Lesson 01 Demo 02

Using Maven CLI to Create Java Web Project

Objective: To create a Java Web Project using Maven CLI and work with the Maven commands to configure and execute the project

Tools required: Visual Studio Code and Maven

Prerequisites: None

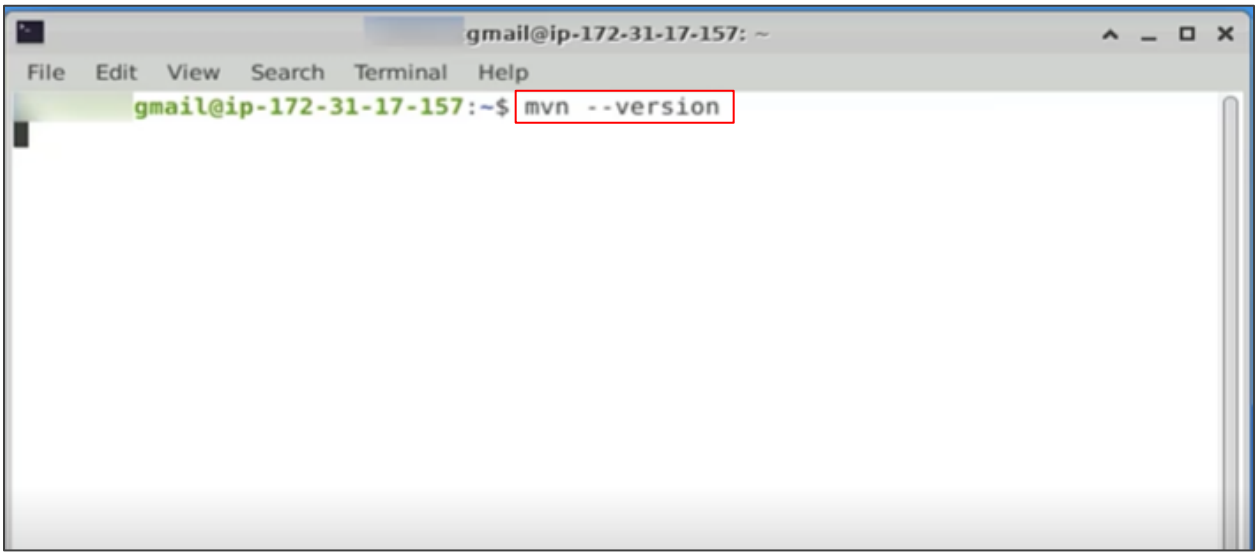
Steps to be followed:

1. Run the mvn package command
2. Open the CMS project
3. Add the dependency

Step 1: Run the mvn package command

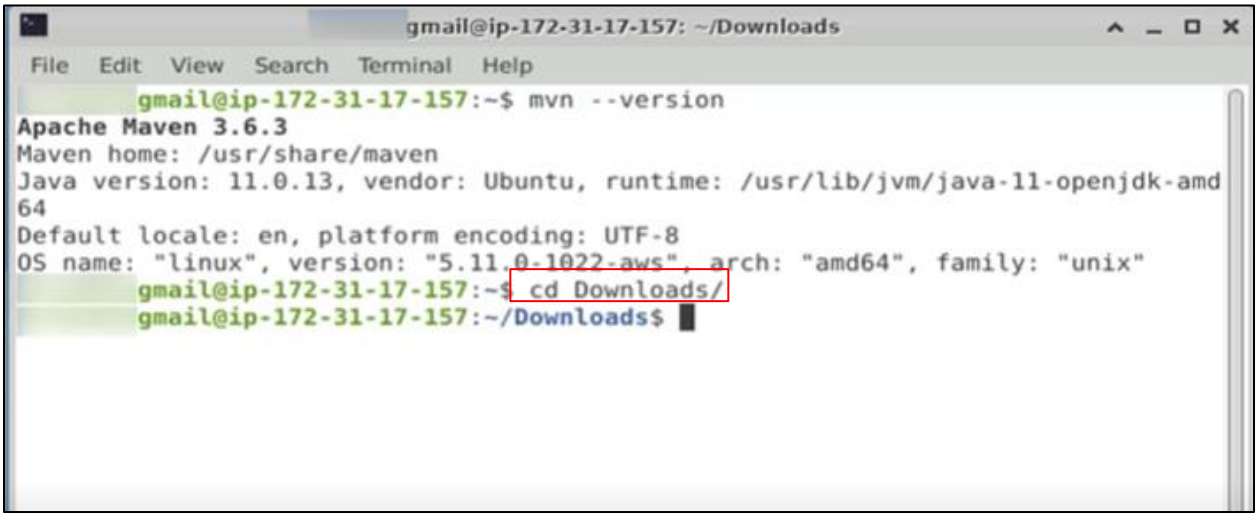
1.1 Open the terminal and check if Maven is installed using the following command:

