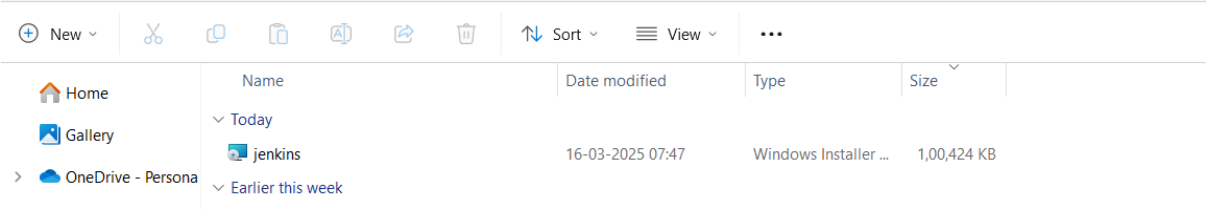
JENKINS NOTES

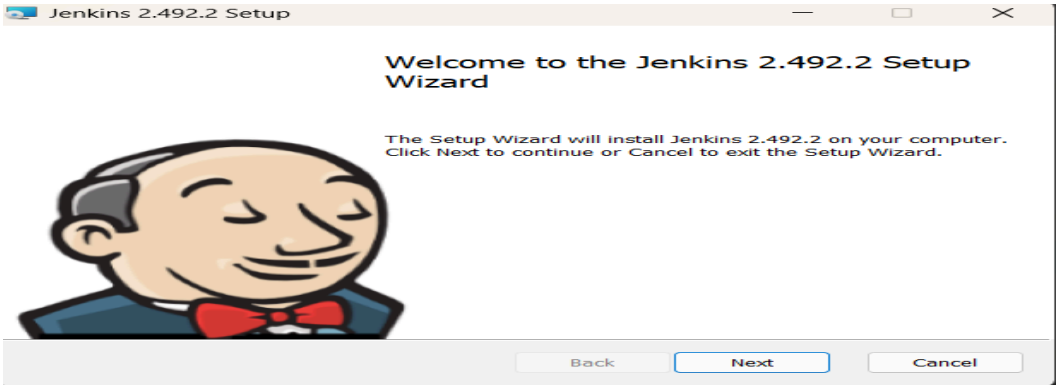
JENKINS INSTALLATION

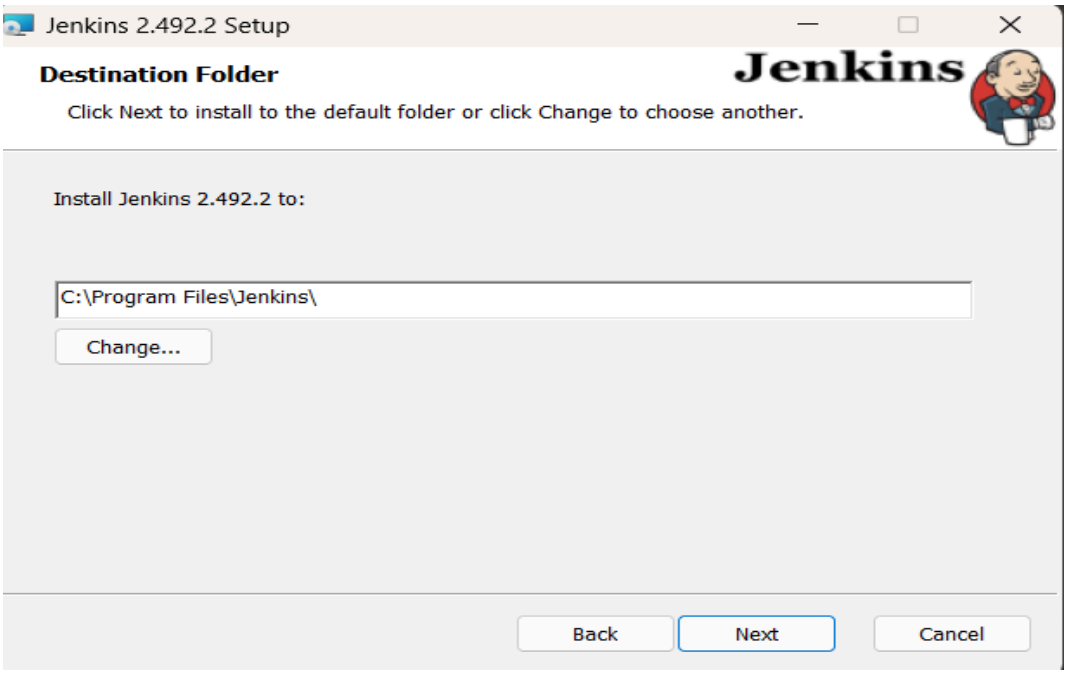
Step 1 : Download Jenkins from https://www.jenkins.io/download/ - Windows Users should download the ".msi" file and not ".war" file

