

# Jenkins Job Creation: Implementing Version Control in Your CI/CD Pipeline

## Step 1: Install a git Bash

## Step 2: Set Up Git Bash

```
git config --global user.name "thayeeb-9211"
```

```
git config --global user.email "devgenius9211@gmail.com"
```

## Step 3: Initialize a Git Repository

- Navigate to your project directory:

```
cd DevOps
```

- Initialize the Git repository:

```
git init
```

```
PS C:\Users\HP\OneDrive\Desktop\DevOps> git init
Reinitialized existing Git repository in C:/Users/HP/OneDrive/Desktop/DevOps/.git/
PS C:\Users\HP\OneDrive\Desktop\DevOps>
```

## Step 4: Add Files to Git

- Add all files to the staging area:

```
git add .
```

## Step 5: Commit the Files

- Commit the files with a message:

```
git commit -m "Initial commit"
```

```
SQL CONSOLE  TERMINAL  PROBLEMS  OUTPUT  DEBUG CONSOLE  COMMENTS
PS C:\Users\HP\OneDrive\Desktop\DevOps> git init
Reinitialized existing Git repository in C:/Users/HP/OneDrive/Desktop/DevOps/.git/
PS C:\Users\HP\OneDrive\Desktop\DevOps> git add
warning: in the working copy of 'main.java', LF will be replaced by CRLF the next time Git touches it
warning: in the working copy of 'hello-docker/Dockerfile', LF will be replaced by CRLF the next time Git touches it
warning: in the working copy of 'hello-docker/app.py', LF will be replaced by CRLF the next time Git touches it
PS C:\Users\HP\OneDrive\Desktop\DevOps> git commit -m "Initial commit"
[master 55c178d] Third commit
34 files changed, 294 insertions(+)
create mode 100644 Jenkinsfile
create mode 100644 Reports/IBW-Assignment -1.pdf
create mode 100644 Week-6/Docker Desktop Installation.pdf
create mode 100644 Week-6/Dockerfile_python App.pdf
create mode 100644 Week-6/Task Hello World Docker Container (1).pdf
create mode 100644 Week-6/Week01.pdf
create mode 100644 Week-6/Week02.pdf
create mode 100644 Week-6/Week03.pdf
create mode 100644 Week-6/Week 6 Day 1.pdf
create mode 100644 Week-7/Lab Exp 2 Week 7 Day 1.pdf
create mode 100644 Week-7/Week 7 Day 2 - Multi Container.pdf
create mode 100644 Week-7/Week 7 Day 2 DevOps Practical.pdf
create mode 100644 Week-7/Week 7 Day 2 Kubernetes.pdf
create mode 100644 Week-7/Week 7 Day 4 Node JS App.pdf
create mode 100644 Week-8/Automated Deployment Node JS Application.pdf
create mode 100644 Week-8/Lab Exp 3- Multi Container App with DB.pdf
create mode 100644 Week-8/Minikube Installation Minikube.pdf
create mode 100644 Week-8/Week 8 Day 1 Kubernetes Introduction.pdf
create mode 100644 Week-8/Week 8 Day 2 Minikube Rolling Updates.pdf
create mode 100644 Week-8/Week 8 Day 2 Kubernetes Deployment.pdf
create mode 100644 docker-image-js/Dockerfile
create mode 100644 docker-image-js/my-app.js
create mode 100644 hello-docker/Dockerfile
create mode 100644 hello-docker/app.py
create mode 100644 minikube-linux-amd64
create mode 100644 my-multi-container-app/backend/Dockerfile
create mode 100644 my-multi-container-app/backend/app.py
create mode 100644 my-multi-container-app/docker-compose.yml
create mode 100644 my-multi-container-app/frontend/Dockerfile
create mode 100644 my-multi-container-app/frontend/index.html
create mode 100644 my-python-app/Dockerfile
create mode 100644 my-python-app/app.py
create mode 100644 my-python-app/requirements.txt
PS C:\Users\HP\OneDrive\Desktop\DevOps>
```

