Lesson 05 Demo 04

Integrating Maven with Jenkins

Objective: To install the Maven plugin in Jenkins for smooth integration and automation of Maven-based build processes within the Jenkins environment

Tools required: Git, GitHub, and Jenkins

Prerequisites: None

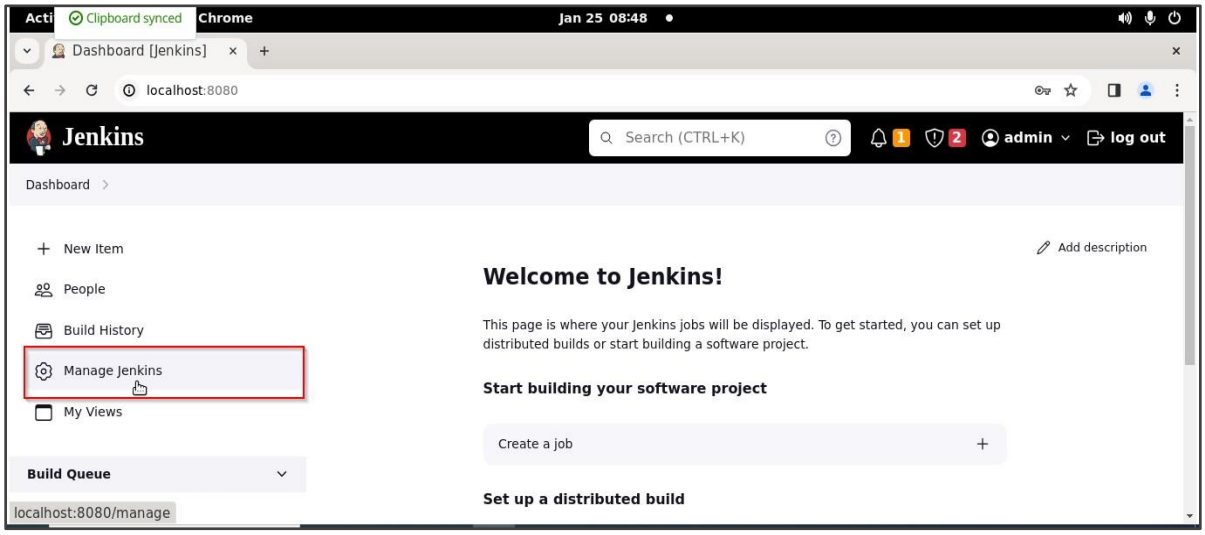
Steps to be followed:

1. Install the Maven plugin
2. Set up Global Tool Configuration
3. Fork a sample repository
4. Integrate Maven with Jenkins

