



Kavin School - <http://www.kavinschool.com/>

Installation Guide

Core Java

Kavin School
10/1/2024

A. Table of Contents

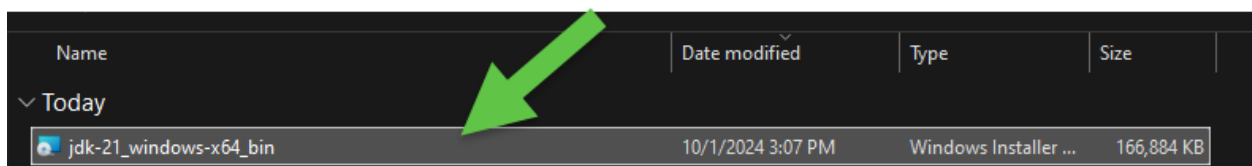
B.	Install Java 21	3
	Step1: Download MSI Windows Installer.....	3
	Step2: Follow the Install Wizard	3
	Step3: Choose Path	3
	Step4: Once Installed Click Close	4
C.	Install Maven.....	5
	Step1: Download Maven & Move to C:\tools.....	5
	Step2: Add environment variables	5
	Step3: Validate Installation	6
D.	Install Eclipse IDE	7
	Step 1: Download Eclipse.....	7
	Step 2: Unzip & Move	7
	Step 3: Create a Shortcut for Eclipse IDE	7
	Step 4: Pin to Start Eclipse IDE	8
	Step 5: Open an Eclipse Workspace.....	8
E.	Installing TestNG Plugin for Eclipse IDE	9
	Step 1: Goto Eclipse Marketplace	9
	Step 2: Search TestNG & Install	9
	Step 3: Follow the prompts & Trust the author.....	9
	Step 4: Accept License	10
	Step 6: Restart Eclipse IDE	11
F.	Install IntelliJ IDEA Community or Ultimate Edition	11
G.	Artifactory settings.xml file.....	16
	Prerequisites	16
	Step-by-Step Instructions.....	16
	Download/Create the settings.xml File:	16
	Edit settings.xml:.....	16
H.	Testing using a real project.....	17

B. Install Java 21

- Java 21 (Available from many locations)
 - From Oracle - <https://www.oracle.com/java/technologies/downloads/#jdk21-windows>
 - From Temurin - <https://adoptium.net/temurin/releases/>
 - From Azul - <https://www.azul.com/downloads/?version=java-21-lts&package=jdk#zulu>
- Set JAVA_HOME (in your environment variables in Windows)
- Add %JAVA_HOME%\bin to your PATH

Step1: Download MSI Windows Installer

- From Oracle - <https://www.oracle.com/java/technologies/downloads/#jdk21-windows>



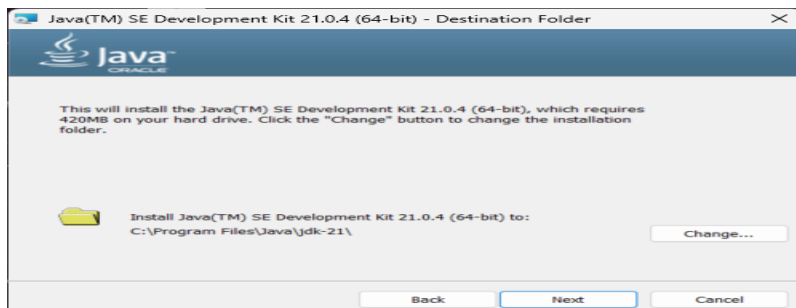
Step2: Follow the Install Wizard

Double-click on the installer and follow the Wizard prompts.



Step3: Choose Path

Change the path as needed and press Next as shown below.

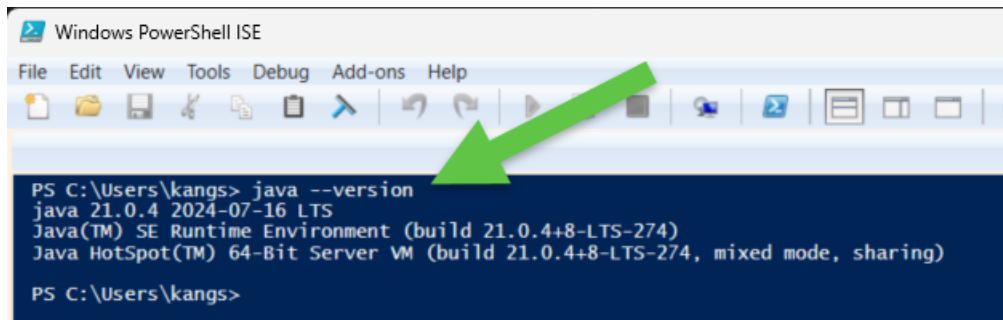


Step4: Once Installed Click Close

When prompted press “Yes” to continue once the installation is done and Close.



Open a terminal or PowerShell and check the command **java --version** as shown below.



C. Install Maven

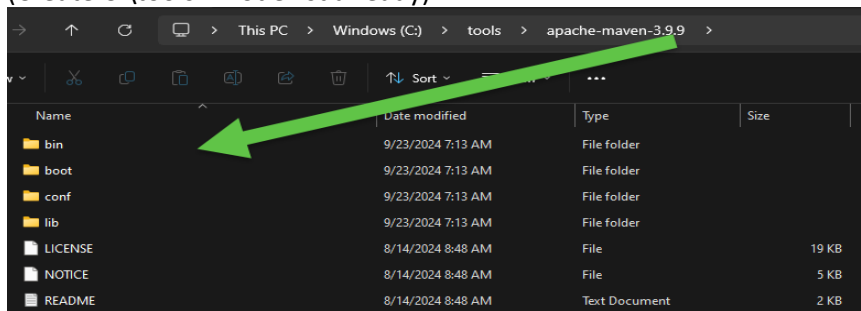
- Download - <https://maven.apache.org/download.cgi>
- Create the Windows environment variable for the below variables
 - M2_HOME=C:\tools\apache-maven-x.y.z
 - M2=%M2_HOME%\bin
 - MAVEN_OPTS=-Xms256m -Xmx512m
- Don't forget to add M2 to your PATH variable.