Step 2: Go to download and open Jenkins

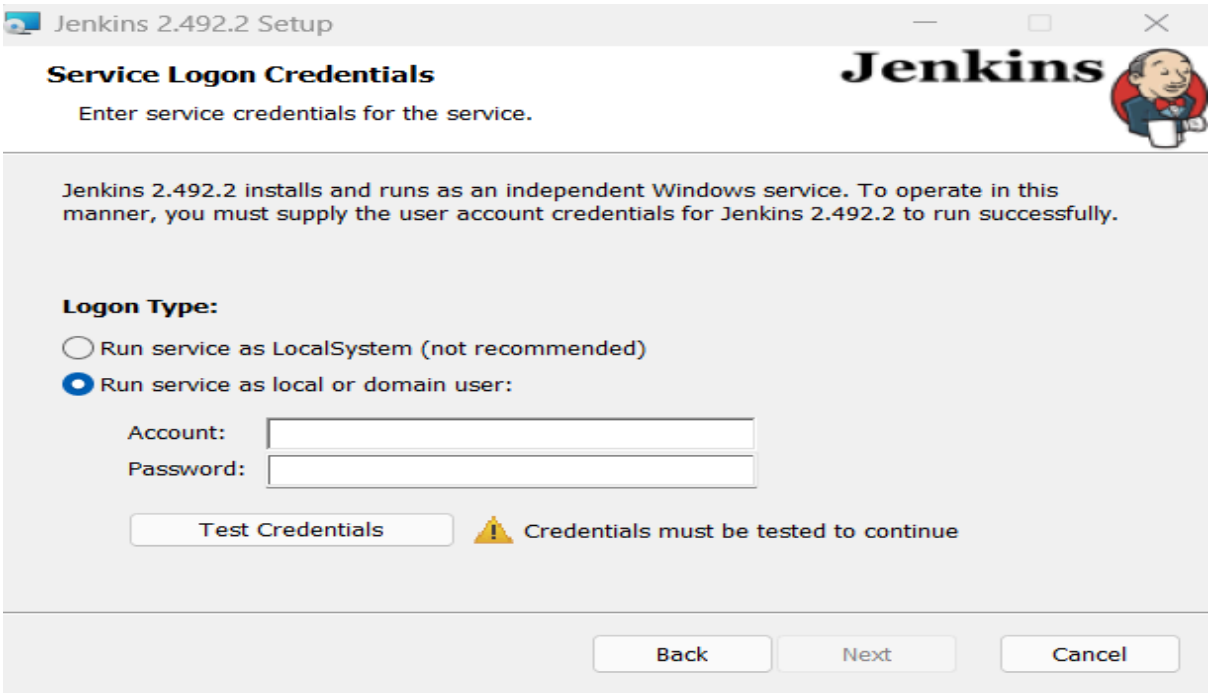


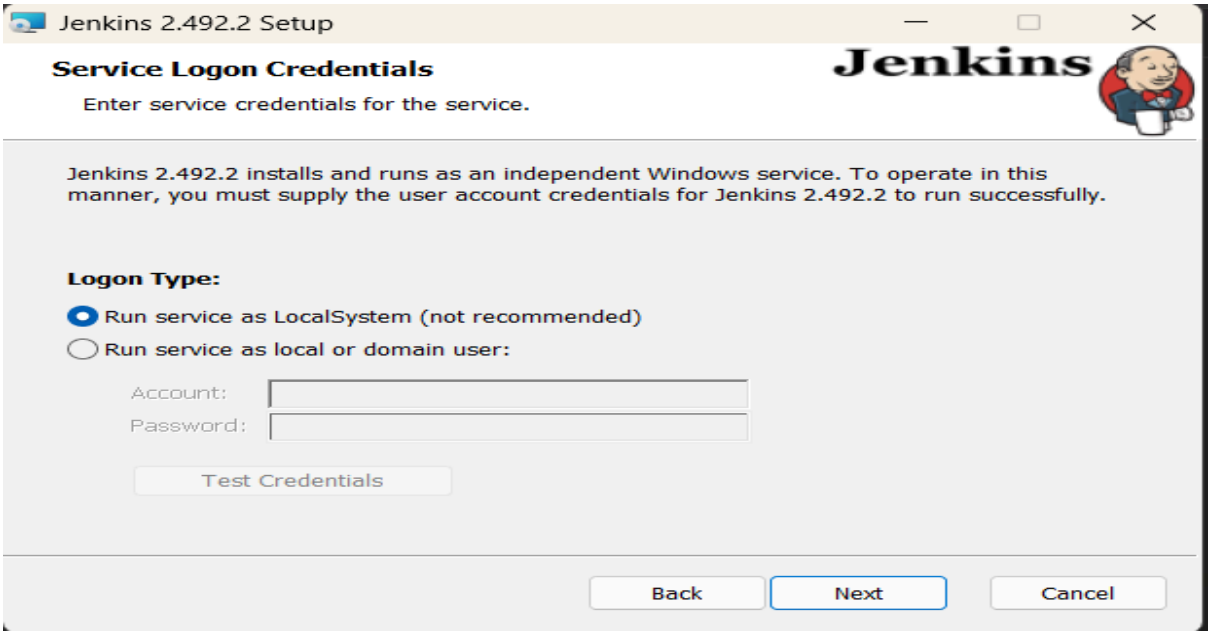
Step 3: Click Next ----> Next





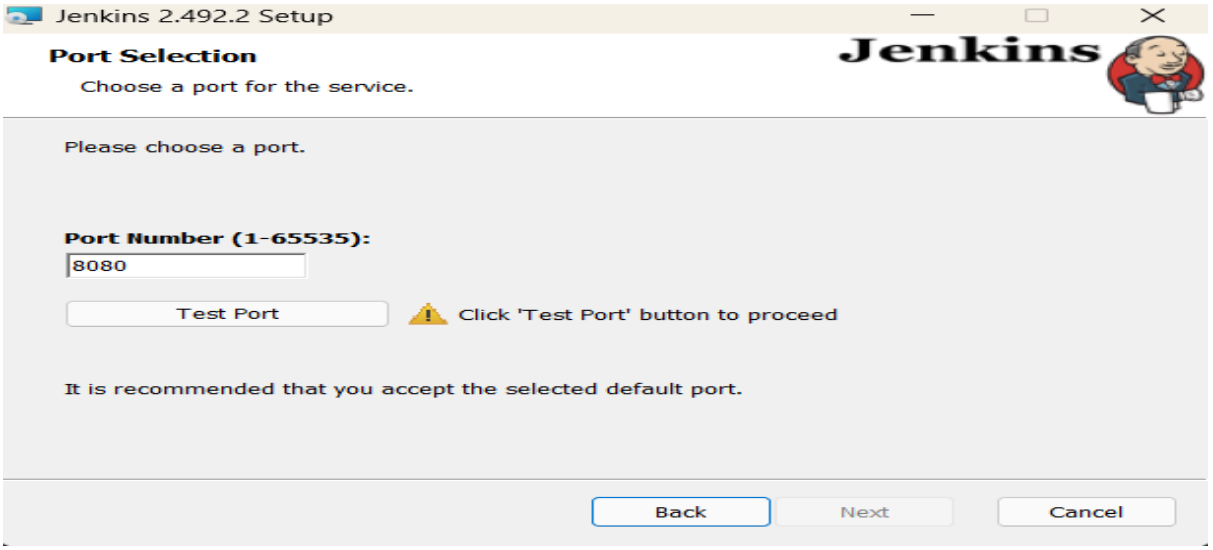
Step 4: In “Logon Type” select “Run Services as local system” and click Next

