

Lab Exercise 8

Setting up Maven Build Job in Jenkins

Objective: To set up Maven build job in Jenkins for automating the build process, enabling continuous integration to enhance the software development lifecycle

Tools required: Jenkins

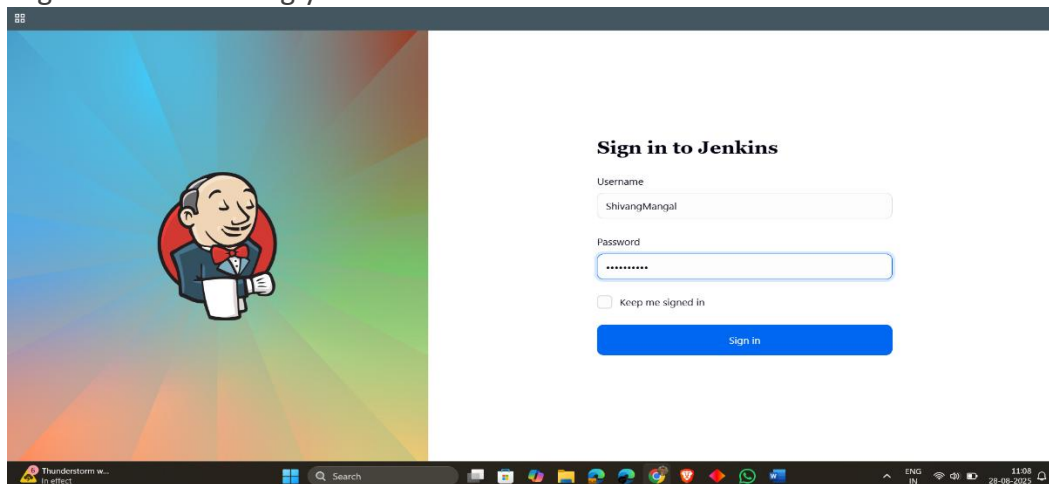
Prerequisites: You need to have a Jenkins up and running.

Steps to be followed:

1. Log in to Jenkins CI tool and configure Maven freestyle job

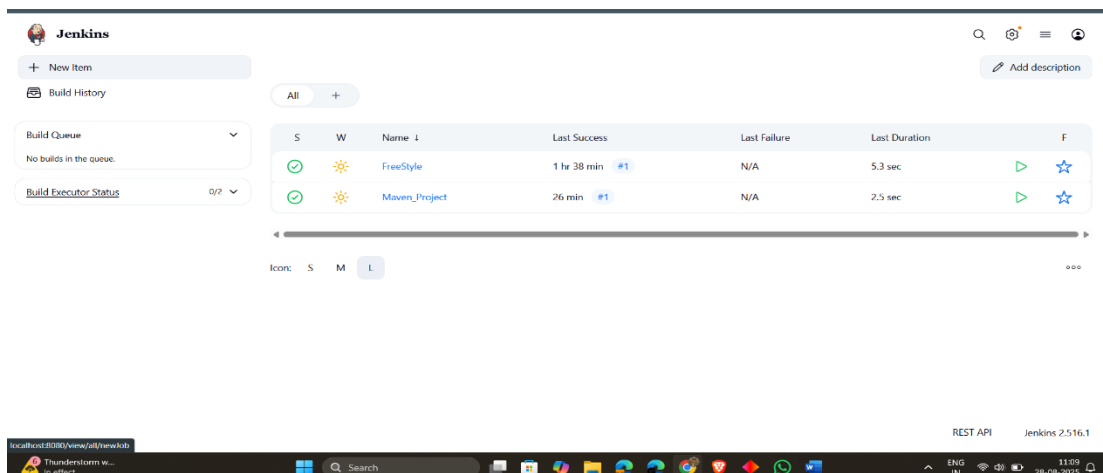
Step 1: Log in to Jenkins CI tool and configure Maven freestyle job

