Shivang Mangal 500124202 Batch-2(DevOps)

Lab Exercise 6.2

Creating a New Jenkins Job to Checkout Source Code

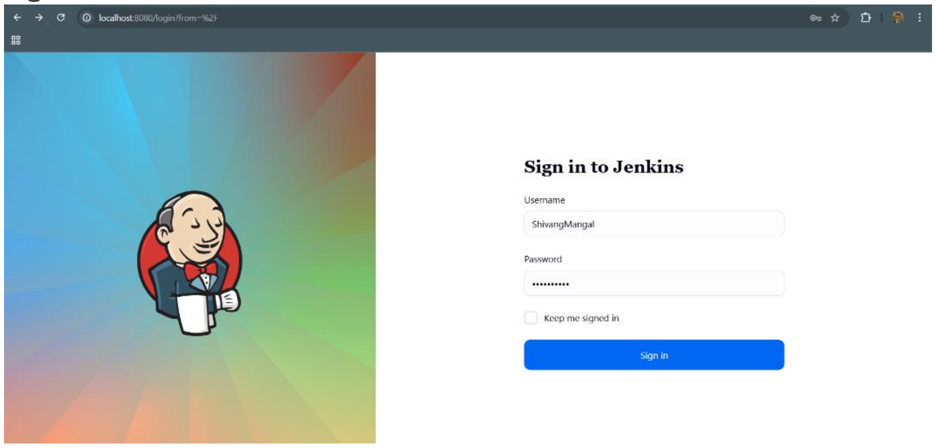
Objective: To set up a Jenkins job to manage source code, specifically by configuring the Source Code Management section to check out code from a Git repository
Tools required: Jenkins
Prerequisites: Jenkins must be operational.

Steps to be followed:

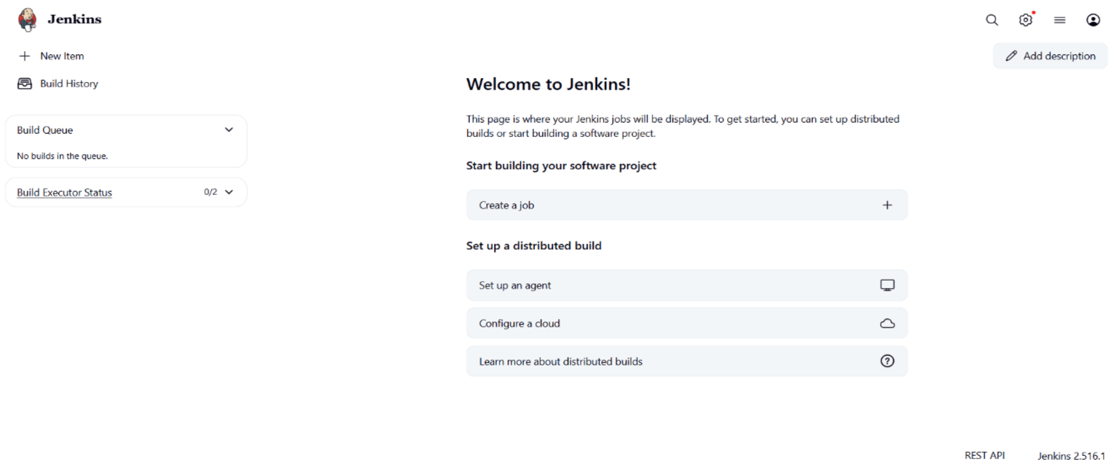
1. Log in and create a Jenkins job
2. Configure source code management

Step 1: Log in and create a Jenkins job

1.1 Navigate to **localhost:8080** in your web browser, enter your credentials, and click on **Sign In**



1.2 Create a new Jenkins job by clicking on **New Item**



Welcome to Jenkins!

