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Batch 3 – DevOps

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

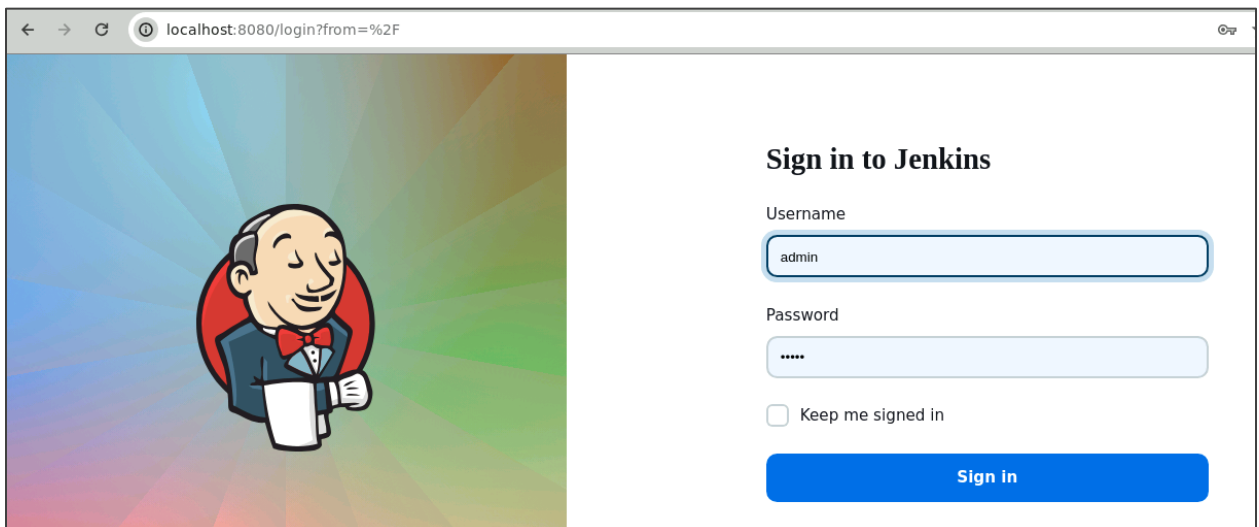
Prerequisites: You need to have a Jenkins up and running.

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

A screenshot of a web browser window showing the Jenkins login page. The browser's address bar displays 'localhost:8080/login?from=%2F'. The page features a large illustration of a man in a tuxedo on the left. On the right, there is a 'Sign in to Jenkins' section with a 'Username' field containing 'admin', a 'Password' field with masked characters, a 'Keep me signed in' checkbox, and a blue 'Sign in' button.

← → ↻ ⓘ localhost:8080/login?from=%2F

Sign in to Jenkins

Username
admin

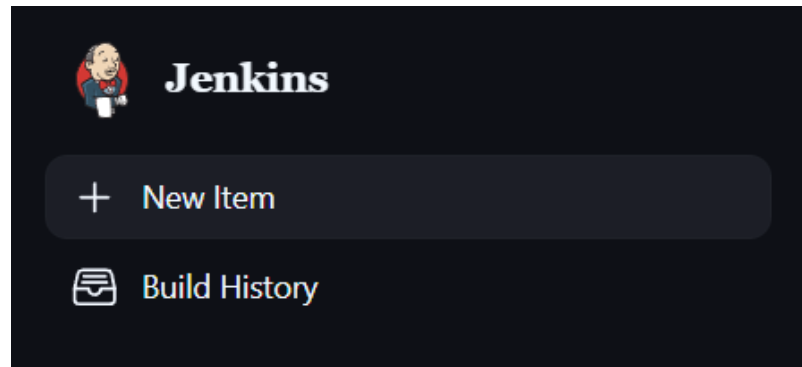
Password
.....

