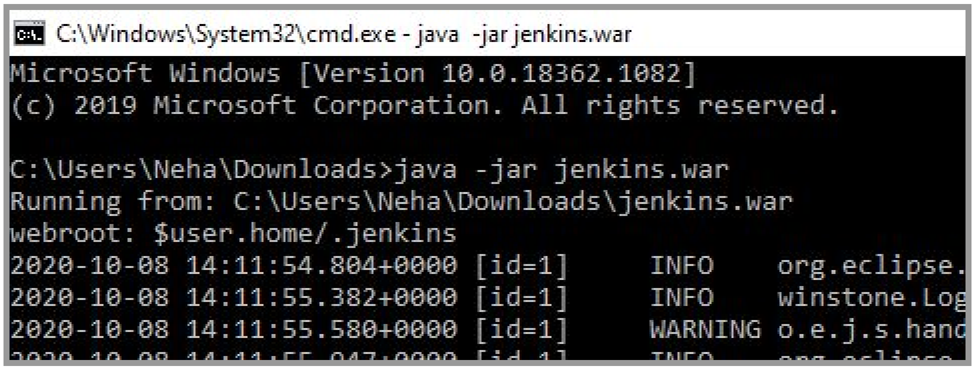
ASSIGNMENT 2

Perform following steps using Git, Jenkins, Maven, and Nexus and create a pdf file including step by step screenshots.

Step 1: Create a Maven project using Eclipse.
Step2: Push the same running project on GitHub using Eclipse or IDE.
Step 3: Create a Jenkins Pipeline to generate build and push the generated build on Nexus
Server using Jenkinsfile in GitHub.
Step 4: Take screenshots of all steps performed in different tools.
Step 5: Create a PDF file using all screenshots. A small description need to be added with each
screenshot.
Step 6: PDF filename name should be your complete roll no.
Step 7: Push your pdf file in this GitHub Repo in your respective folder.
https://github.com/University-of-Petroleum-Energy-Studies/CICD-2020.git

In this assignment, we will see how to integrate Jenkins with Maven, Nexus and GitHub.

Make sure your Jenkins is up and running.

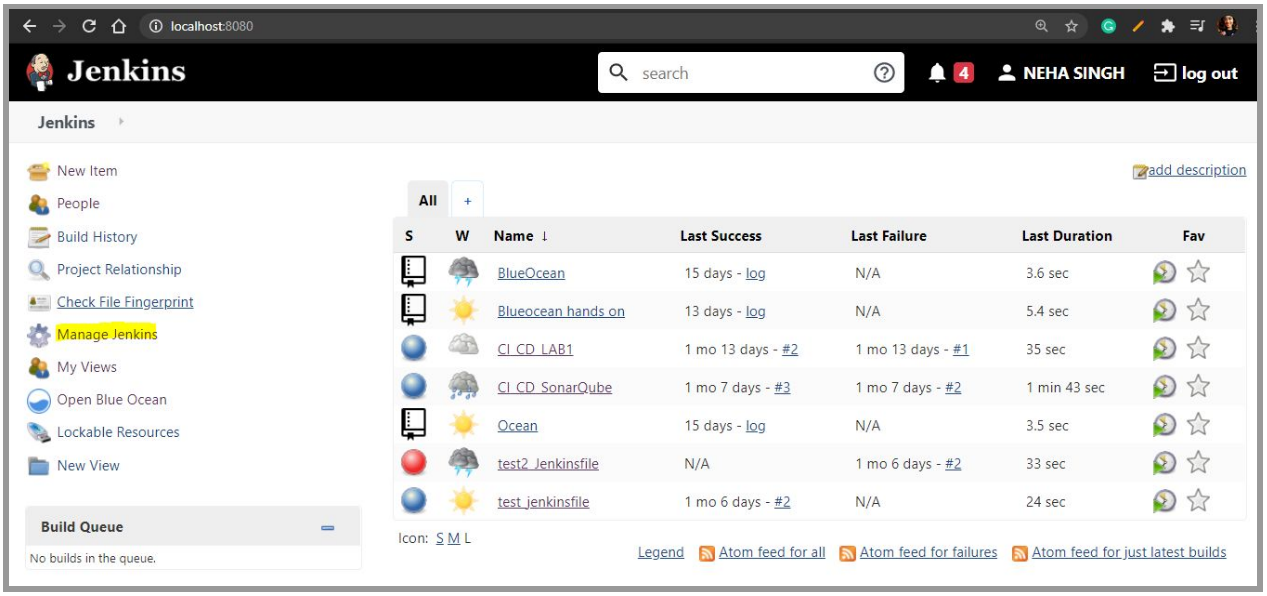


C:\Windows\System32\cmd.exe - java -jar jenkins.war

```
Microsoft Windows [Version 10.0.18362.1082]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\Users\Neha\Downloads>java -jar jenkins.war
Running from: C:\Users\Neha\Downloads\jenkins.war
webroot: $user.home/.jenkins
2020-10-08 14:11:54.804+0000 [id=1]     INFO     org.eclipse.
2020-10-08 14:11:55.382+0000 [id=1]     INFO     winstone.Log
2020-10-08 14:11:55.580+0000 [id=1]     WARNING  o.e.j.s.hand
```

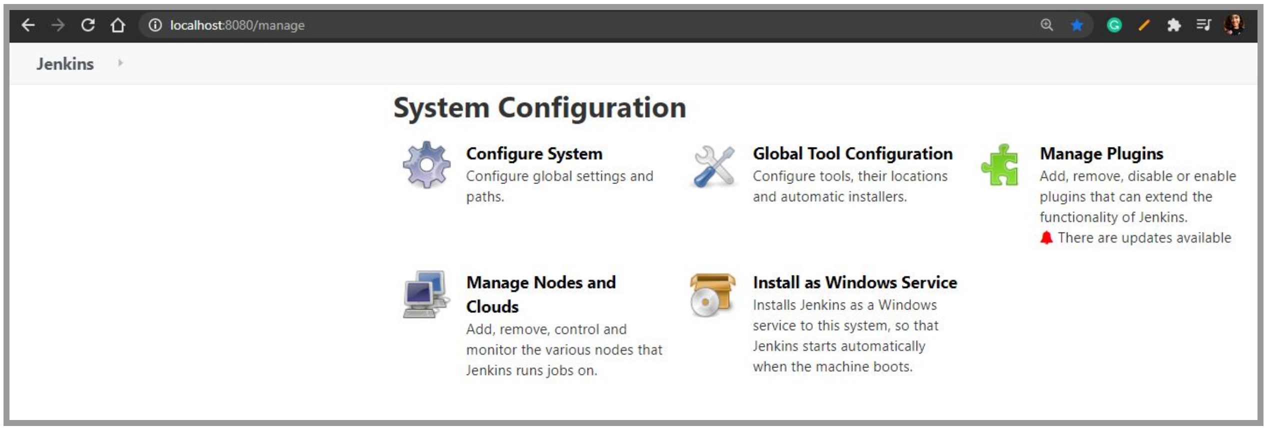
Open jenkins in web browser, I will be using Chrome "Localhost:8080"

On left-hand side, move to manage Jenkins.



S	W	Name ↓	Last Success	Last Failure	Last Duration	Fav
		BlueOcean	15 days - log	N/A	3.6 sec	☆
		Blueocean hands on	13 days - log	N/A	5.4 sec	☆
●		CI CD LAB1	1 mo 13 days - #2	1 mo 13 days - #1	35 sec	☆
●		CI CD SonarQube	1 mo 7 days - #3	1 mo 7 days - #2	1 min 43 sec	☆
		Ocean	15 days - log	N/A	3.5 sec	☆
●		test2 Jenkinsfile	N/A	1 mo 6 days - #2	33 sec	☆
●		test jenkinsfile	1 mo 6 days - #2	N/A	24 sec	☆

Manage Plugins



System Configuration

Configure System
Configure global settings and paths.

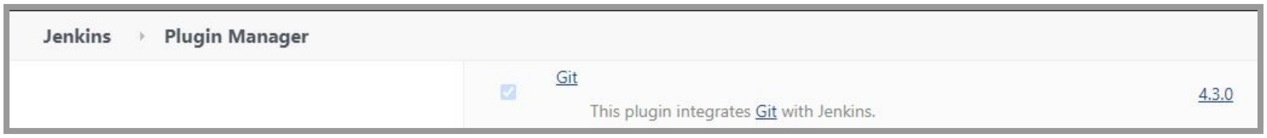
Global Tool Configuration
Configure tools, their locations and automatic installers.

