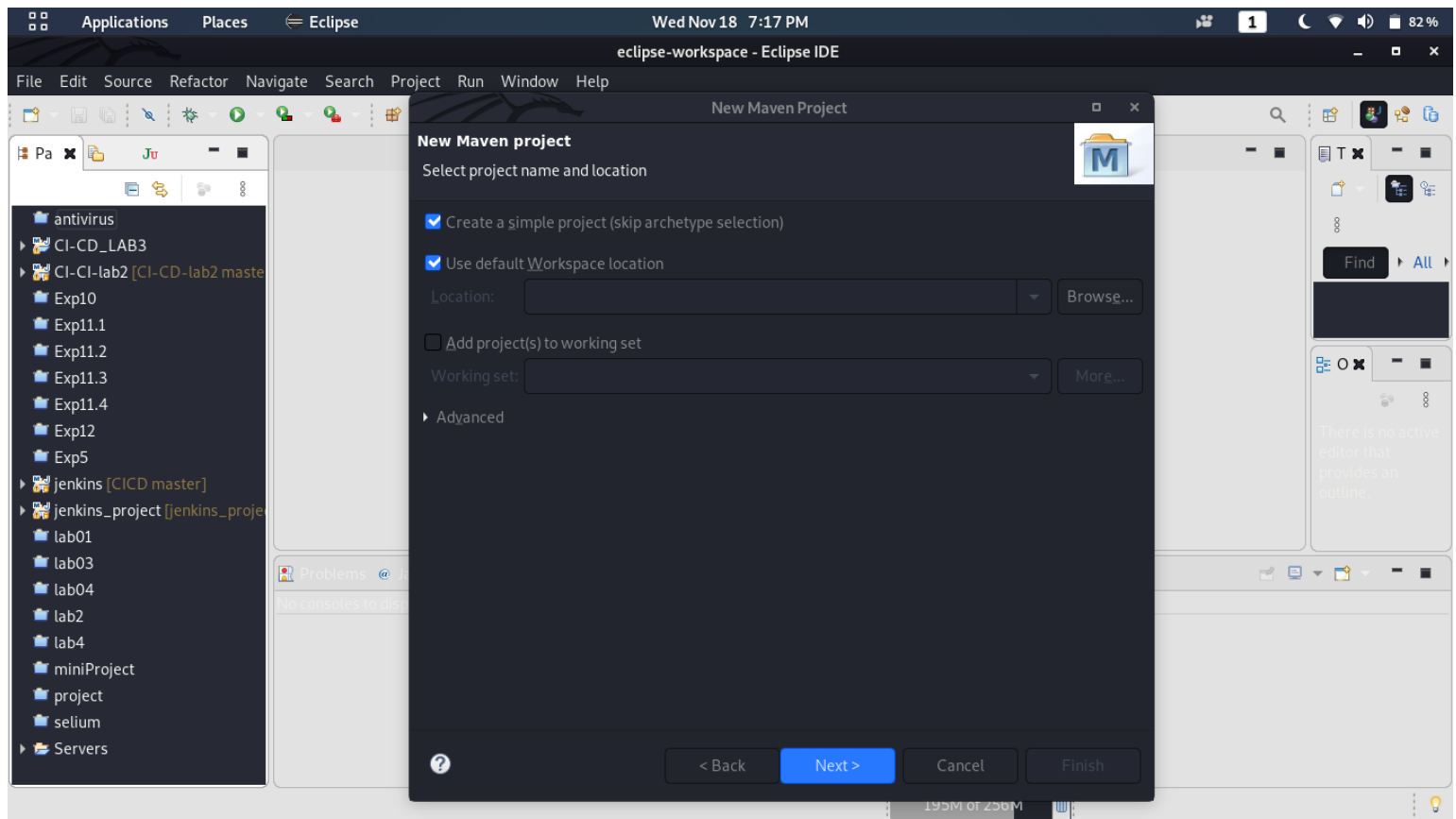


NIPUN SINGAL
R171218069
500069052

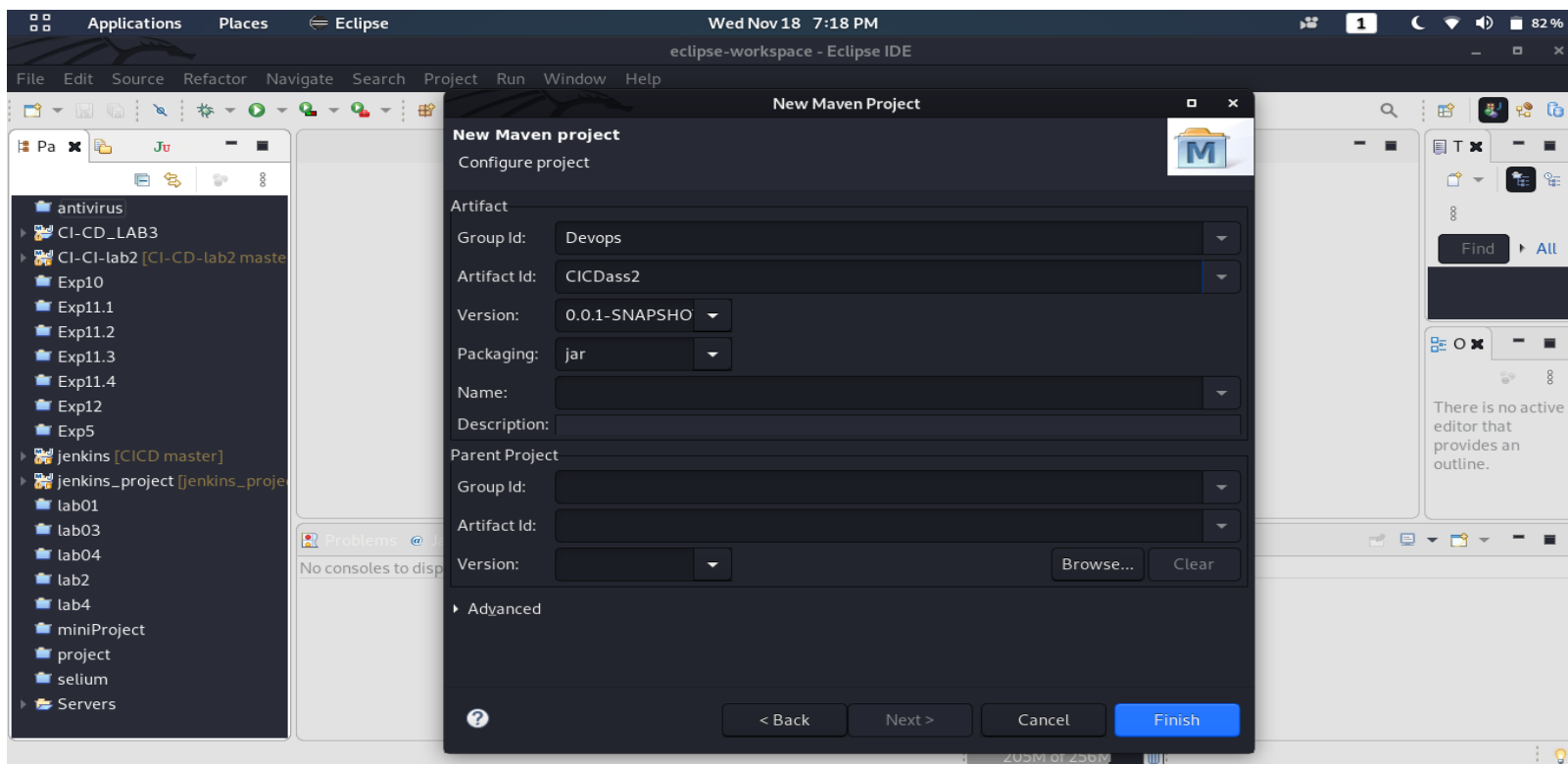
ASSIGNMENT-2

MAVEN, GITHUB,
JENKINS & NEXUS

