

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

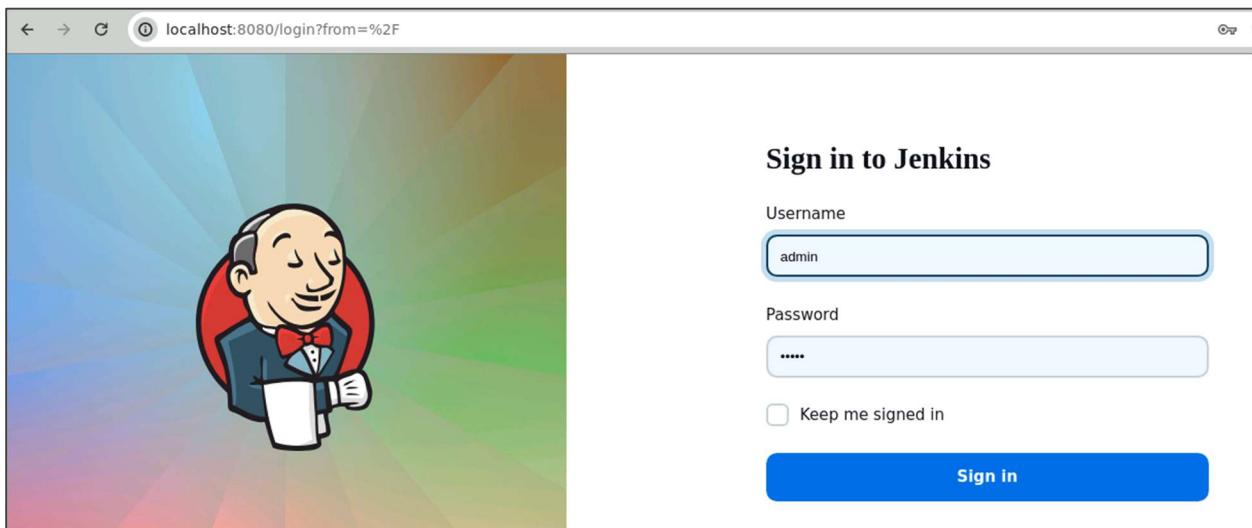
Prerequisites: You need to have a Jenkins up and running.

Steps to be followed:

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

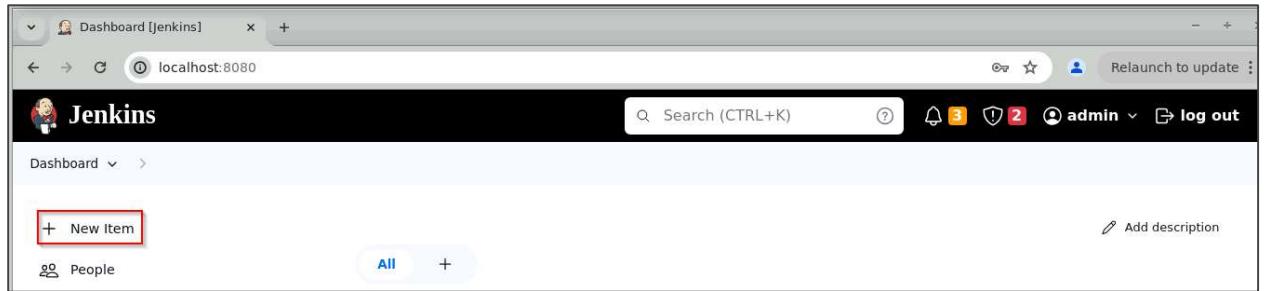
Step 1: Log in to Jenkins CI tool and configure Maven freestyle job

1.1 Log in to Jenkins using your credentials

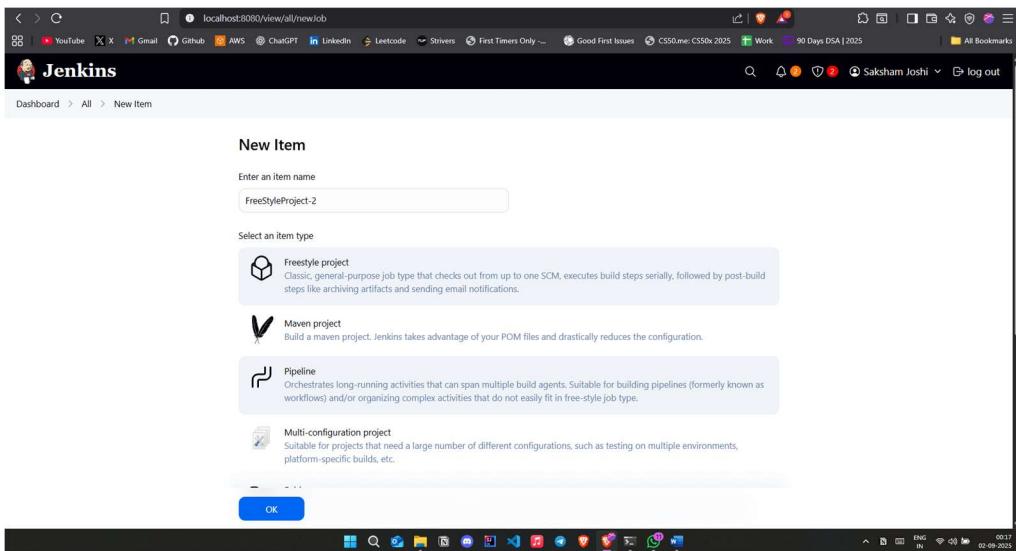


Note: The credentials for accessing Jenkins in the lab are Username: **admin** and Password: **admin**.