Manage Plugins
Add, remove, disable or enable plugins that can extend the functionality of Jenkins.
There are updates available

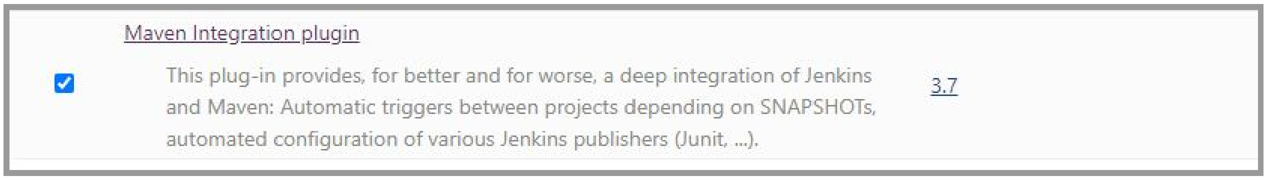
Manage Nodes and Clouds
Add, remove, control and monitor the various nodes that Jenkins runs jobs on.

Install as Windows Service
Installs Jenkins as a Windows service to this system, so that Jenkins starts automatically when the machine boots.

Now, you can install Maven, Github Plugins



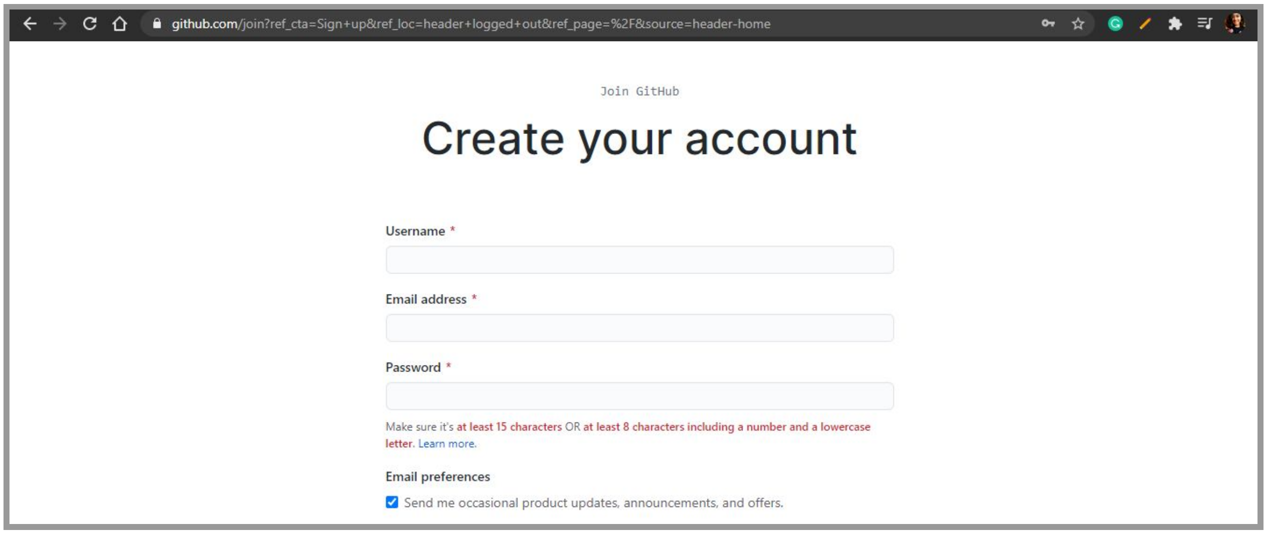
☑ Git
This plugin integrates Git with Jenkins. 4.3.0



☑ Maven Integration plugin
This plug-in provides, for better and for worse, a deep integration of Jenkins and Maven: Automatic triggers between projects depending on SNAPSHOTs, automated configuration of various Jenkins publishers (Junit, ...). 3.7

If you do not have GitHub Account, move to https://github.com/

Enter credentials


github.com/join?ref_cta=Sign+up&ref_loc=header+logged+out&ref_page=%2F&source=header-home

Join GitHub

Create your account

Username *

Email address *

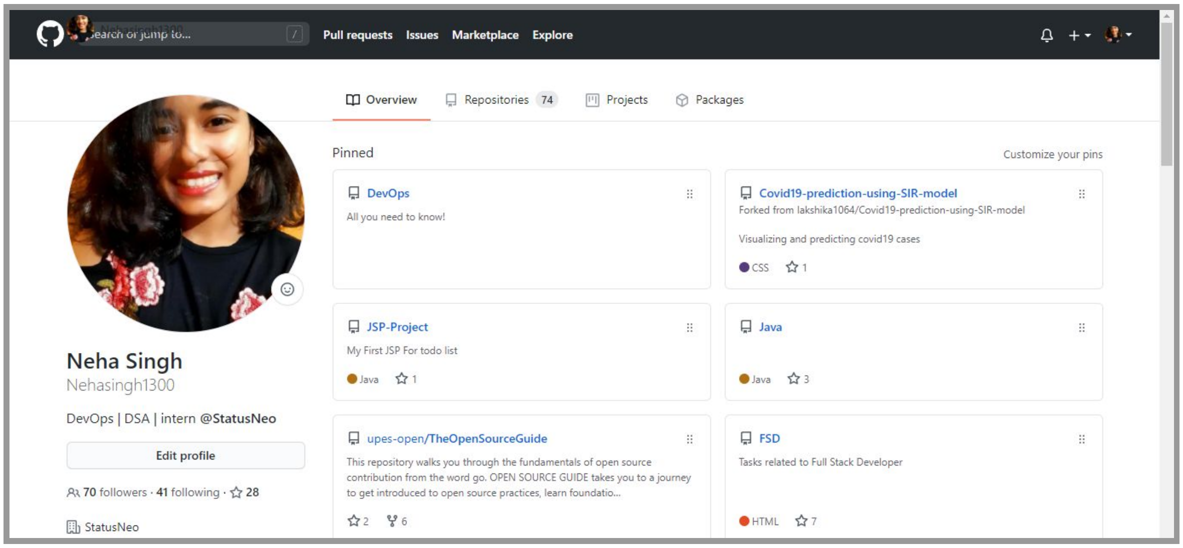
Password *

Make sure it's at least 15 characters OR at least 8 characters including a number and a lowercase letter. Learn more.

Email preferences

☑ Send me occasional product updates, announcements, and offers.

You will see account like this, but without repositories.



Neha Singh
Nehasingh1300

DevOps | DSA | intern @StatusNeo

70 followers · 41 following · ☆ 28

StatusNeo

Pinned

DevOps
All you need to know!

Covid19-prediction-using-SIR-model
Forked from lakshika1064/Covid19-prediction-using-SIR-model
Visualizing and predicting covid19 cases
● CSS ☆ 1

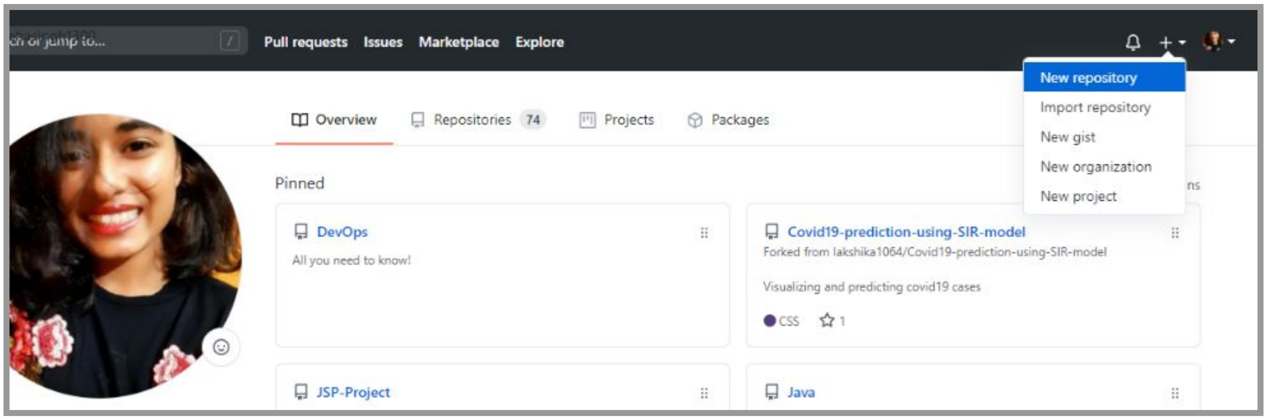
JSP-Project
My First JSP For todo list
● Java ☆ 1

Java
● Java ☆ 3

upes-open/TheOpenSourceGuide
This repository walks you through the fundamentals of open source contribution from the word go. OPEN SOURCE GUIDE takes you to a journey to get introduced to open source practices, learn foundatio...
☆ 2 6

FSD
Tasks related to Full Stack Developer
● HTML ☆ 7

Now, you can move to the upper right-hand side and click on + sign to make new repo.