## Step 6: Push the Project to GitHub

- Push the local project to the GitHub repository:

`git push -u origin main`

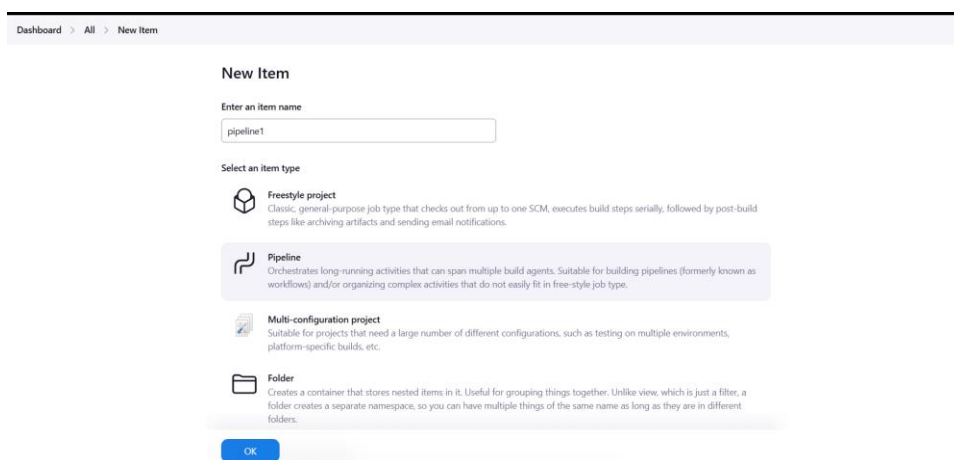
```
create mode 100644 my-python-app/requirements.txt
● PS C:\Users\HP\OneDrive\Desktop\DevOps> git push -u origin main
Total 0 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
remote:
remote: Create a pull request for 'main' on GitHub by visiting:
remote:   https://github.com/thayeeb-9211/DevOps/pull/new/main
remote:
To https://github.com/thayeeb-9211/DevOps.git
 * [new branch]      main -> main
branch 'main' set up to track 'origin/main'.
○ PS C:\Users\HP\OneDrive\Desktop\DevOps>
○ PS C:\Users\HP\OneDrive\Desktop\DevOps>
○ PS C:\Users\HP\OneDrive\Desktop\DevOps>
○ PS C:\Users\HP\OneDrive\Desktop\DevOps>
● PS C:\Users\HP\OneDrive\Desktop\DevOps> git pull origin main
From https://github.com/thayeeb-9211/DevOps
 * branch            main      -> FETCH_HEAD
Already up to date.
● PS C:\Users\HP\OneDrive\Desktop\DevOps> git push -u origin main
branch 'main' set up to track 'origin/main'.
Everything up-to-date
○ PS C:\Users\HP\OneDrive\Desktop\DevOps> |
```

## Jenkins:

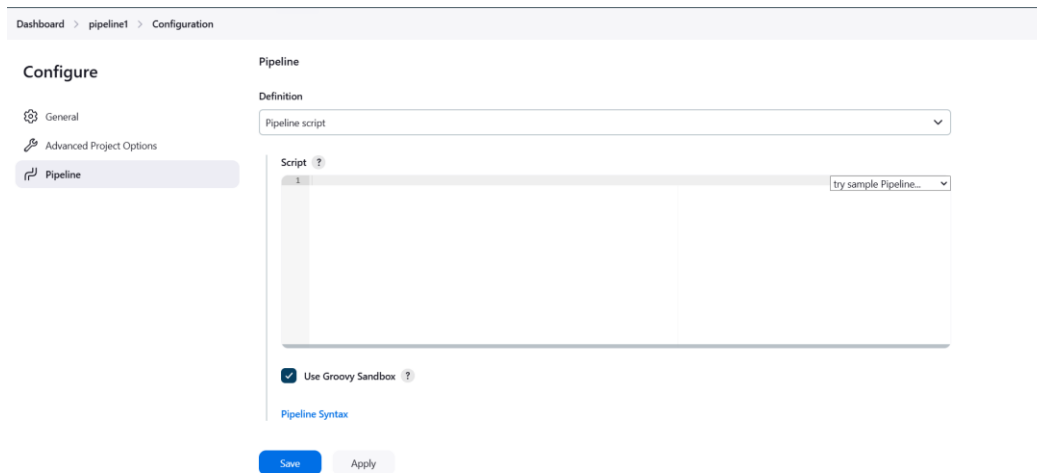
### Step 7: Jenkins Dashboard —> Manage Jenkins —> Plugins