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**



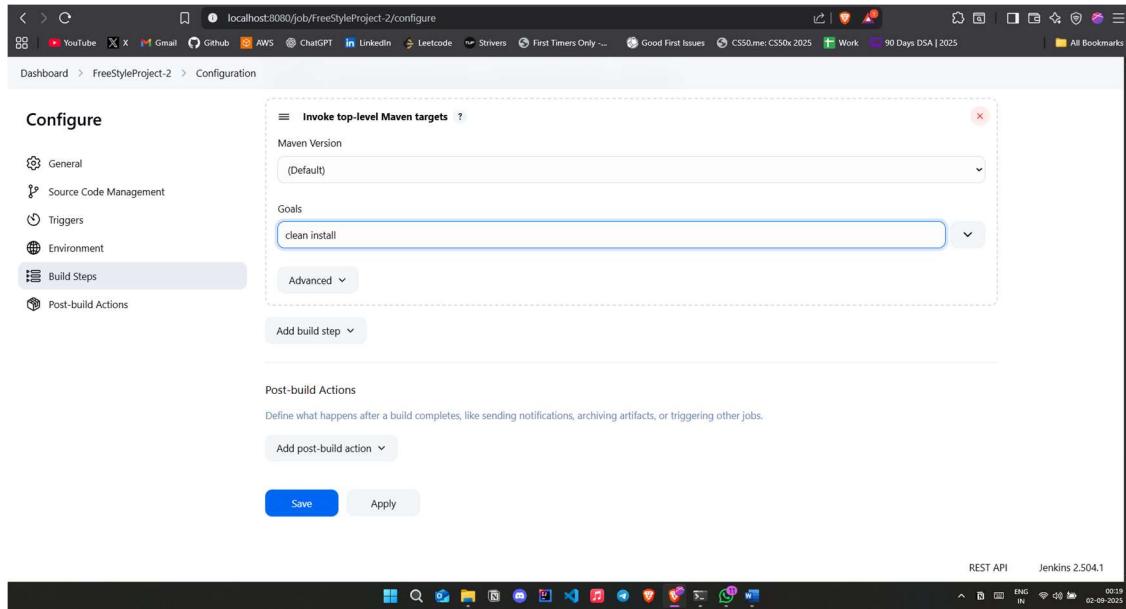
1.4 Now, in the Configure page, navigate to **Source Code Management** in the left navigation bar, select **Git**, and then provide the Git repository URL

The screenshot shows the Jenkins configuration interface for a job named 'NEW-MAVEN'. On the left, under 'Configure', the 'Source Code Management' section is selected. It displays a 'Repository URL' field containing 'https://github.com/shagun25408/NEW-MAVEN.git' with a validation error message: 'Please enter Git repository.' Below it is a 'Branch Specifier' field set to '/master'. At the bottom are 'Save' and 'Apply' buttons.

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

The screenshot shows the Jenkins configuration interface for a 'Freestyle' project. In the left sidebar, the 'Build Steps' section is highlighted with a red box. In the main area, the 'Build Steps' tab is selected, showing a list of available steps. The 'Invoke top-level Maven targets' step is highlighted with a red box. Other visible steps include 'Execute Windows batch command', 'Execute shell', 'Invoke Ant', 'Invoke Gradle script', 'Run with timeout', and 'Set build status to "pending" on GitHub commit'.

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 interface for a project named 'NEW-MAVEN'. On the left, there's a sidebar with links like Status, Changes, Workspace, Build Now, Configure, Delete Project, and Rename. The main area has a title 'NEW-MAVEN' with a red error icon. Below it is a 'Permalinks' section with a bulleted list of recent builds. A 'Builds' card shows a single build entry for '#1' from 08:02 today. There are also 'Add description' and search/filter buttons.

The screenshot shows a browser window with the URL 'localhost:8080/job/FreeStyleProject-2/1/console'. The page displays the Jenkins console output for build #1 of the 'FreeStyleProject-2' job. The output shows the progress of downloading and installing the 'plexus-utils-3.0.5.jar' file, followed by a successful build message: 'BUILD SUCCESS'. The terminal prompt '[0;34mINFO[m]' appears multiple times throughout the log.

```
Progress (1): 172/230 kB
Progress (1): 176/230 kB
Progress (1): 180/230 kB
Progress (1): 184/230 kB
Progress (1): 188/230 kB
Progress (1): 193/230 kB
Progress (1): 197/230 kB
Progress (1): 201/230 kB
Progress (1): 205/230 kB
Progress (1): 209/230 kB
Progress (1): 213/230 kB
Progress (1): 217/230 kB
Progress (1): 221/230 kB
Progress (1): 225/230 kB
Progress (1): 229/230 kB
Progress (1): 230 kB

Downloaded from central: https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-utils/3.0.5/plexus-utils-3.0.5.jar (230 kB at 196 kB/s)
[0;34mINFO[m] Installing /var/lib/jenkins/workspace/FreeStyleProject-2/target/plexus-calc.jar to
/var/lib/jenkins/.m2/repository/plexus/plexus-devops/0.0.1-SNAPSHOT/plexus-devops-0.0.1-SNAPSHOT.jar
[0;34mINFO[m] Installing /var/lib/jenkins/workspace/FreeStyleProject-2/pom.xml to /var/lib/jenkins/.m2/repository/plexus/plexus-devops/0.0.1-
SNAPSHOT/plexus-devops-0.0.1-SNAPSHOT.pom
[0;34mINFO[m] [1m-----@[m
[0;34mINFO[m] [1m---BUILD SUCCESS@[m
[0;34mINFO[m] [1m-----@[m
[0;34mINFO[m] Total time: 40.248 s
[0;34mINFO[m] Finished at: 2025-09-01T18:50:28Z
[0;34mINFO[m] [1m-----@[m
[0;34mINFO[m] Finished: SUCCESS
```

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.