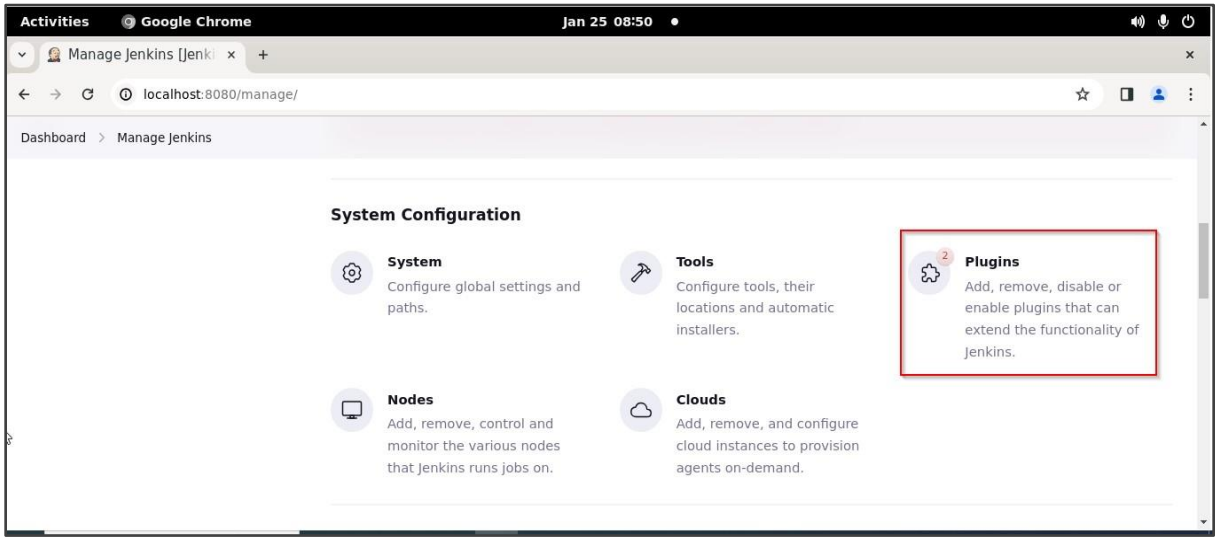
Step 1: Install the Maven plugin

1.1 Open the browser, go to the Jenkins Dashboard by typing **localhost:8080** in your browser, provide the credentials, and click the **Sign in** button

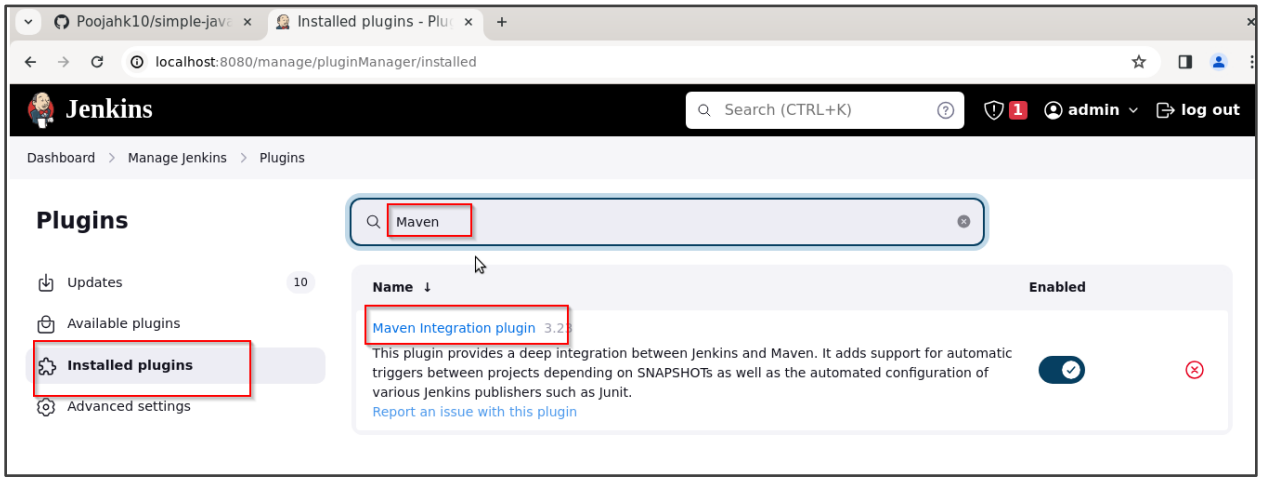
1.2 Click on the **Manage Jenkins** option as shown in the screenshot below:



1.3 Click on the **Plugins** option as shown in the screenshot below:



1.4 Click on **Installed plugins** to verify whether the **Maven Integration plugin** has been installed



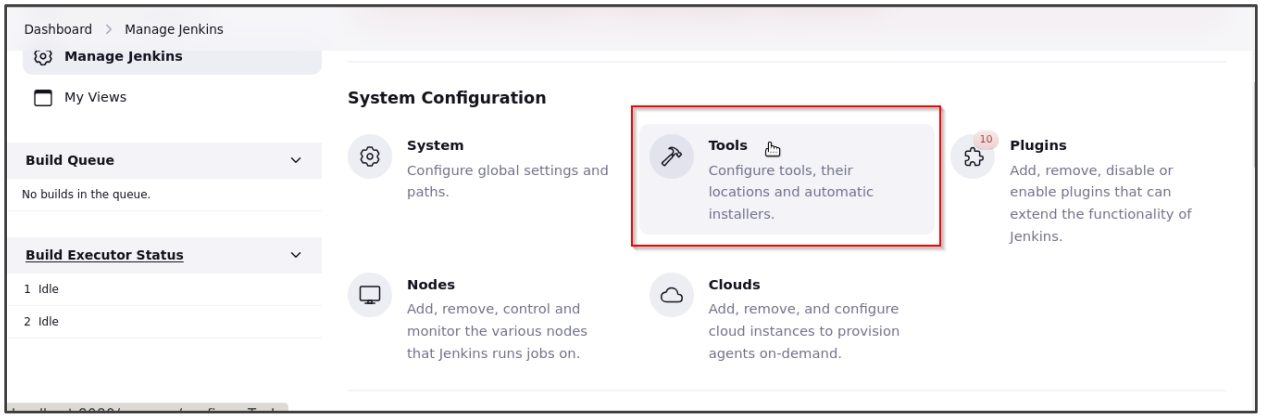
Note: Maven is already installed in your practice lab environment. If not, click on Available plugins and search for Maven Integration plugin and install it