1.1 Log in to Jenkins using your credentials

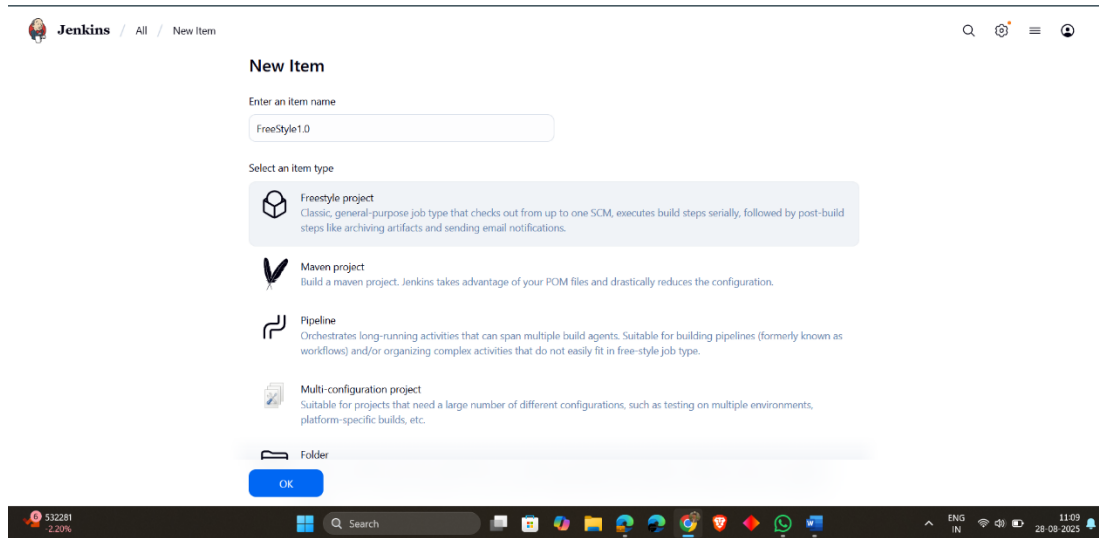


Note: The credentials for accessing Jenkins in the lab are Username: **admin** and Password: **admin**.

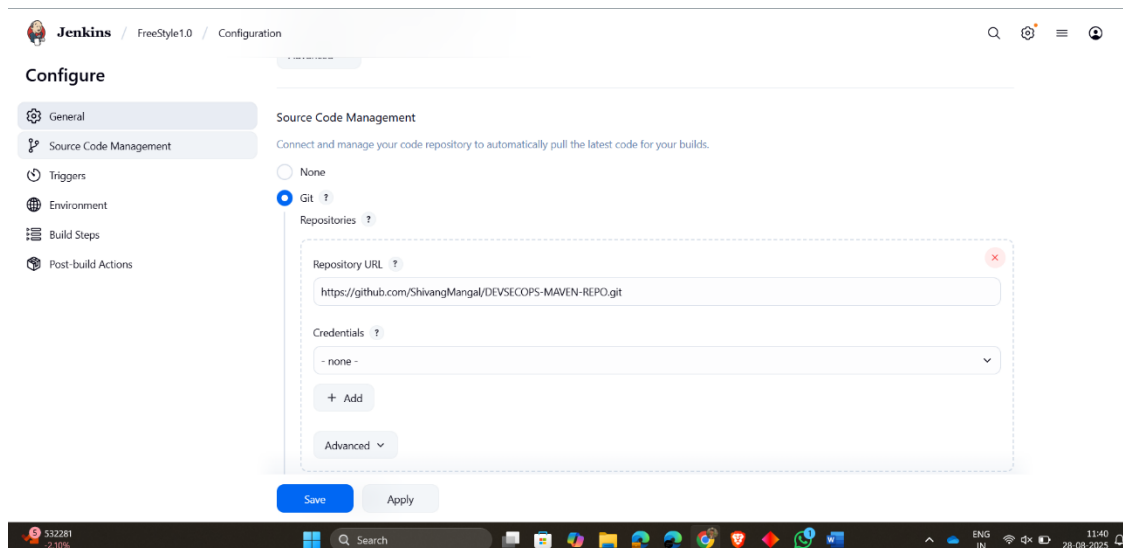
1.2 In the Jenkins dashboard, click on **New Item**