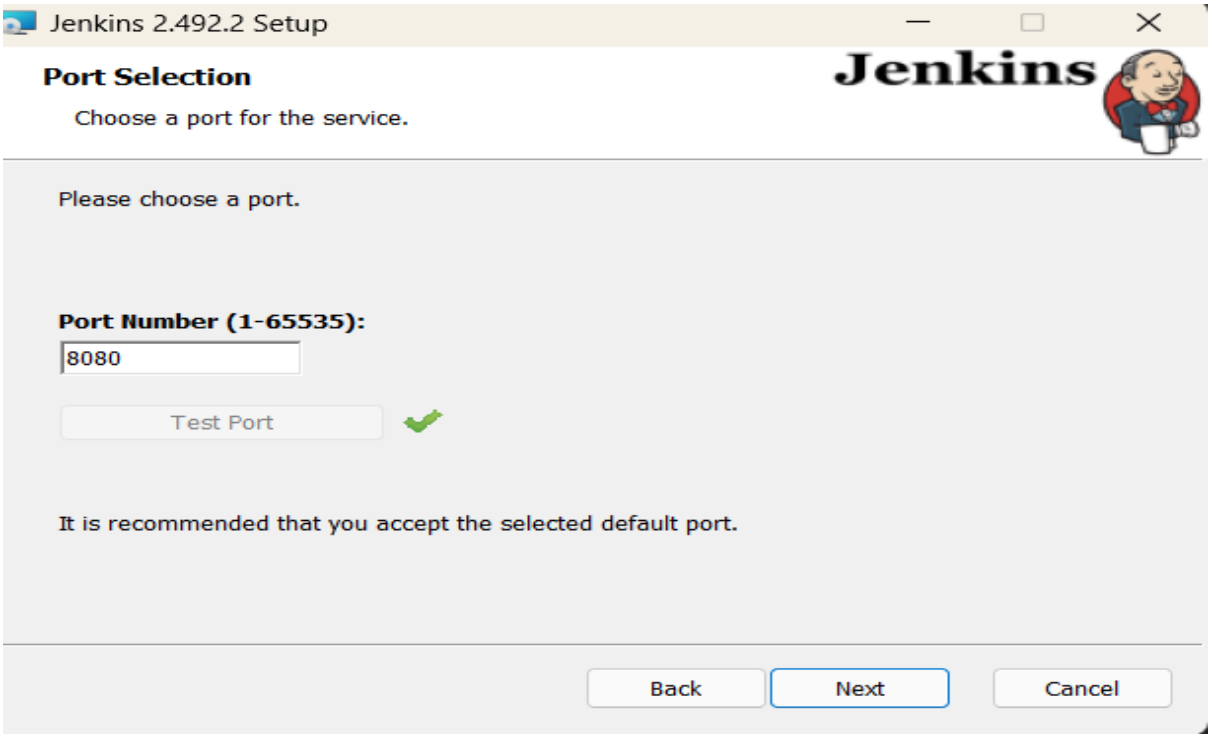




Step 5: Here we have to test the port , Click on the “Test Port” - If after clicking you get a green colour tick then you port is test is passed , otherwise if not getting the green colour tick then try changing the port and click TEST PORT again and then click next