1.5 Use the following command to check the Maven version:
mvn -version

```
labsuser@ip-172-31-39-225:~$ mvn -version
Apache Maven 3.6.3
Maven home: /usr/share/maven
Java version: 11.0.21, vendor: Ubuntu, runtime: /usr/lib/jvm/java-11-openjdk-amd64
Default locale: en, platform encoding: UTF-8
OS name: "linux", version: "6.2.0-1018-aws", arch: "amd64", family: "unix"
labsuser@ip-172-31-39-225:~$
```

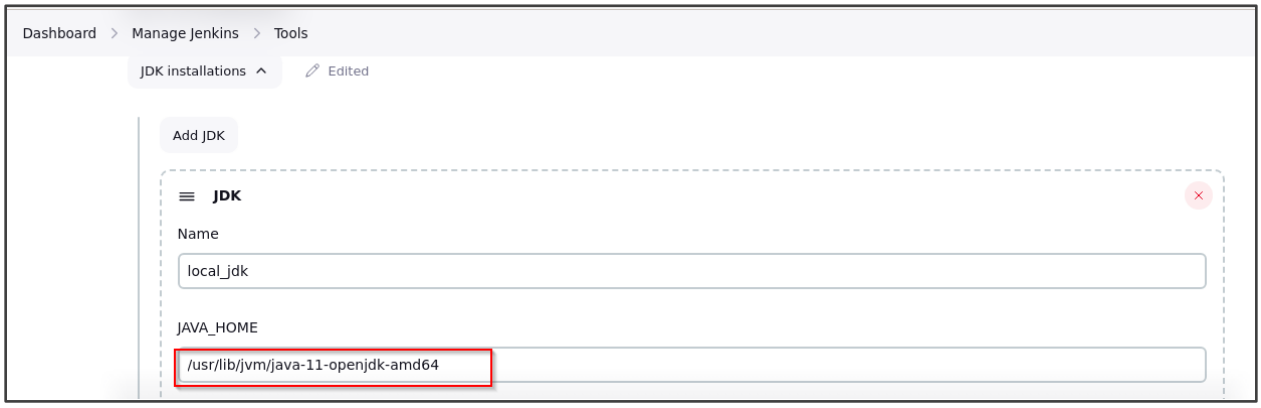
Step 2: Set up Global Tool Configuration

2.1 Go to the Jenkins Dashboard, click on **Manage Jenkins**, and then select **Tools** from the list of options



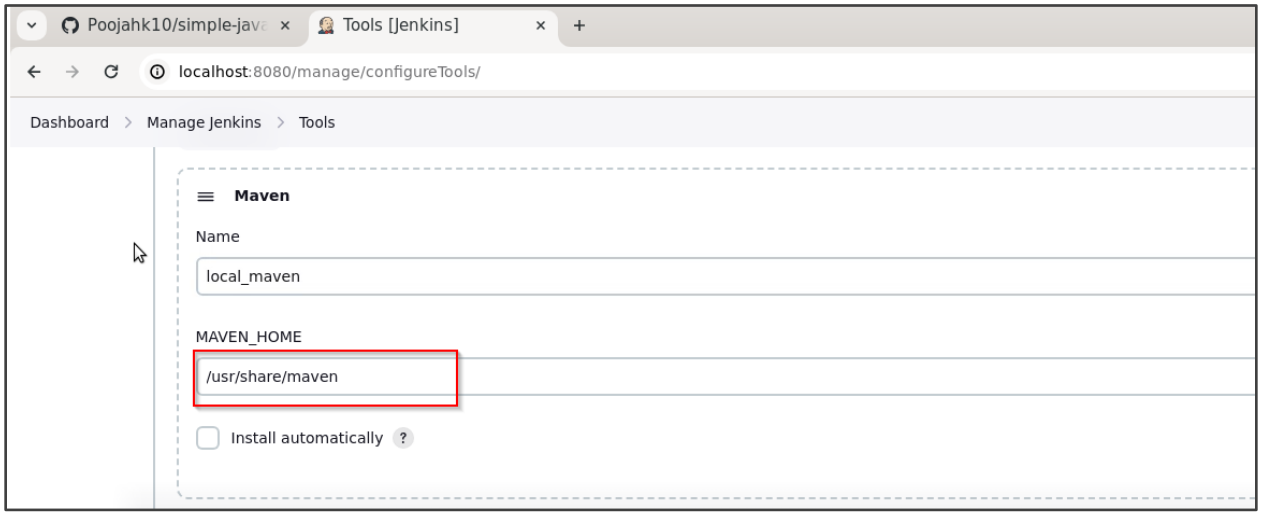
2.2 Click on **JDK installations** and provide the **Name** and **JAVA_HOME** path