- In the Available tab, search for and install:
- Pipeline
- Git

## Step 8: Create a Pipeline Job:

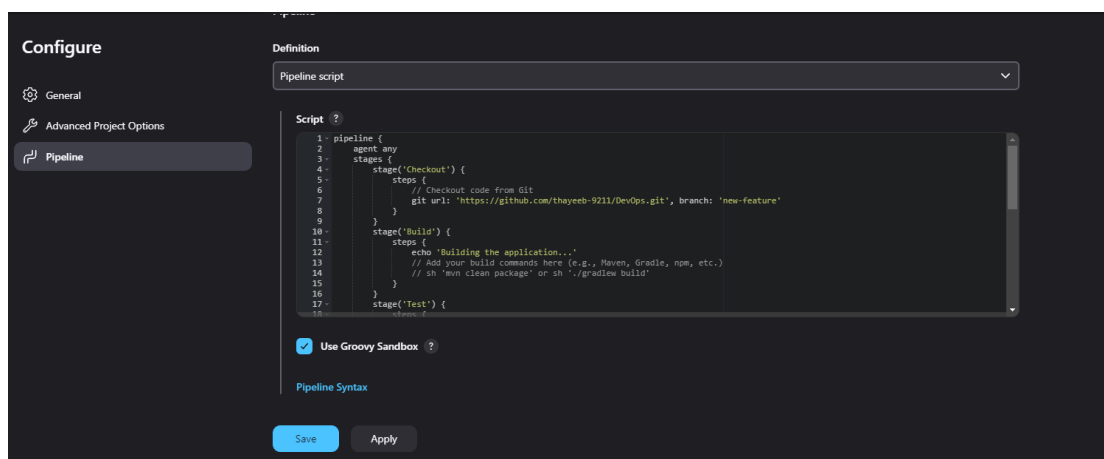
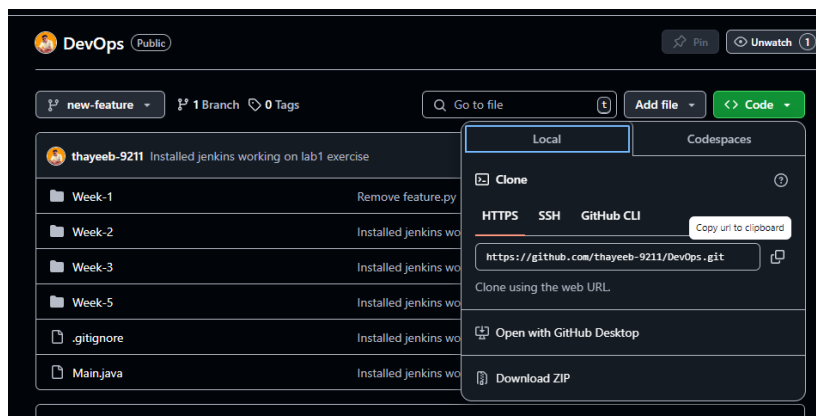


## Step 9: Under the Pipeline section, choose Pipeline script.



## Step 10: Write the Jenkins Pipeline Script:

- Copy the pipeline script mentioned in the lab Exercise\_1Devops and replacing the GitHub repository.
- Replacing the placeholder Git repository URL (<https://github.com/thayeeb-9211/DevOps.git>) with my actual repository URL