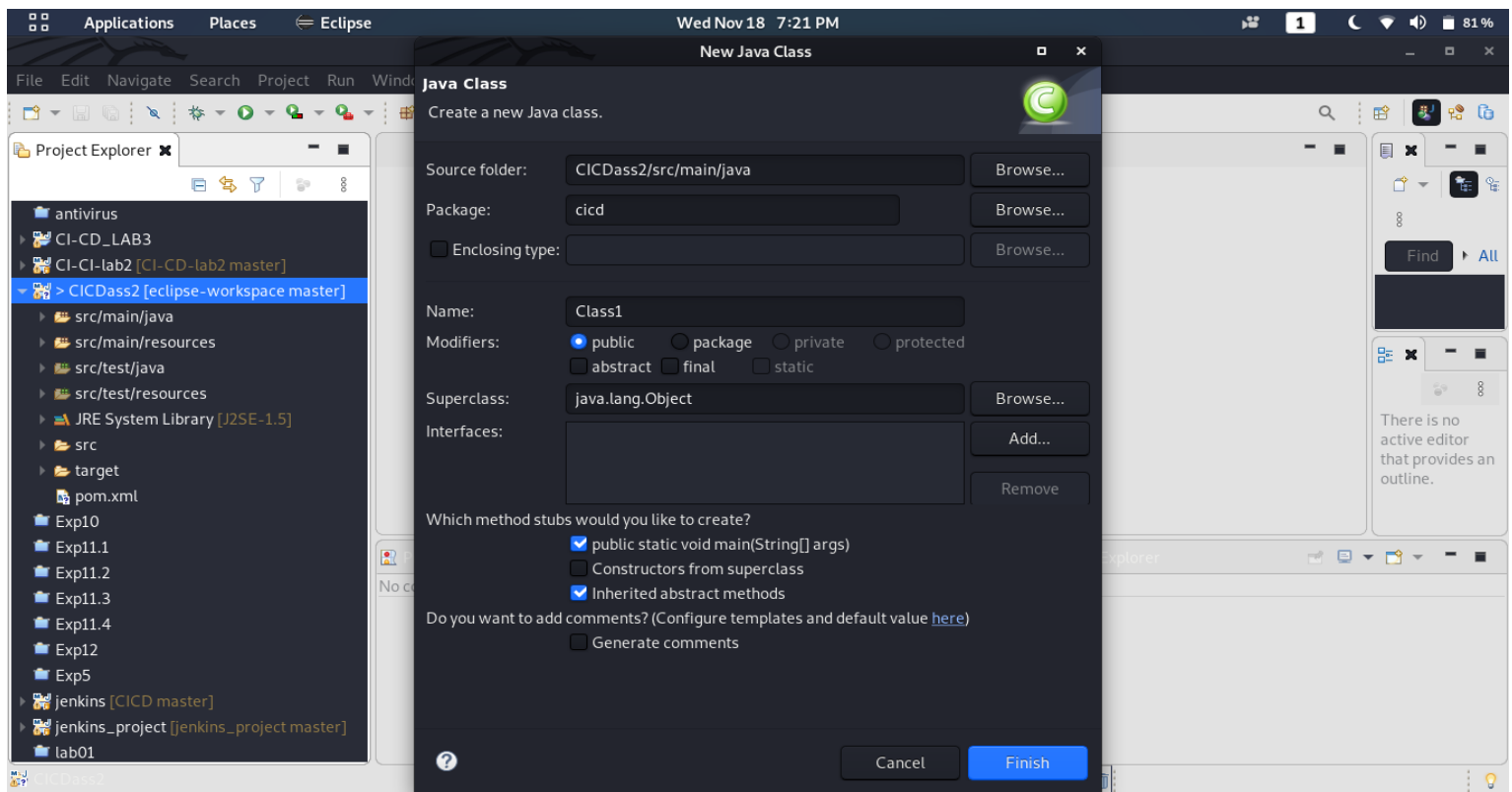
STEP1- Open eclipse and choose the maven project



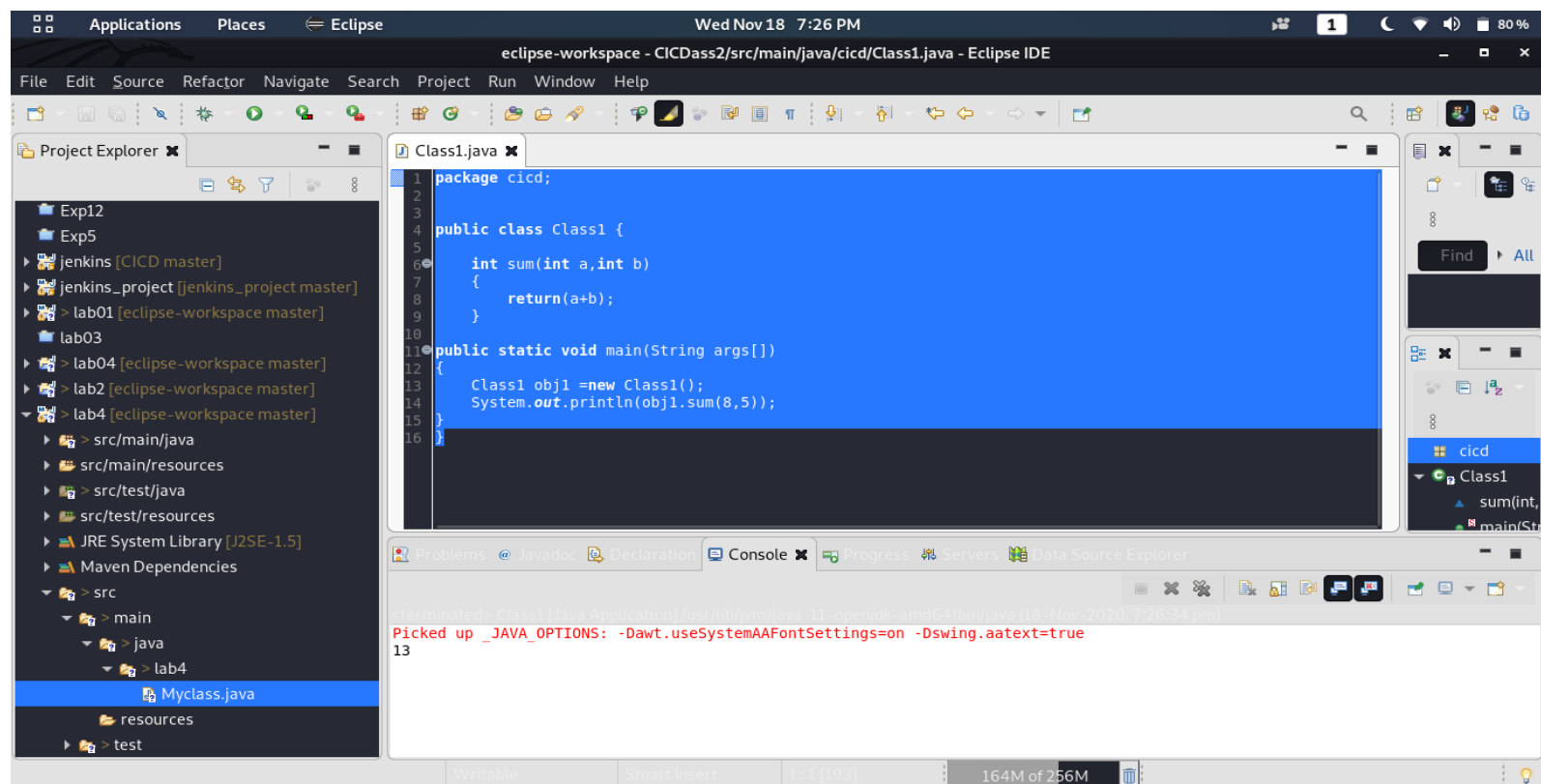
STEP2- Add the artifact id and group id and other details.