Note: Set the **JAVA_HOME** environment variable to **/usr/lib/jvm/java-11-openjdk-amd64**



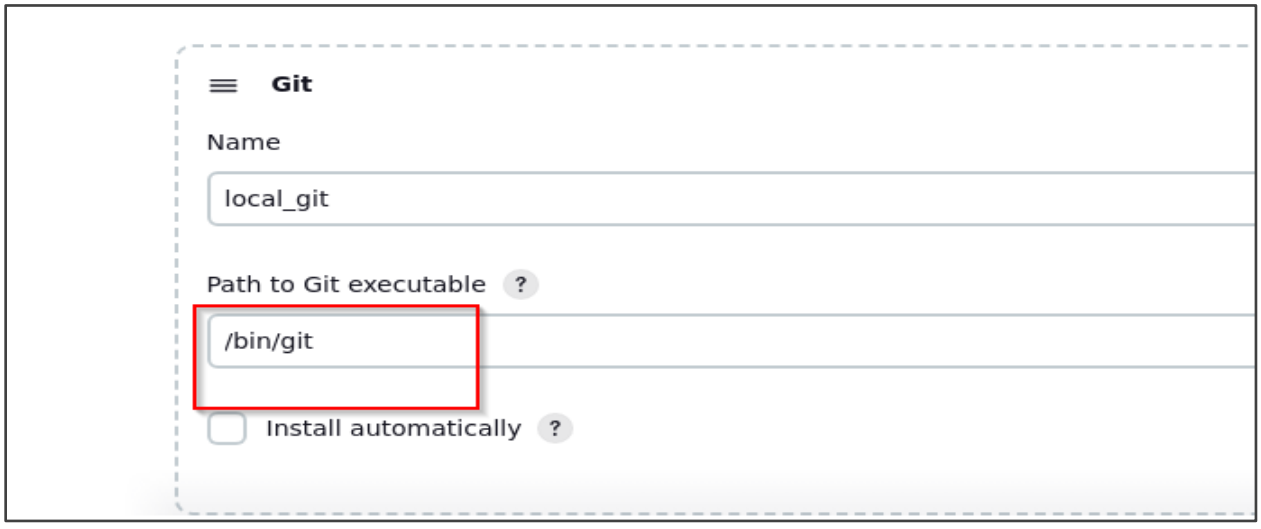
2.3 To configure Maven, click on the **Maven installations** button in the Maven section and enter a **Name** and **MAVEN_HOME** path

