

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

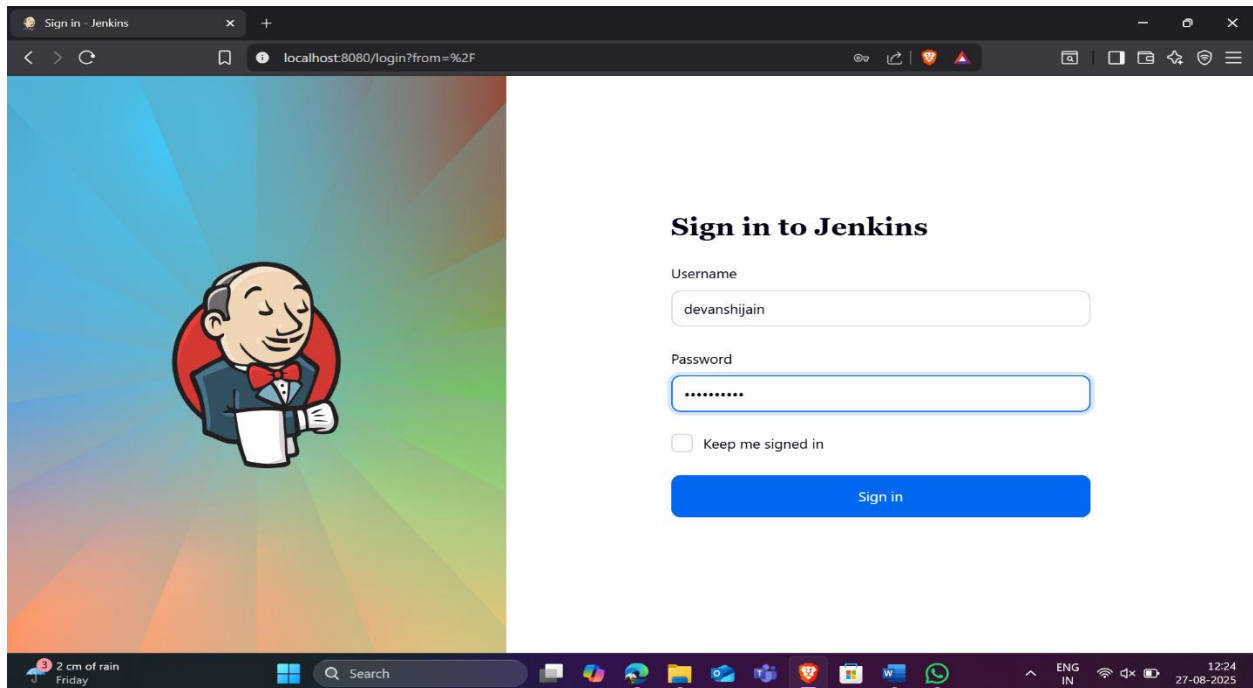
Prerequisites: You need to have a Jenkins up and running.

Steps to be followed:

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

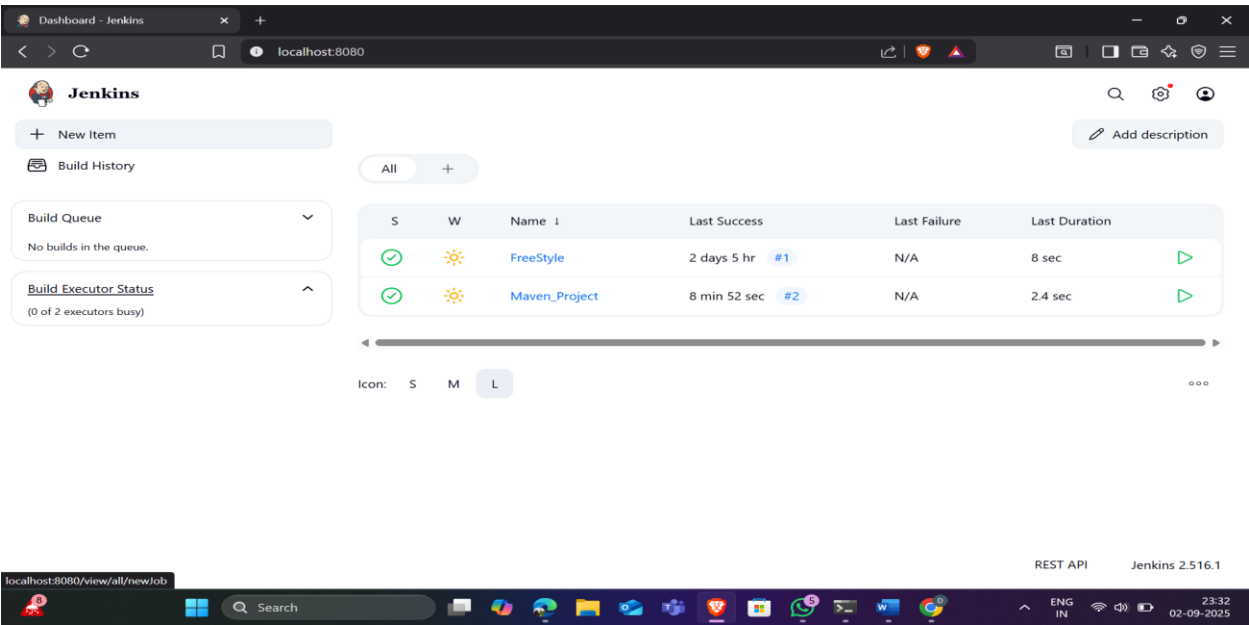
Step 1: Log in to Jenkins CI tool and configure Maven freestyle job