Pinned

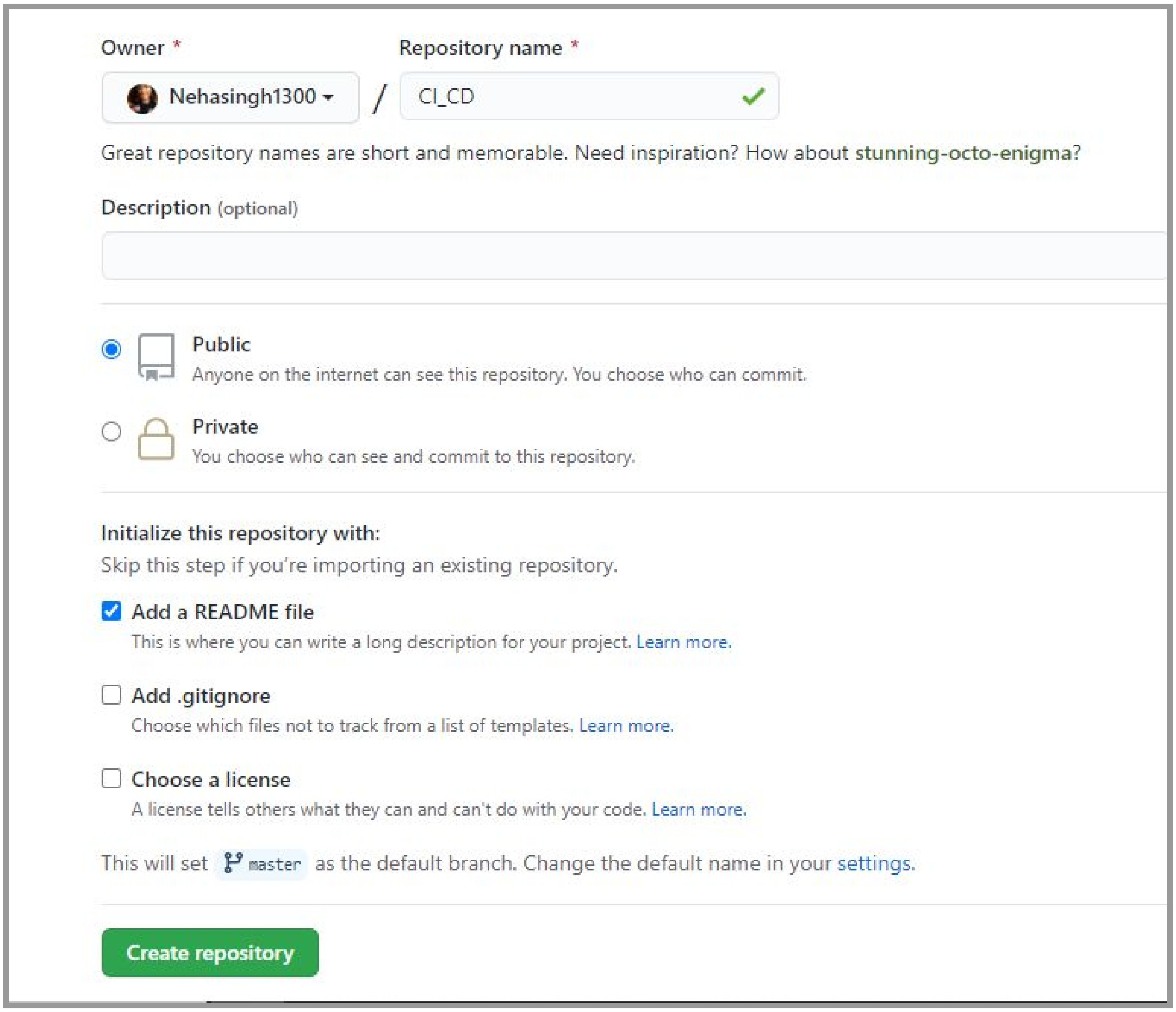
DevOps
All you need to know!

Covid19-prediction-using-SIR-model
Forked from lakshika1064/Covid19-prediction-using-SIR-model
Visualizing and predicting covid19 cases
● CSS ☆ 1

JSP-Project

Java

You can enter any name for your repository, and description if you want. Then, go and click Create Repository



Owner * Nehasingh1300 / Repository name * CI_CD ✓

Great repository names are short and memorable. Need inspiration? How about stunning-octo-enigma?

Description (optional)

● Public
Anyone on the internet can see this repository. You choose who can commit.

○ Private
You choose who can see and commit to this repository.

Initialize this repository with:
Skip this step if you're importing an existing repository.

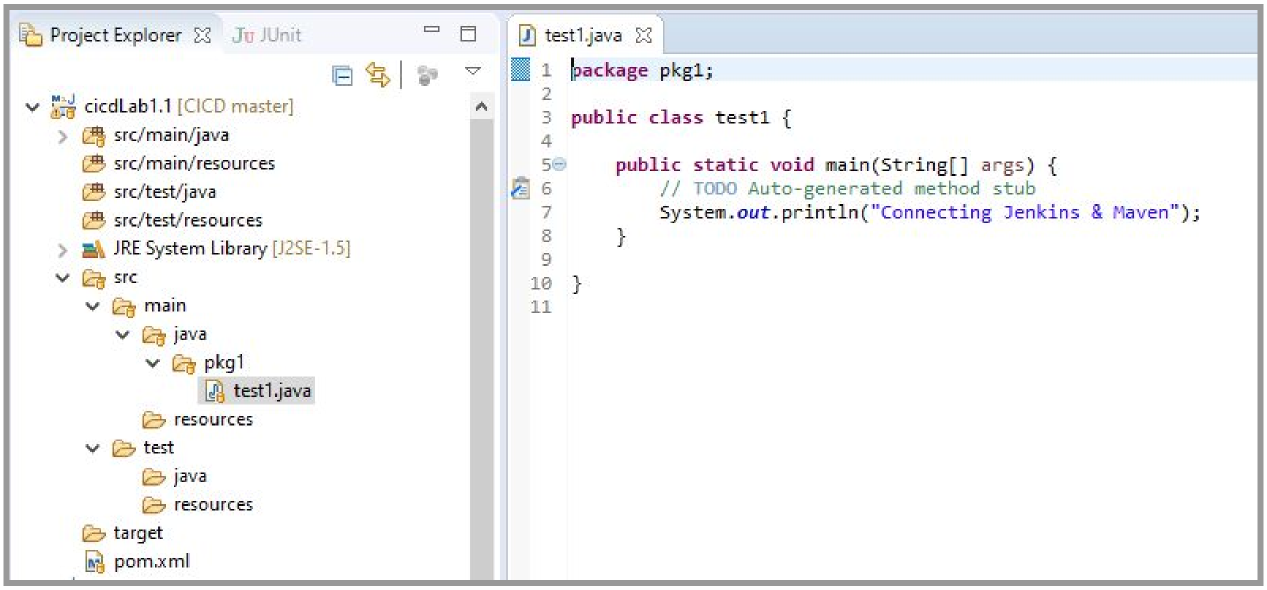
☑ Add a README file
This is where you can write a long description for your project. Learn more.

□ Add .gitignore
Choose which files not to track from a list of templates. Learn more.

□ Choose a license
A license tells others what they can and can't do with your code. Learn more.

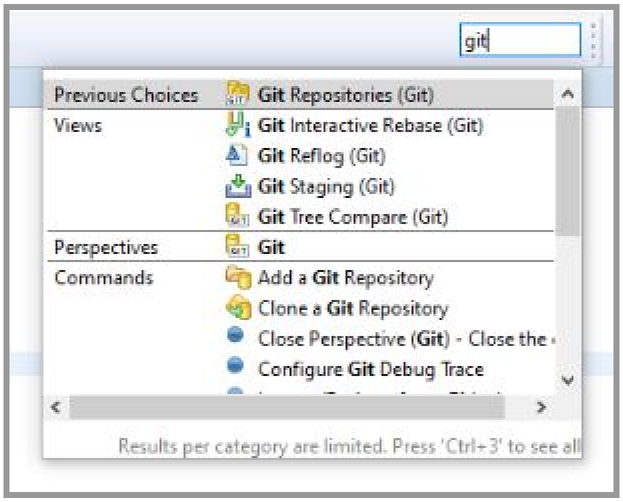
This will set `master` as the default branch. Change the default name in your settings.