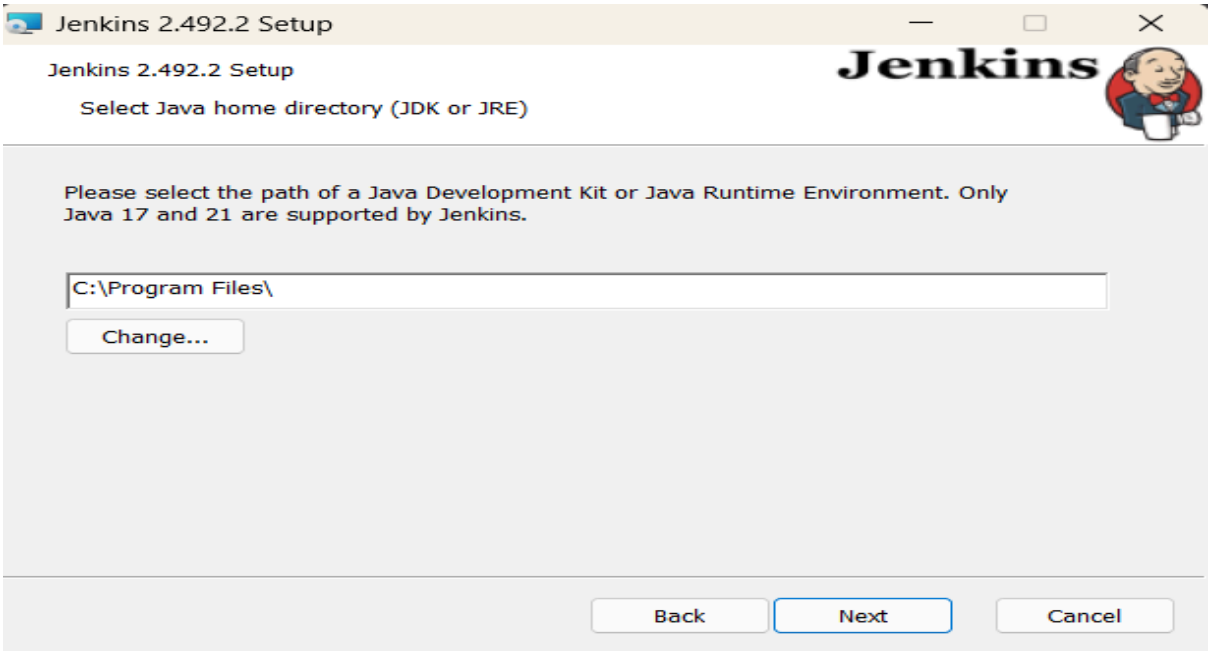
Note: Remember the port number for future use