1.1 Log in to Jenkins using your credentials

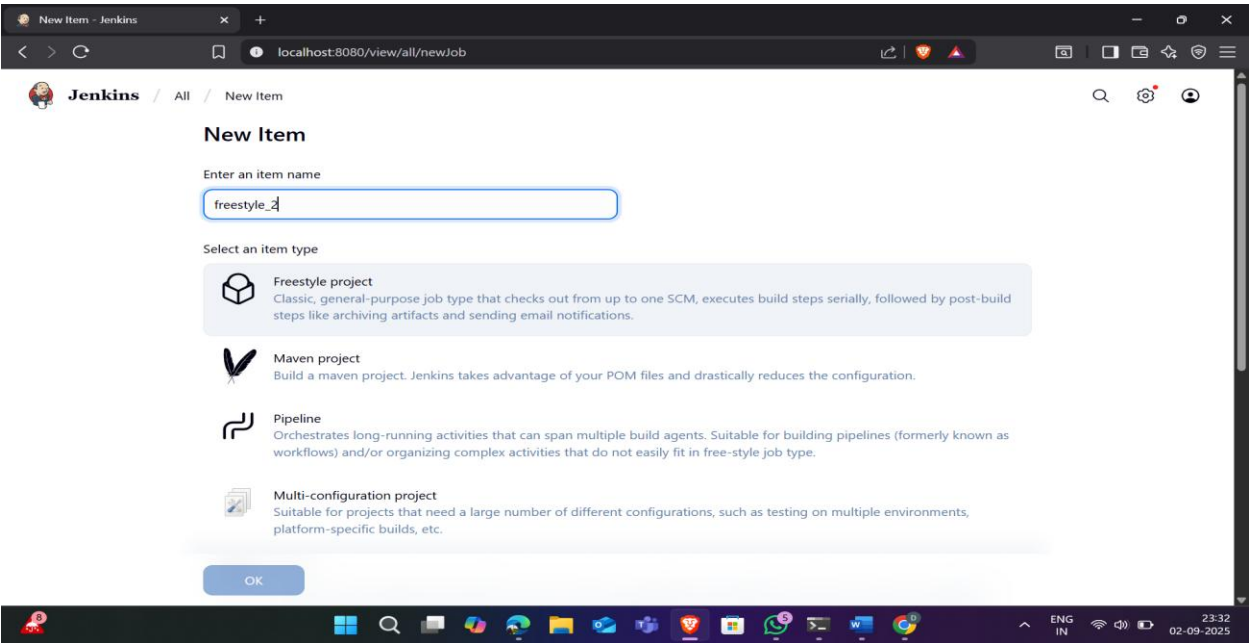


Note: The credentials for accessing Jenkins in the lab are Username: **admin** and Password: **admin**.