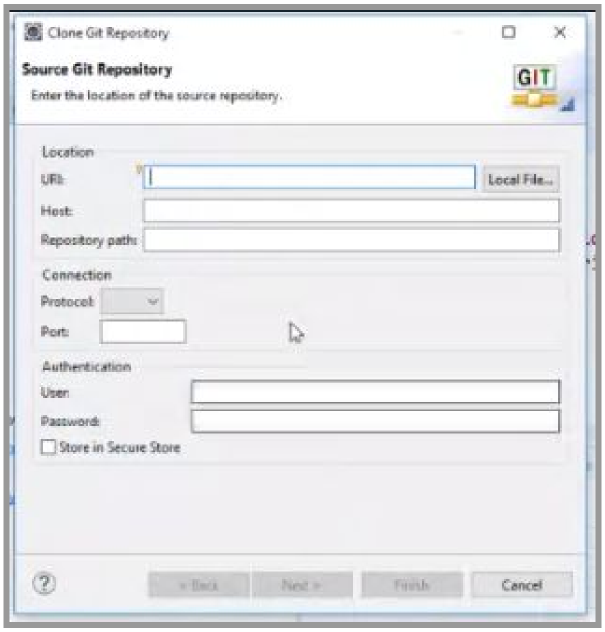
Now, move to Maven, where you have your maven project.



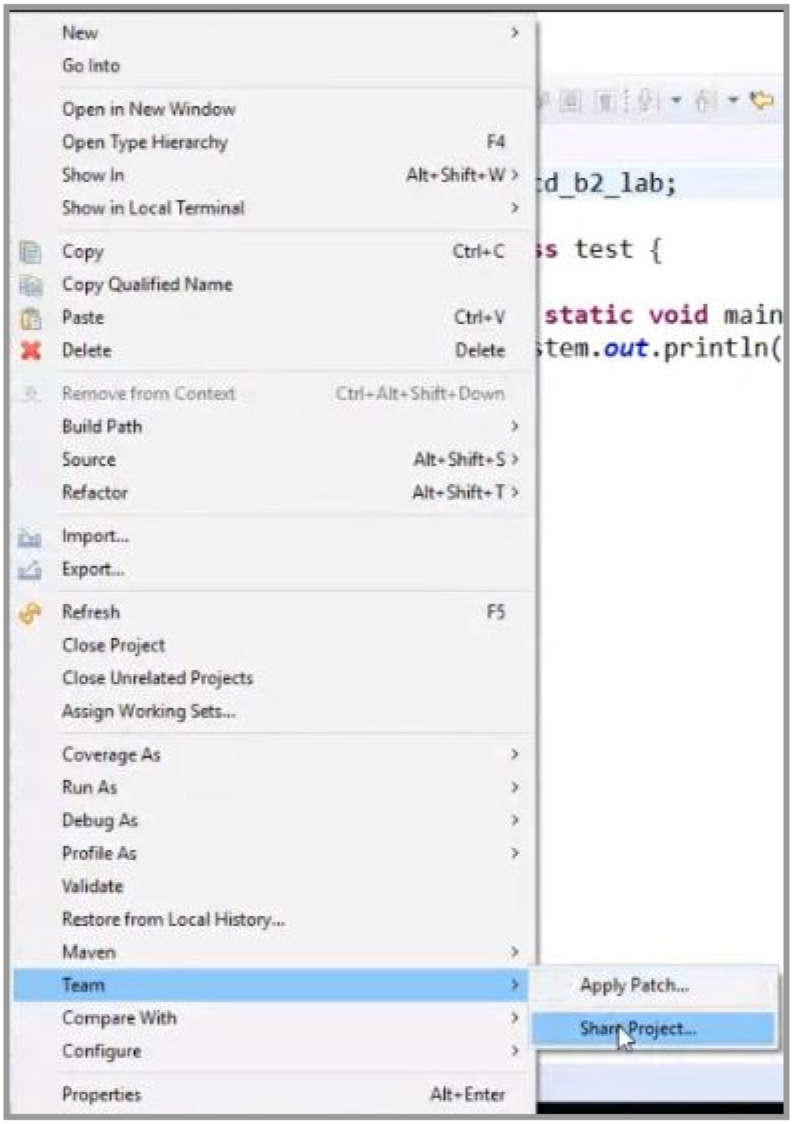
```
package pkg1;

public class test1 {

    public static void main(String[] args) {
        // TODO Auto-generated method stub
        System.out.println("Connecting Jenkins & Maven");
    }

}
```

On the upper right-hand side search for git. Click on it.
Then click on the clone repository icon.
Enter the details and URL of your repository.



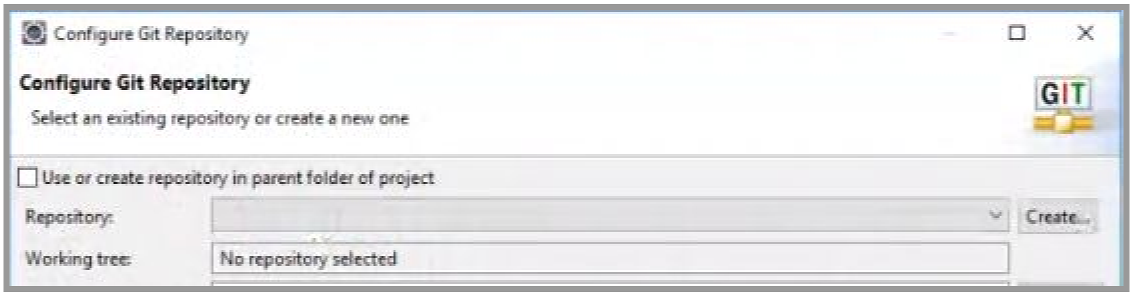


Go to your project and right-click on it.
Move to Team >> share project >> Configure GitHub Repository >> enter credentials



```
d_b2_lab;

s test {

 static void main
tem.out.println(
```

Configure Git Repository



Configure Git Repository

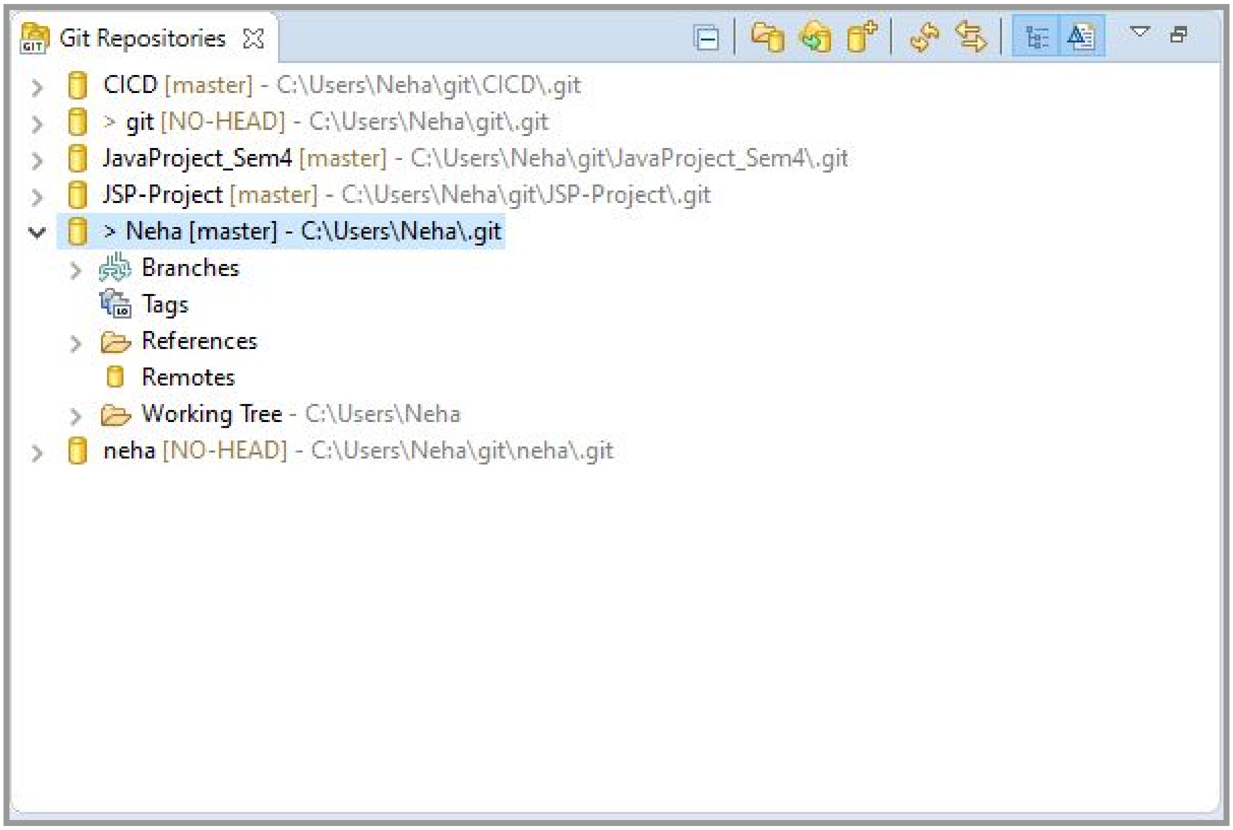
Select an existing repository or create a new one