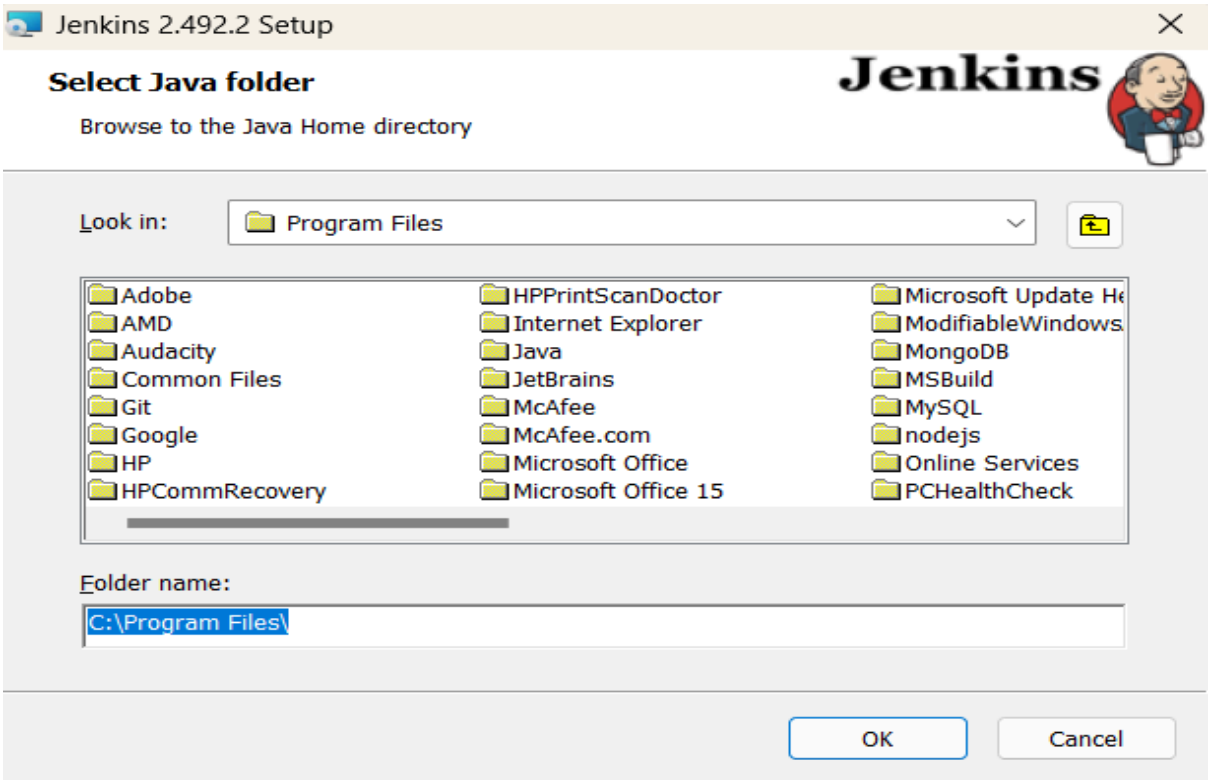




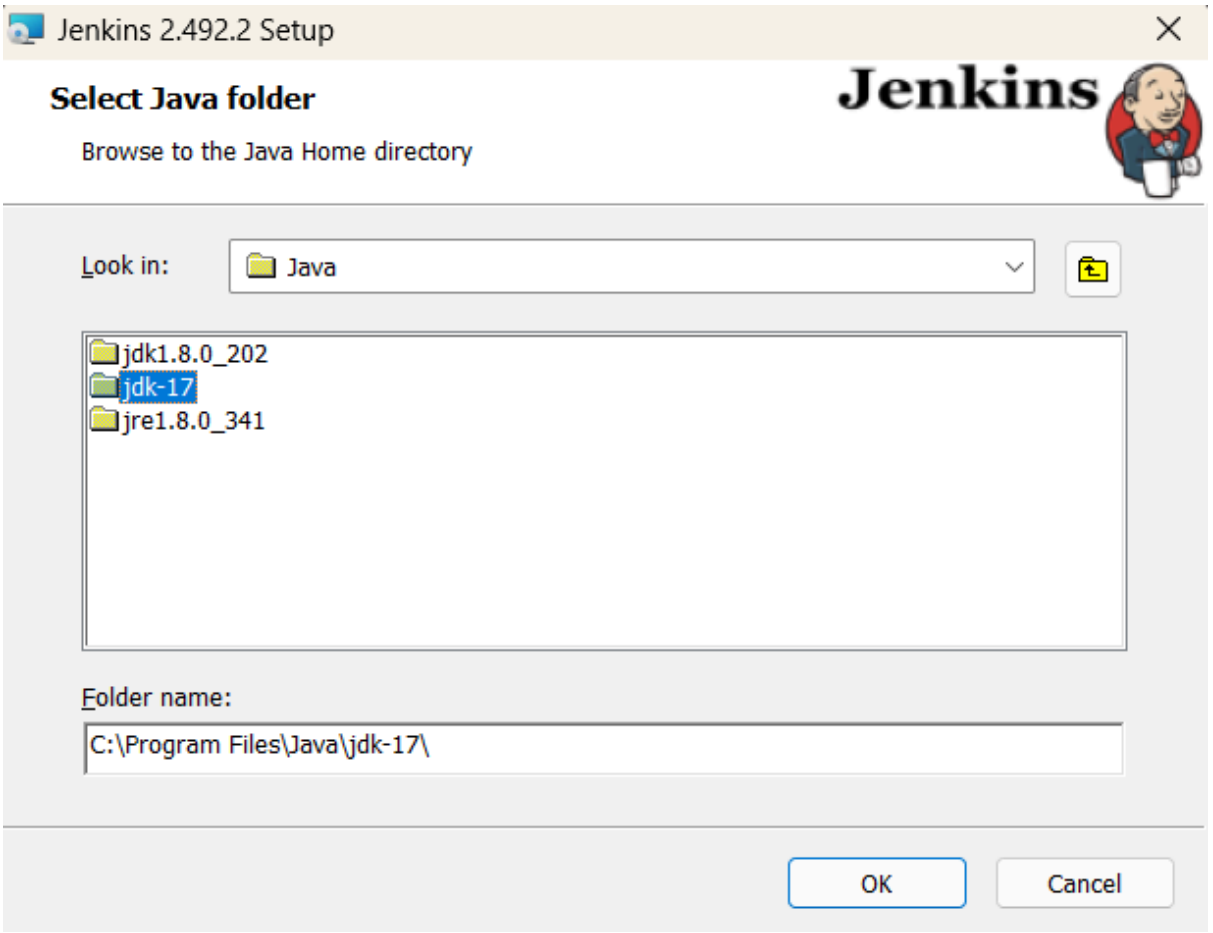
Step 6: Next you have to select the JDK path. Click on Change button ------->select java -------> Select JDK17 ---------> click Next