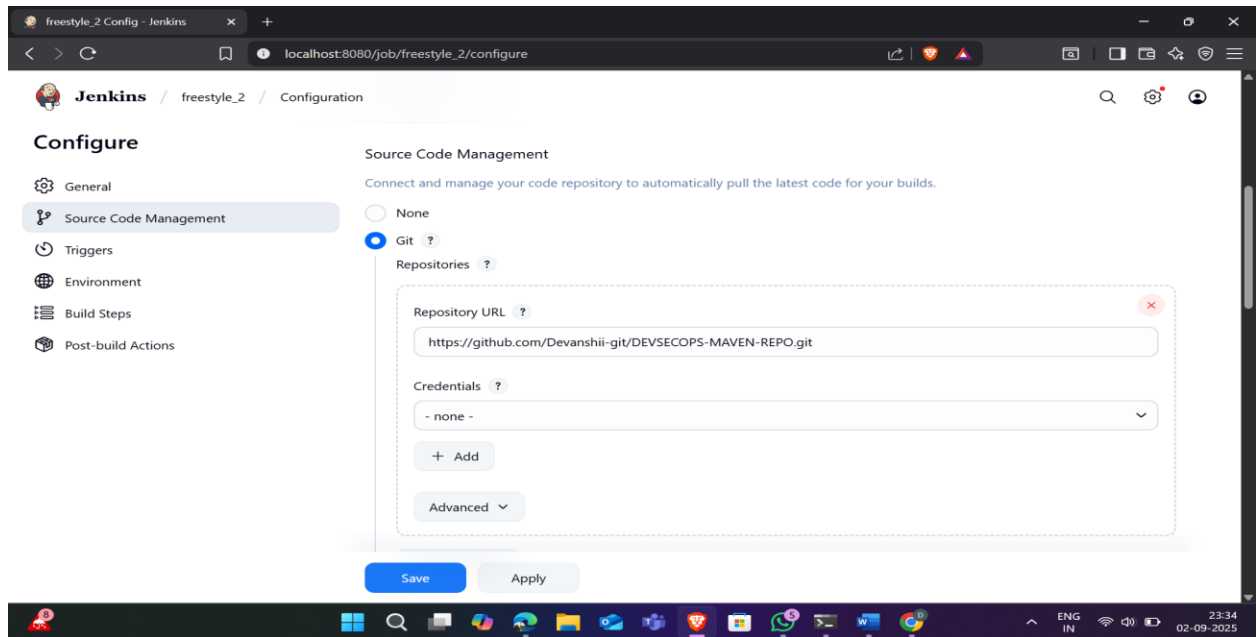
1.2 In the Jenkins dashboard, click on **New Item**



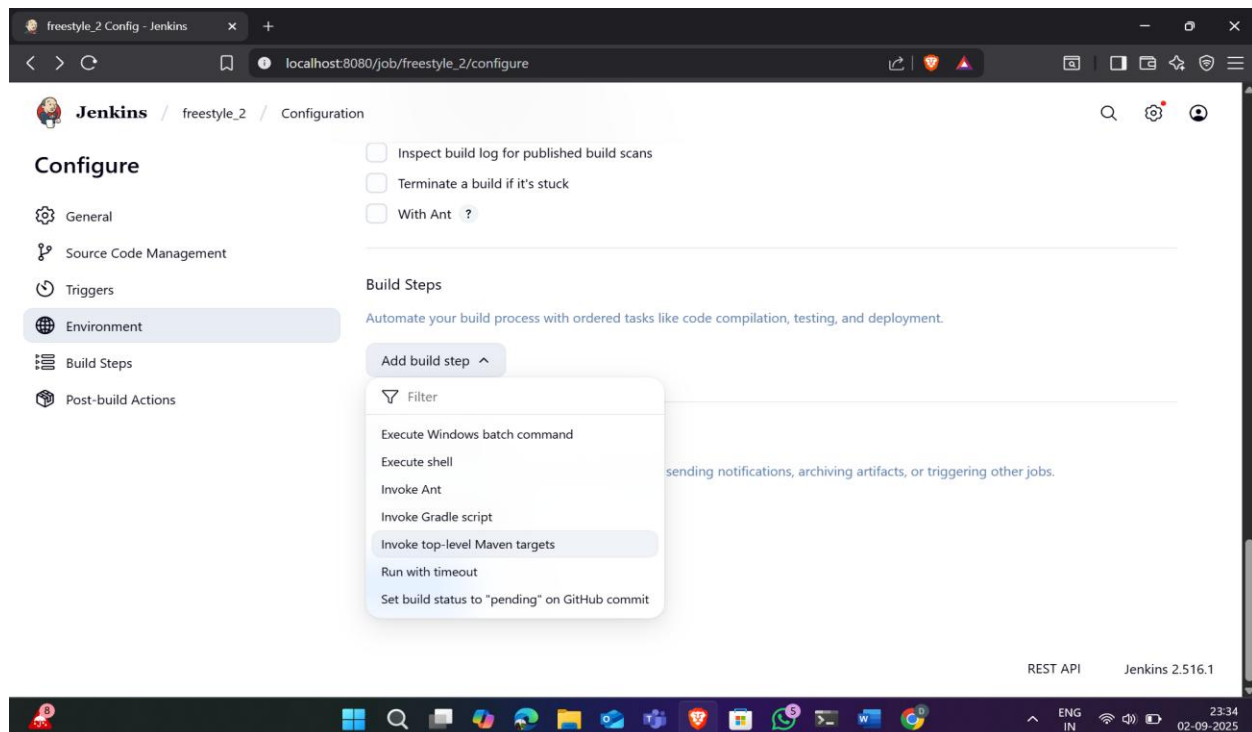
1.3 Select the **Freestyle project** while creating a Jenkins job, provide a custom job name, and click on **OK**