Note: Set the **MAVEN_HOME** environment variable to **/usr/share/maven**



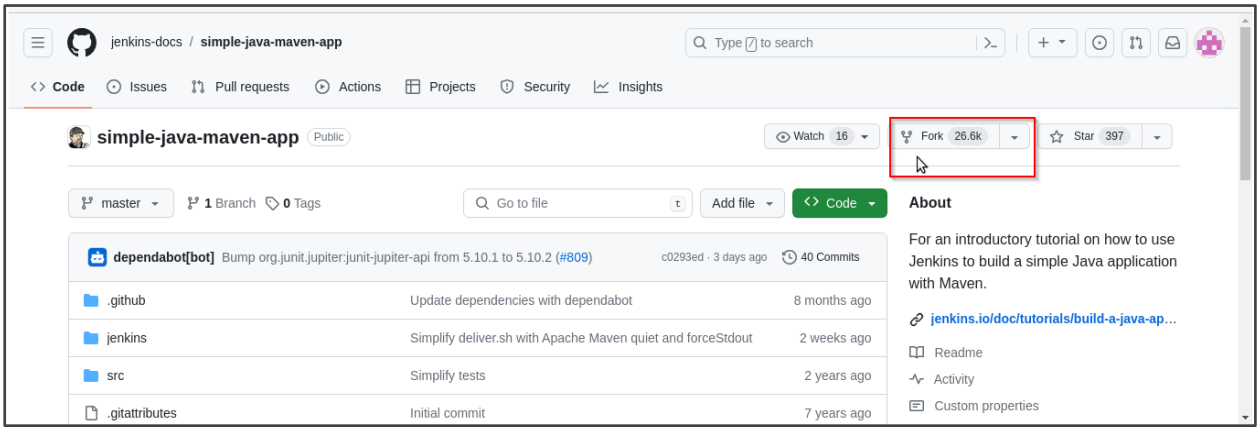
2.4 To configure Git, click on **Git installations** and add the **Name** and **Path to Git executable**

Note: Set the **Path to Git executable** environment variable to **/bin/git** and click on **Save**



Step 3: Fork a sample repository

3.1 Log in to your GitHub account, navigate to **https://github.com/jenkins-docs/simple-java-maven-app**, and click on **Fork**

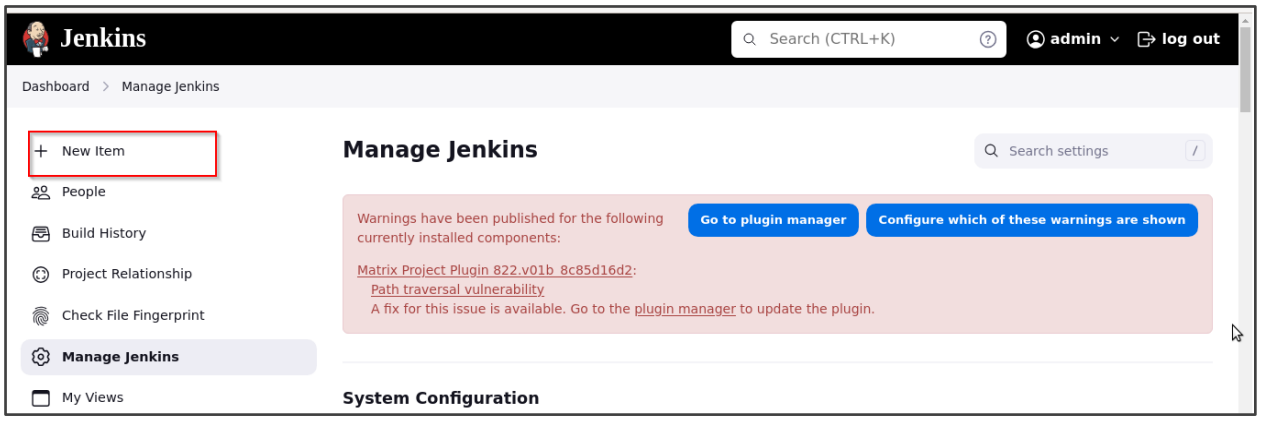


3.2 Run **git clone [Forked REPO URL]** in the terminal to clone the repository locally

```
labsuser@ip-172-31-39-225:~$ git clone https://github.com/jenkins-docs/simple-java-maven-app.git
Cloning into 'simple-java-maven-app'...
remote: Enumerating objects: 173, done.
remote: Counting objects: 100% (9/9), done.
remote: Compressing objects: 100% (8/8), done.
remote: Total 173 (delta 2), reused 4 (delta 0), pack-reused 164
Receiving objects: 100% (173/173), 33.22 KiB | 3.32 MiB/s, done.
Resolving deltas: 100% (51/51), done.
labsuser@ip-172-31-39-225:~$
```