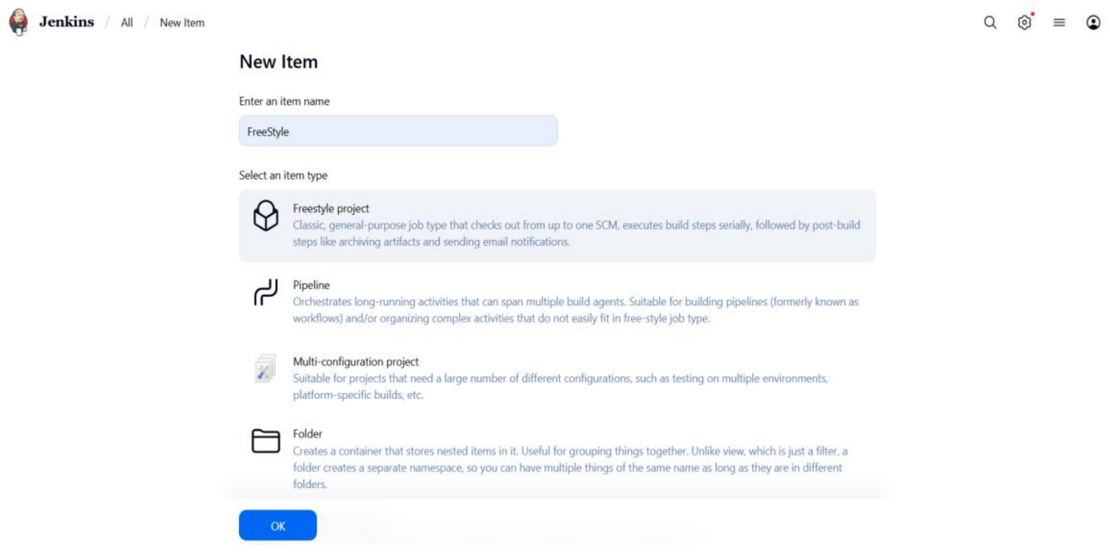
This page is where your Jenkins jobs will be displayed. To get started, you can set up distributed builds or start building a software project.

Start building your software project

Set up a distributed build

No builds in the queue.

1.3 Provide custom job name inside the field **Enter an item name,** select the **Freestyle project** option, and click on the **OK** button to save the job



New Item

Enter an item name

FreeStyle

Select an item type

Freestyle project
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.

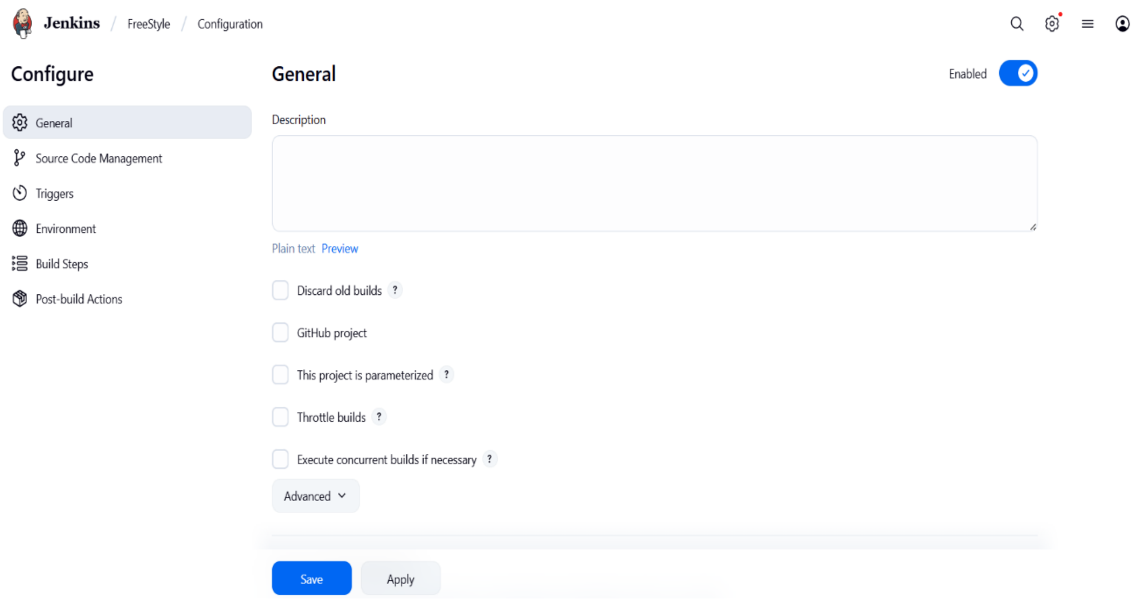
Pipeline
Orchestrates long-running activities that can span multiple build agents. Suitable for building pipelines (formerly known as workflows) and/or organizing complex activities that do not easily fit in free-style job type.

Multi-configuration project
Suitable for projects that need a large number of different configurations, such as testing on multiple environments, platform-specific builds, etc.

Folder
Creates a container that stores nested items in it. Useful for grouping things together. Unlike view, which is just a filter, a folder creates a separate namespace, so you can have multiple things of the same name as long as they are in different folders.

Step 2: Configure source code management

2.1 Access the newly created job's configuration screen by clicking on **Configure**



General

Enabled

Description

Plain text Preview

Discard old builds ?