Step1: Download Maven & Move to C:\tools

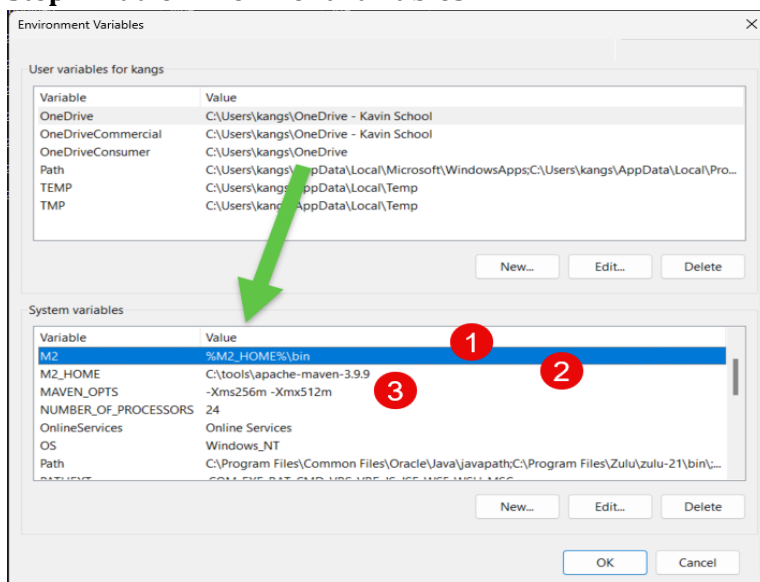
Go to - <https://maven.apache.org/download.cgi>

	Link	Checksums	Signature
Binary tar.gz archive	apache-maven-3.9.9-bin.tar.gz	apache-maven-3.9.9-bin.tar.gz.sha512	apache-maven-3.9.9-bin.tar.gz.asc
Binary zip archive	apache-maven-3.9.9-bin.zip	apache-maven-3.9.9-bin.zip.sha512	apache-maven-3.9.9-bin.zip.asc
Source tar.gz archive	apache-maven-3.9.9-src.tar.gz	apache-maven-3.9.9-src.tar.gz.sha512	apache-maven-3.9.9-src.tar.gz.asc
Source zip archive	apache-maven-3.9.9-src.zip	apache-maven-3.9.9-src.zip.sha512	apache-maven-3.9.9-src.zip.asc

Download the Binary Zip archive and unzip it
Copy and paste the apache-maven-x.y.z to c:\tools directory
(Create C:\tools if not exist already)

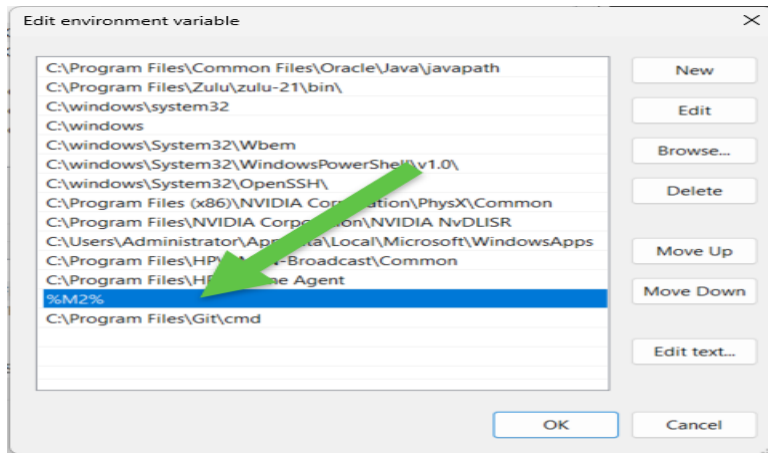


Step2: Add environment variables



Install Guide

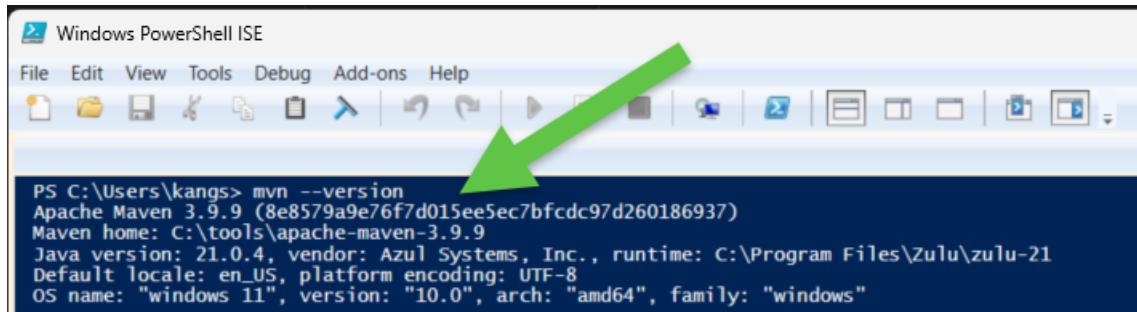
Add %M2% into PATH



Step3: Validate Installation

Open a terminal or a PowerShell and check the command below

mvn --version



D. Install Eclipse IDE

- Download Eclipse EE (Enterprise Edition)
- Make sure to download the correct OS type zip or MSI file
- Your JDK should be 64-bit of your Eclipse IDE
- Unzip and move the eclipse folder to the C:\tools directory.
- If you download the installer, just follow Wizard

Step 1: Download Eclipse

Go to the below Link and download

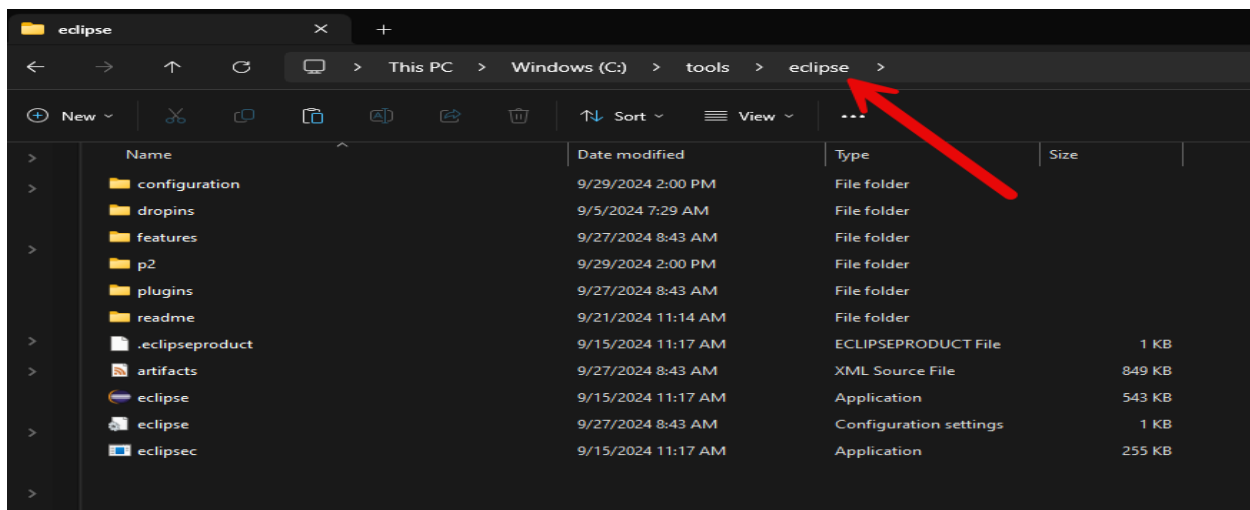
<https://www.eclipse.org/downloads/packages>