STEP3- Now right click on your project and go to new option and choose class

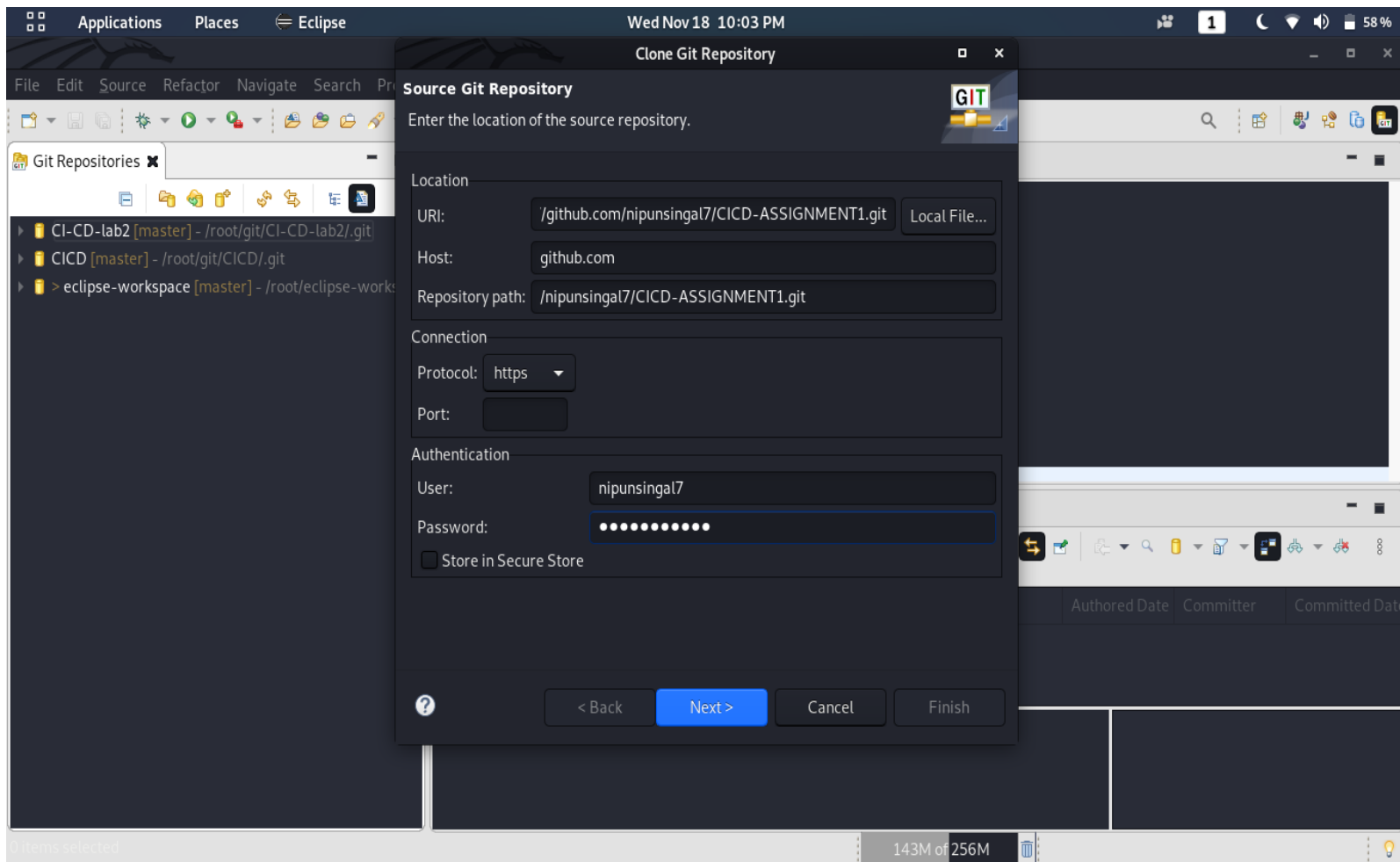


STEP4- Write a working code in this class

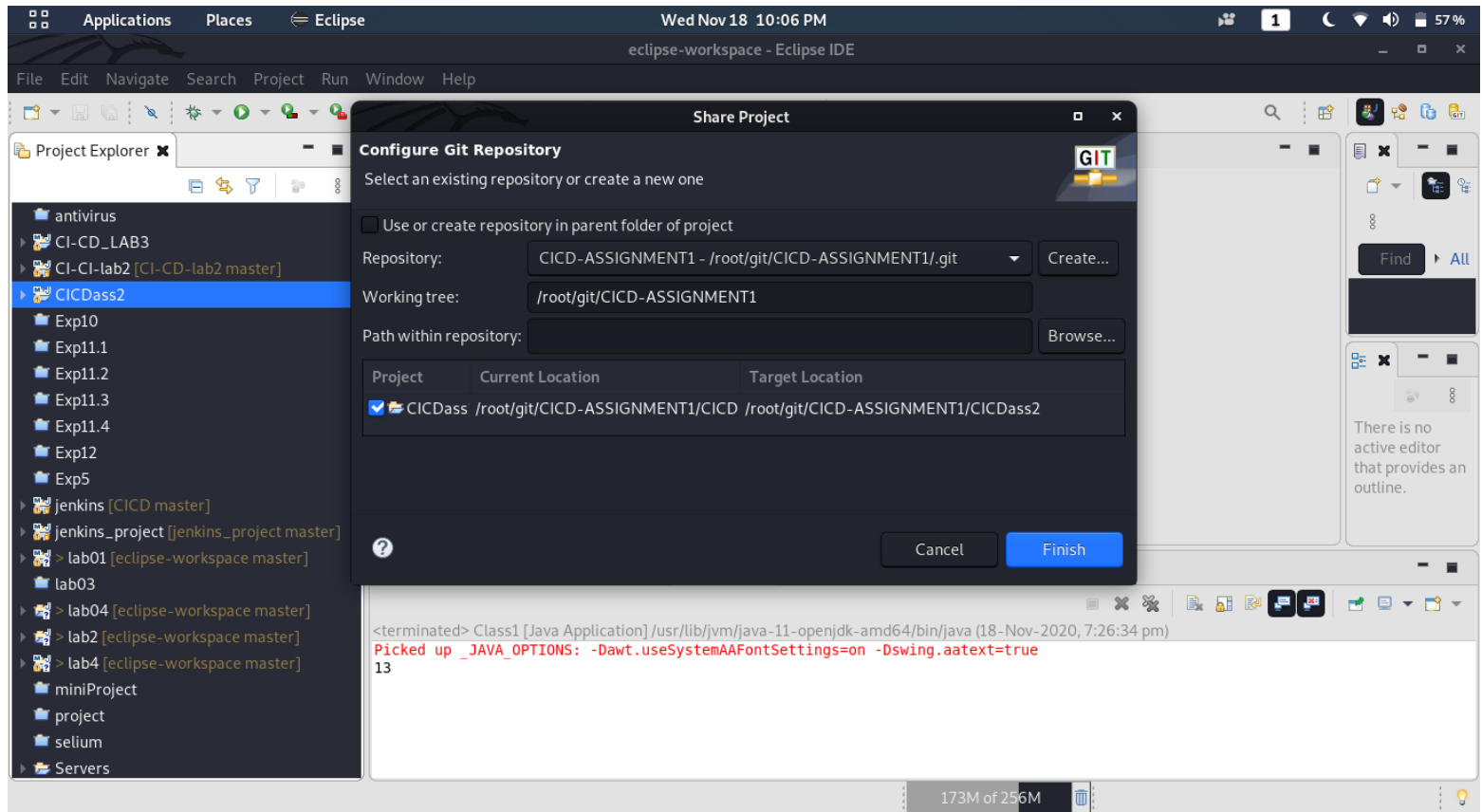


STEP5- Now make a git repository where you will push this code