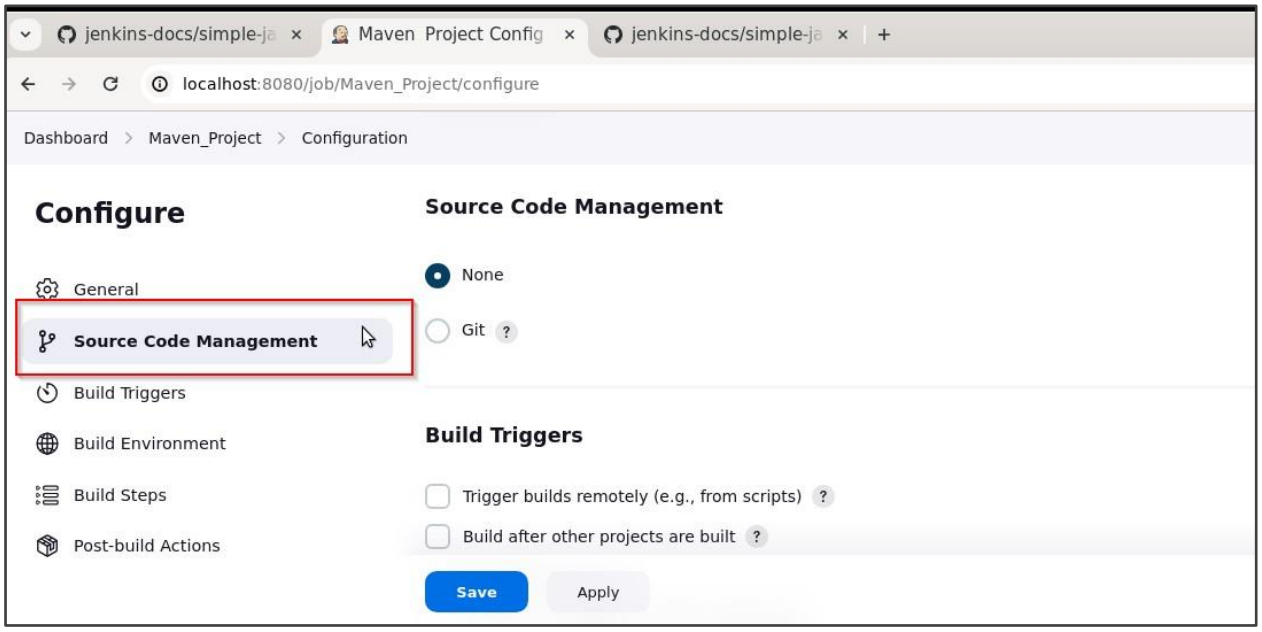
Step 4: Integrate Maven with Jenkins

4.1 Click on **New Item** in the Jenkins Dashboard

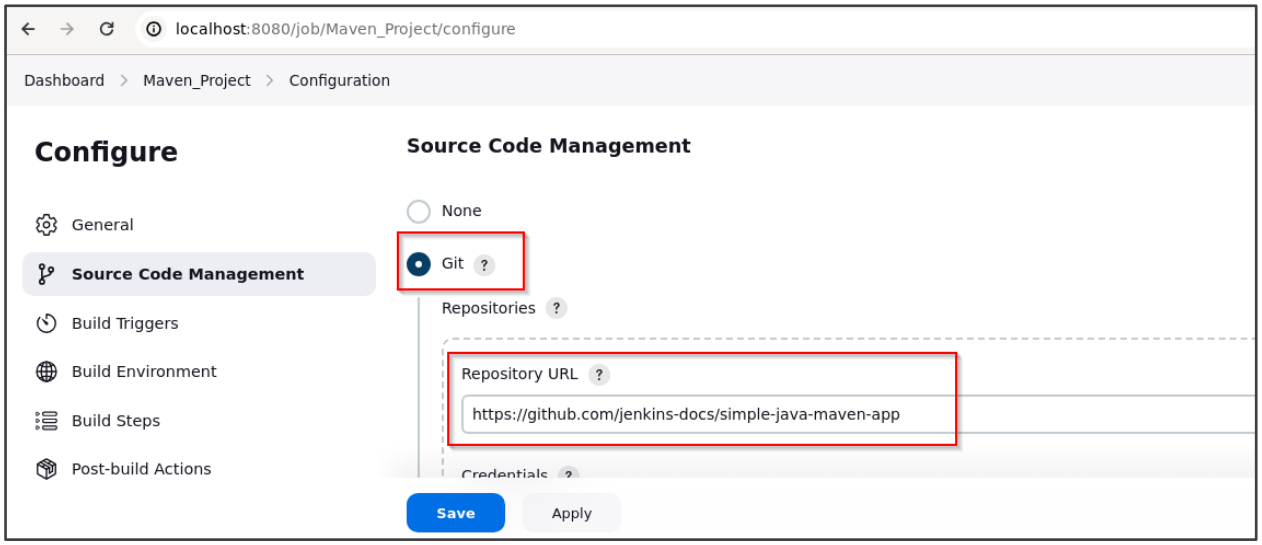


4.2 Enter a name for the project, select **Freestyle project** as the build job type, and click on the **OK** button as shown in the screenshot below:

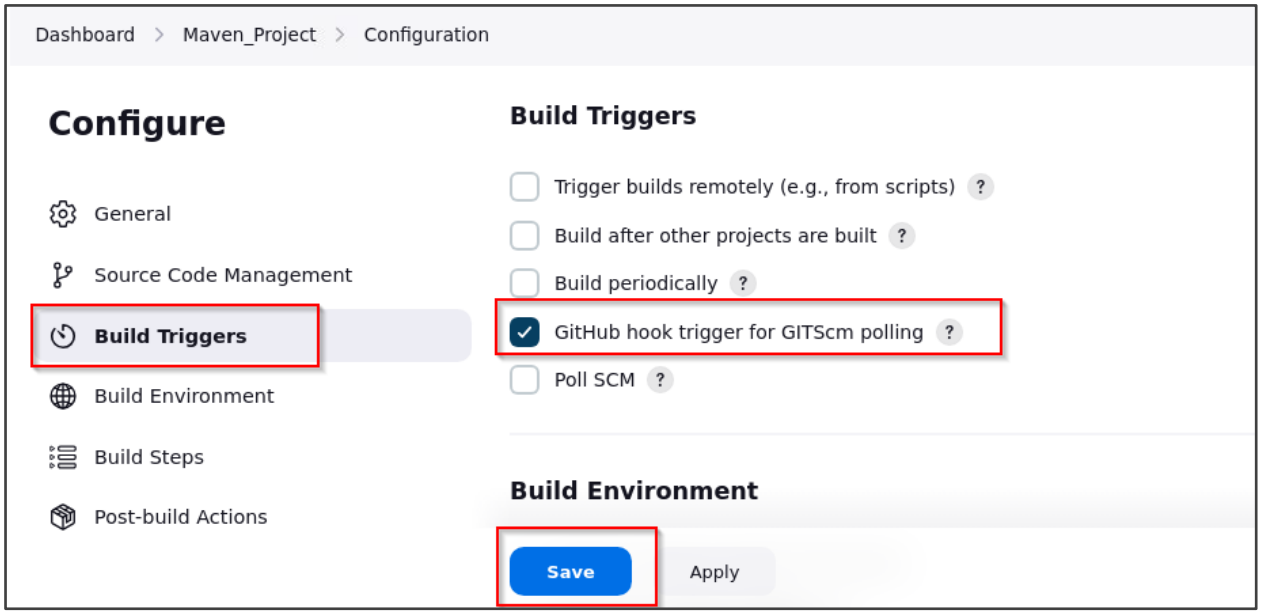
4.3 Click on **Source Code Management**



4.4 Select **Git** and enter the **Repository URL**

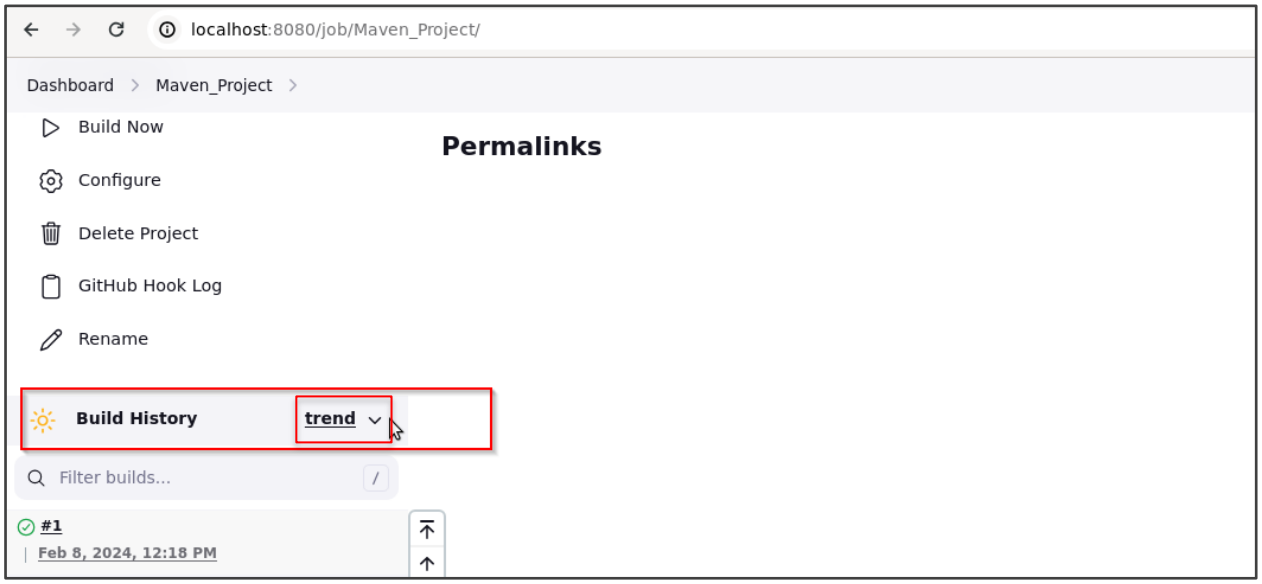


4.5 Click on **Build Triggers**, select the required option as shown in the screenshot below, and then click on **Save**

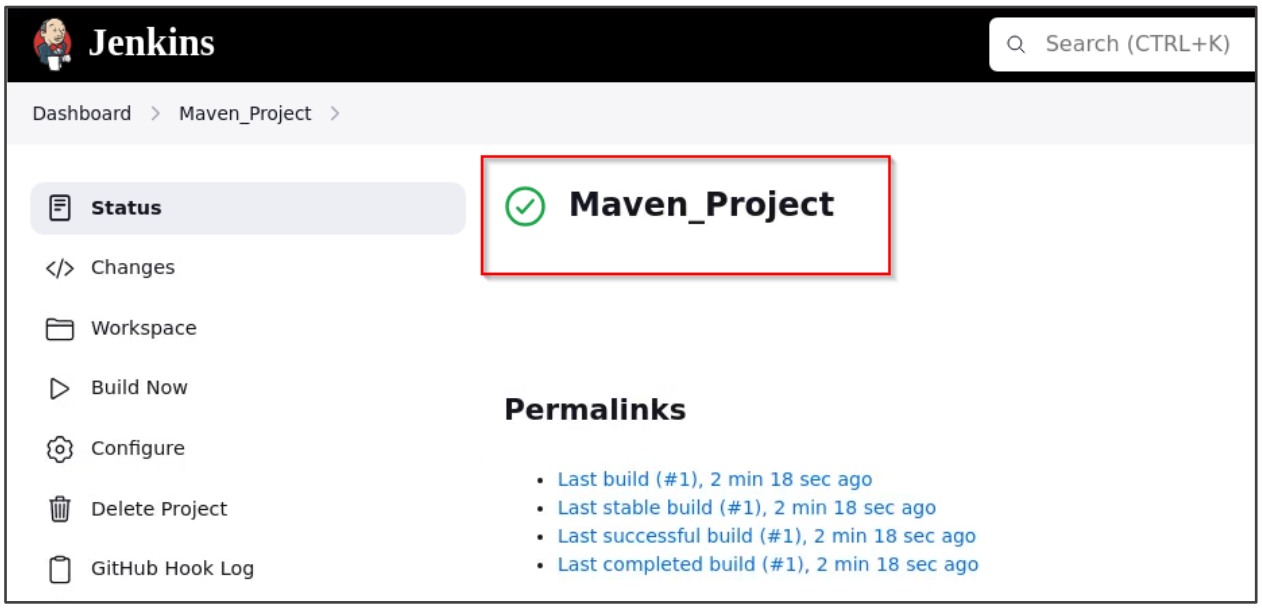


4.6 Click on **Build Now** to view the build results

4.7 Click on **trend** in the **Build History** as shown in the screenshot below:



4.8 Click on **Status** to view the build logs



By following these steps, you have successfully installed the Maven plugin in Jenkins, making it easier to automate Maven-based build tasks within the Jenkins environment for smoother integration and workflow automation.