mvn --version

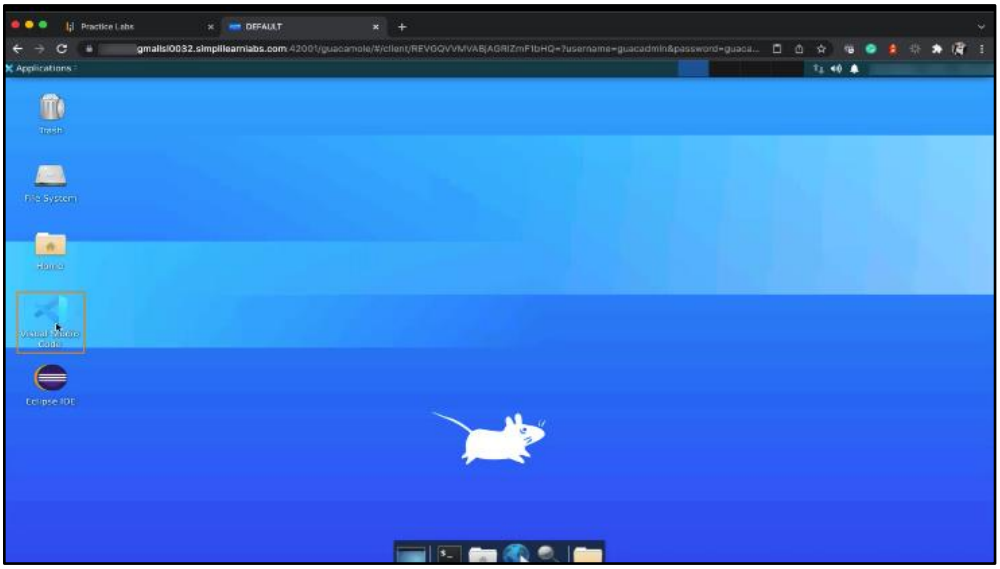


1.2 Use the cd command to navigate to the **Downloads** directory:

cd Downloads/

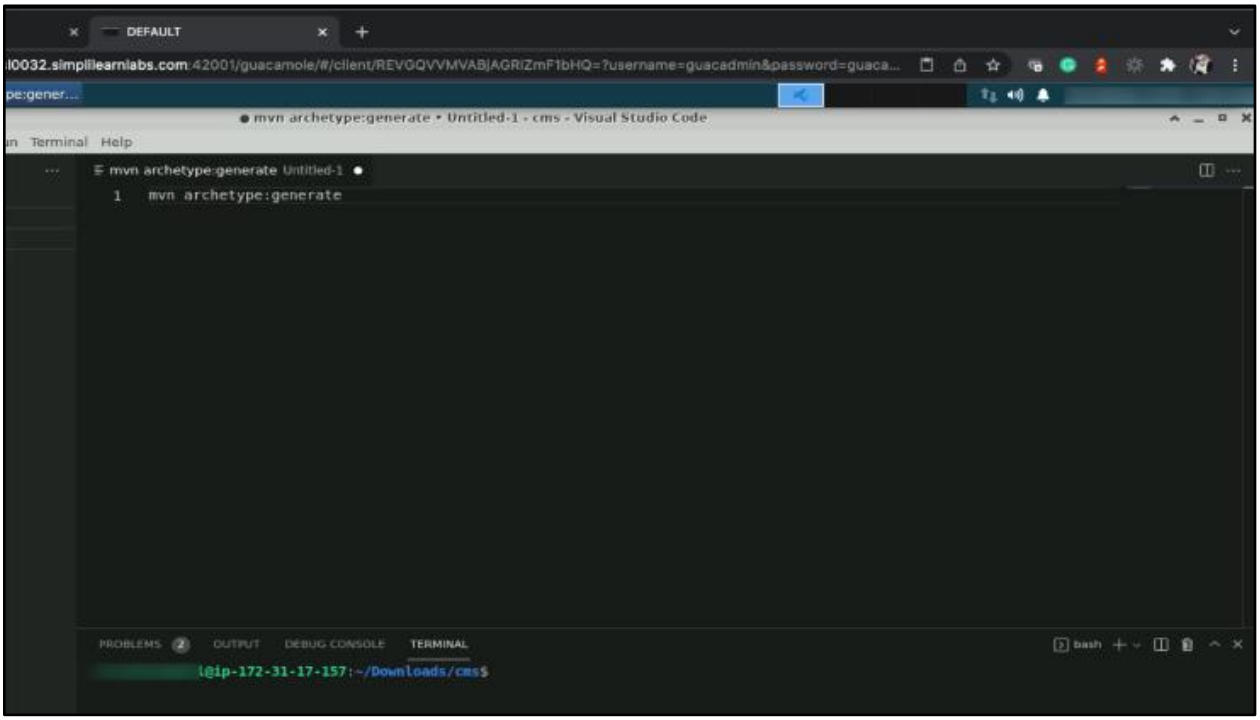


1.3 To execute the different commands, open the Visual Studio Code



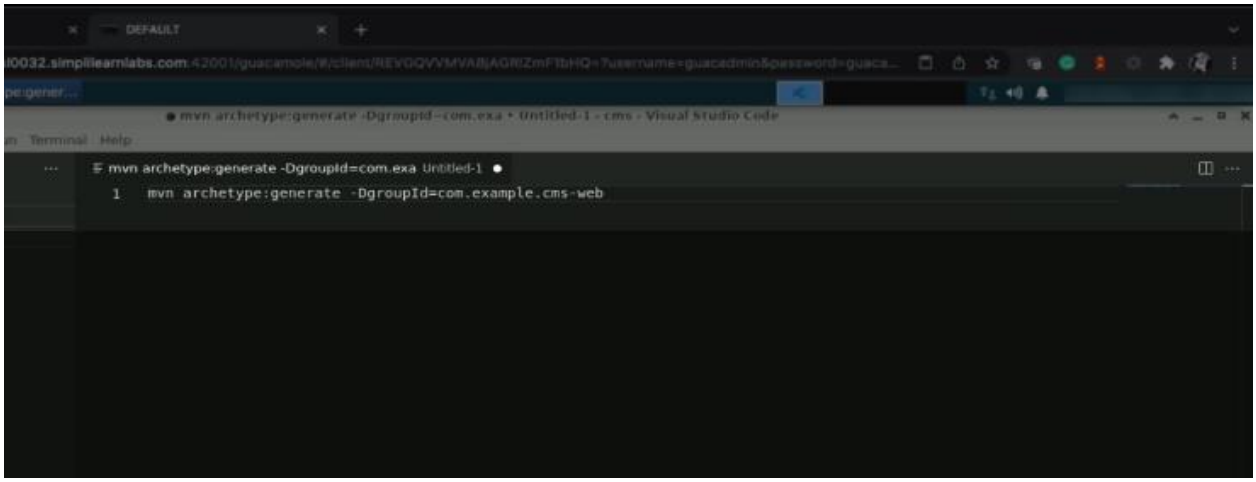
1.4 Use the following command to create a project:

mvn archetype:generate



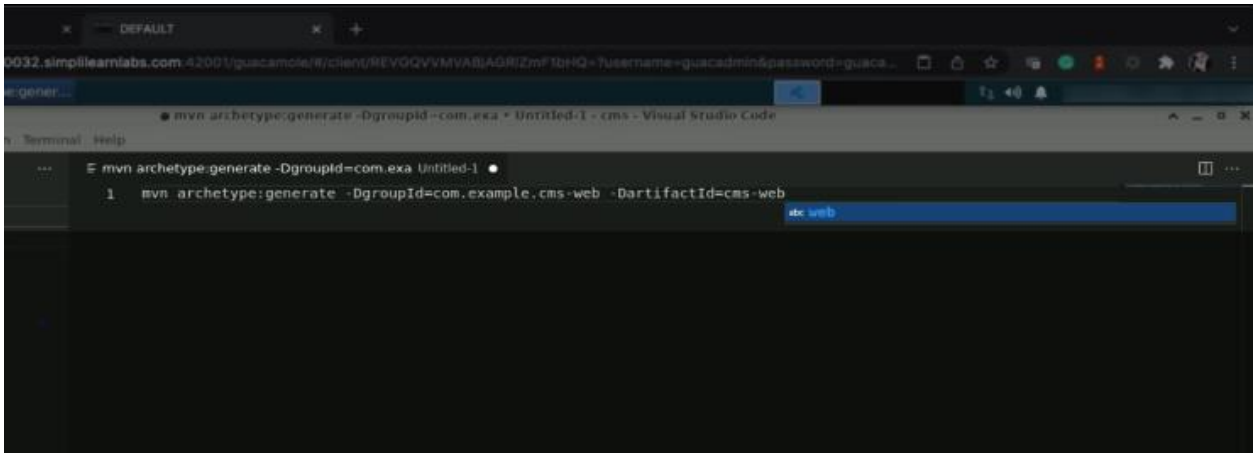
1.5 The project must have the group ID, which can be the company's domain name in reverse order. Add group ID for the project:

-DgroupId=com.example.cms-web



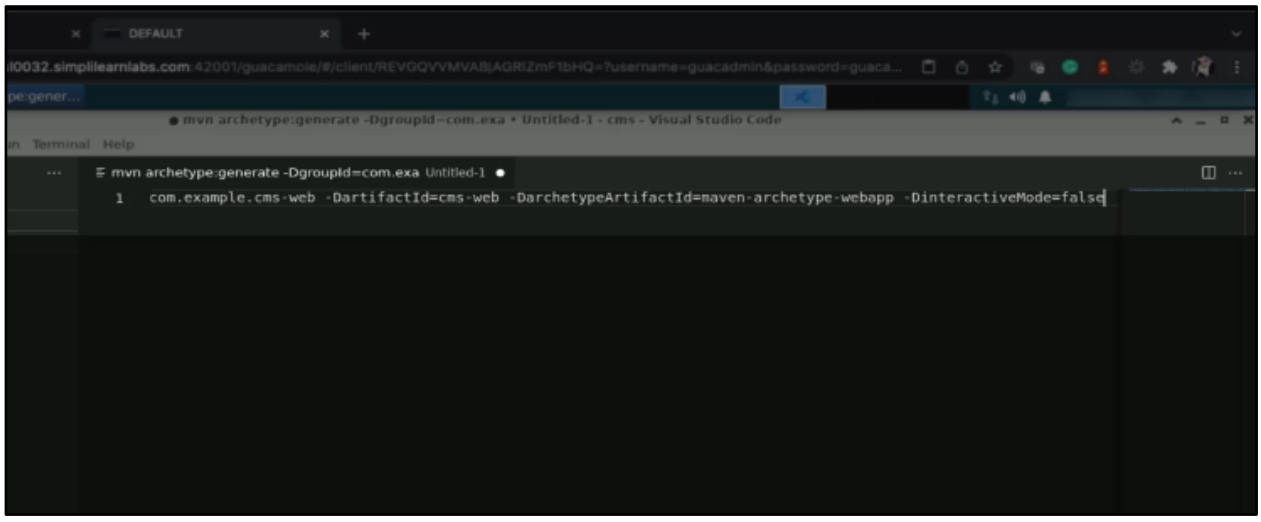
1.6 Add an artifactId for the project, which is the application name for the project

-DartifactId=cms-web



1.7 Add archetype and interactive mode:

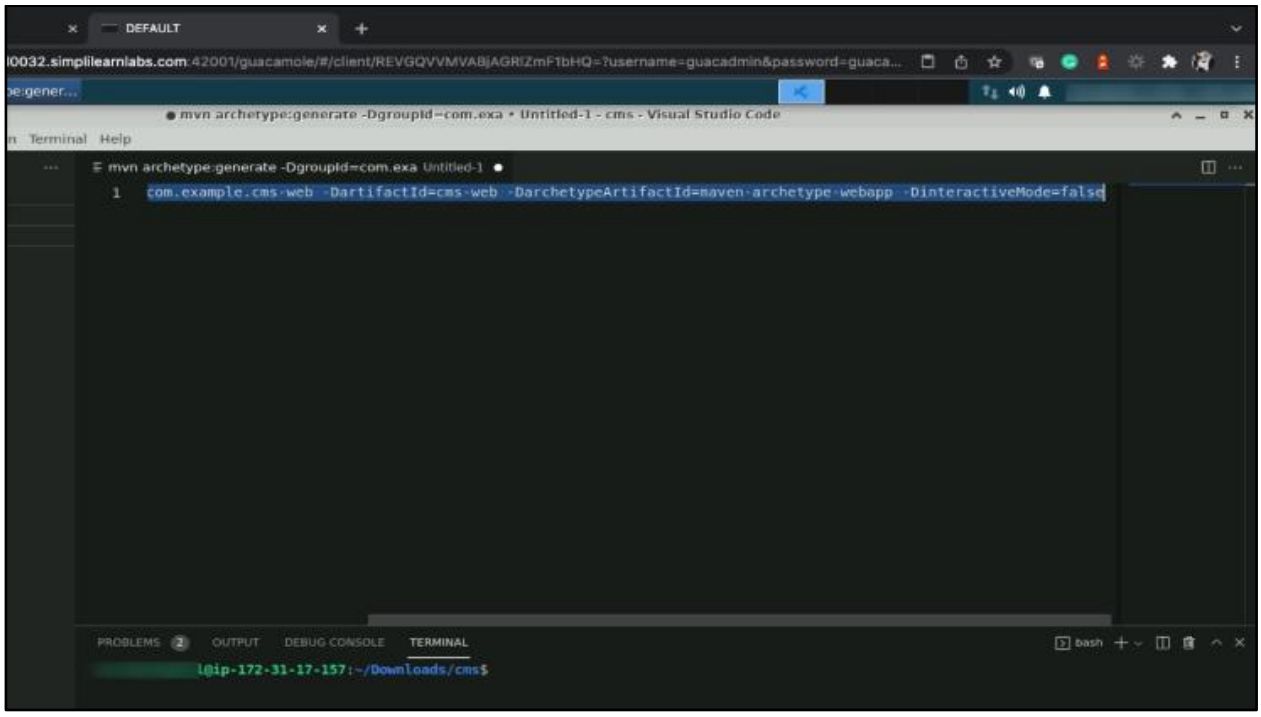
-DarchetypeArtifactId=maven-archetype-webapp -DinteractiveMode=false

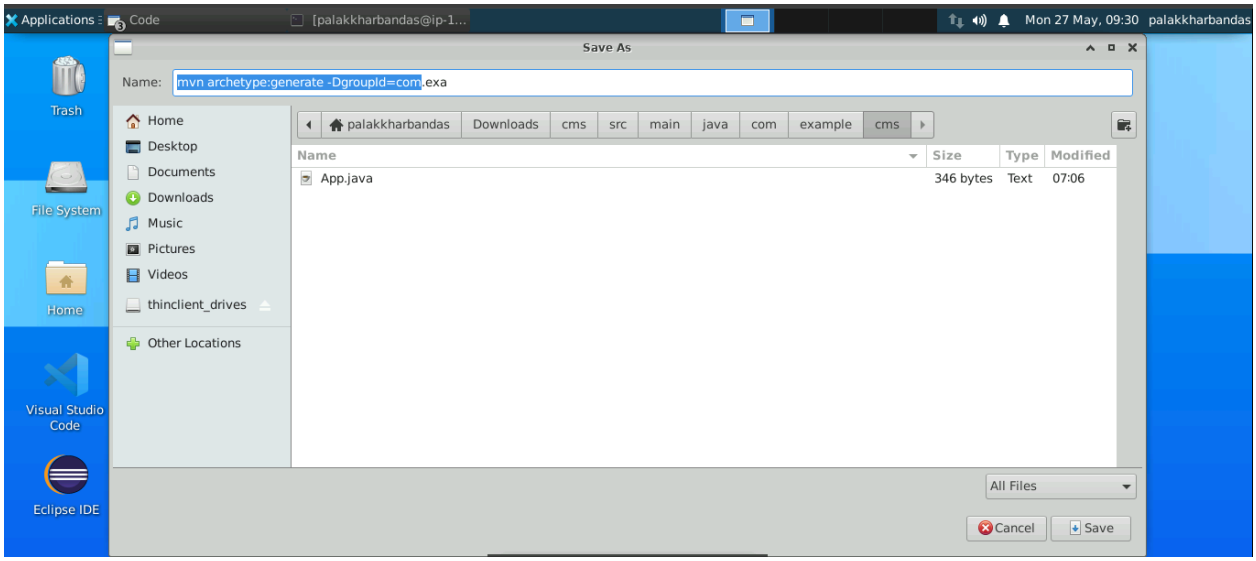


The **-DarchetypeArtifactId=maven-archetype-webapp** flag specifies the Maven archetype or project template for creating a new web application project. The **-DinteractiveMode=false** flag tells Maven to use non-interactive mode, which means that it won't prompt the user for input during the project creation process.