STEP6- Now clone the git repository in the eclipse



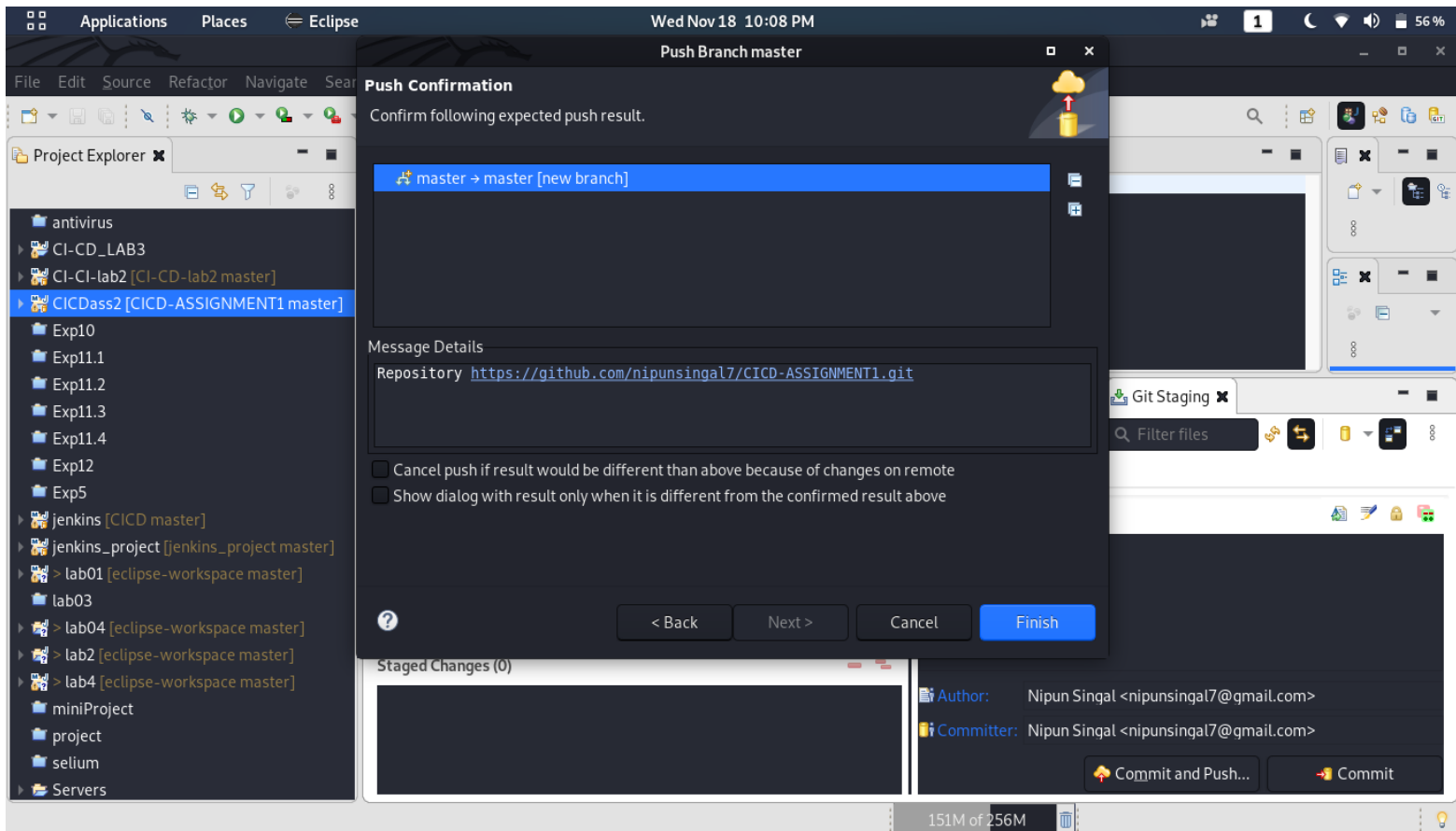
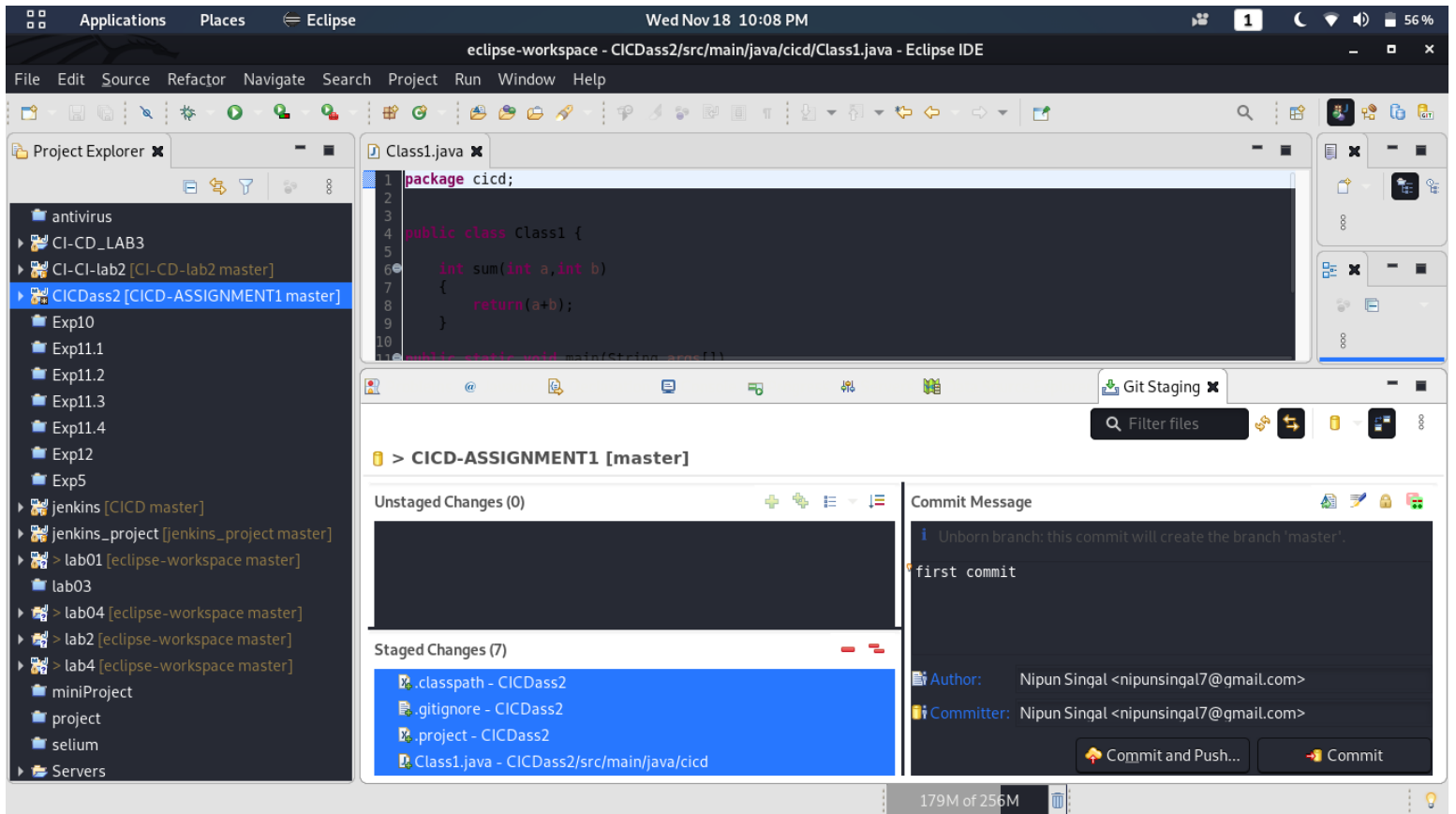
STEP7- Now right click on the project and go to team option and then select share option. Now select the git repository that you have created from the drop down list and click finish.