☐ Use or create repository in parent folder of project

Repository:

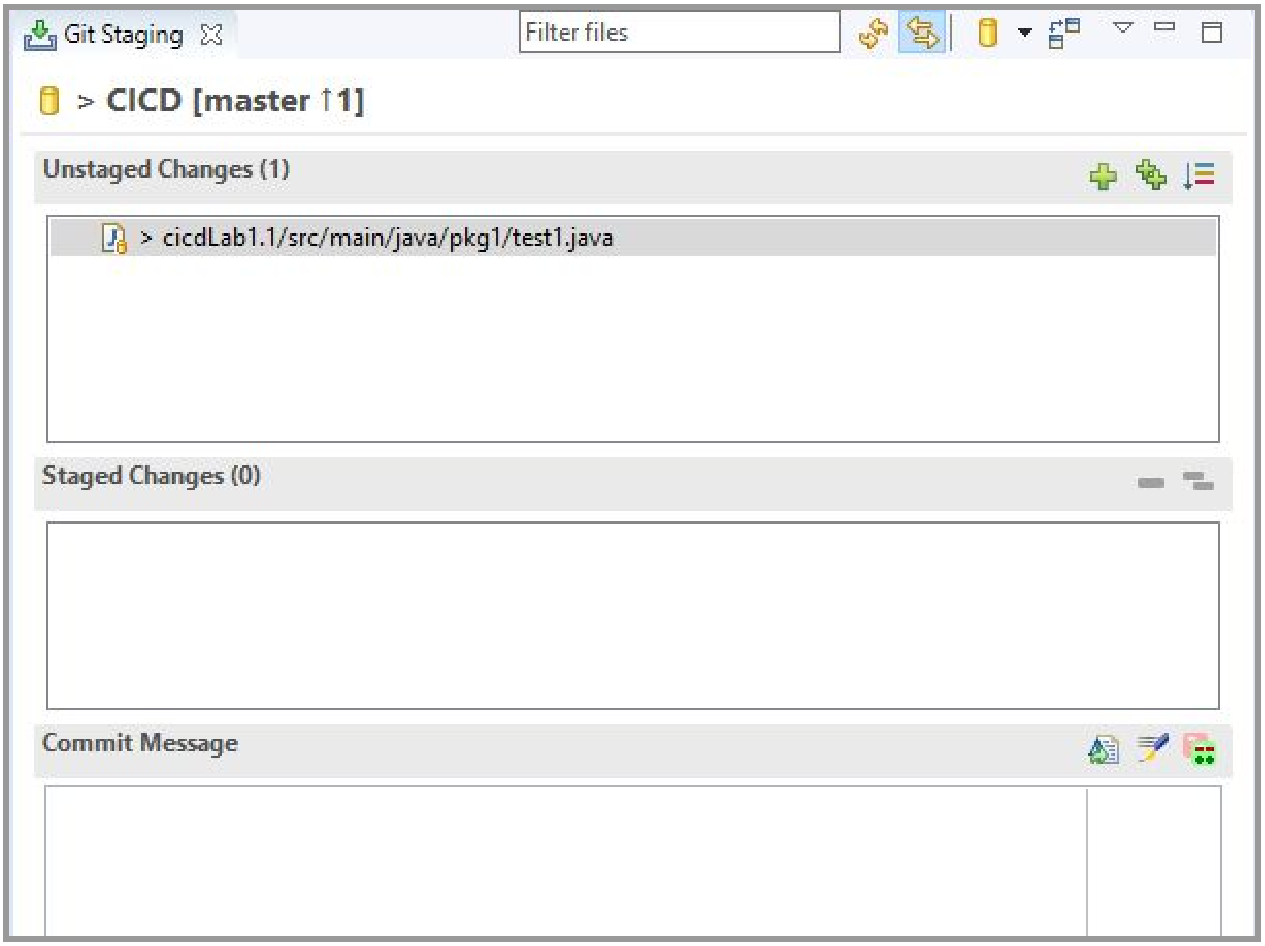
Working tree: No repository selected

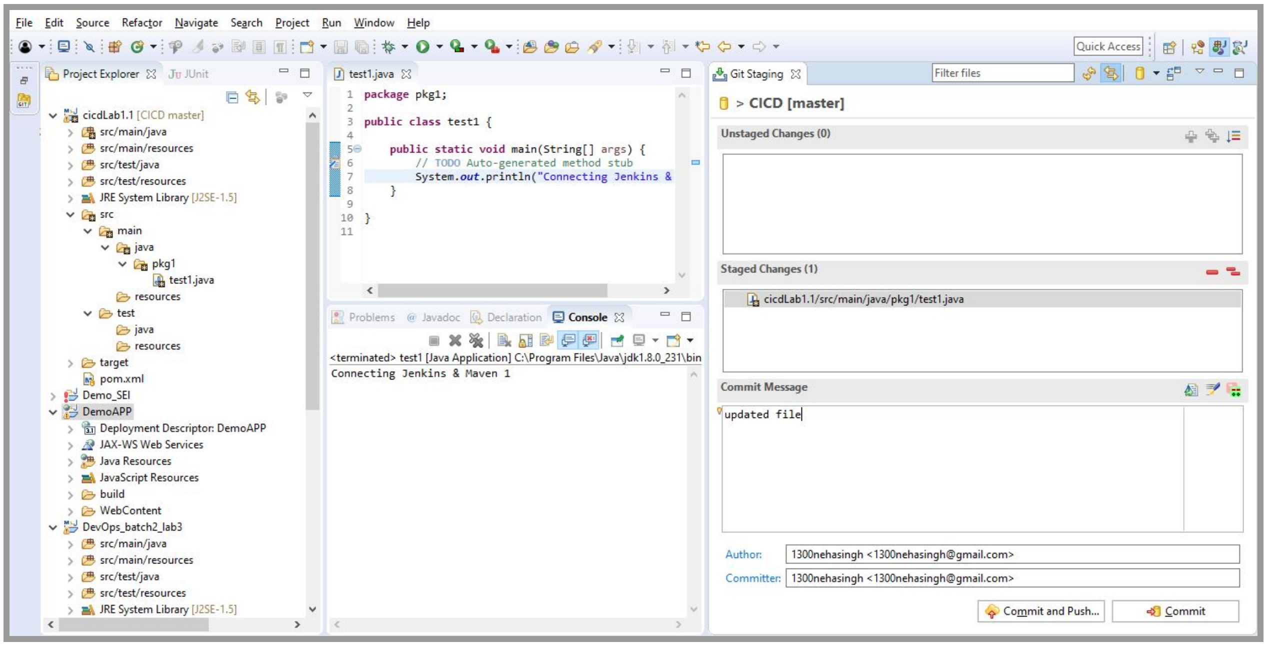
You will be able to see that your repository is connected with GitHub.



CICD [master] - C:\Users\Neha\git\CICD\.git
> git [NO-HEAD] - C:\Users\Neha\git\.git
JavaProject_Sem4 [master] - C:\Users\Neha\git\JavaProject_Sem4\.git
JSP-Project [master] - C:\Users\Neha\git\JSP-Project\.git
> Neha [master] - C:\Users\Neha\.git
Branches
Tags
References
Remotes
Working Tree - C:\Users\Neha
neha [NO-HEAD] - C:\Users\Neha\git\neha\.git

Now, drag all the changes from unstaged to staged. Enter the Commit message then click commit and push.





```
package pkg1;

public class test1 {

    public static void main(String[] args) {
        // TODO Auto-generated method stub
        System.out.println("Connecting Jenkins &
    }

}
```

