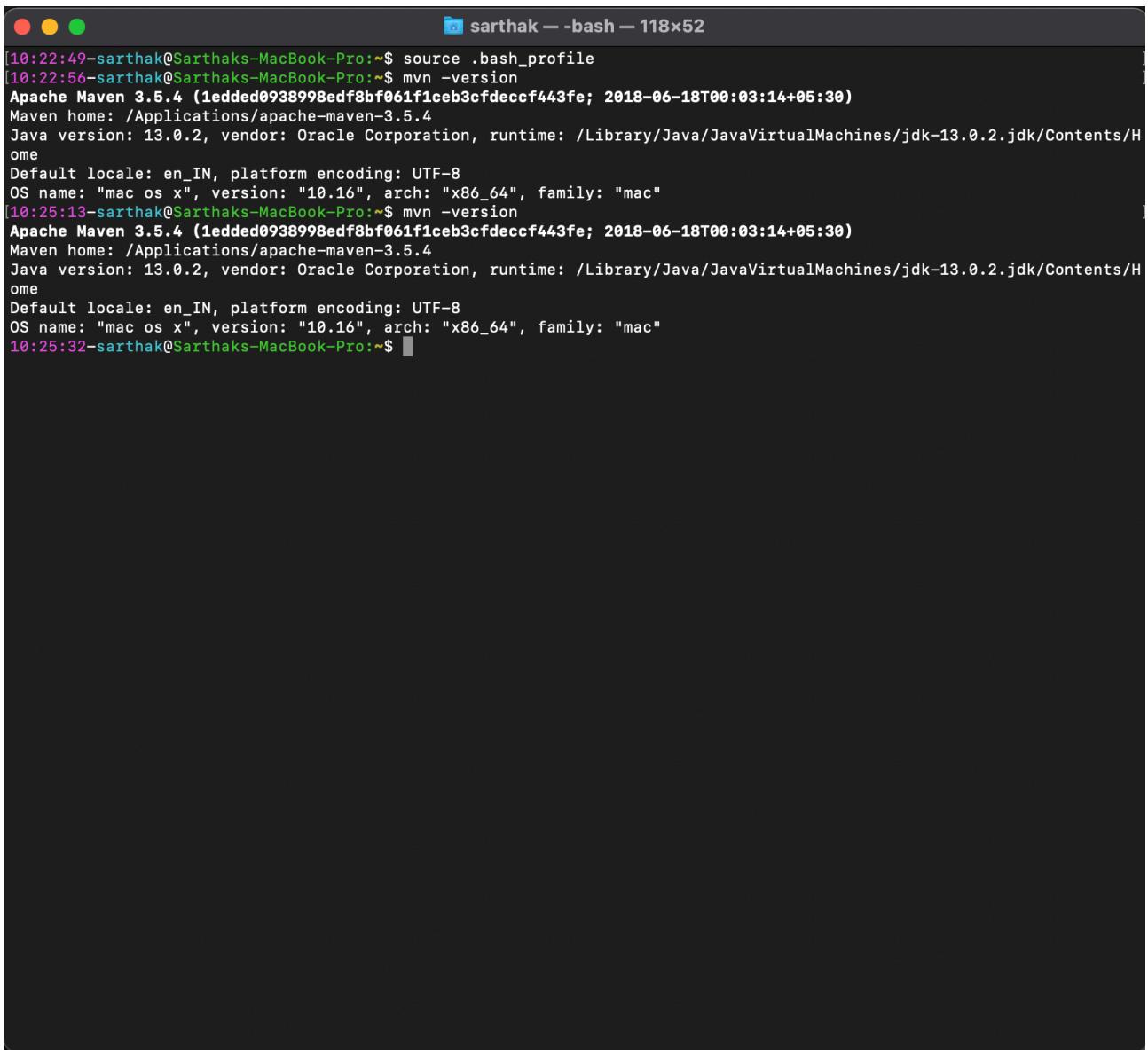


Experiment - 01

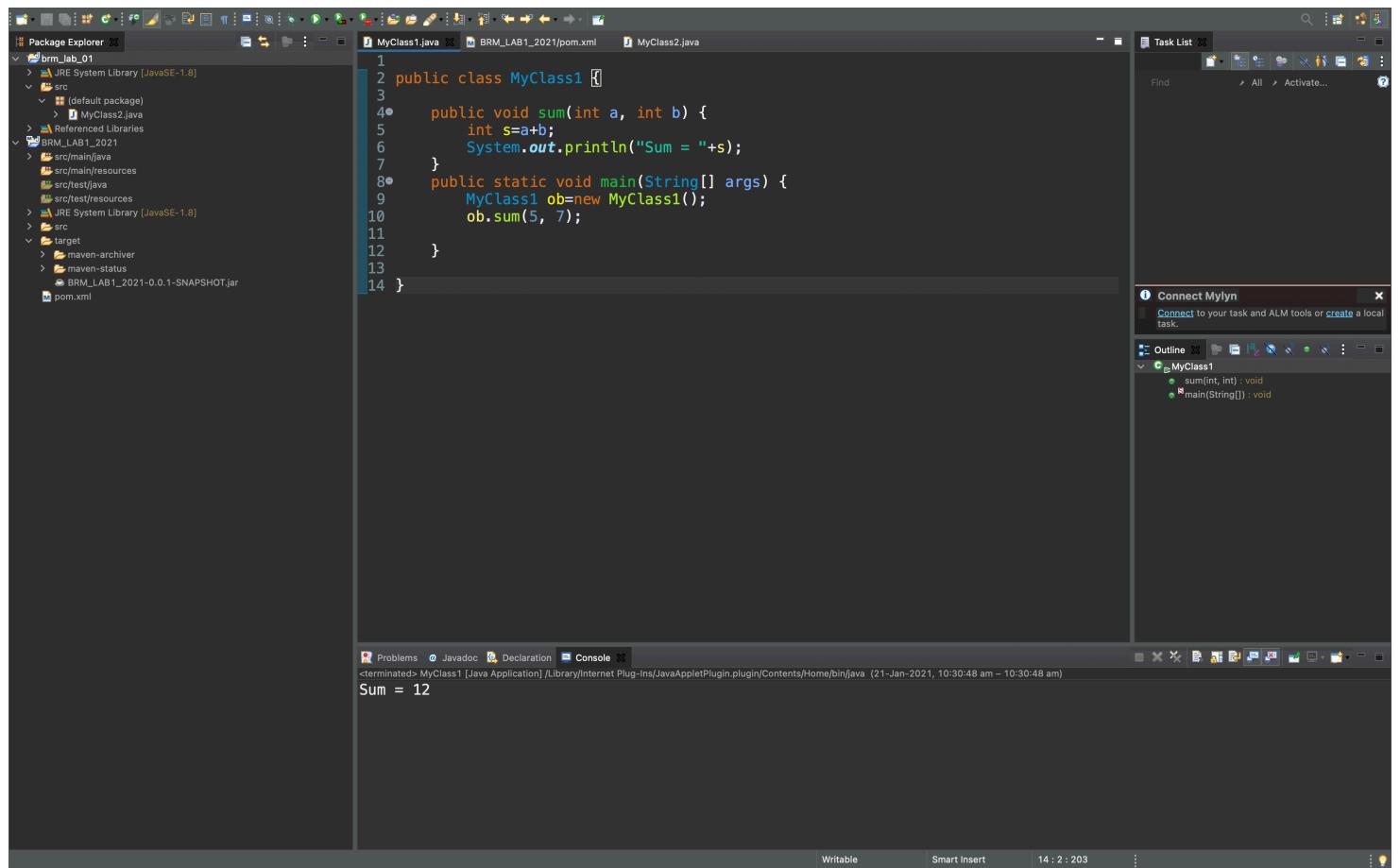
- Maven Installation



The screenshot shows a terminal window titled "sarthak — bash — 118x52". The window contains two sets of command-line output. The first set is from 10:22:49 and the second from 10:25:13. Both sets show the execution of "mvn -version" and the resulting output for Apache Maven 3.5.4, including the build ID, date, and Java version information.

```
[10:22:49-sarthak@Sarthaks-MacBook-Pro:~$ source .bash_profile
[10:22:56-sarthak@Sarthaks-MacBook-Pro:~$ mvn -version
Apache Maven 3.5.4 (1edded0938998edf8bf061f1ceb3cfdeccf443fe; 2018-06-18T00:03:14+05:30)
Maven home: /Applications/apache-maven-3.5.4
Java version: 13.0.2, vendor: Oracle Corporation, runtime: /Library/Java/JavaVirtualMachines/jdk-13.0.2.jdk/Contents/Home
Default locale: en_IN, platform encoding: UTF-8
OS name: "mac os x", version: "10.16", arch: "x86_64", family: "mac"
[10:25:13-sarthak@Sarthaks-MacBook-Pro:~$ mvn -version
Apache Maven 3.5.4 (1edded0938998edf8bf061f1ceb3cfdeccf443fe; 2018-06-18T00:03:14+05:30)
Maven home: /Applications/apache-maven-3.5.4
Java version: 13.0.2, vendor: Oracle Corporation, runtime: /Library/Java/JavaVirtualMachines/jdk-13.0.2.jdk/Contents/Home
Default locale: en_IN, platform encoding: UTF-8
OS name: "mac os x", version: "10.16", arch: "x86_64", family: "mac"
10:25:32-sarthak@Sarthaks-MacBook-Pro:~$
```