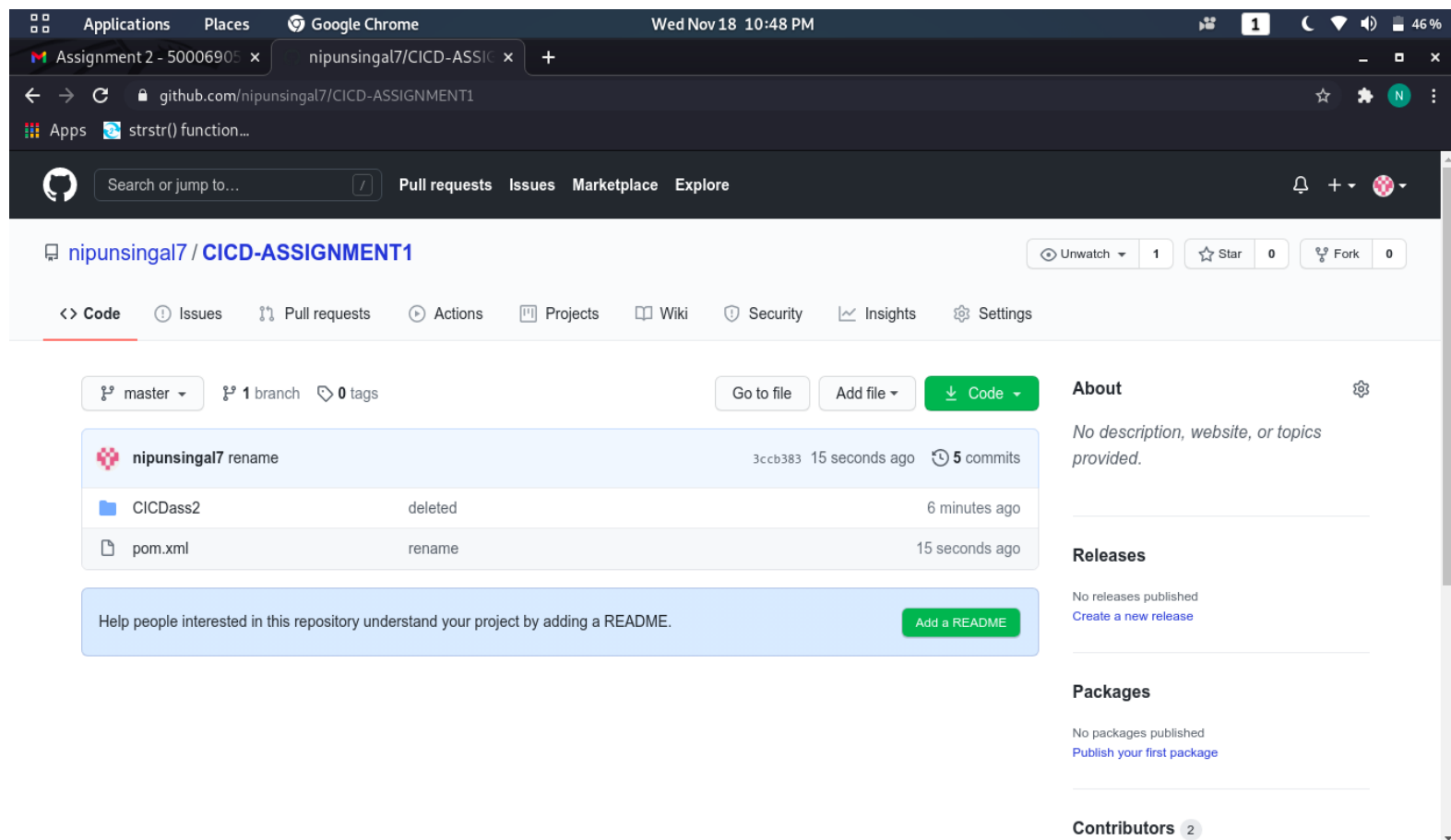
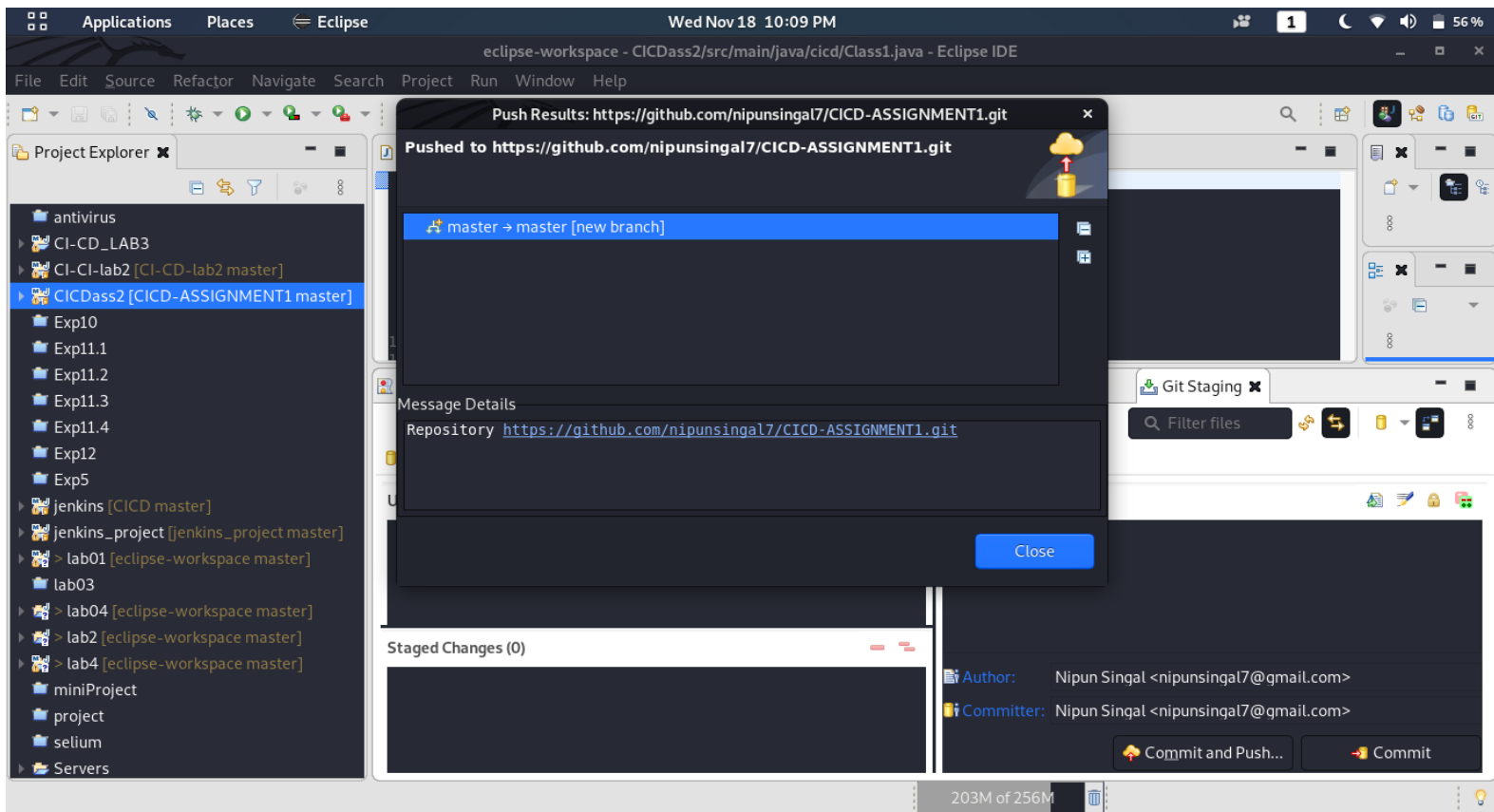


STEP8- Again right click on the project and go to team option and now select commit option. Select all the files and put them in staged changes section.