Step 2: Unzip & Move

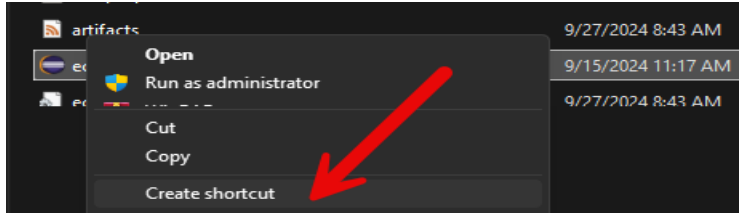
Unzip the download zip file and put it in C:\Program Files\eclipse directory (or) if you have access problems, create tools folder under C drive or any other place where you have access with write privileges and move only the eclipse folder. The screenshot below shows the C:\tools\eclipse directory.

(Create C:\tools directory if it does not exist already)



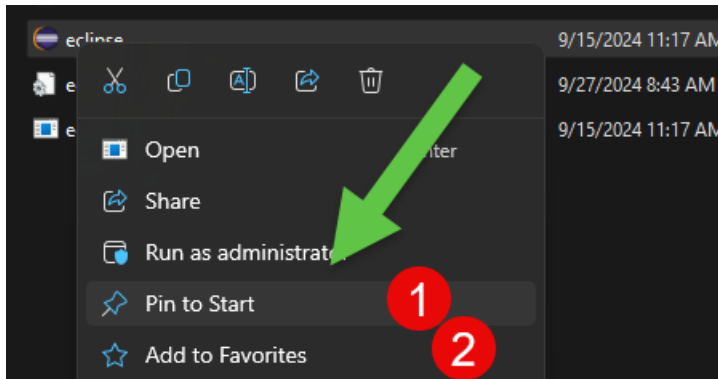
Step 3: Create a Shortcut for Eclipse IDE

Right-click on the Eclipse application and **Create a shortcut** Button as shown below



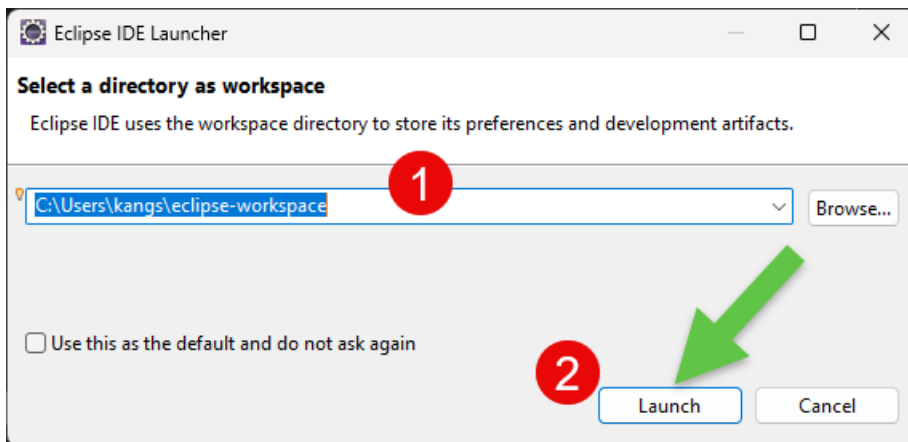
Step 4: Pin to Start Eclipse IDE

Right-click on Eclipse Application and click Pin to Start as shown below (Also optionally you can Add to Favorites as well)



Step 5: Open an Eclipse Workspace

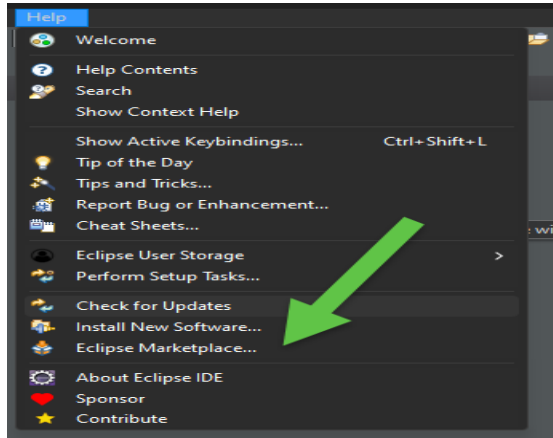
Double-click and open the Eclipse application, choose the default eclipse-workspace or change it to a different directory and click the Launch button.



E. Installing TestNG Plugin for Eclipse IDE

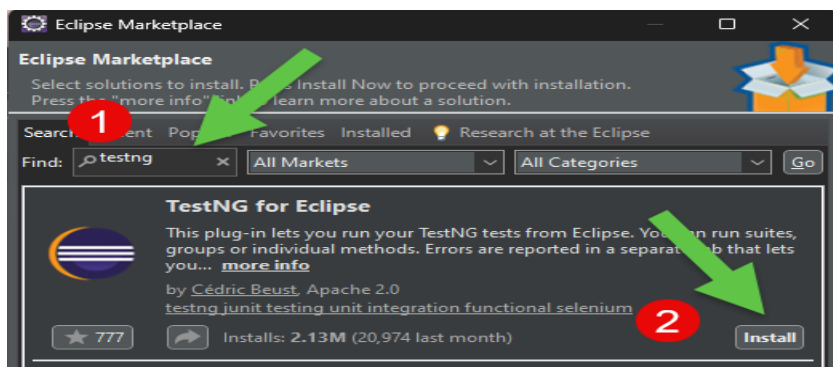
Step 1: Goto Eclipse Marketplace

Go to In Eclipse, Select Help → Eclipse Marketplace



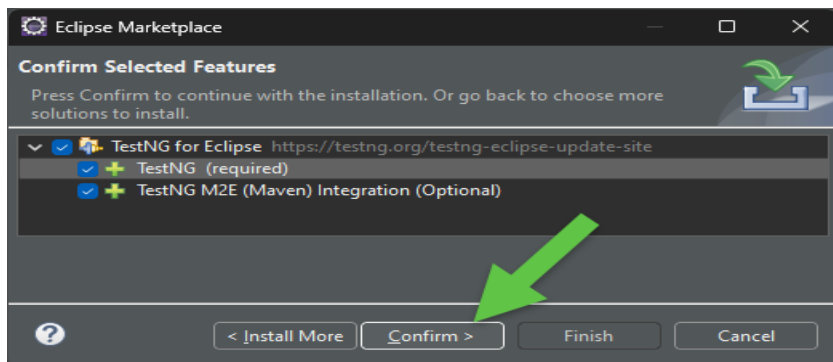
Step 2: Search TestNG & Install

In the Find enter `testing` and search for TestNG, once you find it, click Install as shown below:



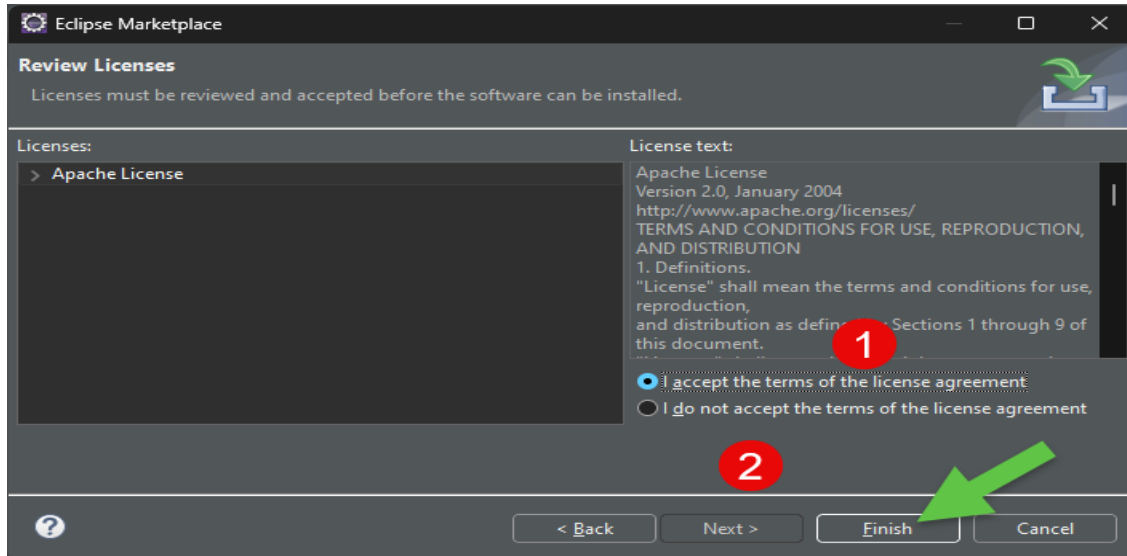
Step 3: Follow the prompts & Trust the author

Click the Confirm button as shown below:

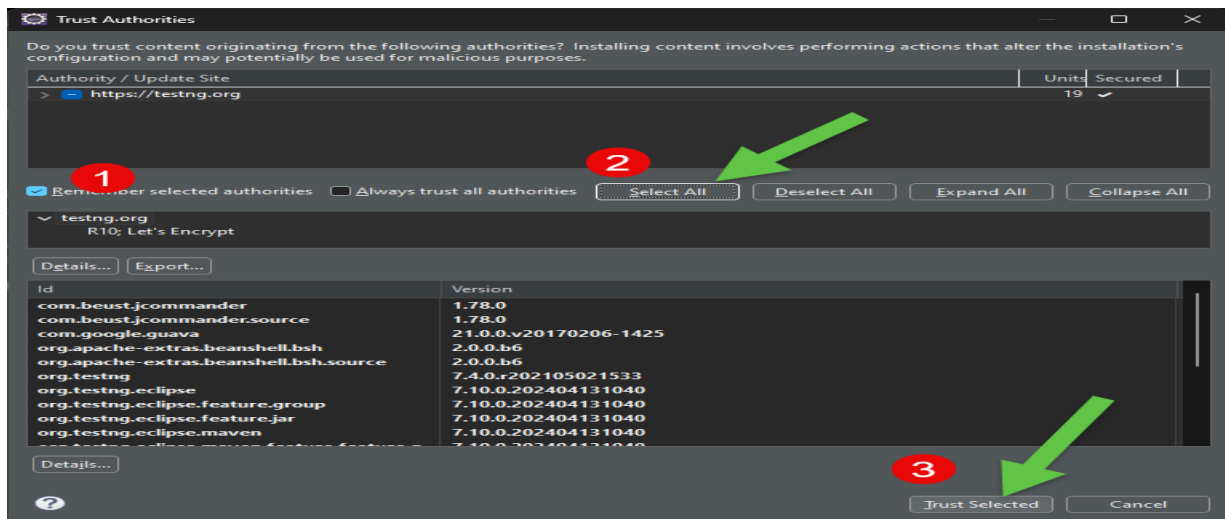


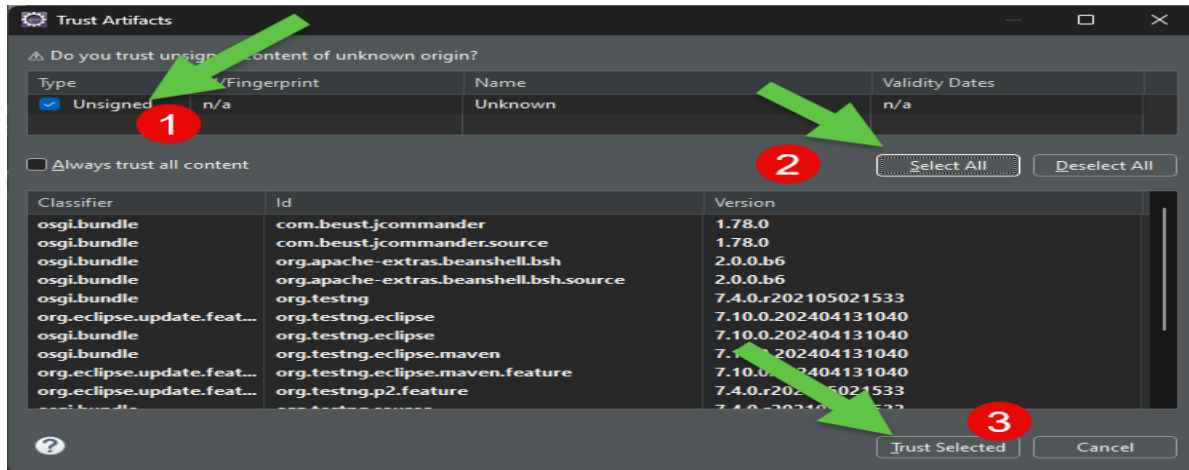
Step 4: Accept License

Click the radio button 'I accept' and then click the Finish button as shown below:



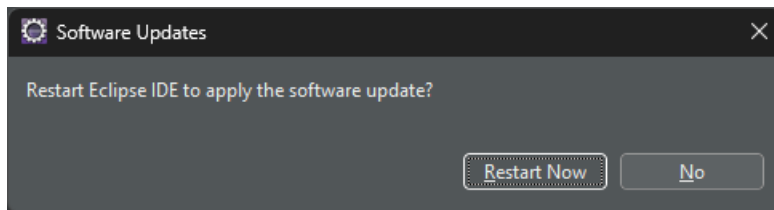
If prompted, click the Select All Button, then Click the Trust Selected button, and then restart the Eclipse IDE.