- Create a Maven Project, and add a Java Class (MyClass1) with a simple code.



The screenshot shows the Eclipse IDE interface with the following details:

- Package Explorer:** Shows the project structure for "brm_lab_01". It includes a "src" folder containing "MyClass1.java" and "MyClass2.java", and a "target" folder containing "BRM_LAB1_2021-0.0.1-SNAPSHOT.jar".
- MyClass1.java Content:**

```

1  public class MyClass1 {
2
3      public void sum(int a, int b) {
4          int s=a+b;
5          System.out.println("Sum = "+s);
6      }
7
8      public static void main(String[] args) {
9          MyClass1 ob=new MyClass1();
10         ob.sum(5, 7);
11     }
12 }
13
14 }
```
- Console Output:** Displays the output "Sum = 12" from the execution of the main method.
- Outline View:** Shows the methods defined in MyClass1: "sum(int, int)" and "main(String[])".

- Run goals on MyClass1 (clean, compile,install)

Clean :

The screenshot shows the Eclipse IDE interface with two main panes. On the left is the code editor for `MyClass1.java`, containing the following Java code:

```

1 public class MyClass1 {
2     public void sum(int a, int b) {
3         int s=a+b;
4         System.out.println("Sum = "+s);
5     }
6     public static void main(String[] args) {
7         MyClass1 ob=new MyClass1();
8         ob.sum(5, 7);
9     }
10    }
11 }
12 }
13 }
14 }

```

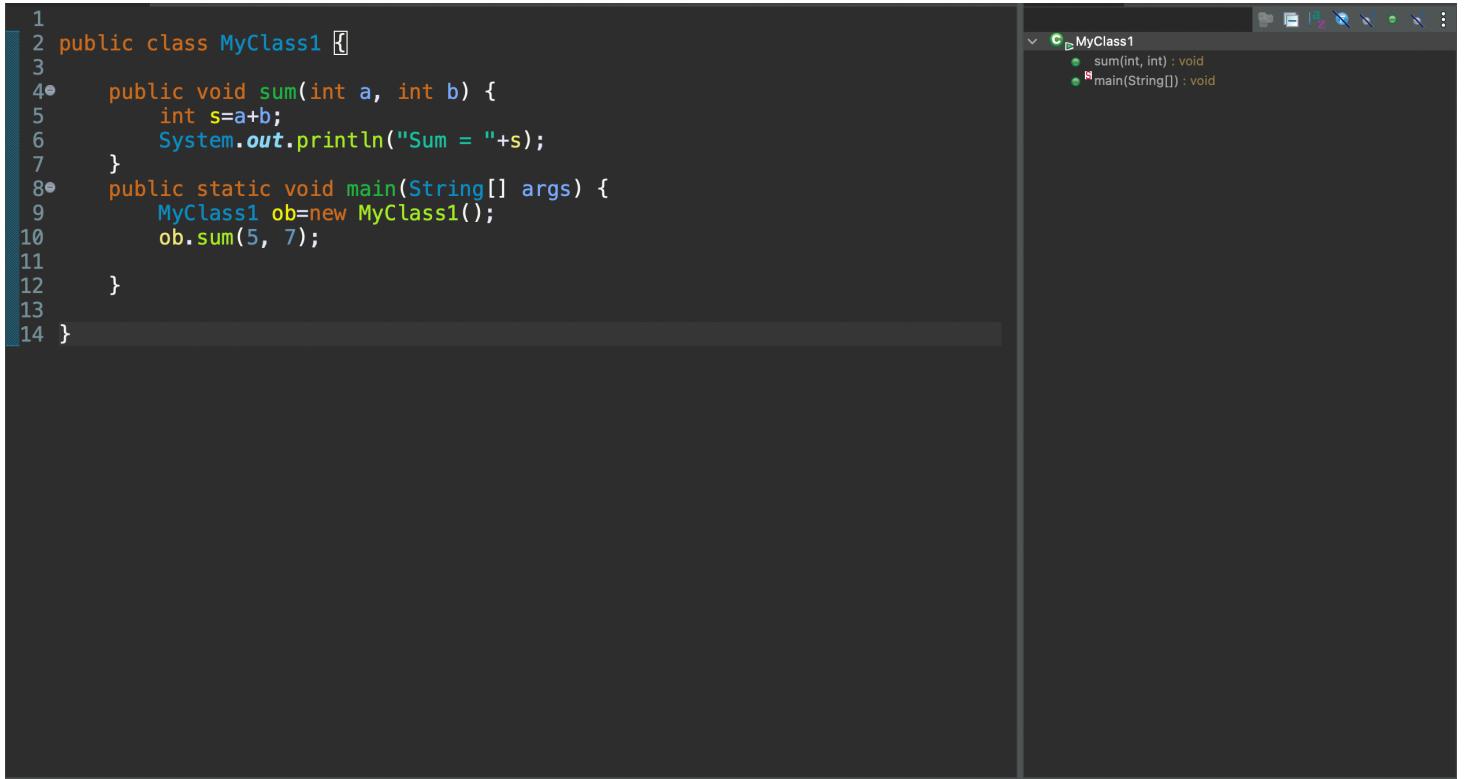
On the right is the Maven Build console output, which shows the execution of the `maven-clean-plugin`:

```

<terminated> BRM_LAB1_2021 [Maven Build] /Library/Java/JavaVirtualMachines/jdk-13.0.2.jdk/Contents/Home/bin/java (21-Jan-2021, 9:56:36 am - 9:56:45 am)
[INFO] Downloading from : https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-clean-plugin/2.5/maver
[INFO] Downloaded from : https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-clean-plugin/2.5/maven-
[INFO]
[INFO] --- maven-clean-plugin:2.5:clean (default-clean) @ BRM_LAB1_2021 ---
[INFO] Deleting /Users/sarthak/eclipse-workspace/BRM_LAB1_2021/target
[INFO]
[INFO] BUILD SUCCESS
[INFO]
[INFO] Total time: 6.815 s
[INFO] Finished at: 2021-01-21T09:56:45+05:30
[INFO]