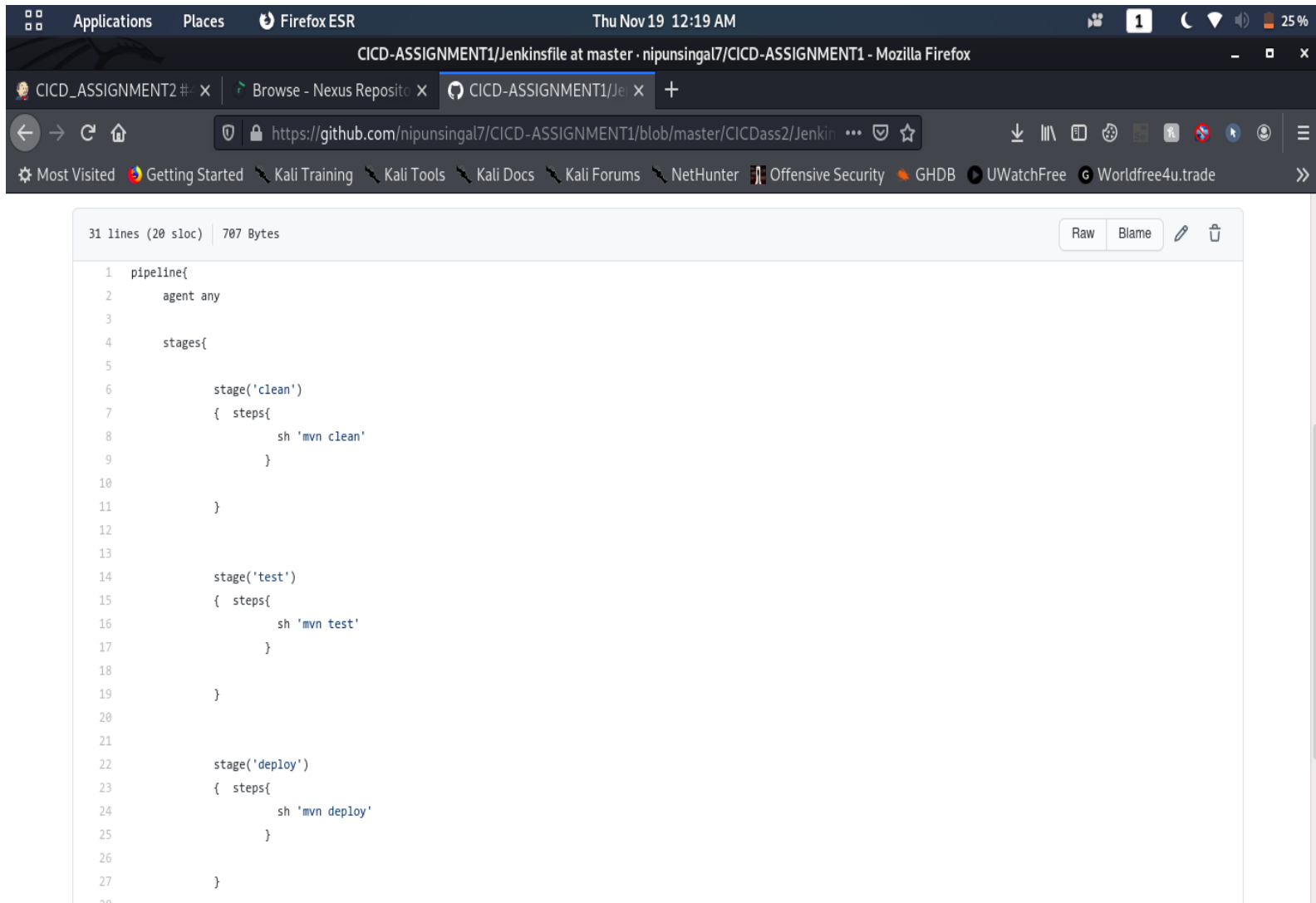
STEP9- Now add a commit message and click commit and push button.

STEP10- Enter your github credentials and click finish





STEP11- Go to your github repository and create a new file there name Jenkinsfile. And add the below content in it. You can choose the stages of your choice.



```
31 lines (20 sloc) | 707 Bytes
Raw Blame

1 pipeline{
2   agent any
3
4   stages{
5
6     stage('clean')
7     { steps{
8       sh 'mvn clean'
9     }
10
11   }
12
13
14   stage('test')
15   { steps{
16     sh 'mvn test'
17   }
18
19 }
20
21
22 stage('deploy')
23 { steps{
24   sh 'mvn deploy'
25 }
26
27 }
```


STEP12- Now open Jenkins

Jenkins Dashboard [Jenkins] - Mozilla Firefox

localhost:8080

Jenkins

add description

S	W	Name ↓	Last Success	Last Failure	Last Duration	Fav
		blueOcean	2 mo 4 days - log	N/A	4.5 sec	
		CI-CD-lab2	2 mo 29 days - #5	2 mo 29 days - #4	5 min 56 sec	
		ci-cd-lab3	1 mo 13 days - #4	2 mo 20 days - #2	52 sec	
		CICD_lab10	1 mo 13 days - #1	N/A	1 min 12 sec	
		CICD_lab5	2 mo 7 days - #1	N/A	1 min 33 sec	
		CICD_Project	3 mo 7 days - #7	3 mo 7 days - #6	3 min 35 sec	
		newblueocean	2 mo 4 days - log	N/A	5.3 sec	
		work	1 mo 16 days - #1	N/A	6.4 sec	

Icon: [S](#) [M](#) [L](#)

[Legend](#) [Atom feed for all](#) [Atom feed for failures](#) [Atom feed for just latest builds](#)

STEP13- Now go to new item from left and enter the item name and select pipeline and click ok

New Item [Jenkins] - Mozilla Firefox

localhost:8080/view/all/newJob

Jenkins

Enter an item name

» Required field

Freestyle project
This is the central feature of Jenkins. Jenkins will build your project, combining any SCM with any build system, and this can be even used for something other than software build.

Maven project
Build a maven project. Jenkins takes advantage of your POM files and drastically reduces the configuration.

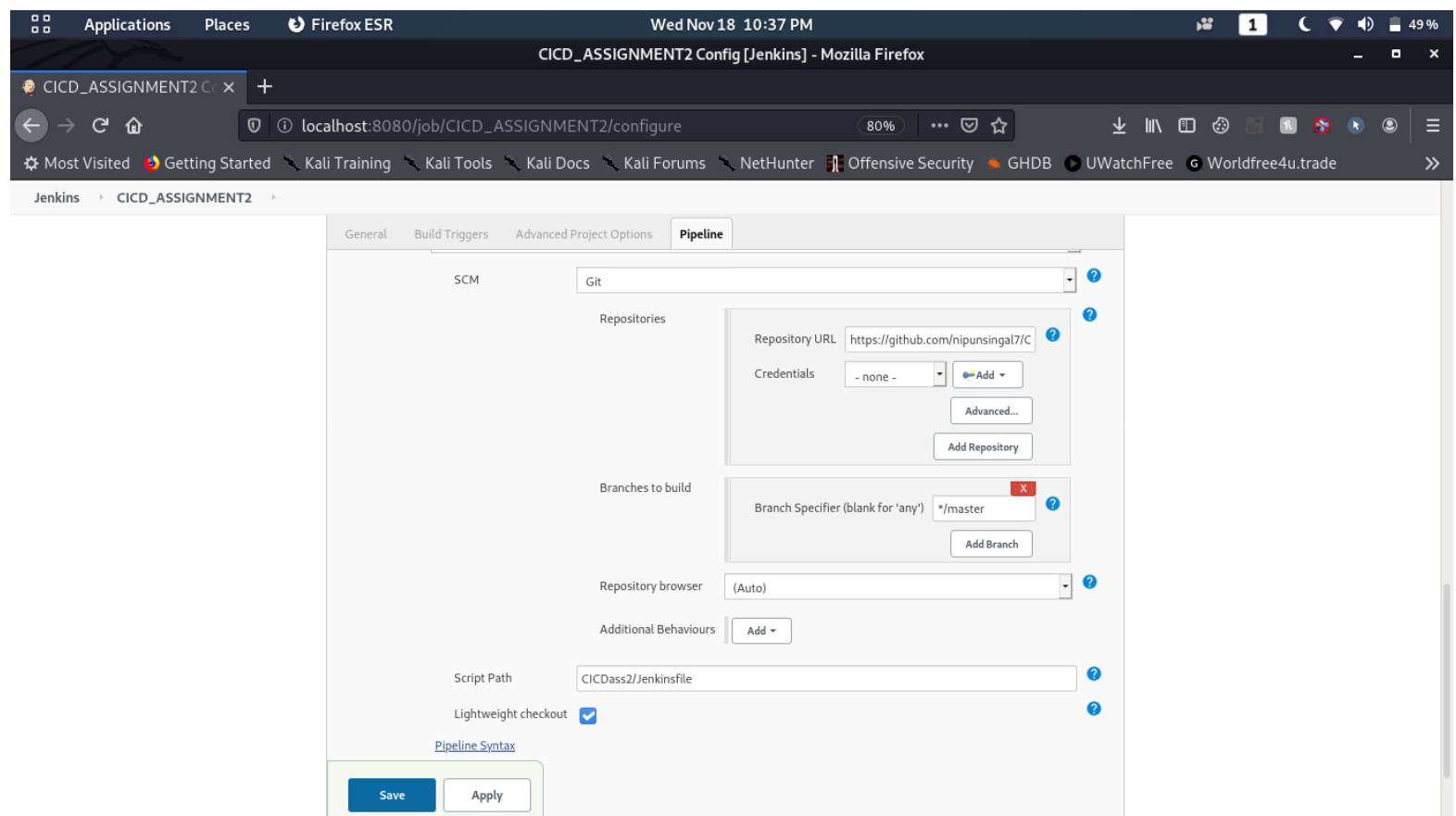
Pipeline
Orchestrates long-running activities that can span multiple build agents. Suitable for building pipelines (formerly known as workflows) and/or organizing complex activities that do not easily fit in free-style job type.