Step 6: Restart Eclipse IDE

Click Restart Now



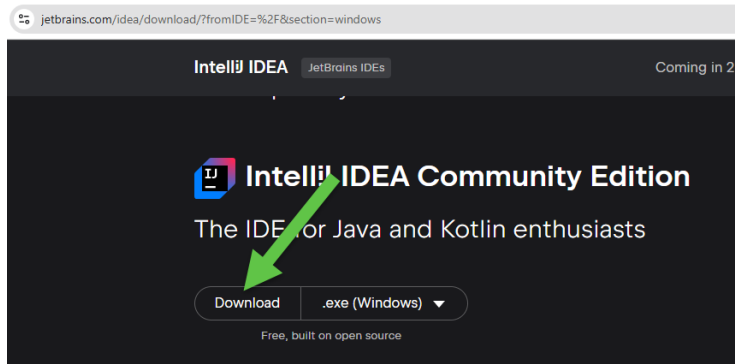
F. Install IntelliJ IDEA Community or Ultimate Edition

Note: In NYC delivery, some users encountered issues installing Eclipse IDE. As an alternative, they have installed IntelliJ IDEA. If you've already installed the Eclipse IDE, you can choose to skip installing IntelliJ IDEA. However, it's important to install at least one of these IDEs. You're also welcome to install IntelliJ IDEA even if Eclipse IDE is already installed.

URL: <https://www.jetbrains.com/idea/download/?fromIDE=%2F§ion=windows>

- Download IntelliJ (Community Edition Free or Ultimate requires license)
- Make sure to download the correct OS type zip or .exe file
- If you download a zip file, Unzip and move the idea folder to the C:\tools directory.
- If you download the installer, just follow Wizard and install it. (**Wizard Application installer is recommended**)

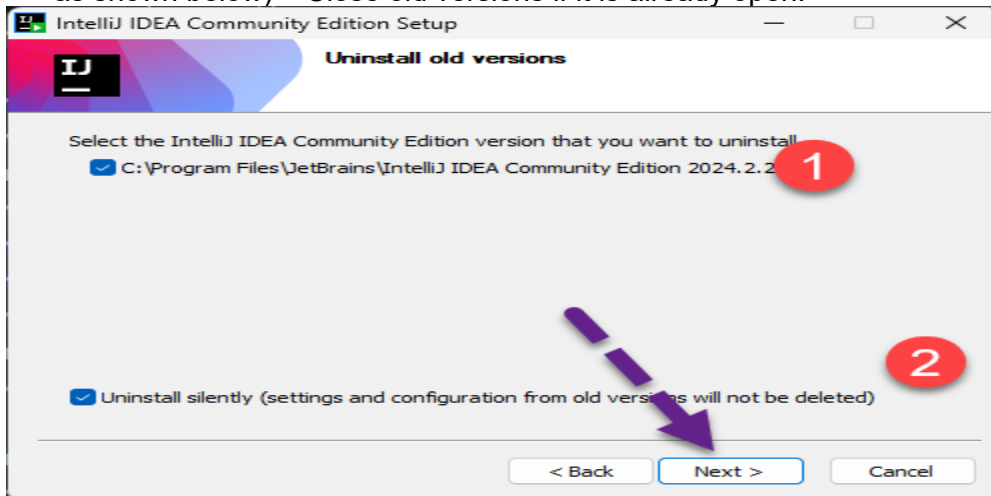
Install Guide



- Double-click on the installer

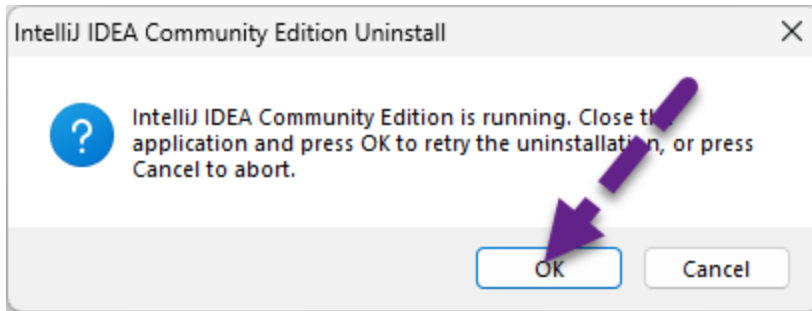


- Press Next
- If you have old versions already installed it will show an option to uninstall, (do uninstall as shown below) – Close old versions if it is already open.

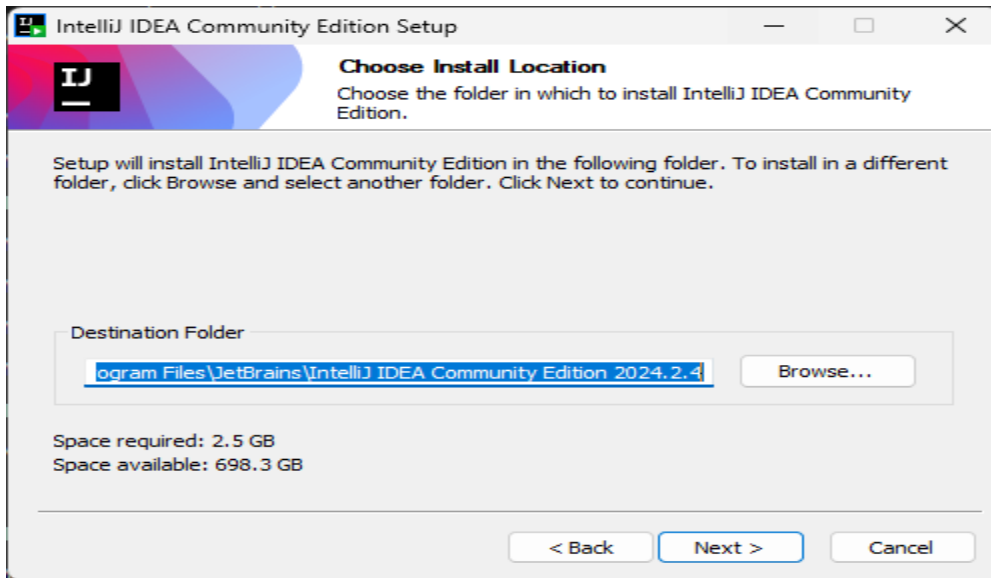


- Press Next
- Close old versions if they are currently open.