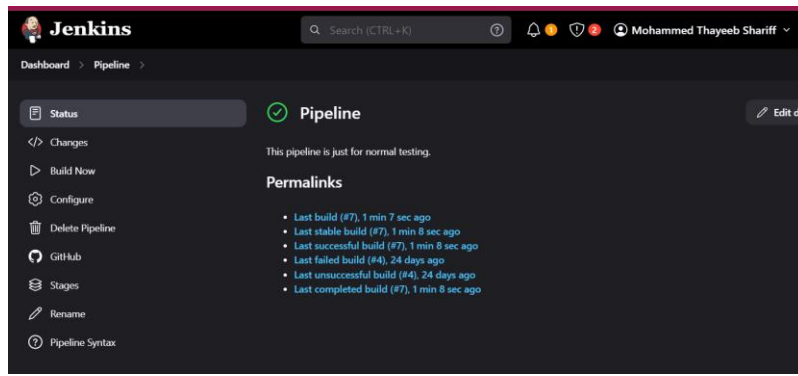


## Step 11: Save the Pipeline:

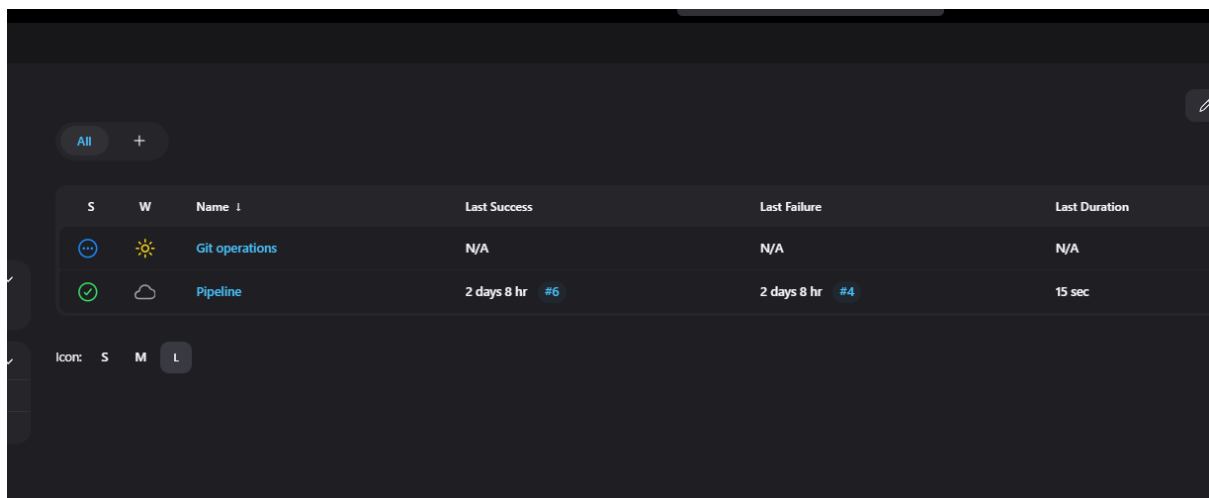
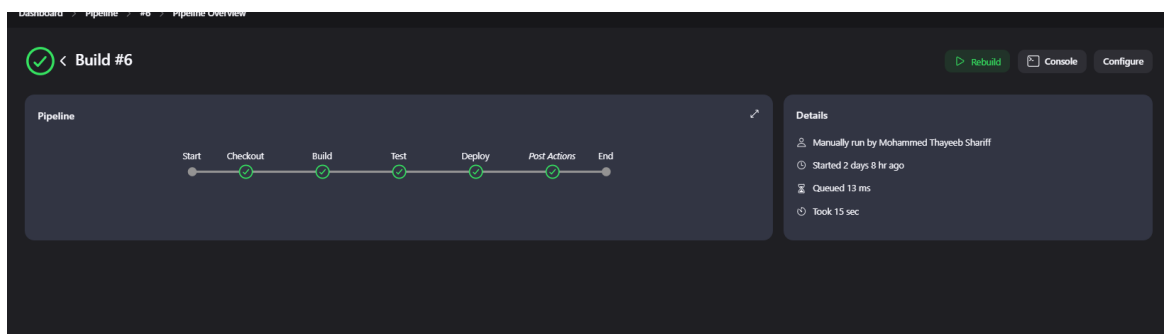
After writing the script, click Save.