Configuration project
Suitable for projects that need a large number of different configurations, such as testing on multiple environments, platform-specific

OK

STEP14- Now settings will be open automatically. Go to pipeline tab.

STEP15-Select git in SCM. Put your github repository URL in the box. Now add the path of your Jenkinsfile in script path. Now click save



STEP16- Go to dashboard of Jenkins and select manage Jenkins option from the left. Now select system configuration option.

STEP17- Scroll down to the sonatype nexus and enter the details. Perform 18th step and then come back on this screen and click on test connection button to check the connection is working or not.

The screenshot shows the Jenkins configuration interface in a Mozilla Firefox browser. The address bar indicates the URL is localhost:8080/configure. The page title is 'Configure System [Jenkins] - Mozilla Firefox'. The breadcrumb navigation shows 'Jenkins > configuration'. The main section is titled 'Sonatype Nexus' and contains a sub-section 'Nexus Repository Manager Servers'. Under this sub-section, there is a form for 'Nexus Repository Manager 3.x Server'. The form fields are: 'Display Name' (nexus-cicd), 'Server ID' (nexus-cicd), 'Server URL' (http://localhost:8081/), and 'Credentials' (admin/*****). Below the form, there is a message 'Nexus Repository Manager 3.x connection succeeded' and a 'Test connection' button. A warning message states: 'NXRM OSS 3.18.1-01 found. Some operations require Nexus Repository Manager Professional server version 3.13.0 or newer; use of an incompatible server could result in failed builds.' At the bottom of the page, there are buttons for 'Save' and 'Apply', and a 'Delete' button.

Applications Places Firefox ESR Thu Nov 19 12:01 AM 1 31 %

Configure System [Jenkins] - Mozilla Firefox

Configure System [Jenkins] x Repositories - Nexus Rep x +

localhost:8080/configure

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Jenkins > configuration

Add

Sonatype Nexus

Nexus Repository Manager Servers

Nexus Repository Manager 3.x Server

Display Name nexus-cicd

Server ID nexus-cicd

Server URL http://localhost:8081/

Credentials admin/***** Add

Nexus Repository Manager 3.x connection succeeded Test connection

NXRM OSS 3.18.1-01 found. Some operations require Nexus Repository Manager Professional server version 3.13.0 or newer; use of an incompatible server could result in failed builds.

Delete

Add Nexus Repository Manager Server

Nexus IQ Server

Add Nexus IQ Server

Build Assistant Plugin > BuildStep Action

Save Apply

STEP18- Go to the maven setting.xml file and edit it. Write the <server> tag in <servers> tag in it as shown below.

```
Applications  Places  Text Editor  Thu Nov 19 12:04 AM
settings.xml
/usr/share/maven/conf

111 <servers>
112   <!-- server
113        Specifies the authentication information to use when connecting to a particular server, identified by
114        a unique name within the system (referred to by the 'id' attribute below).
115
116        NOTE: You should either specify username/password OR privateKey/passphrase, since these pairings are
117        used together.
118   -->
119   <server>
120     <id>deploymentRepo</id>
121     <username>repouser</username>
122     <password>repopwd</password>
123   </server>
124   →
125
126   <!-- Another sample, using keys to authenticate.
127   -->
128   <server>
129     <id>siteServer</id>
130     <privateKey>/path/to/private/key</privateKey>
131     <passphrase>optional; leave empty if not used.</passphrase>
132   </server>
133   →
134   <server>
135     <id>nexus-cicd</id>
136     <username>admin</username>
137     <password>admin</password>
138   </server>
139 </servers>
140
141 <!-- mirrors
142        This is a list of mirrors to be used in downloading artifacts from remote repositories.
143
144        It works like this: a POM may declare a repository to use in resolving certain artifacts.
145        However, this repository may have problems with heavy traffic at times, so people have mirrored
146        it to several places.
147
148        That repository definition will have a unique id, so we can create a mirror reference for that
```

STEP-19 Now start the nexus

Applications Places Firefox ESR Wed Nov 18 11:26 PM 38 %

Welcome - Nexus Repository Manager - Mozilla Firefox

Dashboard [Jenkins] x Welcome - Nexus Reposi x +

localhost:8081/#browse/welcome

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Sonatype Nexus Repository Manager OSS 3.18.1-01

Welcome

Warning

This version of Nexus Repository Manager is vulnerable to a critical remote code execution security vulnerability. We recommend [immediate upgrade](#) to 3.25.1 or later, especially if this is a public instance.

STEP20- Now go wheel shape option and go to repositories option from left. Select maven2(hosted) and fill the details as below

The screenshot shows the Sonatype Nexus Repository Manager web interface in a Mozilla Firefox browser. The browser's address bar shows the URL `localhost:8081/#admin/repository/repositories`. The page title is "Repositories - Nexus Repository Manager - Mozilla Firefox". The left sidebar contains the "Administration" menu with options like Repository, Blob Stores, Repositories (highlighted), Content Selectors, Cleanup Policies, Routing Rules, Security, Privileges, Roles, Users, Anonymous, LDAP, Realms, and SSL Certificates. The main content area is titled "Repositories / Select Recipe / Create Repository: maven2 (hosted)". The form fields are as follows:

- Name:** A unique identifier for this repository. Value: `CICD-ASSIGN2`
- Online:** ☒ If checked, the repository accepts incoming requests
- Maven 2**
 - Version policy:** What type of artifacts does this repository store? Value: `Snapshot`
 - Layout policy:** Validate that all paths are maven artifact or metadata paths. Value: `Strict`
- Storage**
 - Blob store:** Blob store used to store asset contents. Value: `default`
 - Strict Content Type Validation:** ☒ Validate that all content uploaded to this repository is of a MIME type appropriate for the repository format

STEP21-Now copy the repository url.

Applications Places Firefox ESR Wed Nov 18 11:44 PM

Repositories - Nexus Repository Manager - Mozilla Firefox

Dashboard [Jenkins] x Repositories - Nexus Rep x +

localhost:8081/#admin/repository/repositories

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Sonatype Nexus Repository Manager OSS 3.18.1-01

Search components

admin Sign out

Administration

- Repository
 - Blob Stores
 - Repositories**
 - Content Selectors
 - Cleanup Policies
 - Routing Rules
- Security
 - Privileges
 - Roles
 - Users
 - Anonymous
 - LDAP
 - Realms
 - SSL Certificates
 - IQ Server

Repositories Manage repositories

+ Create repository

Filter

Name ↑	Type	Format	Status	URL	Health check	IQ Policy Viola...
CICD-ASSIGN2	hosted	maven2	Online	copy		
cicd-lab10	hosted	maven2	Online	copy		
cicd-nexus	hosted	maven2	Online	copy		
maven-central	proxy	maven2	Online - Ready to Connect	copy	Analyze	
maven-public	group	maven2	Online	copy		
maven-releases	hosted	maven2	Online	copy		
maven-snapshots	hosted	maven2	Online	copy		
nuget-group	group	nuget	Online	copy		
nuget-hosted	hosted	nuget	Online	copy		
nuget.org-proxy	proxy	nuget	Online - Ready to Connect	copy	Analyze	

STEP22- Now go to your projects pom.xml file on github and edit it. And define <distributionManagment> tag in it as shown below and add the repository url of nexus. Nexus ID should be same everywhere.