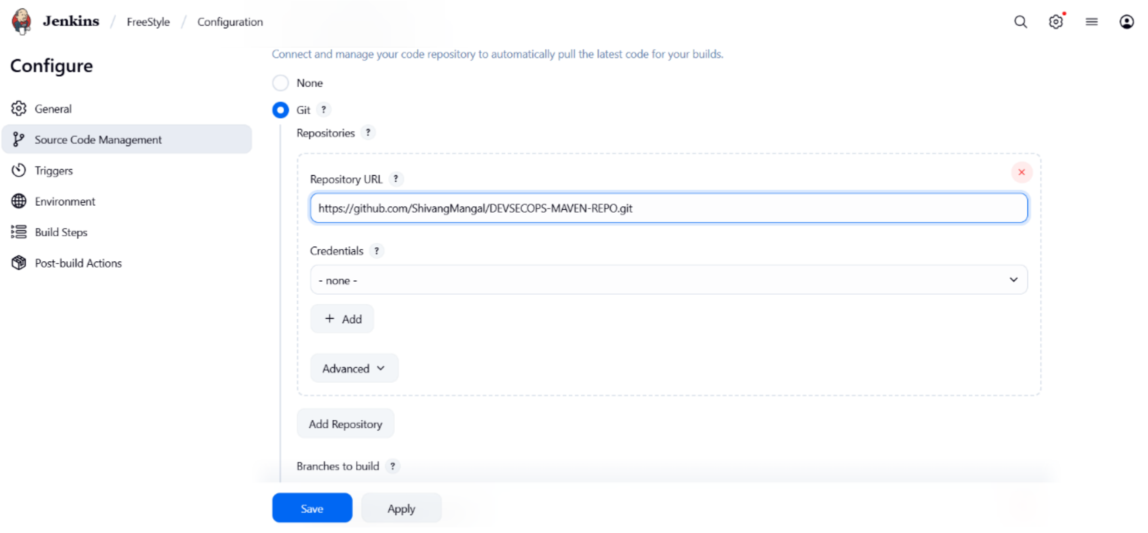
GitHub project

This project is parameterized ?

Throttle builds ?

Execute concurrent builds if necessary ?

2.2 Navigate to the **Source Code Management** tab, provide Git repository configuration inside the **Repository URL** field, and click on the **Save** button



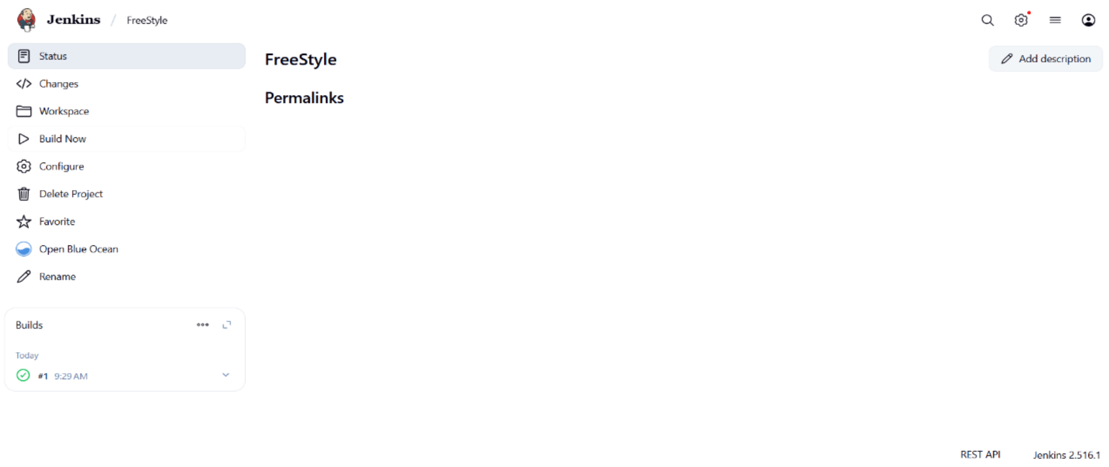
Connect and manage your code repository to automatically pull the latest code for your builds.

None [✓ Git]

