

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

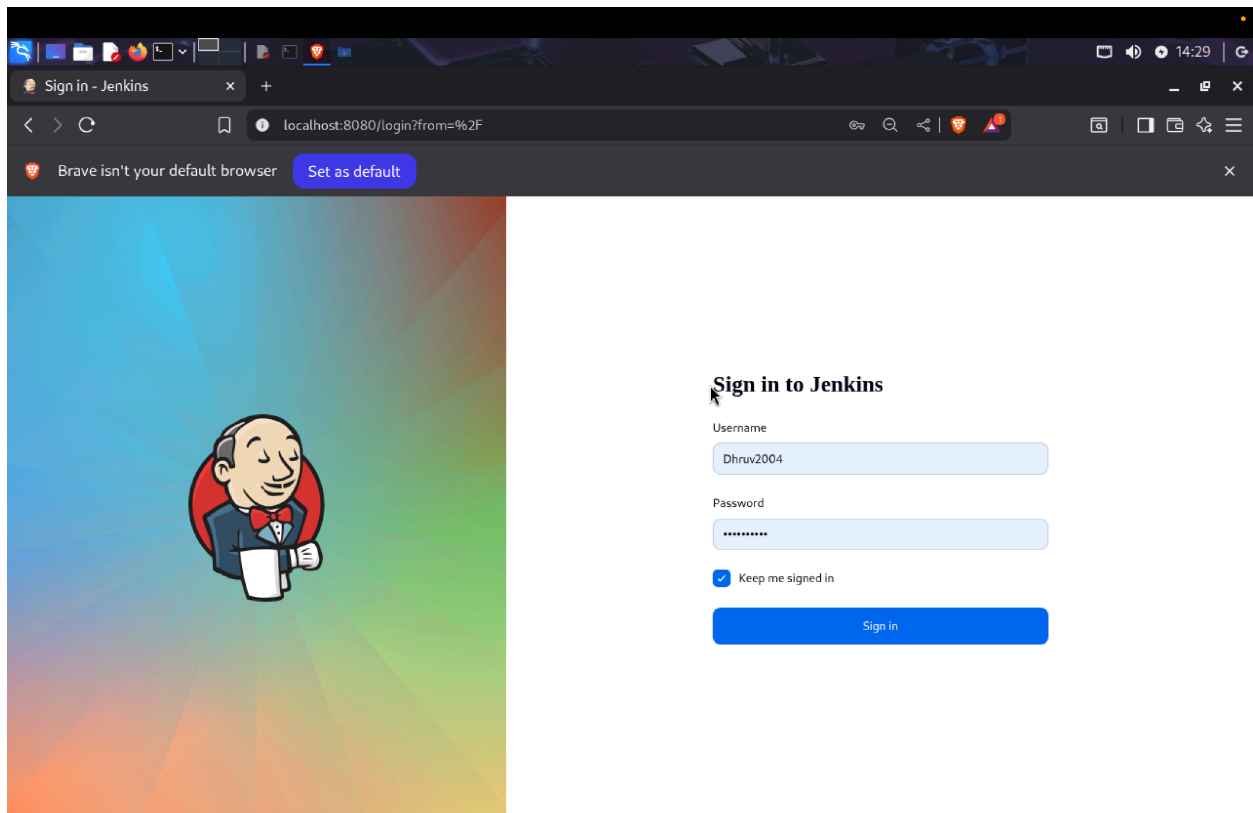
Prerequisites: You need to have a Jenkins up and running.

Steps to be followed:

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

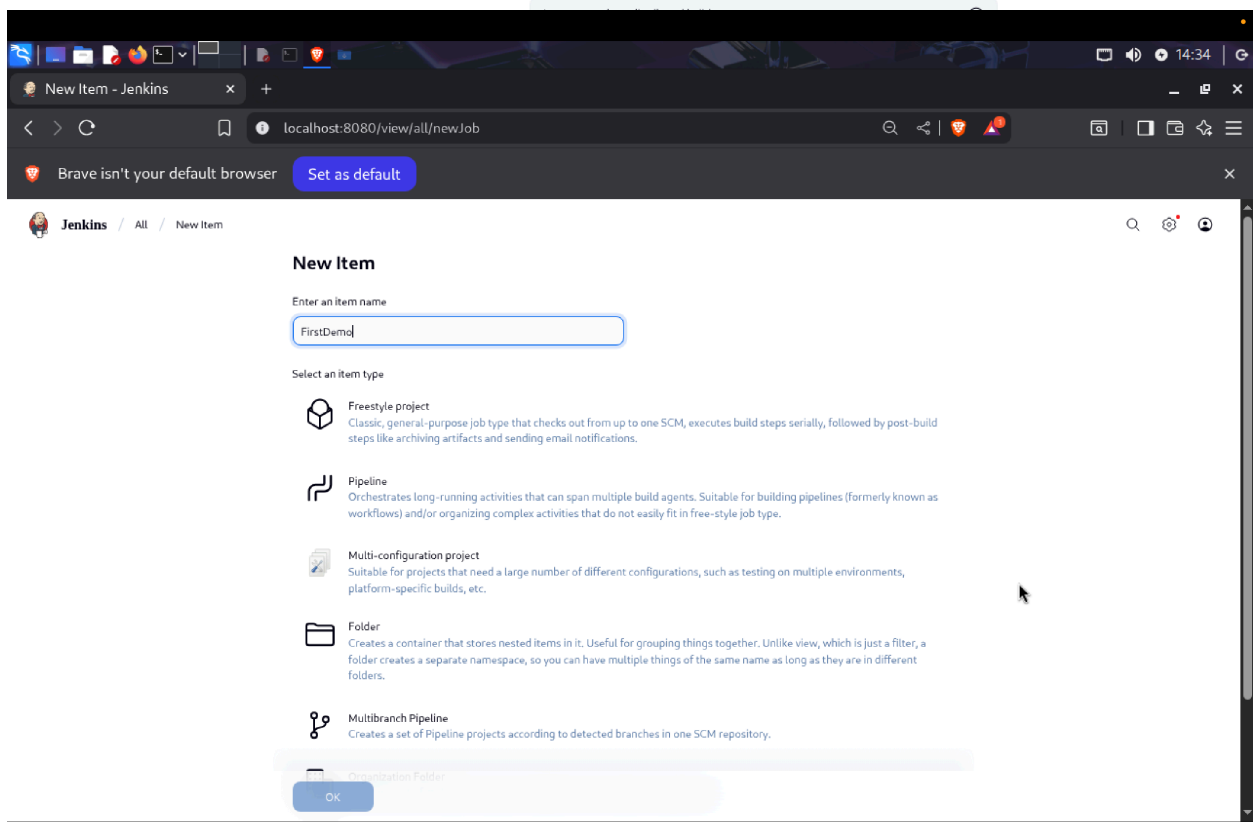
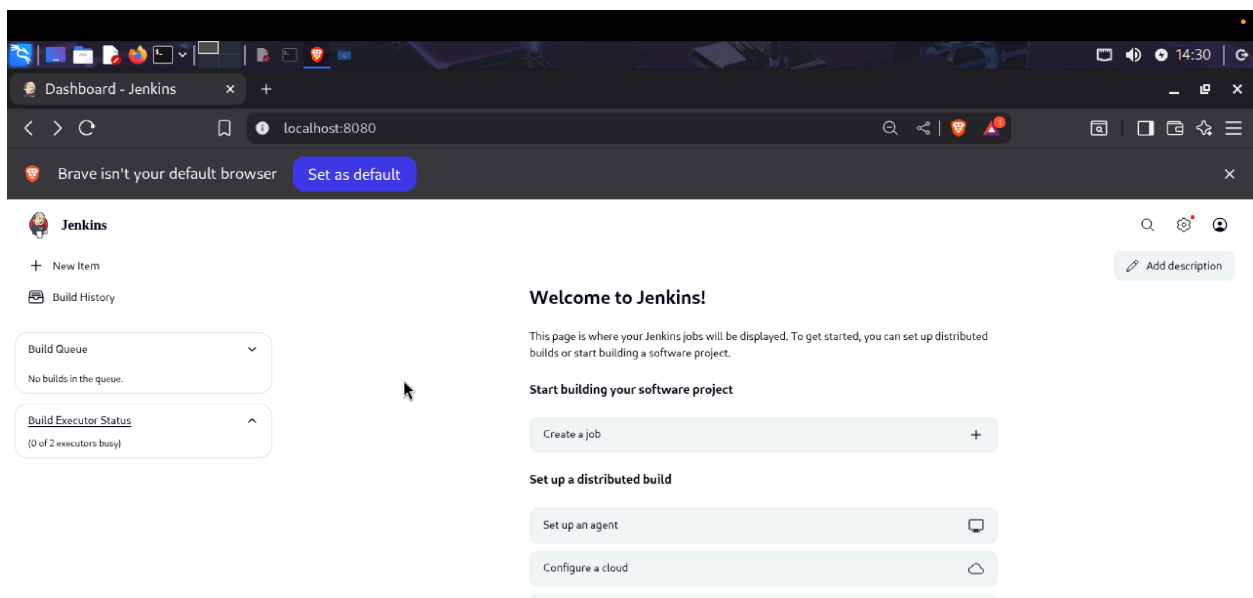
Step 1: Log in to Jenkins CI tool and configure Maven freestyle job