Applications Places Firefox ESR Thu Nov 19 12:08 AM

CICD-ASSIGNMENT1/pom.xml at master · nipunsingal7/CICD-ASSIGNMENT1 - Mozilla Firefox

Dashboard [Jenkins] x Repositories - Nexus Rep x CICD-ASSIGNMENT1/po x +

https://github.com/nipunsingal7/CICD-ASSIGNMENT1/blob/master/pom.xml

nipunsingal7 changes Latest commit #502000 13 seconds ago History

1 contributor

17 lines (13 sloc) 564 Bytes Raw Blame

```
1 <project xmlns="http://maven.apache.org/POM/4.0.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 https://maven.apache.org/maven-v4_0_0.xsd">
2   <modelVersion>4.0.0</modelVersion>
3   <groupId>Devops</groupId>
4   <artifactId>CICDass2</artifactId>
5   <version>0.0.1-SNAPSHOT</version>
6
7
8   <distributionManagement>
9     <snapshotRepository>
10      <id>nexus-cicd</id>
11      <name>cicd-lab10</name>
12      <url>http://localhost:8081/repository/CICD-ASSIGN2/</url>
13    </snapshotRepository>
14  </distributionManagement>
15
16
17 </project>
```

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STEP23- Now go to the project in Jenkins and click on build now option from the left side. A pipeline representation will be created.

Applications

Places

Firefox ESR

Thu Nov 19 12:18 AM

1

26 %

CICD_ASSIGNMENT2 [Jenkins] - Mozilla Firefox

CICD_ASSIGNMENT2

Browse - Nexus Repository

CICD-ASSIGNMENT1/Jenkins

+

localhost:8080/job/CICD_ASSIGNMENT2/

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Jenkins

CICD_ASSIGNMENT2

Back to Dashboard

Status

Changes

Build Now

Delete Pipeline

Configure

Full Stage View

Open Blue Ocean

Rename

Pipeline Syntax

Pipeline CICD_ASSIGNMENT2

add description

Disable Project

Recent Changes

Stage View

Average stage times:
(Average full run time: ~1min 5s)

Declarative: Checkout SCM	clean	test	deploy
5s	9s	7s	29s
5s	9s	7s	29s

#4

Nov 19 00:15

1 commit

Permalinks

- Last build (#4), 1 min 47 sec ago
- Last stable build (#4), 1 min 47 sec ago

Applications

Places

Firefox ESR

Thu Nov 19 12:18 AM

1

26 %

CICD_ASSIGNMENT2 #4 Console [Jenkins] - Mozilla Firefox

CICD_ASSIGNMENT2 #4

Browse - Nexus Repository

CICD-ASSIGNMENT1/Jenkins

+

localhost:8080/job/CICD_ASSIGNMENT2/4/console

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CICD_ASSIGNMENT2

#4

Back to Project

Status

Changes

Console Output

View as plain text

Edit Build Information

Delete build '#4'

Git Build Data

No Tags

Open Blue Ocean

Restart from Stage

Replay

Pipeline Steps

Workspaces

Previous Build

Console Output

```
Started by user nipunsingal
Obtained CICDass2/Jenkinsfile from git https://github.com/nipunsingal7/CICD-ASSIGNMENT1.git
Running in Durability level: MAX_SURVIVABILITY
[Pipeline] Start of Pipeline
[Pipeline] node
Running on Jenkins in /var/lib/jenkins/workspace/CICD_ASSIGNMENT2
[Pipeline] {
[Pipeline] stage
[Pipeline] { (Declarative: Checkout SCM)
[Pipeline] checkout
No credentials specified
> git rev-parse --is-inside-work-tree # timeout=10
Fetching changes from the remote Git repository
> git config remote.origin.url https://github.com/nipunsingal7/CICD-ASSIGNMENT1.git # timeout=10
Fetching upstream changes from https://github.com/nipunsingal7/CICD-ASSIGNMENT1.git
> git --version # timeout=10
> git --version # 'git version 2.28.0'
> git fetch --tags --force --progress -- https://github.com/nipunsingal7/CICD-ASSIGNMENT1.git +refs/heads/*:refs
/remotes/origin/* # timeout=10
> git rev-parse refs/remotes/origin/master^{commit} # timeout=10
> git rev-parse refs/remotes/origin/origin/master^{commit} # timeout=10
Checking out Revision 1dcba9723042705342621c9cf2576e6e345b5f34 (refs/remotes/origin/master)
> git config core.sparsecheckout # timeout=10
> git checkout -f 1dcba9723042705342621c9cf2576e6e345b5f34 # timeout=10
Commit message: "changes"
```


Applications Places Firefox ESR Thu Nov 19 12:18 AM

CICD_ASSIGNMENT2 #4 Console [Jenkins] - Mozilla Firefox

CICD_ASSIGNMENT2 #4 x Browse - Nexus Reposit x CICD_ASSIGNMENT1/Je x +

localhost:8080/job/CICD_ASSIGNMENT2/4/console

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Jenkins > CICD_ASSIGNMENT2 > #4

```
Uploading to nexus-cicd: http://localhost:8081/repository/CICD-ASSIGN2/Devops/CICDass2/0.0.1-SNAPSHOT/maven-metadata.xml
Progress (1): 764 B

Uploaded to nexus-cicd: http://localhost:8081/repository/CICD-ASSIGN2/Devops/CICDass2/0.0.1-SNAPSHOT/maven-metadata.xml
(764 B at 706 B/s)
Uploading to nexus-cicd: http://localhost:8081/repository/CICD-ASSIGN2/Devops/CICDass2/maven-metadata.xml
Progress (1): 274 B

Uploaded to nexus-cicd: http://localhost:8081/repository/CICD-ASSIGN2/Devops/CICDass2/maven-metadata.xml (274 B at 318
B/s)
[[1;34mINFO[m] [1m-----[m
[[1;34mINFO[m] [1;32mBUILD SUCCESS[m
[[1;34mINFO[m] [1m-----[m
[[1;34mINFO[m] Total time: 23.385 s
[[1;34mINFO[m] Finished at: 2020-11-19T00:16:30+05:30
[[1;34mINFO[m] [1m-----[m
[Pipeline] }
[Pipeline] // stage
[Pipeline] }
[Pipeline] // withEnv
[Pipeline] }
[Pipeline] // node
[Pipeline] End of Pipeline
Finished: SUCCESS
```

Page generated:
Nov 19, 2020 12:18:36 AM IST REST API Jenkins 2.235.2

STEP24- Now go to nexus and then go to browse from left side. You will see your project folder in that. You will see your artifacts in that folder.

Browse

Welcome

Search

Custom

Maven

NuGet

Browse

Upload

Browse / CICD-ASSIGN2

HTML View

Advanced search...

Devops

CICDass2

0.0.1-SNAPSHOT

0.0.1-20201118.184614-1

CICDass2-0.0.1-20201118.184614-1.jar

CICDass2-0.0.1-20201118.184614-1.jar.md5

CICDass2-0.0.1-20201118.184614-1.jar.sha1

CICDass2-0.0.1-20201118.184614-1.pom

CICDass2-0.0.1-20201118.184614-1.pom.md5

CICDass2-0.0.1-20201118.184614-1.pom.sha1

maven-metadata.xml

maven-metadata.xml.md5

maven-metadata.xml.sha1

maven-metadata.xml

maven-metadata.xml.md5

maven-metadata.xml.sha1