The complete command will look like: **mvn archetype:generate -DgroupId=com.example.cms-web -DartifactId=cms-web -DarchetypeArtifactId=maven-archetype-quickstart -DarchetypeVersion=1.4 -DinteractiveMode=false**

1.8 Copy the following command:





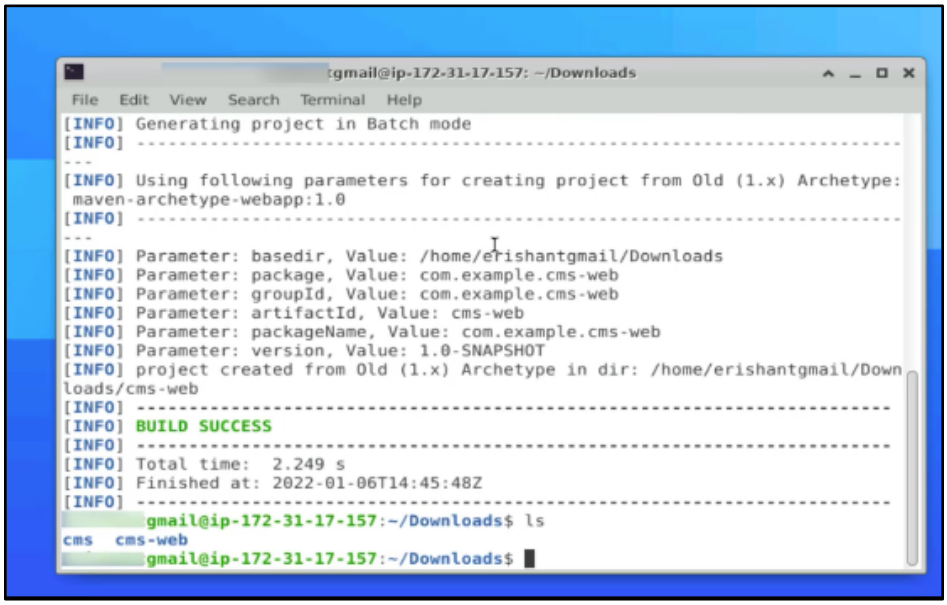
1.9 Enter the **Downloads** directory in the terminal window:

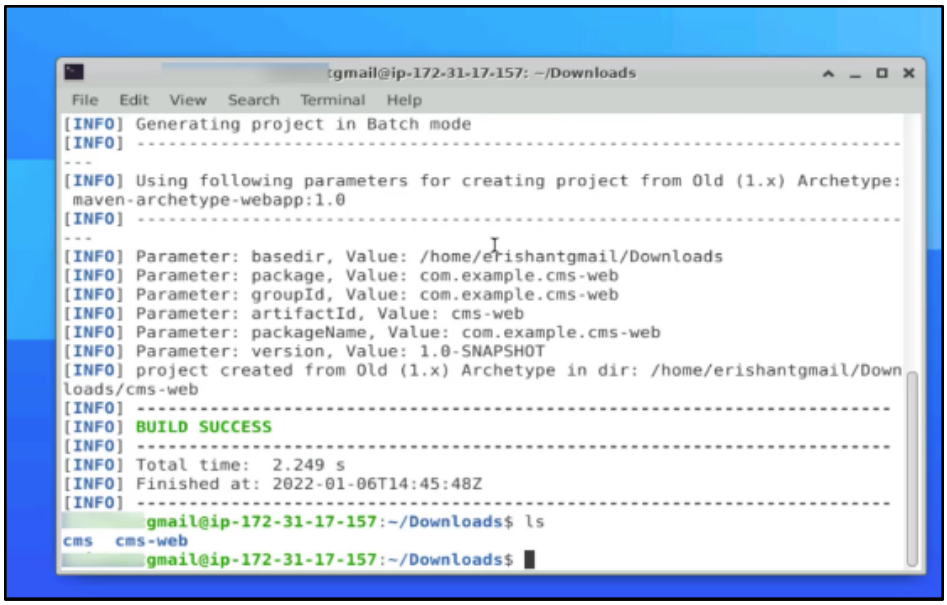
cd Downloads/

1.10 Paste the above command and press **Enter:**

mvn archetype:generate -DgroupId=com.example.cms-web -DartifactId=cms-web -DarchetypeArtifactId=maven-archetype-quickstart -DarchetypeVersion=1.4 -DinteractiveMode=false

```
palakkharbandas@ip-172-31-17-240:~/Downloads$ mvn archetype:generate -DgroupId=com.example.cms-web -DartifactId=cms-web -DarchetypeArtifactId=maven-a
rchetype-quickstart -DarchetypeVersion=1.4 -DinteractiveMode=false
[INFO] Scanning for projects...
[INFO]
[INFO] ------------------< org.apache.maven:standalone-pom >-------------------
[INFO] Building Maven Stub Project (No POM) 1
[INFO] --------------------------------[ pom ]---------------------------------
[INFO]
[INFO] >>> maven-archetype-plugin:3.2.1:generate (default-cli) > generate-sources @ standalone-pom >>>
[INFO]
[INFO] <<< maven-archetype-plugin:3.2.1:generate (default-cli) < generate-sources @ standalone-pom <<<
[INFO]
[INFO]
[INFO] --- maven-archetype-plugin:3.2.1:generate (default-cli) @ standalone-pom ---
[INFO] Generating project in Batch mode
[INFO] ----------------------------------------------------------------------------
```