1. Log in to Jenkins using your credentials



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

2. In the Jenkins dashboard, click on **New Item**



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

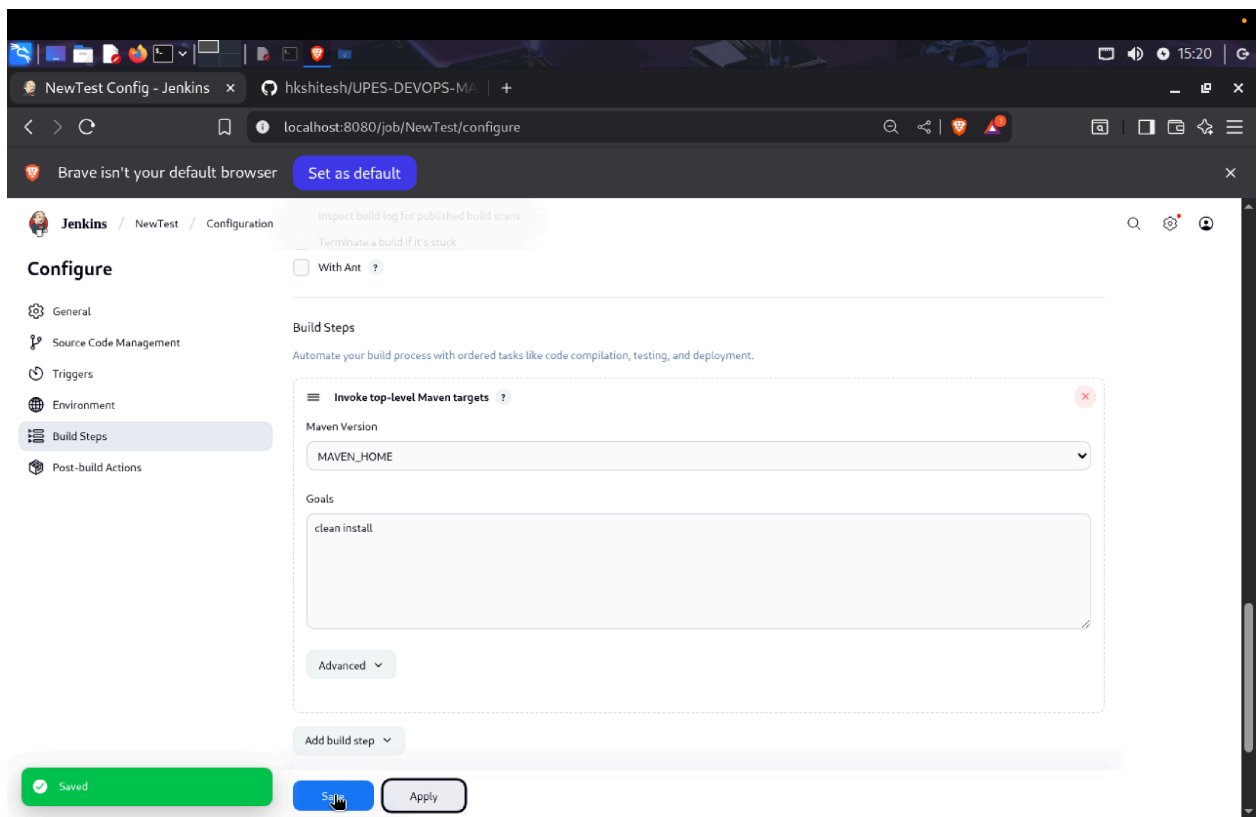
4. Now, in the Configure page, navigate to **Source Code Management** in the left navigation bar, select **Git**, and then provide the Git repository URL