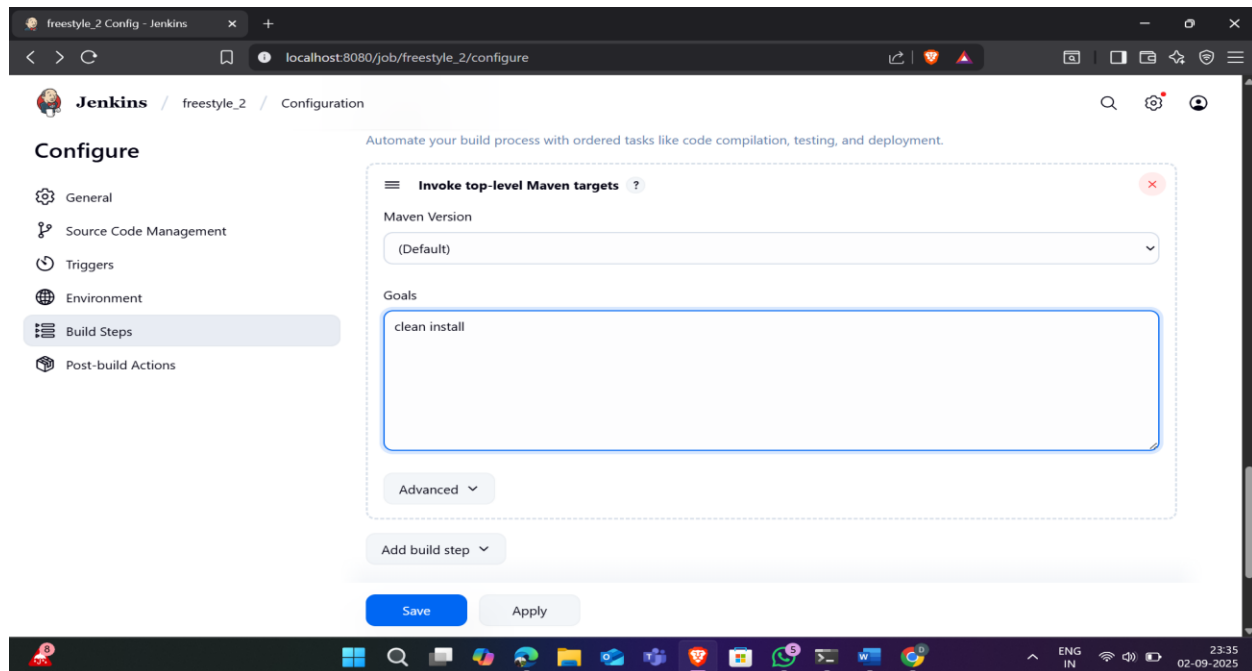
1.4 Now, in the Configure page, navigate to **Source Code Management** in the left navigation bar, select **Git**, and then provide the Git repository URL