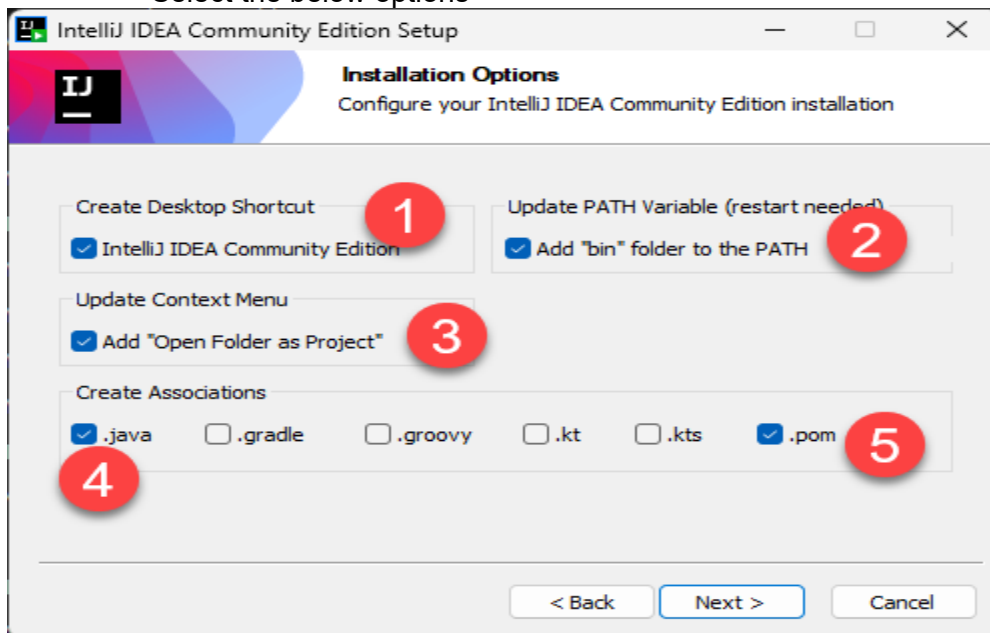
Install Guide



Install Guide

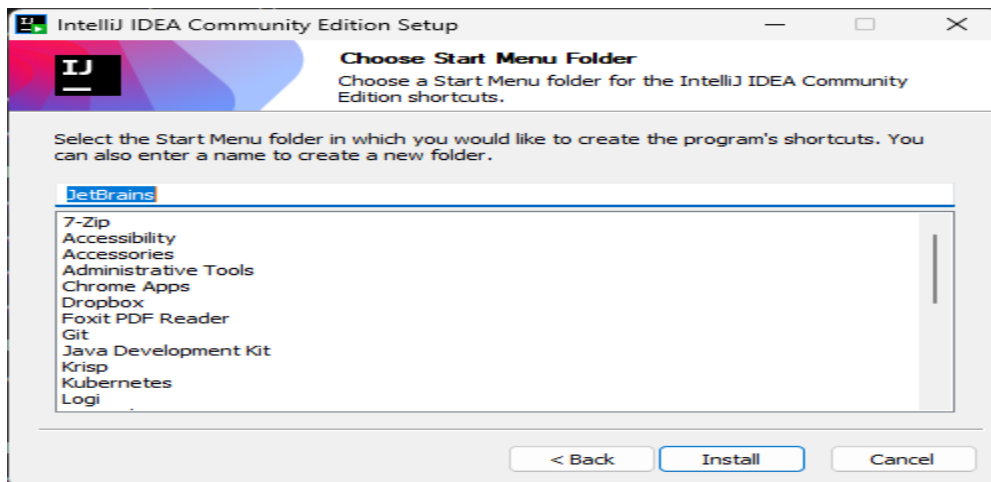


- Select a location and press Next
- Select the below options

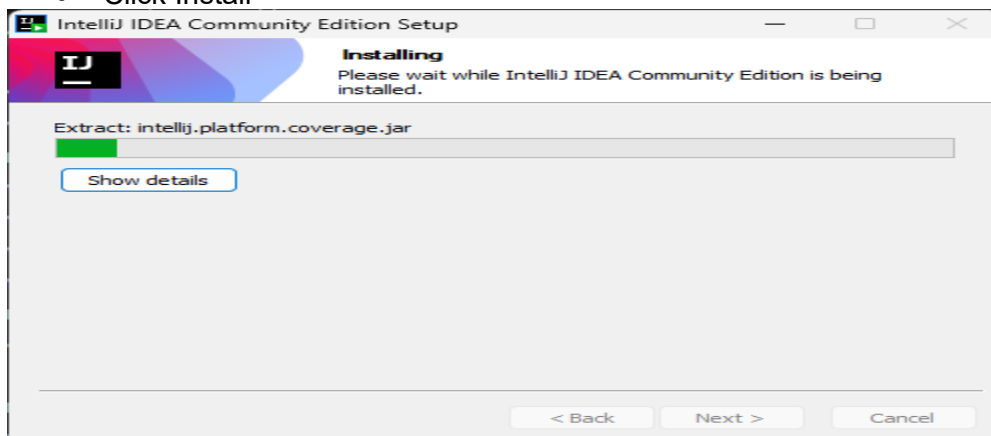


- Press Next

Install Guide



- Click Install



Once installation is completed, please reboot your laptop.

G. Artifactory settings.xml file

For Maven to correctly download the pom file it is important to set the settings.xml file in your .m2 folder.

To configure the settings.xml file for Nexus Artifactory in your Maven setup on Windows 11, follow these steps:

Prerequisites

- Maven installed on your Windows machine.
- A Nexus Artifactory repository URL and credentials.

Step-by-Step Instructions

1. **Locate the .m2 Directory:** The .m2 directory is the default location for Maven's configuration files and local repository. On Windows 11, you can find this directory in your user profile:

C:\Users\<YourUsername>\.m2

Replace <YourUsername> with your actual Windows username.

If the .m2 directory does not exist, create it manually:

- Press Win + E to open File Explorer.
- Navigate to C:\Users\<YourUsername>\.
- Create a new folder named .m2.

Download/Create the settings.xml File:

If you don't have a settings.xml file yet, you need to create it. You can also get the pre-configured settings.xml from your Nexus Artifactory administrator.

- Create a new file named settings.xml inside the .m2 directory:
 - Right-click in the .m2 folder > New > Text Document.
 - Rename it to settings.xml (make sure to change the file extension from .txt to .xml).

Edit settings.xml:

Open the settings.xml file using a text editor (e.g., Notepad++ or Visual Studio Code).

Add your Nexus Artifactory server configuration to the settings.xml file. The example settings.xml is given in this URL: <https://github.com/kpassoubady/java-for-qe-template/blob/master/settings.xml>

Replace:

- Your-username and your-password with your Nexus Artifactory credentials.
- http://your-nexus-repo-url/ with the actual URL of your Nexus Artifactory server.