Note: Only JDK 17 and 21 are supported

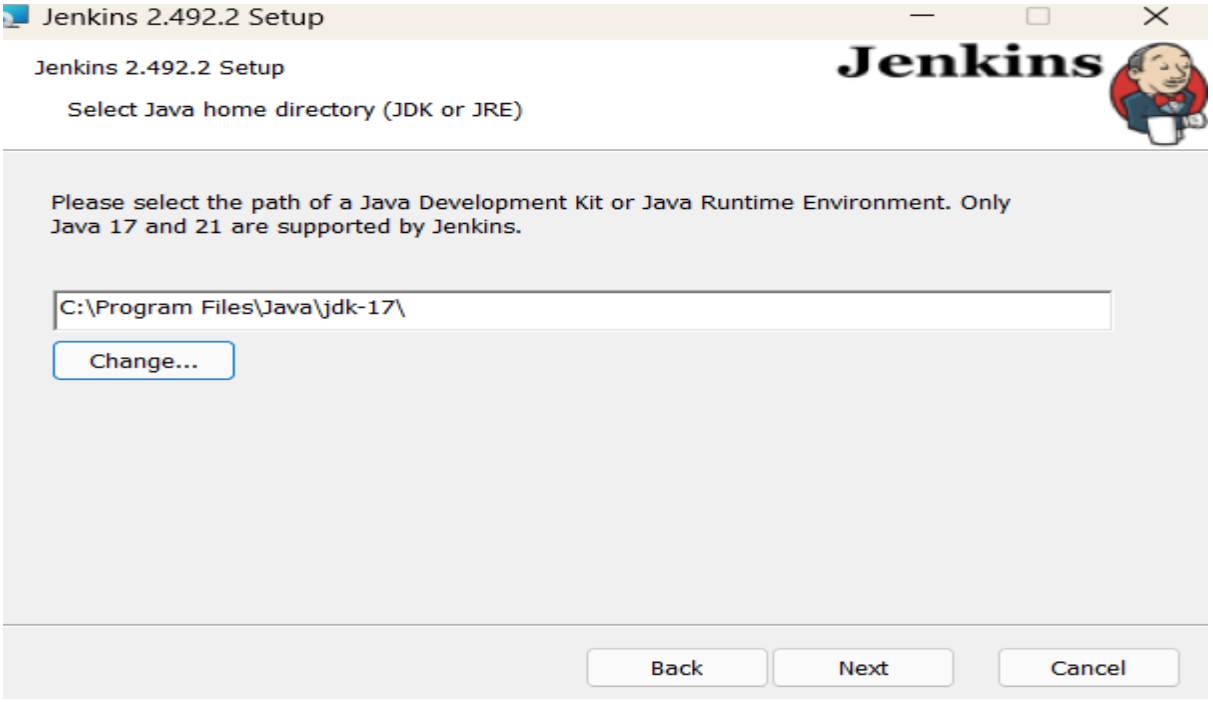




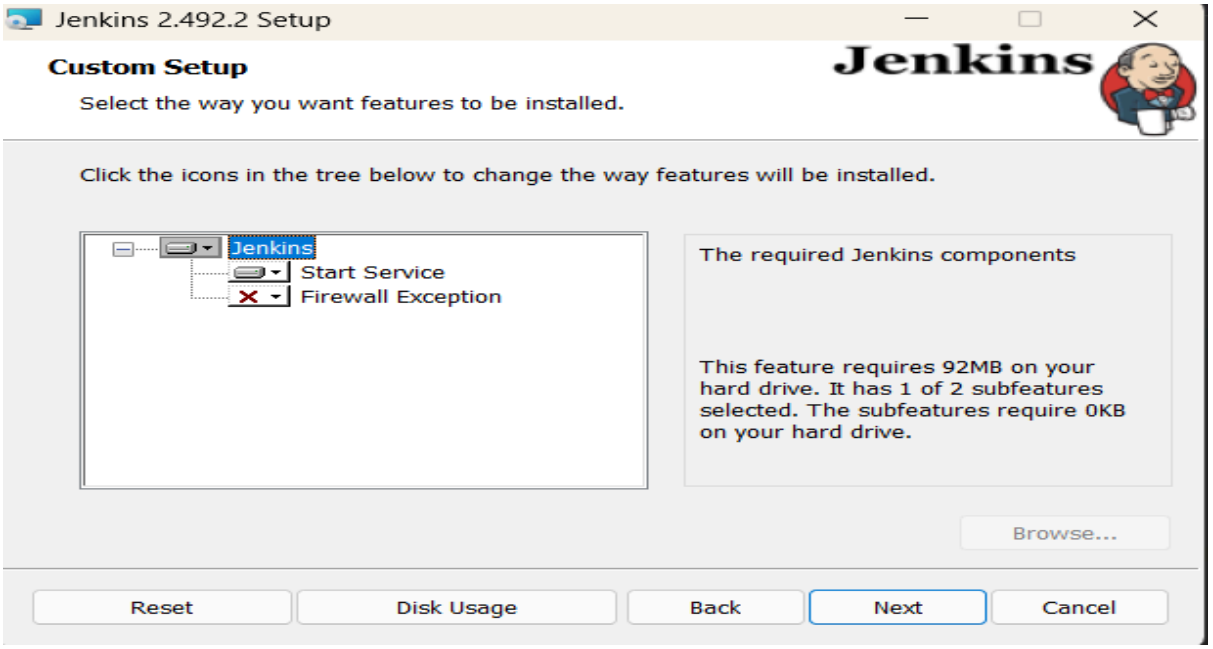

Jenkins 2.492.2 Setup
Select Java folder
Browse to the Java Home directory
Jenkins
Look in:
Java
jdk1.8.0_202
jdk-17
jre1.8.0_341
Folder name:
C:\Program Files\Java\
OK
Cancel