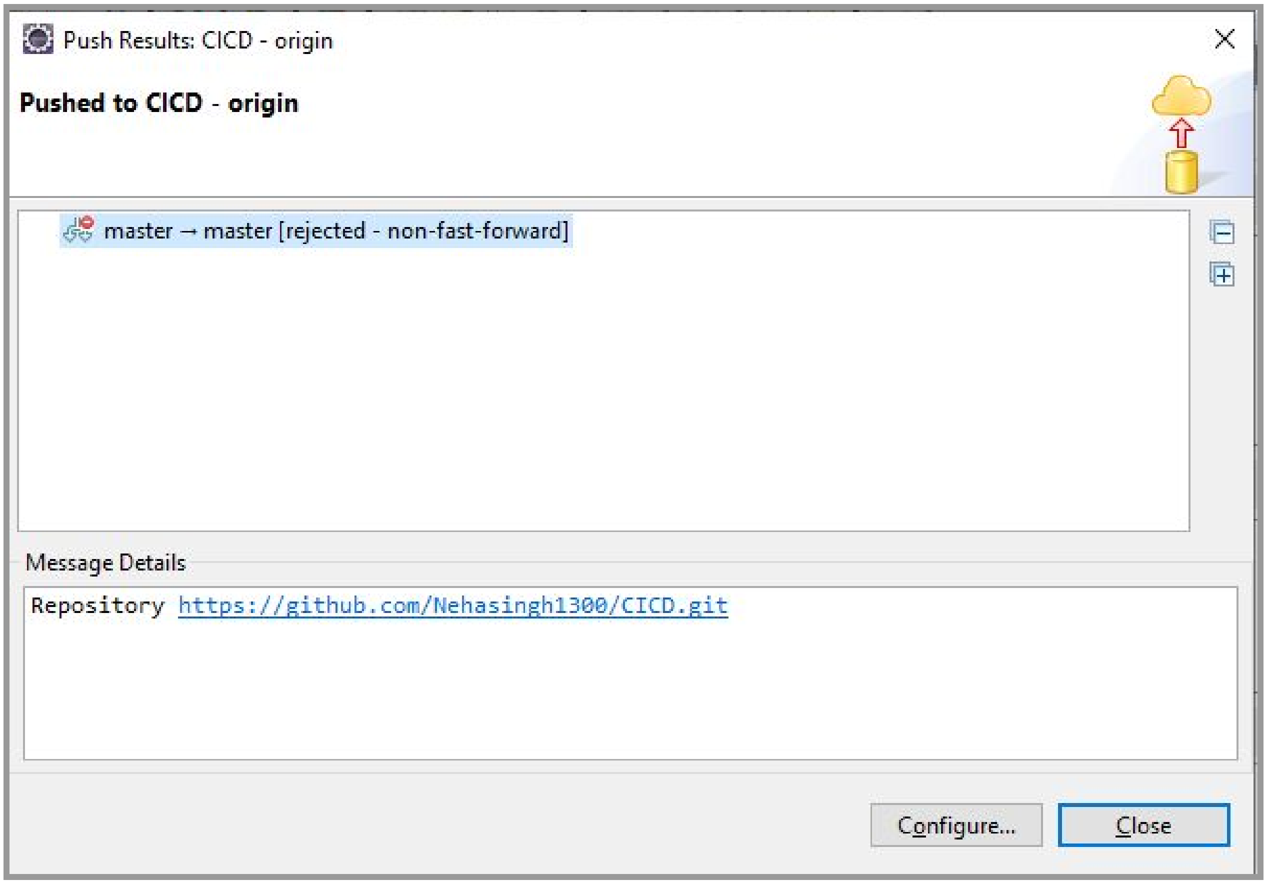
```
<terminated> test1 [Java Application] C:\Program Files\Java\jdk1.8.0_231\bin
Connecting Jenkins & Maven 1
```

Commit Message: updated file

Author: 1300nehasingh <1300nehasingh@gmail.com>

Committer: 1300nehasingh <1300nehasingh@gmail.com>

Enter



Push Results: CICD - origin

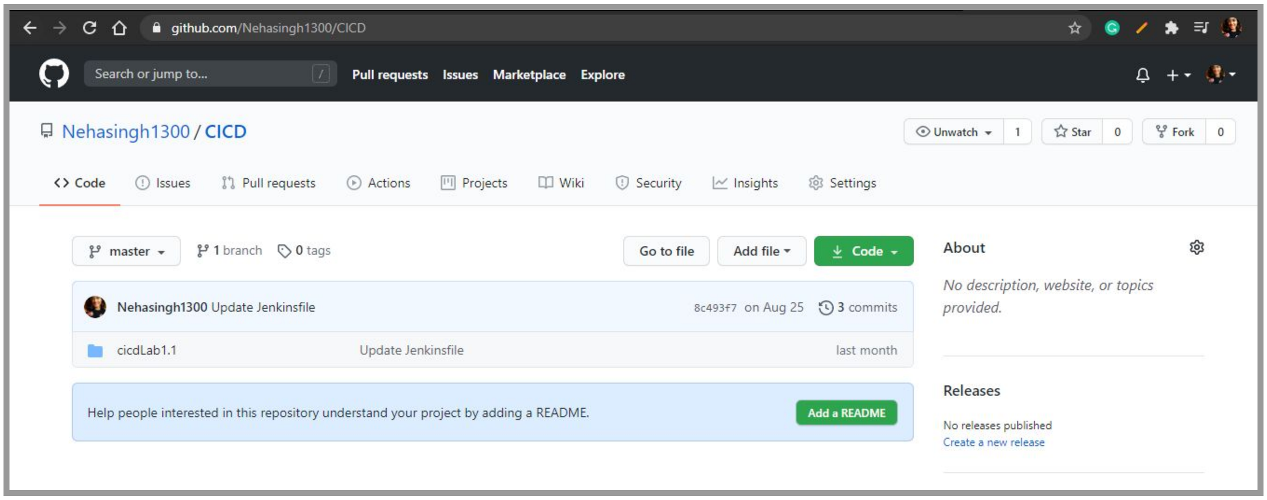
Pushed to CICD - origin

master → master [rejected - non-fast-forward]

Message Details

Repository https://github.com/Nehasingh1300/CICD.git

You can see all the changes in your repository.



github.com/Nehasingh1300/CICD

Nehasingh1300 / CICD

Nehasingh1300 Update Jenkinsfile		8c493f7 on Aug 25	3 commits
cicdLab1.1	Update Jenkinsfile	last month	

Help people interested in this repository understand your project by adding a README.

About

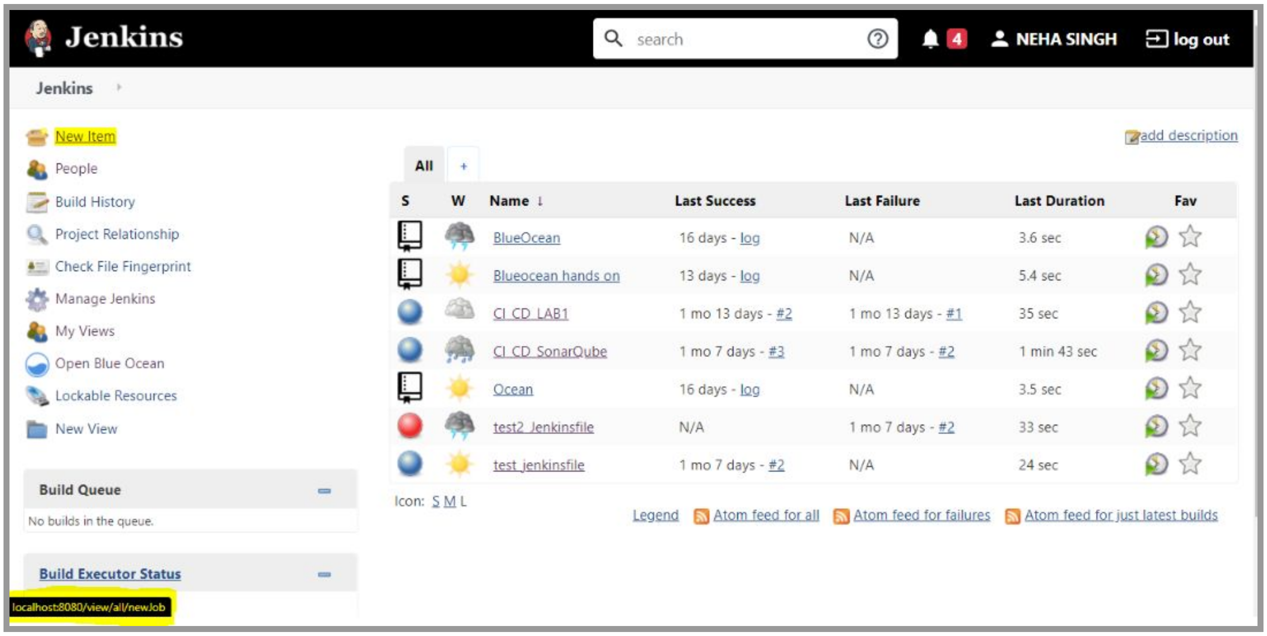
No description, website, or topics provided.