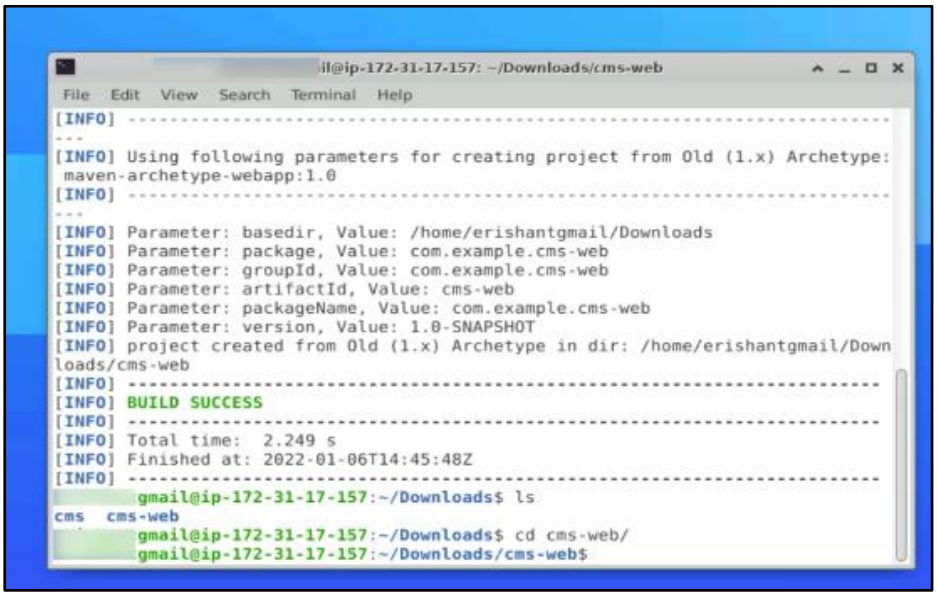




1.11 Use the **ls** command to list the directories, and the **cms** folder will be present

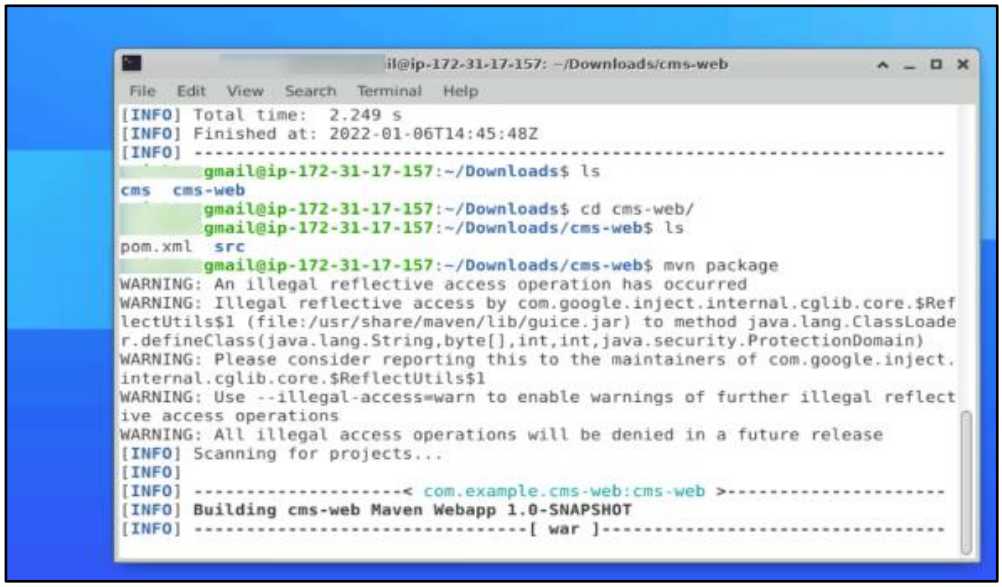
1.11 Use the **cd** command to navigate to the **cms-web** folder:

cd cms-web/



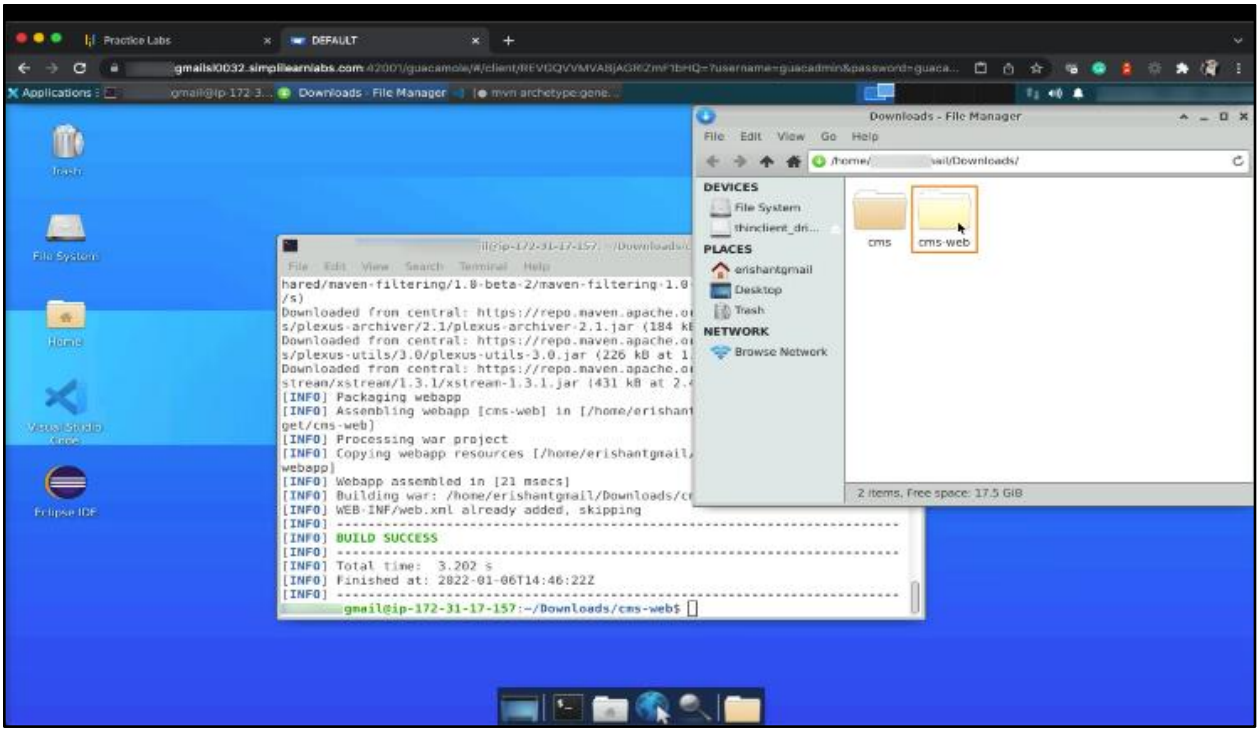
1.12 Use the **mvn package** command to build the project:

mvn package

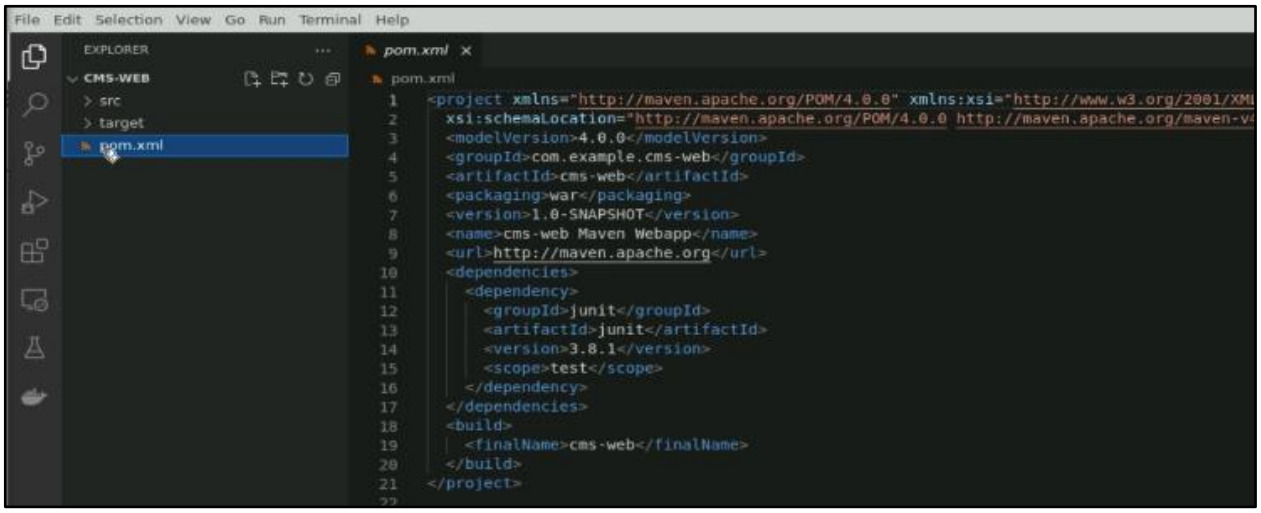


Step 2: Open the CMS project

2.1 Navigate to the **Downloads** directory and open the **cms-web** folder in the Visual Studio Code

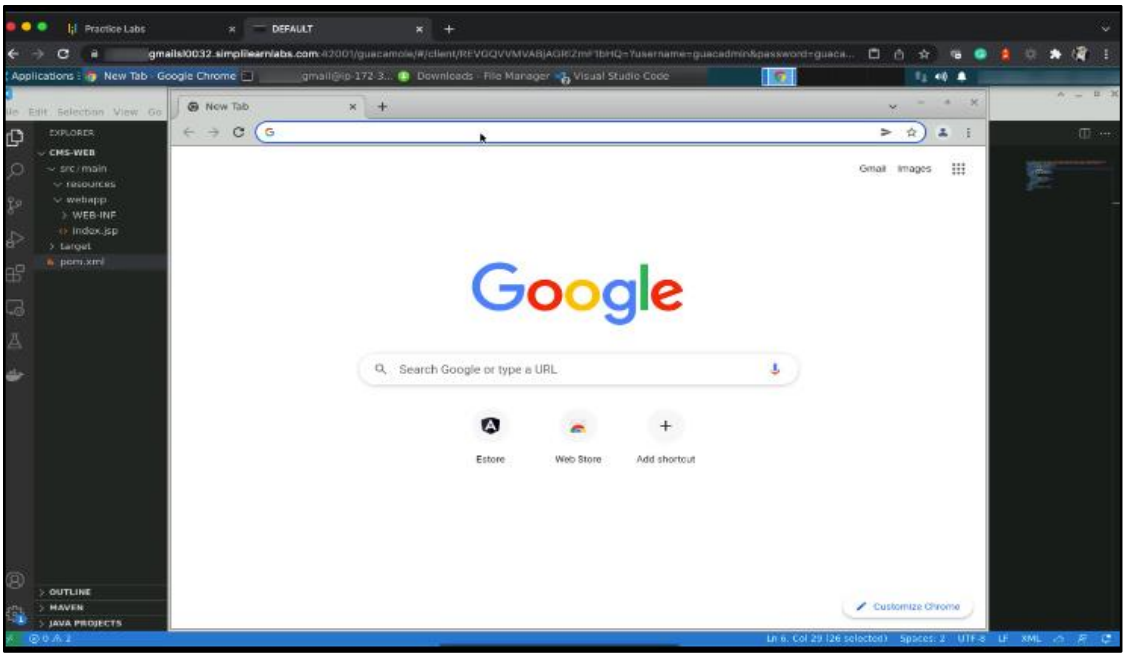


2.2 Open the **pom.xml** file. Check and ensure that the packaging is **war** and not **jar.**

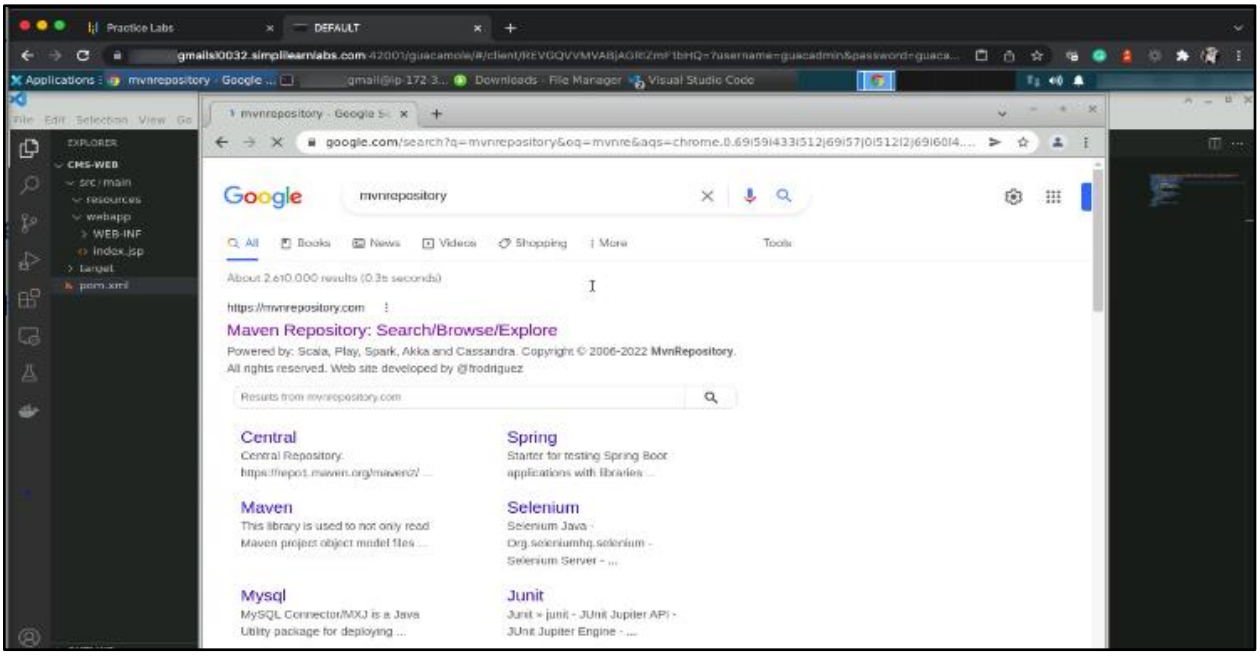


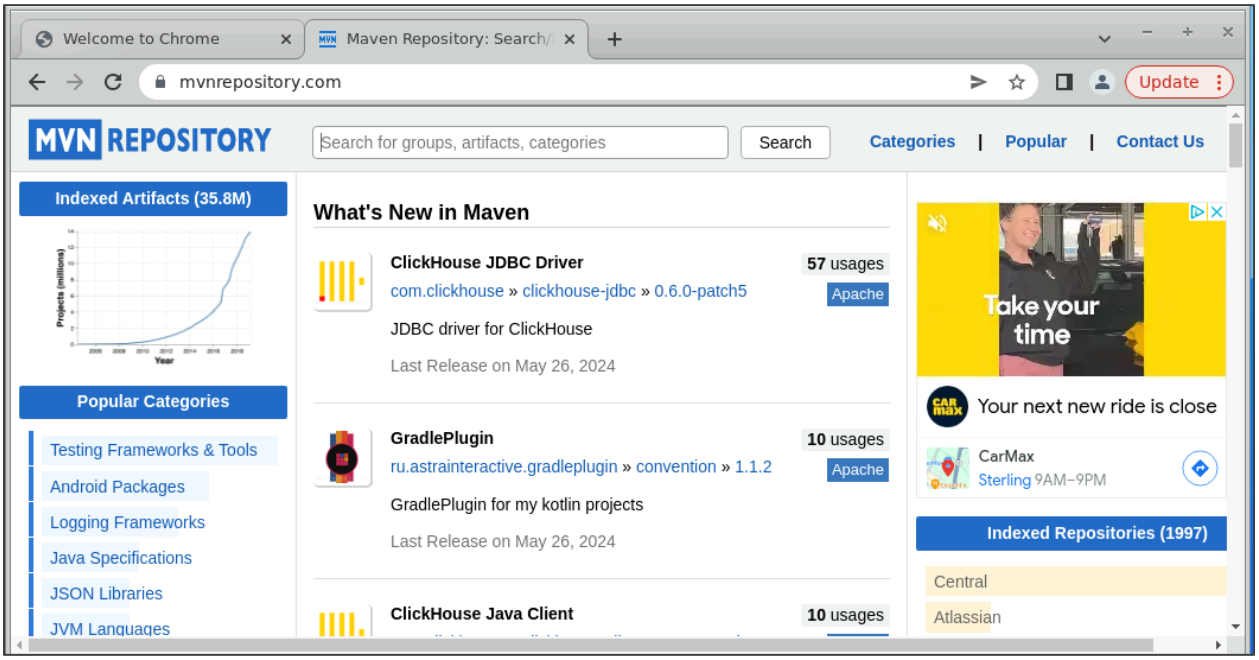