1.3 Select the **Freestyle project** while creating a Jenkins job, provide a custom job name, and click on **OK**

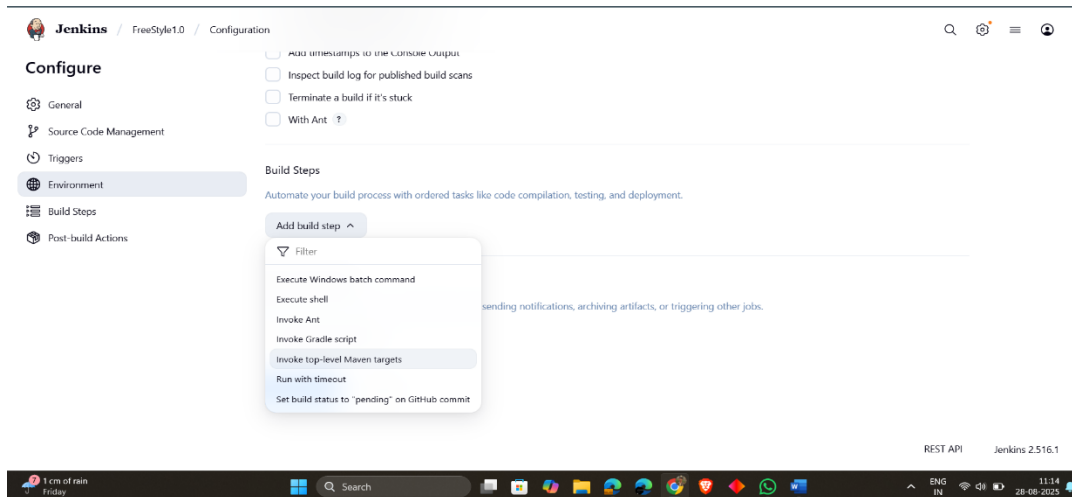


1.4 Now, in the Configure page, navigate to **Source Code Management** in the left navigation bar, select **Git**, and then provide the Git repository URL

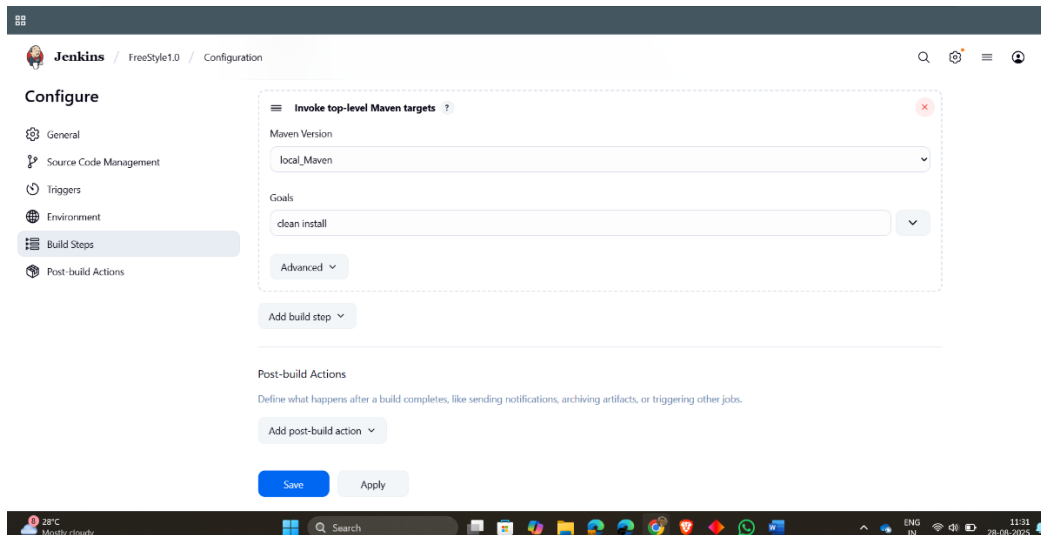


Note: Here, the repository URL is <https://github.com/GithubResources1/Maven->

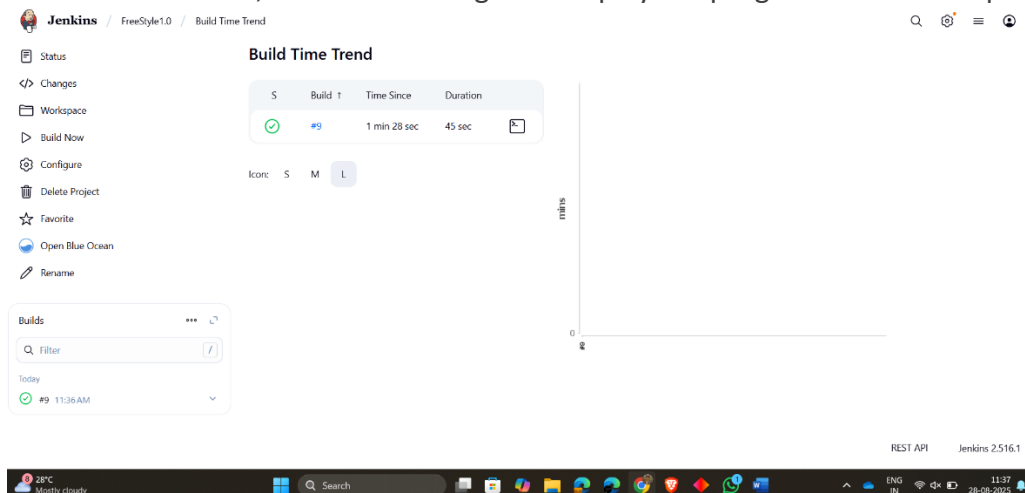
1.5 Now, navigate to **Build Steps**, click on **Add build step**, and then select the option **Invoke top-level Maven targets**