## Step 12: Run the Pipeline:

- Go back to the Jenkins dashboard and select your newly created pipeline job.
- Click Build Now to trigger the pipeline.



### Step 13: Output of the Pipeline Execution





## Build #6 (Oct 22, 2024, 11:54:08 AM)



Started by user [Mohammed Thayeeb Shariff](#)



This run spent:

- 0.14 sec waiting;
- 15 sec build duration;
- 15 sec total from scheduled to completion.



Revision: a514c94f35d4a735415e0d0453e29591cec793f2

Repository: <https://github.com/thayeeb-9211/DevOps.git>

- refs/remotes/origin/new-feature


- We can view the progress by clicking on the Build Number in the build history and selecting Console Output.



Git

```
0 The recommended git tool is: NONE
1 No credentials specified
2 > git.exe rev-parse --resolve-git-dir C:\ProgramData\Jenkins\jenkins\workspace\Pipeline\.git # timeout=10
3 Fetching changes from the remote Git repository
4 > git.exe config remote.origin.url https://github.com/thayeeb-9211/DevOps.git # timeout=10
5 Fetching upstream changes from https://github.com/thayeeb-9211/DevOps.git
6 > git.exe --version # timeout=10
7 > git --version # 'git version 2.47.0.windows.1'
8 > git.exe fetch --tags --force --progress -- https://github.com/thayeeb-9211/DevOps.git +refs/heads/*:refs/remotes/origin/* # timeout=10
9 > git.exe rev-parse "refs/remotes/origin/new-feature^{commit}" # timeout=10
10 Checking out Revision a514c94f35d4a735415e0d0453e29591cec793f2 (refs/remotes/origin/new-feature)
11 > git.exe config core.sparsecheckout # timeout=10
12 > git.exe checkout -f a514c94f35d4a735415e0d0453e29591cec793f2 # timeout=10
13 > git.exe branch -a -v --no-abbrev # timeout=10
14 > git.exe branch -D new-feature # timeout=10
15 > git.exe checkout -b new-feature a514c94f35d4a735415e0d0453e29591cec793f2 # timeout=10
16 Commit message: "Installed jenkins working on lab1 exercise"
17 > git.exe rev-list --no-walk a514c94f35d4a735415e0d0453e29591cec793f2 # timeout=10
```

or quick access, place your bookmarks here on the bookmarks bar. [Import bookmarks now...](#)

 **Jenkins**

Dashboard > Pipeline >

Status

</> Changes

▶ Build Now

⚙️ Configure

🗑️ Delete Pipeline

🌐 GitHub

📁 Stages

✎ Rename

❓ Pipeline Syntax

Build History

trend ▾

Filter...

✔️ #6

Oct 22, 2024, 11:54 AM

✔️ #5

Oct 22, 2024, 11:50 AM

❌ #4

Oct 22, 2024, 11:45 AM

🔄 #3

Oct 22, 2024, 11:43 AM

🔄 #2

Oct 22, 2024, 11:43 AM

❌ #1

Oct 22, 2024, 11:43 AM

📡 Atom feed for all

📡 Atom feed for failures

✔️ Pipeline

This pipeline is just for normal testing.

Permalinks

- Last build (#6), 2 days 8 hr ago
- Last stable build (#6), 2 days 8 hr ago
- Last successful build (#6), 2 days 8 hr ago
- Last failed build (#4), 2 days 8 hr ago
- Last unsuccessful build (#4), 2 days 8 hr ago
- Last completed build (#6), 2 days 8 hr ago