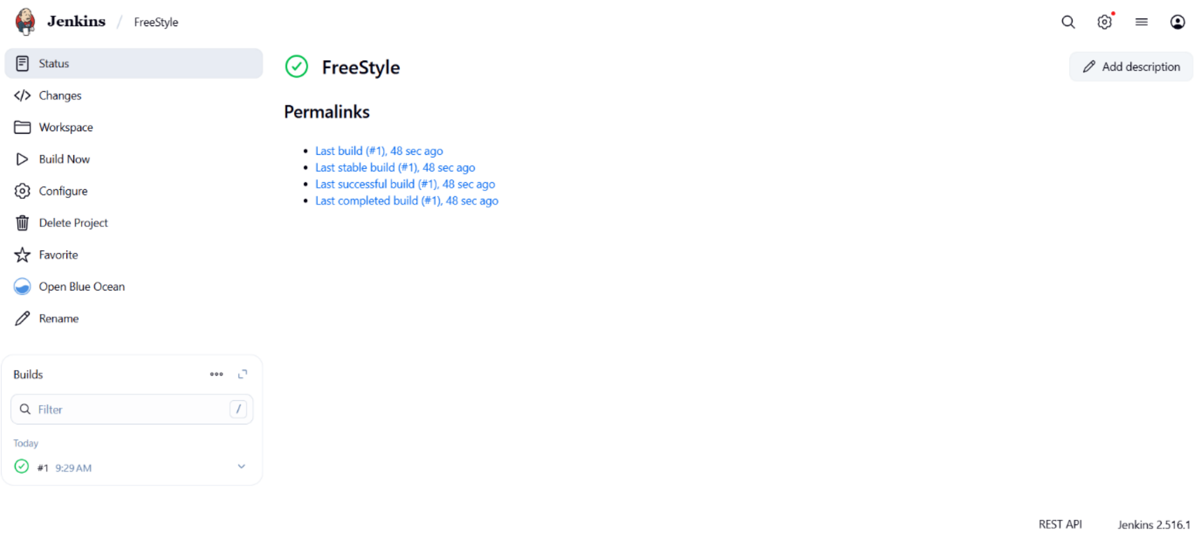
Repository URL: https://github.com/ShivangMangal/DEVSECOPS-MAVEN-REPO.git

Credentials: - none -

2.3 Then, click on the **Build Now** option to schedule a build



2.4 To schedule the build, click the required link under **Permalinks**

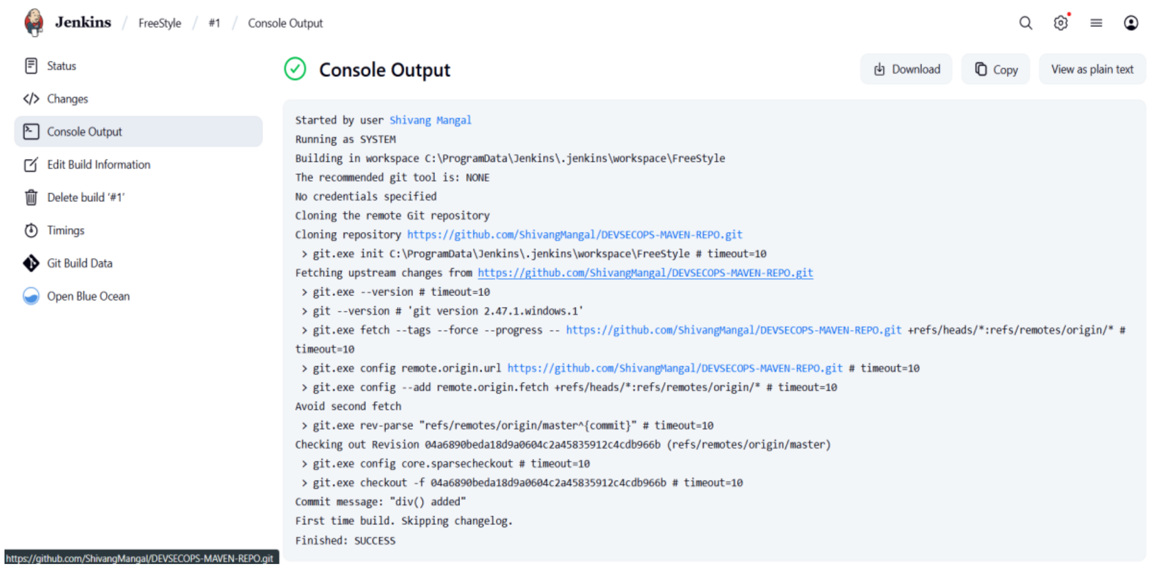


FreeStyle

Permalinks

- Last build (#1), 48 sec ago
- Last stable build (#1), 48 sec ago
- Last successful build (#1), 48 sec ago
- Last completed build (#1), 48 sec ago

2.5 Click on **Console Output** to check out the process during the build process



```
Started by user Shivang Mangal
Running as SYSTEM
Building in workspace C:\ProgramData\Jenkins\.jenkins\workspace\FreeStyle
The recommended git tool is: NONE
No credentials specified
Cloning the remote Git repository
Cloning repository https://github.com/ShivangMangal/DEVSECOPS-MAVEN-REPO.git
 > git.exe init C:\ProgramData\Jenkins\.jenkins\workspace\FreeStyle # 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 config remote.origin.url https://github.com/ShivangMangal/DEVSECOPS-MAVEN-REPO.git # timeout=10
 > git.exe config --add remote.origin.fetch +refs/heads/*:refs/remotes/origin/* # timeout=10
Avoid second fetch
 > 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"
First time build. Skipping changelog.
Finished: SUCCESS
```

By following these steps, you have successfully set up a Jenkins job to automatically check out source code from a Git repository, enabling seamless integration and automation in your CI/CD pipeline.