Releases

No releases published

Create a new release

Move to new items



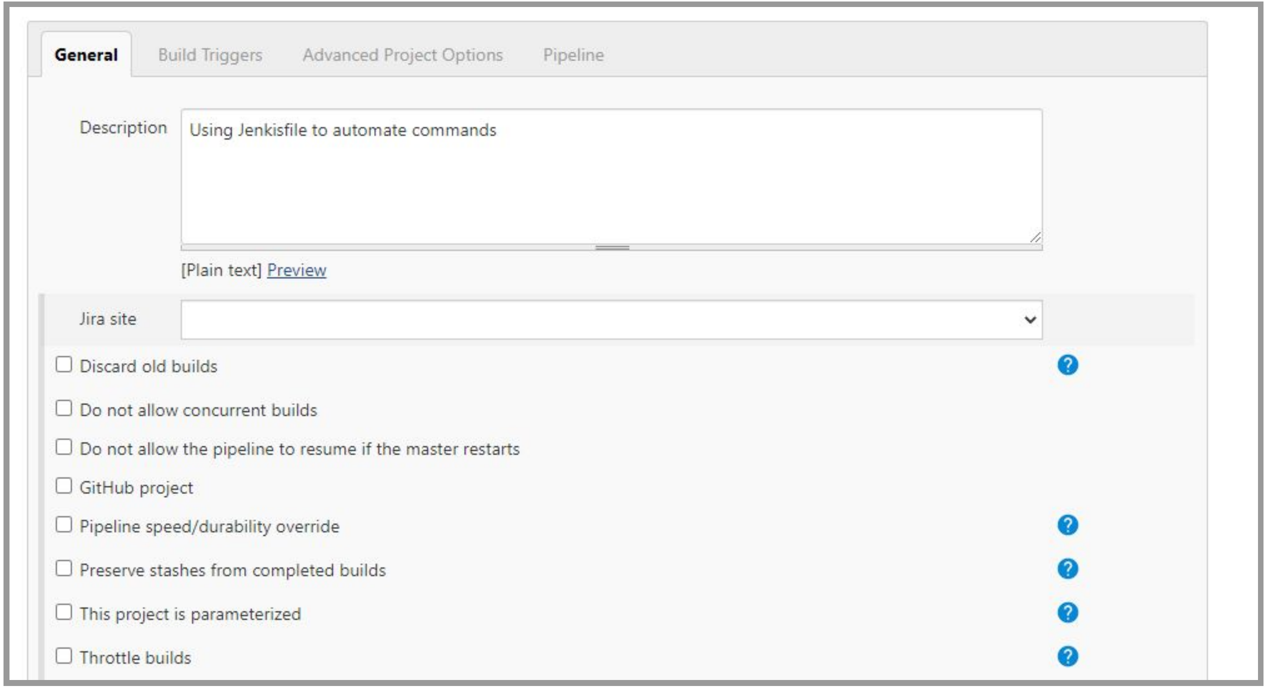
S	W	Name ↓	Last Success	Last Failure	Last Duration	Fav
	⛈	BlueOcean	16 days - log	N/A	3.6 sec	☆
	☀	Blueocean hands on	13 days - log	N/A	5.4 sec	☆
●	☁	CI_CD_LAB1	1 mo 13 days - #2	1 mo 13 days - #1	35 sec	☆
●	⛈	CI_CD_SonarQube	1 mo 7 days - #3	1 mo 7 days - #2	1 min 43 sec	☆
	☀	Ocean	16 days - log	N/A	3.5 sec	☆
●	⛈	test2_Jenkinsfile	N/A	1 mo 7 days - #2	33 sec	☆
●	☀	test_jenkinsfile	1 mo 7 days - #2	N/A	24 sec	☆

Select Pipeline and enter the name of the project.

Jenkinsfile Code

```
pipeline{
    agent any
    stages{
      stage('Build'){     // Stage 1
          steps{
          echo 'Build Stage'
          }
      }
      stage('Test'){      // Stage 2
          steps{
          echo 'Test Stage'
          }
      }
      stage('Clean'){      // Stage 2
          steps{
          echo 'Clean Stage'
          }
      }
    }
}
```

Configuration

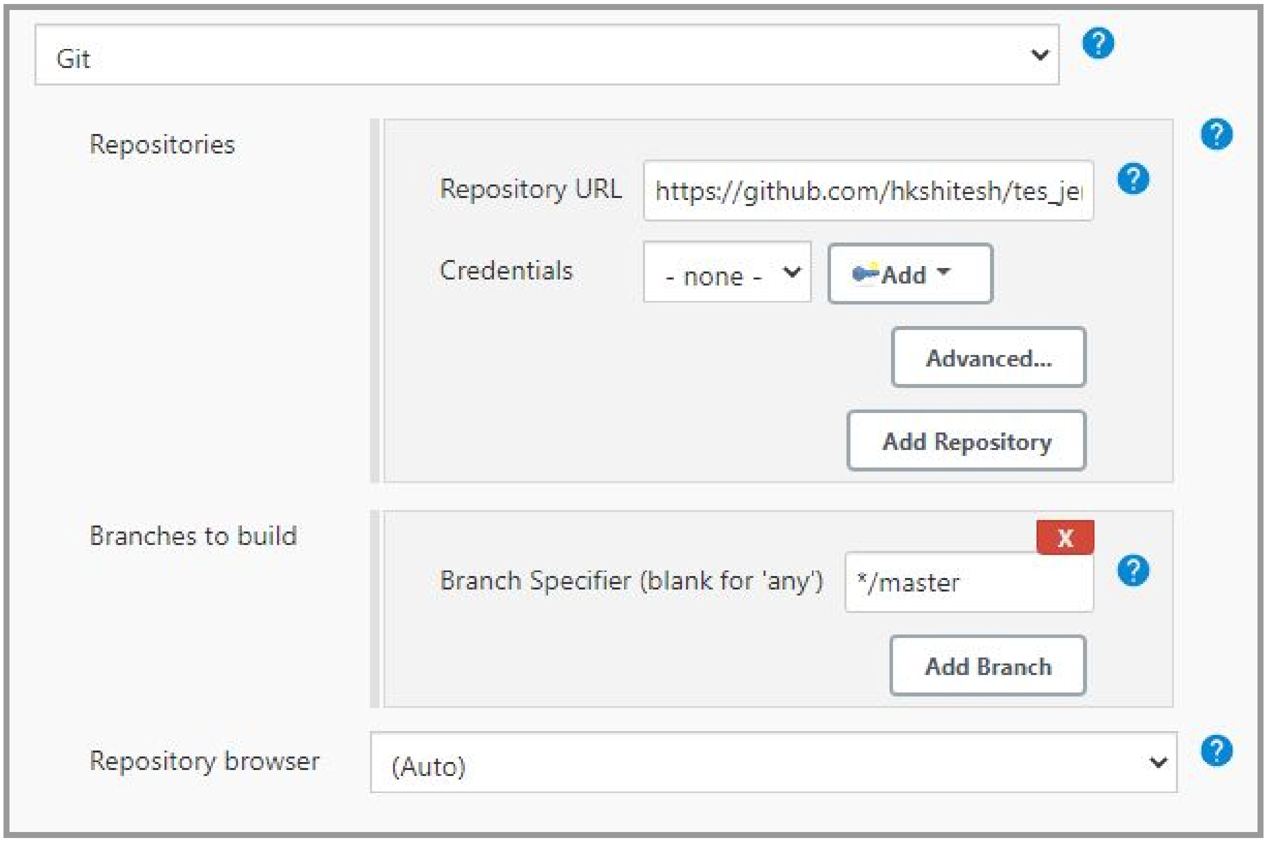


Description: Using Jenkisfile to automate commands

[Plain text] Preview

Jira site:

- ☐ Discard old builds
- ☐ Do not allow concurrent builds
- ☐ Do not allow the pipeline to resume if the master restarts
- ☐ GitHub project
- ☐ Pipeline speed/durability override
- ☐ Preserve stashes from completed builds
- ☐ This project is parameterized
- ☐ Throttle builds



Git

Repositories

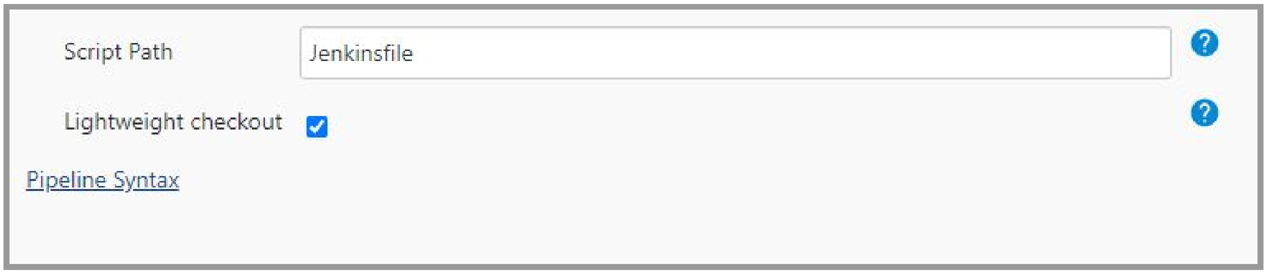
Repository URL: https://github.com/hkshitesh/tes_je

Credentials: - none -

Branches to build

Branch Specifier (blank for 'any'): */master

Repository browser: (Auto)