1.6 Provide clean install under **Goals** section and then click on **Save**



1.7 You will be navigated to the project after clicking on Save. Now, click on **Build Now** to initiate a new build, and the build logs will display the progress of the build process.



The screenshot displays the Jenkins web interface for a build named 'FreeStyle1.0' with build number '#9'. The 'Console Output' tab is selected, showing a successful build process. The output includes the following steps and messages:

```
Started by user Shivang Mangal
Running as SYSTEM
Building in workspace C:\ProgramData\Jenkins\jenkins\workspace\FreeStyle1.0
The recommended git tool is: NONE
No credentials specified
> git.exe rev-parse --resolve-git-dir C:\ProgramData\Jenkins\jenkins\workspace\FreeStyle1.0\.git # timeout=10
Fetching changes from the remote Git repository
> git.exe config remote.origin.url https://github.com/ShivangMangal/DEVSECOPS-MAVEN-REPO.git # timeout=10
Fetching upstream changes from https://github.com/ShivangMangal/DEVSECOPS-MAVEN-REPO.git
> git.exe --version # timeout=10
> git --version # 'git version 2.47.1.windows.1'
> git.exe fetch --tags --force --progress -- https://github.com/ShivangMangal/DEVSECOPS-MAVEN-REPO.git +refs/heads/*:refs/remotes/origin/* # timeout=10
> git.exe rev-parse 'refs/remotes/origin/master^{commit}' # timeout=10
Checking out Revision 04a6890beda18d9a0604c2a45835912c4cdb966b (refs/remotes/origin/master)
> git.exe config core.sparsecheckout # timeout=10
> git.exe checkout -f 04a6890beda18d9a0604c2a45835912c4cdb966b # timeout=10
Commit message: "div() added"
> git.exe rev-list --no-walk 04a6890beda18d9a0604c2a45835912c4cdb966b # timeout=10
[FreeStyle1.0] $ cmd.exe /c "C:\maven-mvnd-1.0.2-windows-amd64\mvn\bin\mvn.cmd clean install && exit %ERRORLEVEL%"
[INFO] Scanning for projects...
[INFO]
[INFO] -----< upes.devops:upes.devops >-----
[INFO] Building upes.devops 0.0.1-SNAPSHOT

Progress (1): 96/193 kB
Progress (1): 112/193 kB
Progress (1): 129/193 kB
Progress (1): 145/193 kB
Progress (1): 162/193 kB
Progress (1): 178/193 kB
Progress (1): 193 kB

Downloaded from central: https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-utils/4.0.1/plexus-utils-4.0.1.jar (193 kB at 26 KB/s)
[INFO] Installing C:\ProgramData\Jenkins\jenkins\workspace\FreeStyle1.0\pom.xml to
C:\WINDOWS\system32\config\systemprofile\.m2\repository\upes\devops\upes.devops\0.0.1-SNAPSHOT\upes.devops-0.0.1-SNAPSHOT.pom
[INFO] Installing C:\ProgramData\Jenkins\jenkins\workspace\FreeStyle1.0\target\upes-calc.jar to
C:\WINDOWS\system32\config\systemprofile\.m2\repository\upes\devops\upes.devops\0.0.1-SNAPSHOT\upes.devops-0.0.1-SNAPSHOT.jar
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 41.168 s
[INFO] Finished at: 2025-08-28T11:37:03+05:30
[INFO] -----
Finished: SUCCESS
```

The bottom of the screenshot shows the Jenkins REST API endpoint and version (Jenkins 2.516.1) along with a Windows taskbar at the bottom.

You can see that the build is configured successfully.

By following these steps, you have successfully set up Maven build job in Jenkins for automating the build process, enabling continuous integration to enhance the software development lifecycle.