Step 3: Add the dependency

3.1 Open the Google browser

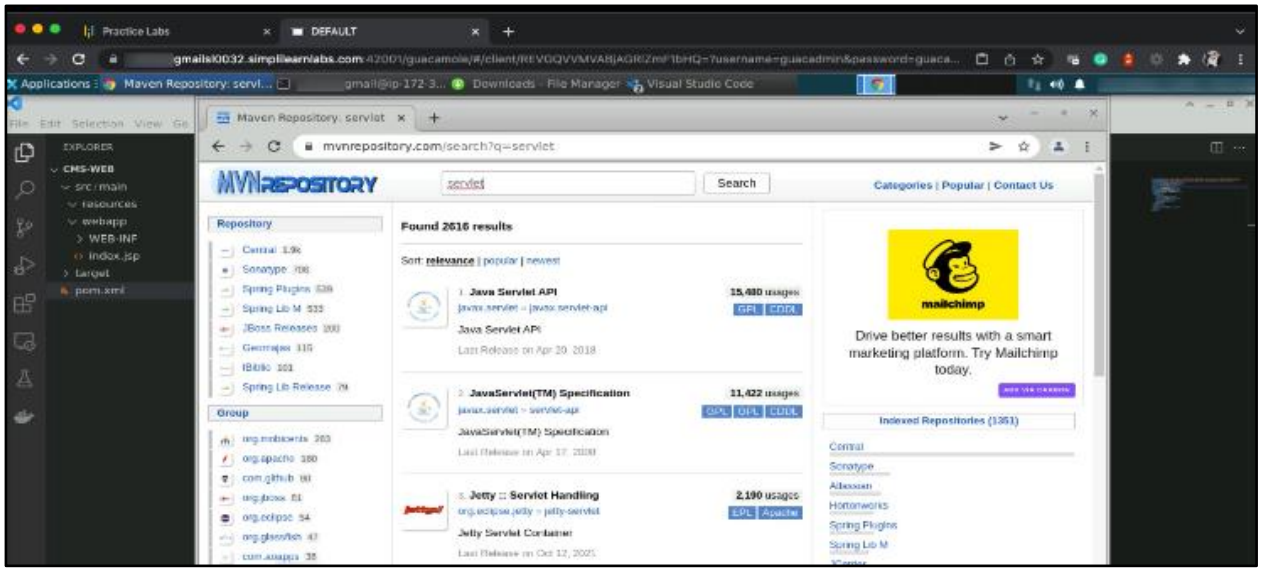


3.2 Search for mvn repository

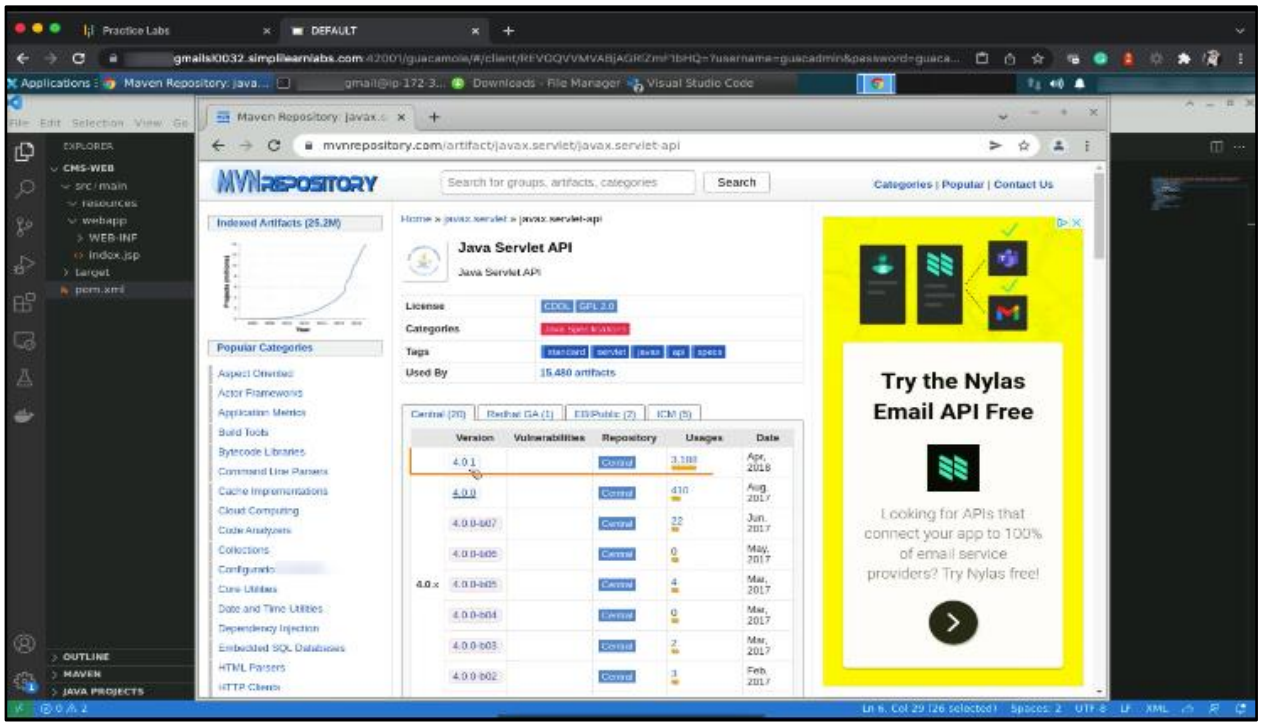




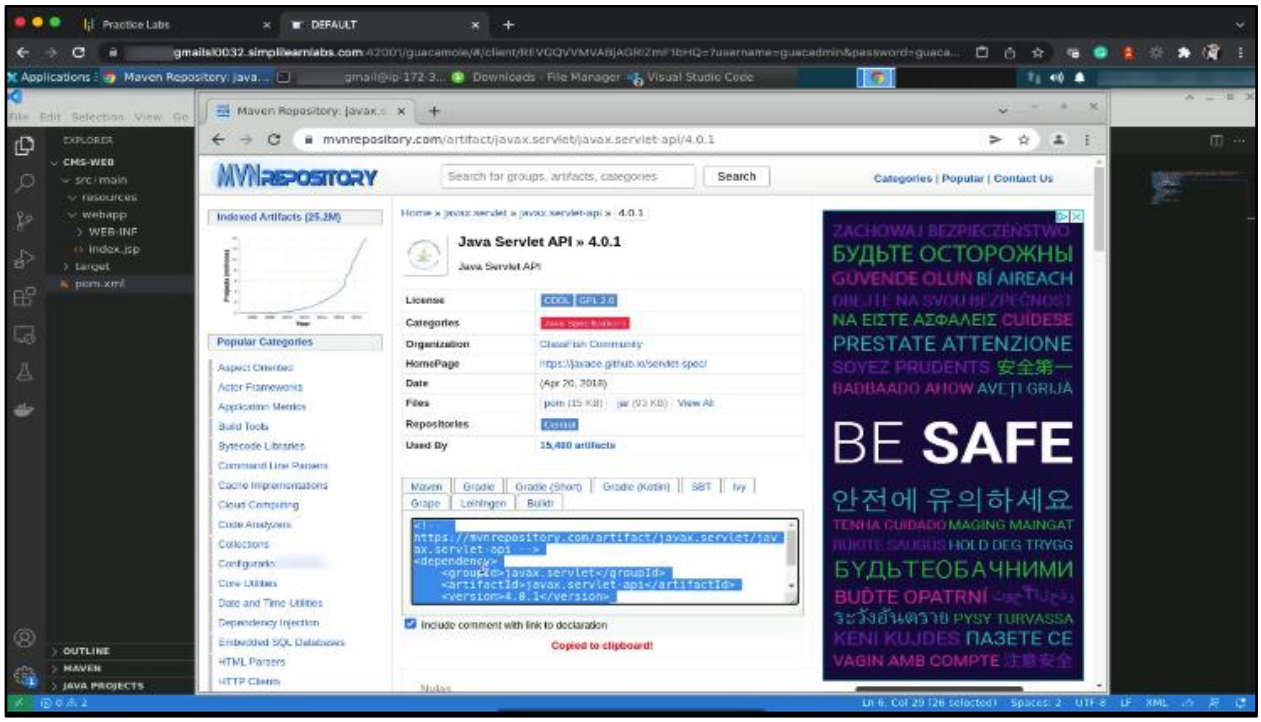
3.3 Search for **servlet** in the search box and select **Java Servlet API**



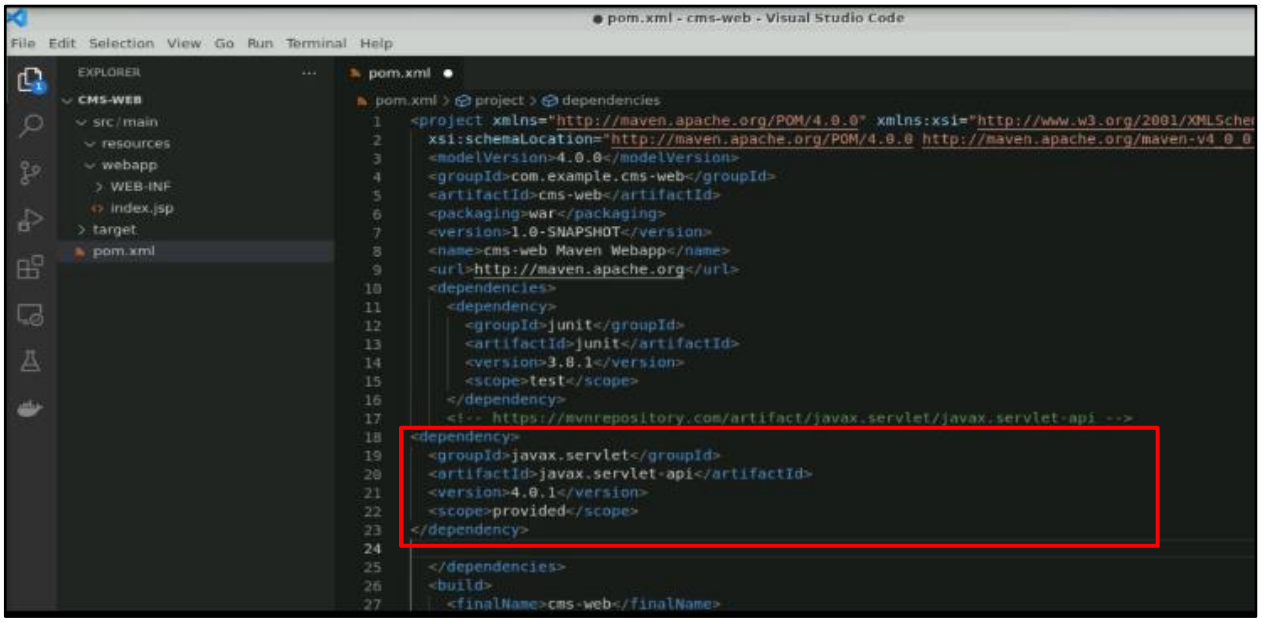
3.4 Select the latest version of Servlet, which is **4.0.1**



3.5 Copy the dependency from the results shown



3.6 Paste it under the **dependency** in the **pom.xml** file



This is how you can easily add dependencies for the Servlet API. The same process can be used for other dependencies, such as Spring.

By following these steps, you have successfully created a Java Web Project using Maven CLI, built the project, opened it in Visual Studio Code, and added the necessary dependencies.