```

Compile:



The screenshot shows the Eclipse IDE interface. On the left, the code editor displays a Java file named `MyClass1.java` with the following content:

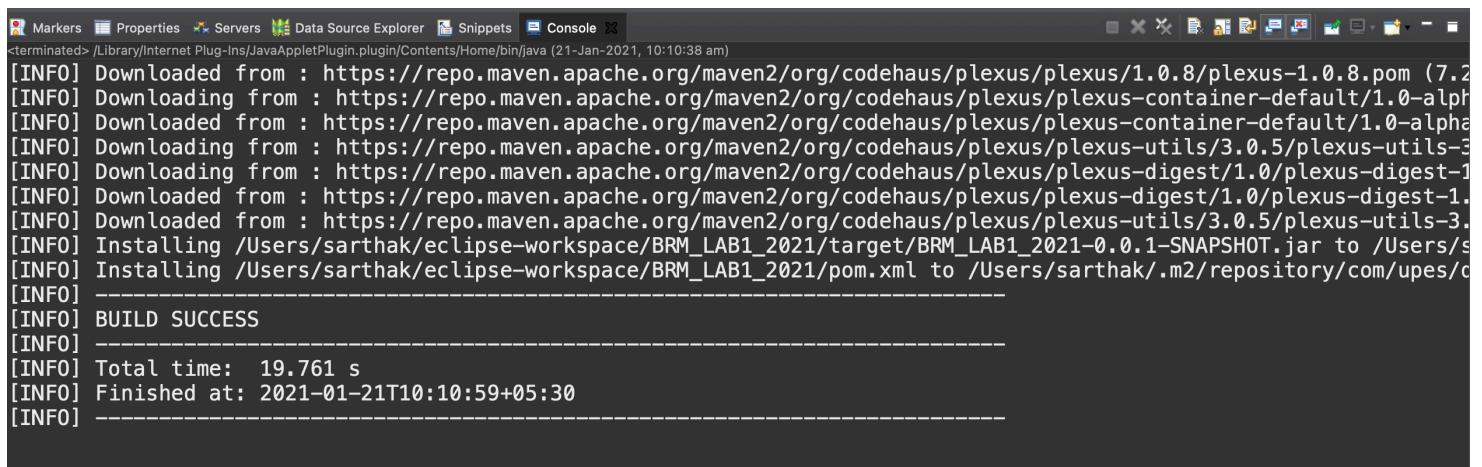
```
1 public class MyClass1 {
2     public void sum(int a, int b) {
3         int s=a+b;
4         System.out.println("Sum = "+s);
5     }
6     public static void main(String[] args) {
7         MyClass1 ob=new MyClass1();
8         ob.sum(5, 7);
9     }
10 }
11
12 }
```

On the right, the Java Outline view shows the class `MyClass1` with its methods: `sum(int, int)` and `main(String[])`. The `main` method is marked with a red warning icon.