H. Testing using a real project

1. Clone the repository:

```
git clone git@github.com:kpassoubady/java-for-qe-template.git
```

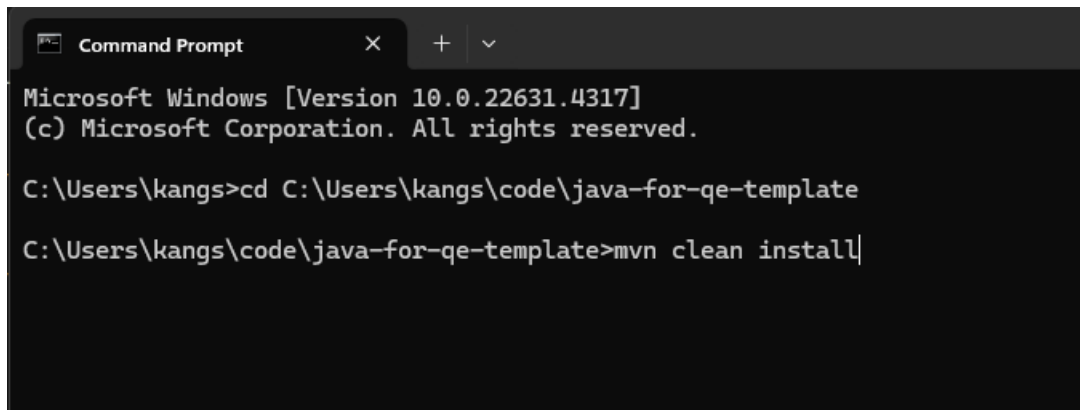
or download the zip file and extract it.

1. Open the project in your IDE.

2. Go to `cmd prompt` and navigate to the project directory.

2. Build the project using Maven:

```
mvn clean install
```



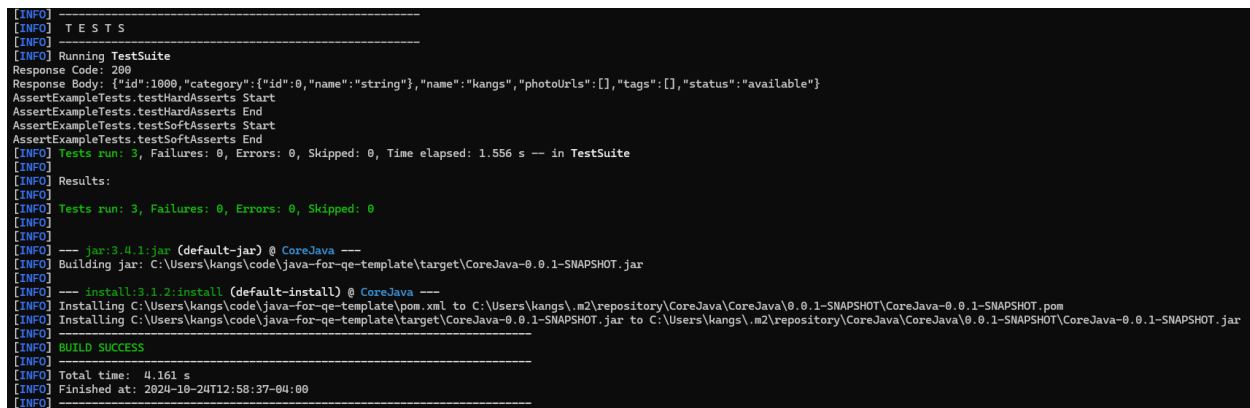
```

Microsoft Windows [Version 10.0.22631.4317]
(c) Microsoft Corporation. All rights reserved.

C:\Users\kangs>cd C:\Users\kangs\code\java-for-qe-template

C:\Users\kangs\code\java-for-qe-template>mvn clean install
  
```

You should see the execution below at the end:

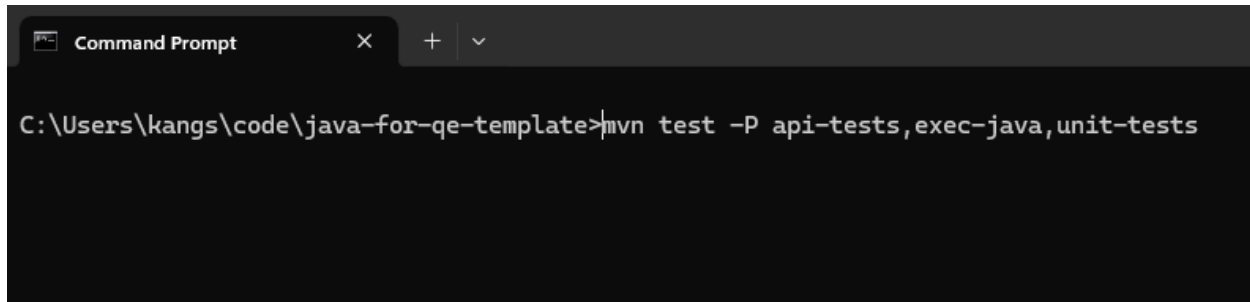


```

[INFO] -----
[INFO] T E S T S
[INFO] -----
[INFO] Running TestSuite
[INFO] Response Code: 200
[INFO] Response Body: {"id":1000,"category":{"id":0,"name":"string"},"name":"kangs","photoUrls":[],"tags":[],"status":"available"}
[INFO] AssertExampleTests.testHardAsserts Start
[INFO] AssertExampleTests.testHardAsserts End
[INFO] AssertExampleTests.testSoftAsserts Start
[INFO] AssertExampleTests.testSoftAsserts End
[INFO] AssertExampleTests.testSoftAsserts End
[INFO] Tests run: 3, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 1.556 s -- in TestSuite
[INFO] Results:
[INFO] Tests run: 3, Failures: 0, Errors: 0, Skipped: 0
[INFO]
[INFO] --- jar:3.4.1:jar (default-jar) @ CoreJava ---
[INFO] Building jar: C:\Users\kangs\code\java-for-qe-template\target\CoreJava-0.0.1-SNAPSHOT.jar
[INFO]
[INFO] --- install:3.1.2:install (default-install) @ CoreJava ---
[INFO] Installing C:\Users\kangs\code\java-for-qe-template\pom.xml to C:\Users\kangs\.m2\repository\CoreJava\CoreJava\0.0.1-SNAPSHOT\CoreJava-0.0.1-SNAPSHOT.pom
[INFO] Installing C:\Users\kangs\code\java-for-qe-template\target\CoreJava-0.0.1-SNAPSHOT.jar to C:\Users\kangs\.m2\repository\CoreJava\CoreJava\0.0.1-SNAPSHOT\CoreJava-0.0.1-SNAPSHOT.jar
[INFO]
[INFO] BUILD SUCCESS
[INFO]
[INFO] Total time: 4.161 s
[INFO] Finished at: 2024-10-24T12:58:37-04:00
[INFO]
  