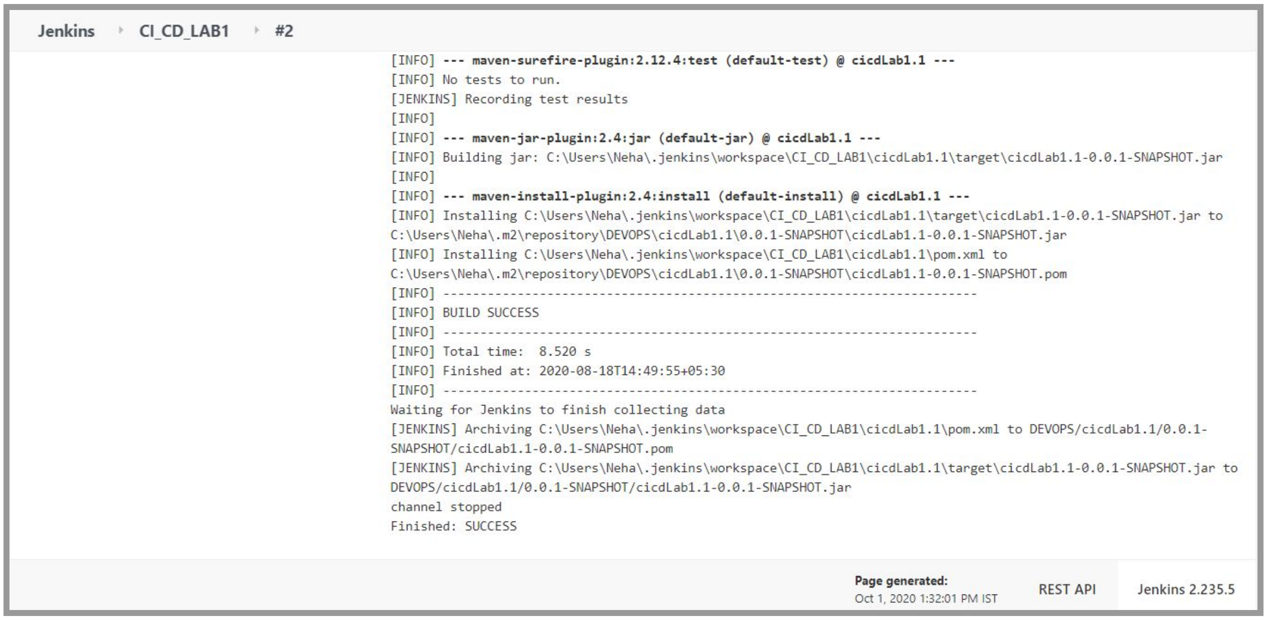


Script Path: Jenkinsfile

Lightweight checkout ☑

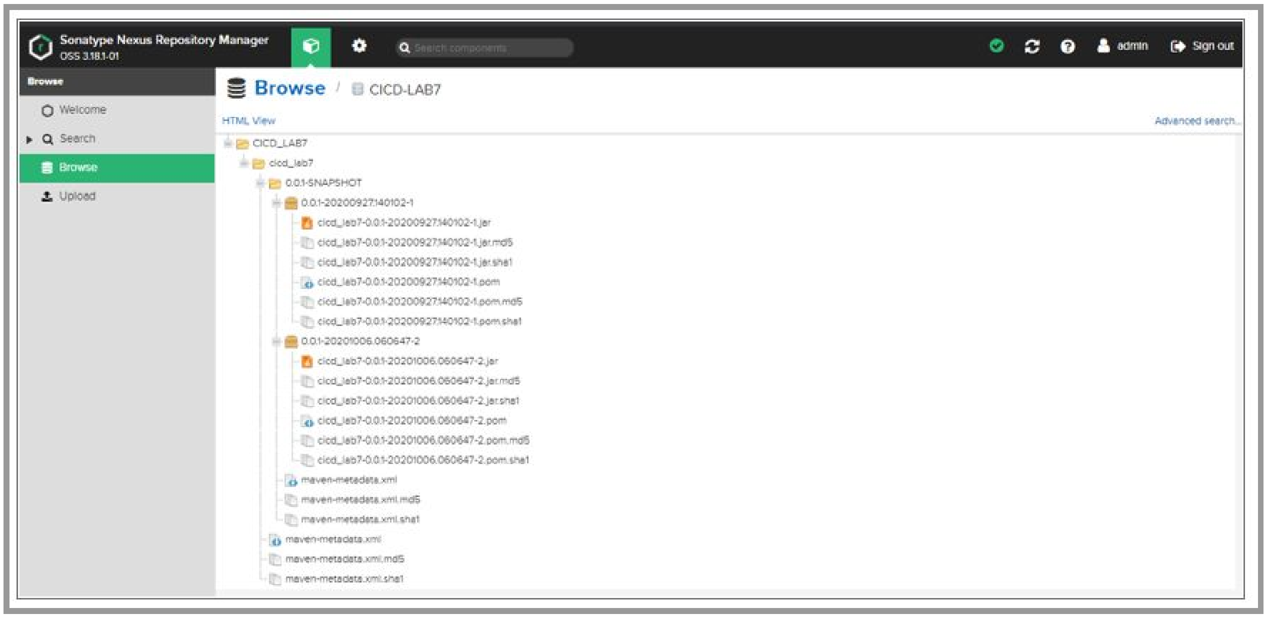
Build Now
You can move to console and check if you get success

Build Success



```
[INFO] --- maven-surefire-plugin:2.12.4:test (default-test) @ cicdLab1.1 ---
[INFO] No tests to run.
[JENKINS] Recording test results
[INFO]
[INFO] --- maven-jar-plugin:2.4:jar (default-jar) @ cicdLab1.1 ---
[INFO] Building jar: C:\Users\Neha\.jenkins\workspace\CI_CD_LAB1\cicdLab1.1\target\cicdLab1.1-0.0.1-SNAPSHOT.jar
[INFO]
[INFO] --- maven-install-plugin:2.4:install (default-install) @ cicdLab1.1 ---
[INFO] Installing C:\Users\Neha\.jenkins\workspace\CI_CD_LAB1\cicdLab1.1\target\cicdLab1.1-0.0.1-SNAPSHOT.jar to
C:\Users\Neha\.m2\repository\DEVOPS\cicdLab1.1\0.0.1-SNAPSHOT\cicdLab1.1-0.0.1-SNAPSHOT.jar
[INFO] Installing C:\Users\Neha\.jenkins\workspace\CI_CD_LAB1\cicdLab1.1\pom.xml to
C:\Users\Neha\.m2\repository\DEVOPS\cicdLab1.1\0.0.1-SNAPSHOT\cicdLab1.1-0.0.1-SNAPSHOT.pom
[INFO] ------------------------------------------------------------------------
[INFO] BUILD SUCCESS
[INFO] ------------------------------------------------------------------------
[INFO] Total time:  8.520 s
[INFO] Finished at: 2020-08-18T14:49:55+05:30
[INFO] ------------------------------------------------------------------------
Waiting for Jenkins to finish collecting data
[JENKINS] Archiving C:\Users\Neha\.jenkins\workspace\CI_CD_LAB1\cicdLab1.1\pom.xml to DEVOPS/cicdLab1.1/0.0.1-
SNAPSHOT/cicdLab1.1-0.0.1-SNAPSHOT.pom
[JENKINS] Archiving C:\Users\Neha\.jenkins\workspace\CI_CD_LAB1\cicdLab1.1\target\cicdLab1.1-0.0.1-SNAPSHOT.jar to
DEVOPS/cicdLab1.1/0.0.1-SNAPSHOT/cicdLab1.1-0.0.1-SNAPSHOT.jar
channel stopped
Finished: SUCCESS
```

You can see all the related files.



```
CICD_LAB7
  cicd_lab7
    0.0.1-SNAPSHOT
      0.0.1-20200927.140102-1
        cicd_lab7-0.0.1-20200927.140102-1.jar
        cicd_lab7-0.0.1-20200927.140102-1.jar.md5
        cicd_lab7-0.0.1-20200927.140102-1.jar.sha1
        cicd_lab7-0.0.1-20200927.140102-1.pom
        cicd_lab7-0.0.1-20200927.140102-1.pom.md5
        cicd_lab7-0.0.1-20200927.140102-1.pom.sha1
      0.0.1-20201006.060647-2
        cicd_lab7-0.0.1-20201006.060647-2.jar
        cicd_lab7-0.0.1-20201006.060647-2.jar.md5
        cicd_lab7-0.0.1-20201006.060647-2.jar.sha1
        cicd_lab7-0.0.1-20201006.060647-2.pom
        cicd_lab7-0.0.1-20201006.060647-2.pom.md5
        cicd_lab7-0.0.1-20201006.060647-2.pom.sha1
      maven-metadata.xml
      maven-metadata.xml.md5
      maven-metadata.xml.sha1
    maven-metadata.xml
    maven-metadata.xml.md5
    maven-metadata.xml.sha1
```