☐ Keep me signed in

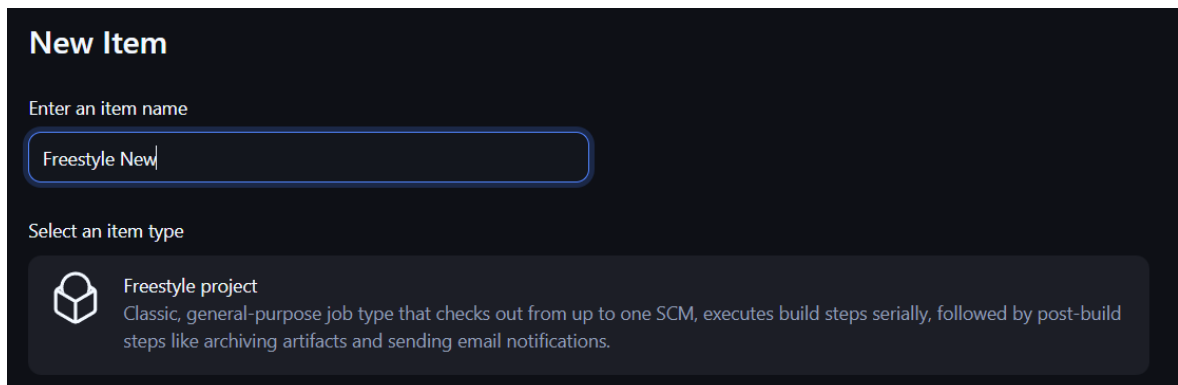
Sign in

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**

The image shows the 'New Item' form in Jenkins. The form has a dark gray background. At the top, the title 'New Item' is displayed in a bold, black, serif font. Below the title is a text input field with the placeholder text 'Enter an item name'. The input field contains the text 'Freestyle New'. Below the input field is a section titled 'Select an item type'. Under this section, there is a single option: 'Freestyle project'. To the left of this option is a small icon of a cube. To the right of the icon, the text 'Freestyle project' is displayed in a bold, black, serif font. Below this text is a description: 'Classic, general-purpose job type that checks out from up to one SCM, executes build steps serially, followed by post-build steps like archiving artifacts and sending email notifications.'

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

Source Code Management

Connect and manage your code repository to automatically pull the latest code for your builds.

☐ None

☒ Git ?

Repositories ?

Repository URL ?

Credentials ?

- none -

+ Add

Advanced ▾

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

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

Build Steps

Automate your build process with ordered tasks like code compilation, testing, and deployment.

Add build step ^

Filter

- Execute Windows batch command
- Execute shell
- Invoke Ant
- Invoke Gradle script
- Invoke top-level Maven targets**
- Run with timeout
- Set build status to "pending" on GitHub commit

sending notifications, archiving artifacts, or triggering other jobs.

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

≡ Invoke top-level Maven targets ?

Maven Version

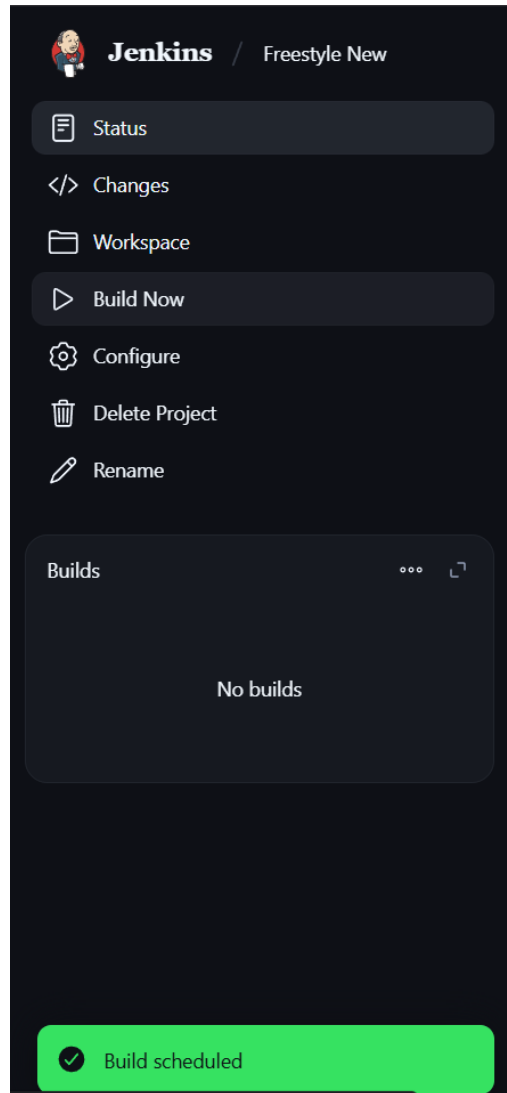
MAVEN_HOME

Goals

clean install

Advanced ▾

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.



```
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 1.6 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 1.4 MB/s)
[INFO] Installing C:\ProgramData\Jenkins\.jenkins\workspace\Freestyle New\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 New\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: 24.221 s
[INFO] Finished at: 2025-08-28T18:46:42+05:30
[INFO] -----
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.