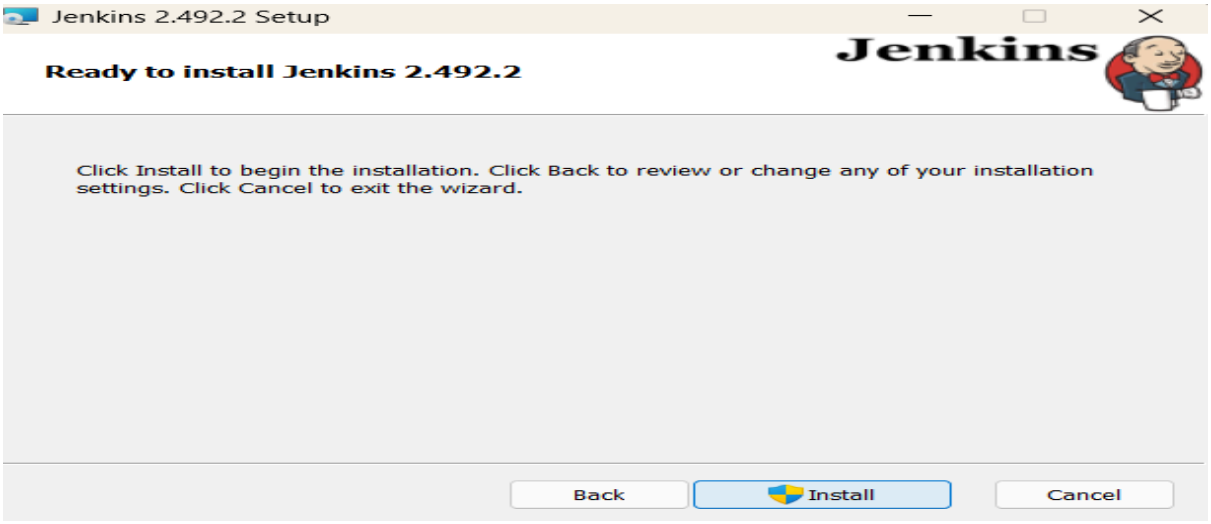

Jenkins 2.492.2 Setup
Select Java folder
Browse to the Java Home directory
Jenkins
Look in:
Java
jdk1.8.0_202
jdk-17
jre1.8.0_341
Folder name:
C:\Program Files\Java\jdk-17\
OK
Cancel

You can see the JDK path here and then click Next



Step 8 :Click Next ---------> Click Install ---------> Finish





Your have Successfully INSTALLED JENKINS

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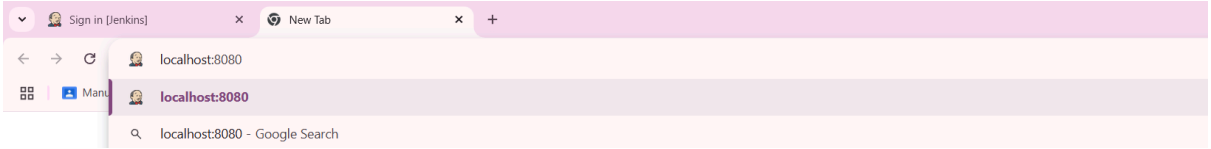
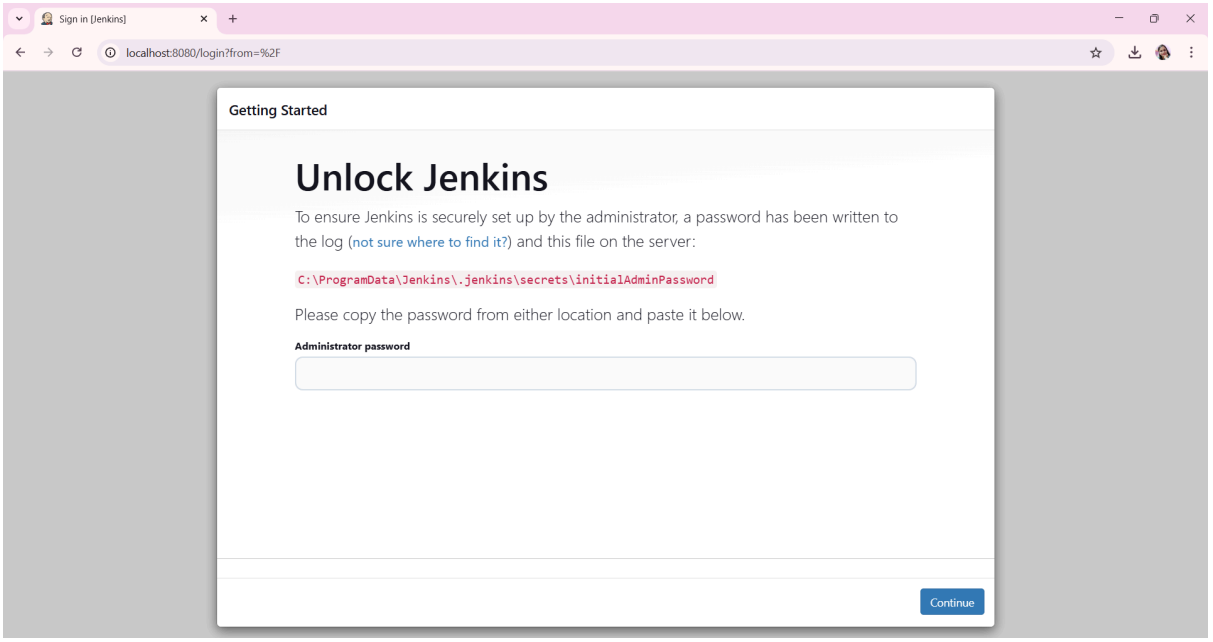
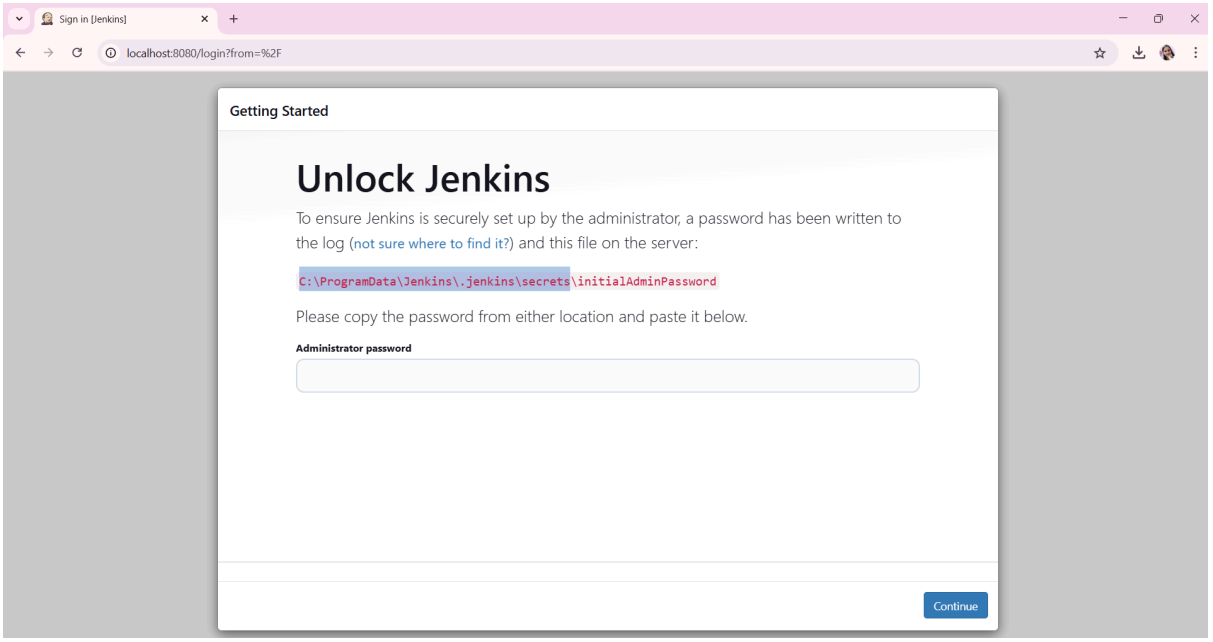
Step 1: Open a new tab in Chrome ----------> in SEARCH BAR type **localhoast:8080**
[If you have changed the port number then replace 8080 with you port number]