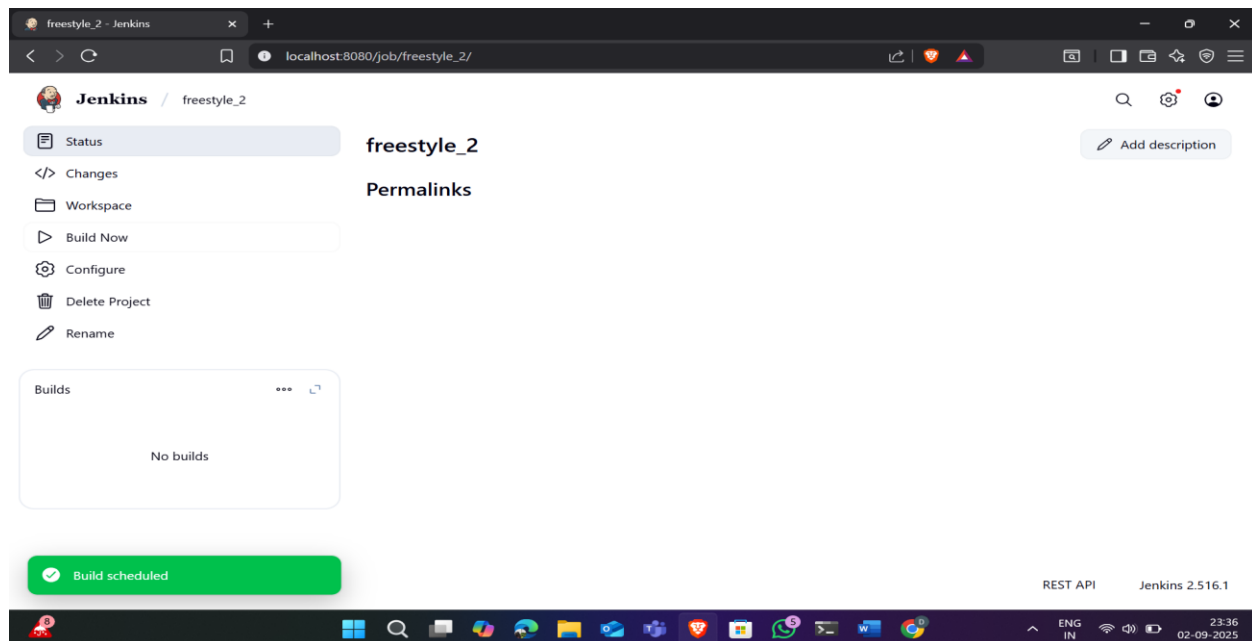
1.5 Now, navigate to **Build Steps**, click on **Add build step**, and then select the option **Invoke top-level Maven targets**



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 shows the Jenkins web interface for a job named 'freestyle_2'. The 'Console Output' tab is selected, displaying the build log. The log shows the build starting with a user 'Devanshi Jain' and running as 'SYSTEM'. It details the process of cloning a repository from GitHub, checking out a specific revision, and then executing a Maven build. The build progress is shown with two stages: 'Progress (1): 193 kB | 147/157 kB' and 'Progress (2): 193 kB | 157 kB'. The log also shows the download of Maven dependencies from the central repository and the installation of the build artifacts. The build concludes with a 'BUILD SUCCESS' message and a 'Finished: SUCCESS' status. The Jenkins version is 2.516.1.

```
Started by user Devanshi Jain
Running as SYSTEM
Building in workspace C:\ProgramData\Jenkins\jenkins\workspace\freestyle_2
The recommended git tool is: NONE
No credentials specified
> git.exe rev-parse --resolve-git-dir C:\ProgramData\Jenkins\jenkins\workspace\freestyle_2\.git #
timeout=10
Fetching changes from the remote Git repository
> git.exe config remote.origin.url https://github.com/Devanshii-git/DEVSECOPS-MAVEN-REPO.git # timeout=10
Fetching upstream changes from https://github.com/Devanshii-git/DEVSECOPS-MAVEN-REPO.git
> git.exe --version # timeout=10
> git --version # 'git version 2.47.0.windows.2'
> git.exe fetch --tags --force --progress -- https://github.com/Devanshii-git/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
[freestyle_2] $ cmd.exe /C "C:\Users\Devanshi\Downloads\maven-mvnd-1.0.2-windows-amd64\maven-mvnd-1.0.2-
windows-amd64\mvn\bin\mvn.cmd clean install && exit %ERRORLEVEL%"
[INFO] Scanning for projects...
```

Progress (1): 193 kB | 147/157 kB
Progress (2): 193 kB | 157 kB

Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/resolver/maven-resolver-
api/1.9.18/maven-resolver-api-1.9.18.jar (157 kB at 1.5 MB/s)
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 1.6 MB/s)
[INFO] Installing C:\ProgramData\Jenkins\jenkins\workspace\freestyle_2\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\freestyle_2\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: 52.019 s
[INFO] Finished at: 2025-09-02T23:40:01+05:30
[INFO] -----
Finished: SUCCESS

REST API Jenkins 2.516.1

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.