The screenshot shows the 'Source Code Management' configuration page in Jenkins. At the top, it says 'Connect and manage your code repository to automatically pull the latest code for your builds.' Below this, there are two radio buttons: 'None' and 'Git'. The 'Git' option is selected. Under the 'Git' section, there is a 'Repositories' section. Inside this section, there is a 'Repository URL' field with the value 'https://github.com/hkshitesh/DEVSECOPS-MAVEN-REPO.git'. Below the URL field, there is a 'Credentials' dropdown menu with the value '- none -'. There is an '+ Add' button and an 'Advanced' dropdown menu. At the bottom of the 'Repositories' section, there is an 'Add Repository' button.

The screenshot shows the Jenkins Configuration page for a job named 'NewTest'. The left sidebar shows the 'Configure' section with options for General, Source Code Management, Triggers, Environment, Build Steps, and Post-build Actions. The 'Environment' section is currently selected. The main content area shows the 'Environment' configuration options, including checkboxes for 'Delete workspace before build starts', 'Use secret text(s) or file(s)', 'Add timestamps to the Console Output', 'Inspect build log for published build scans', 'Terminate a build if it's stuck', and 'With Ant'. Below these options, there is a 'Build Steps' section with a button to 'Add build step'. A dropdown menu is open, showing a list of build steps: 'Execute Windows batch command', 'Execute shell', 'Invoke Ant', 'Invoke Gradle script', 'Invoke top-level Maven targets', 'Run with timeout', and 'Set build status to "pending" on GitHub commit'. The 'Run with timeout' option is highlighted.

Note: Here, the repository URL is <https://github.com/hkshitesh/DEVSECOPS-MAVEN-REPO.git>.

- Now, navigate to **Build Steps**, click on **Add build step**, and then select the option **Invoke top-level Maven targets**
- Provide clean install under **Goals** section and then click on **Save**



- 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.

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Jenkins / NewTest

Status

Changes

Workspace

Build Now

Configure

Delete Project

Rename

Credentials

NewTest

Add description

Permalinks

- Last build (#2), 2 min 17 sec ago
- Last stable build (#2), 2 min 17 sec ago
- Last successful build (#2), 2 min 17 sec ago
- Last completed build (#2), 2 min 17 sec ago

Builds

Filter

Today

- #3 3:21 PM
- #2 3:18 PM
- #1 3:00 PM

localhost:8080/job/NewTest/3/

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Jenkins / NewTest / #3 / Console Output

Progress (2): 151/193 kB | 49/157 kB
Progress (2): 131/193 kB | 66/157 kB
Progress (2): 147/193 kB | 66/157 kB
Progress (2): 147/193 kB | 82/157 kB
Progress (2): 164/193 kB | 82/157 kB
Progress (2): 164/193 kB | 98/157 kB
Progress (2): 180/193 kB | 98/157 kB
Progress (2): 193 kB | 98/157 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 2.2 MB/s)
Progress (1): 115/157 kB
Progress (1): 131/157 kB
Progress (1): 147/157 kB
Progress (1): 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 1.4 MB/s)

[INFO] Installing /home/dhruv/.jenkins/workspace/NewTest/pom.xml to /home/dhruv/.m2/repository/upes/devops/upes.devops/0.0.1-SNAPSHOT/upes.devops-0.0.1-SNAPSHOT.pom

[INFO] Installing /home/dhruv/.jenkins/workspace/NewTest/target/upes-calc.jar to /home/dhruv/.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: 7.900 s
[INFO] Finished at: 2025-09-19T15:21:26+05:30
[INFO] -----
Finished: SUCCESS

<https://repo.maven.apache.org/maven2/org/apache/maven/resolver/maven-resolver-api/1.9.18/maven-resolver-api-1.9.18.jar>

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.