```

3. Run the tests:

```
mvn test -P api-tests,exec-java,unit-tests
```

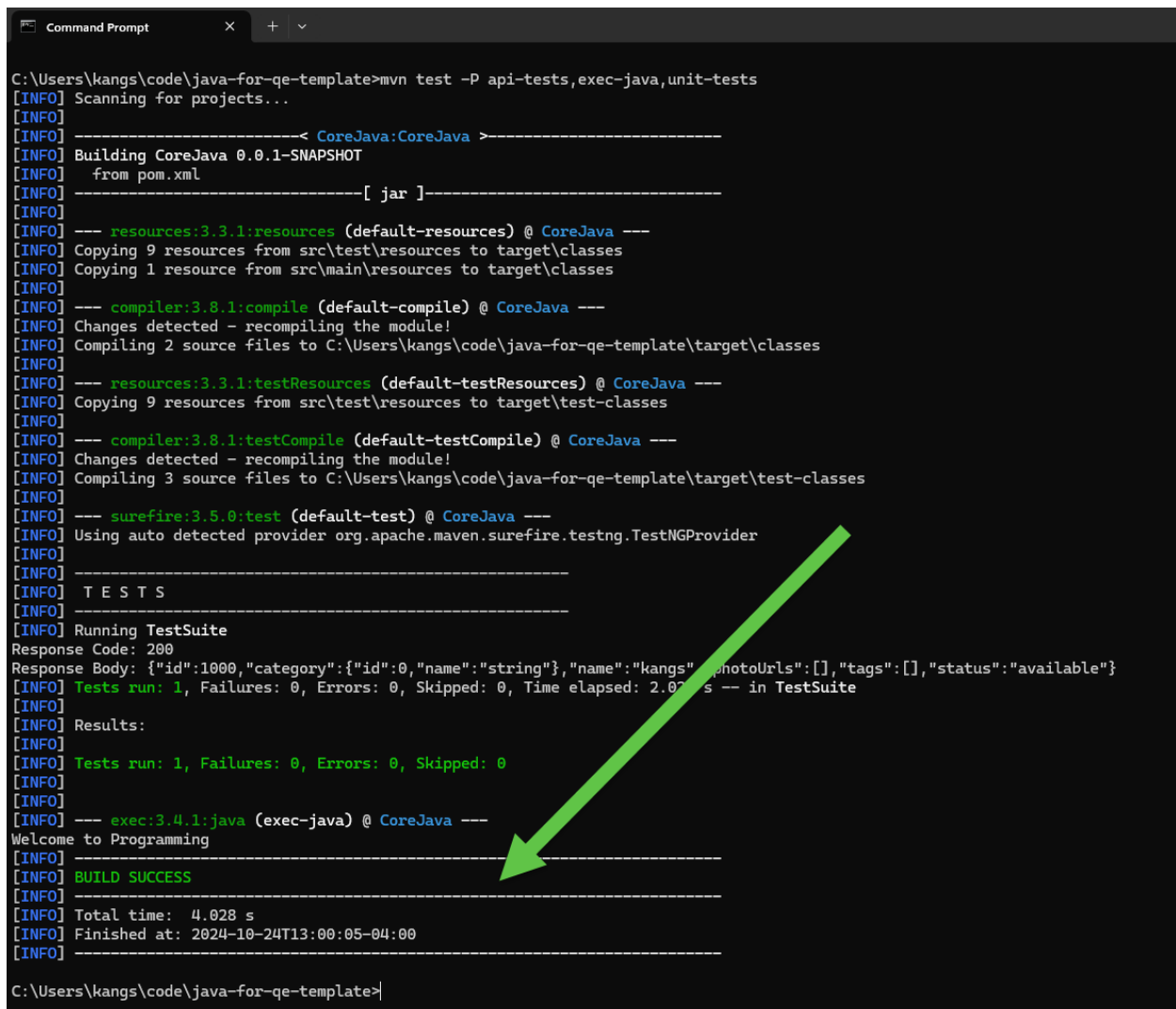


```

C:\Users\kangs\code\java-for-qe-template>mvn test -P api-tests,exec-java,unit-tests

```

You should see Build Success at the end.



```

C:\Users\kangs\code\java-for-qe-template>mvn test -P api-tests,exec-java,unit-tests
[INFO] Scanning for projects...
[INFO]
[INFO] -----< CoreJava:CoreJava >-----
[INFO] Building CoreJava 0.0.1-SNAPSHOT
[INFO] from pom.xml
[INFO] -----[ jar ]-----
[INFO]
[INFO] --- resources:3.3.1:resources (default-resources) @ CoreJava ---
[INFO] Copying 9 resources from src\test\resources to target\classes
[INFO] Copying 1 resource from src\main\resources to target\classes
[INFO]
[INFO] --- compiler:3.8.1:compile (default-compile) @ CoreJava ---
[INFO] Changes detected - recompiling the module!
[INFO] Compiling 2 source files to C:\Users\kangs\code\java-for-qe-template\target\classes
[INFO]
[INFO] --- resources:3.3.1:testResources (default-testResources) @ CoreJava ---
[INFO] Copying 9 resources from src\test\resources to target\test-classes
[INFO]
[INFO] --- compiler:3.8.1:testCompile (default-testCompile) @ CoreJava ---
[INFO] Changes detected - recompiling the module!
[INFO] Compiling 3 source files to C:\Users\kangs\code\java-for-qe-template\target\test-classes
[INFO]
[INFO] --- surefire:3.5.0:test (default-test) @ CoreJava ---
[INFO] Using auto detected provider org.apache.maven.surefire.testng.TestNGProvider
[INFO]
[INFO] -----
[INFO] T E S T S
[INFO] -----
[INFO] Running TestSuite
Response Code: 200
Response Body: {"id":1000,"category":{"id":0,"name":"string"},"name":"kangs","photoUrls":[],"tags":[],"status":"available"}
[INFO] Tests run: 1, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 2.07 s -- in TestSuite
[INFO]
[INFO] Results:
[INFO]
[INFO] Tests run: 1, Failures: 0, Errors: 0, Skipped: 0
[INFO]
[INFO] --- exec:3.4.1:java (exec-java) @ CoreJava ---
Welcome to Programming
[INFO]
[INFO] BUILD SUCCESS
[INFO]
[INFO] Total time: 4.028 s
[INFO] Finished at: 2024-10-24T13:00:05-04:00
[INFO]
C:\Users\kangs\code\java-for-qe-template>

```