Below the editor, the Eclipse tool bar includes icons for Markers, Properties, Servers, Data Source Explorer, Snippets, and Console. The Console tab is selected, showing Maven build output:

```
<terminated> BRM_LAB1_2021 (4) [Maven Build] /Library/Java/JavaVirtualMachines/jdk-13.0.2.jdk/Contents/Home/bin/java (21-Jan-2021, 10:10:00 am - 10:10:02 am)
[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) @ BRM_LAB1_2021 ---
[INFO] Nothing to compile - all classes are up to date
[INFO]
[INFO] BUILD SUCCESS
[INFO]
[INFO] Total time:  0.474 s
[INFO] Finished at: 2021-01-21T10:10:02+05:30
[INFO]
```

Install :



The screenshot shows the Eclipse IDE interface with the Console tab selected, displaying Maven dependency download and installation logs for the `Internet Plug-Ins/JavaAppletPlugin.plugin` project:

```
<terminated> /Library/Internet Plug-Ins/JavaAppletPlugin.plugin/Contents/Home/bin/java (21-Jan-2021, 10:10:38 am)
[INFO] Downloaded from : https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus/1.0.8/plexus-1.0.8.pom (7.2 kB at 10:10:38)
[INFO] Downloading from : https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-container-default/1.0-alpha-10/plexus-container-default-1.0-alpha-10.pom
[INFO] Downloaded from : https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-container-default/1.0-alpha-10/plexus-container-default-1.0-alpha-10.pom (1.1 kB at 10:10:38)
[INFO] Downloading from : https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-utils/3.0.5/plexus-utils-3.0.5.pom
[INFO] Downloading from : https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-digest/1.0/plexus-digest-1.0.pom
[INFO] Downloaded from : https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-digest/1.0/plexus-digest-1.0.pom (1.1 kB at 10:10:38)
[INFO] Downloaded from : https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-utils/3.0.5/plexus-utils-3.0.5.pom (1.1 kB at 10:10:38)
[INFO] Installing /Users/sarthak/eclipse-workspace/BRM_LAB1_2021/target/BRM_LAB1_2021-0.0.1-SNAPSHOT.jar to /Users/sarthak/.m2/repository/com/upes/BRM_LAB1_2021/0.0.1/BRM_LAB1_2021-0.0.1-SNAPSHOT.jar
[INFO] Installing /Users/sarthak/eclipse-workspace/BRM_LAB1_2021/pom.xml to /Users/sarthak/.m2/repository/com/upes/BRM_LAB1_2021/0.0.1/BRM_LAB1_2021-0.0.1-SNAPSHOT.pom
[INFO]
[INFO] BUILD SUCCESS
[INFO]
[INFO] Total time:  19.761 s
[INFO] Finished at: 2021-01-21T10:10:59+05:30
[INFO]
```

- After running **Install**, the class will be exported as a .jar file, which we use by making a new **Java Project** with a new class (**MyClass2**).
- We add the .jar file target location in the build settings, so that we are able to use the exported .jar class within the new java class.

The screenshot shows the Eclipse IDE interface. On the left, the Package Explorer view displays a project structure for 'brm_lab_01' containing JRE System Library [JavaSE-1.8], src, target, and BRM_LAB1_2021. The src folder contains MyClass1.java and MyClass2.java. MyClass2.java is open in the editor, showing the following code:

```

1  public class MyClass2 {
2      public static void main(String[] args) {
3          int x=20;
4          int y=30;
5          MyClass1 ob=new MyClass1();
6          ob.sum(x,y);
7      }
8  }
9
10 }
11
12 }
13

```

The Problems view at the bottom shows one error: <terminated> MyClass2 (1) [Java Application] /Library/Internet Plug-ins/JavaAppletPlugin.plugin/Contents/Home/bin/java (21-Jan-2021, 10:28:03 am - 10:28:04 am)
Sum = 50