Press ENTER

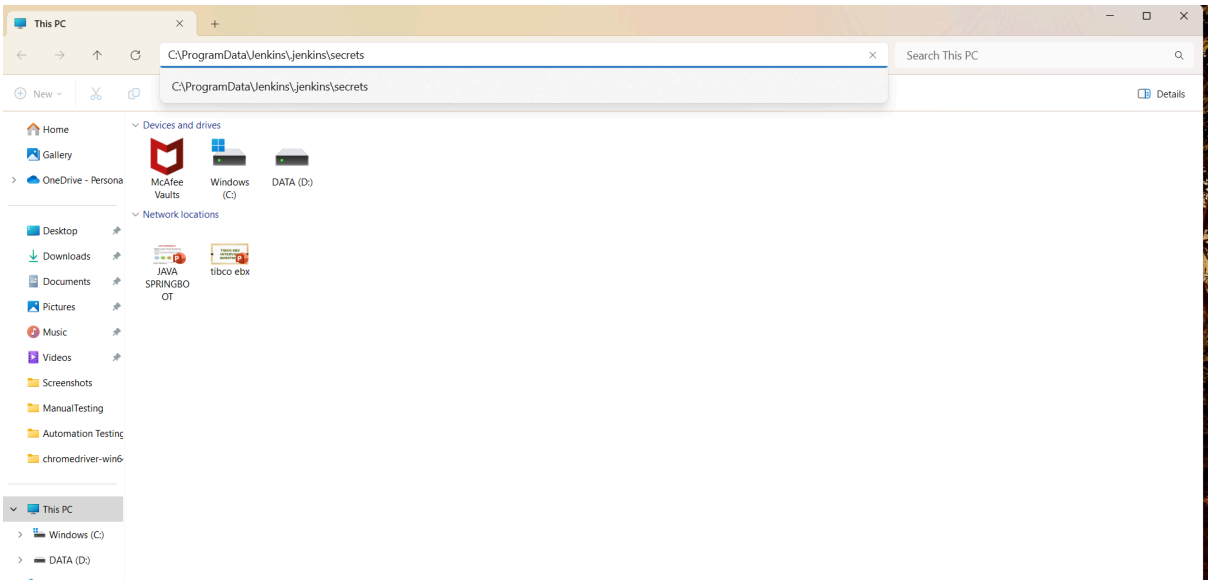


Step 2: Getting Started screen will appear. Here you will see a path, copy that path till SECRETS

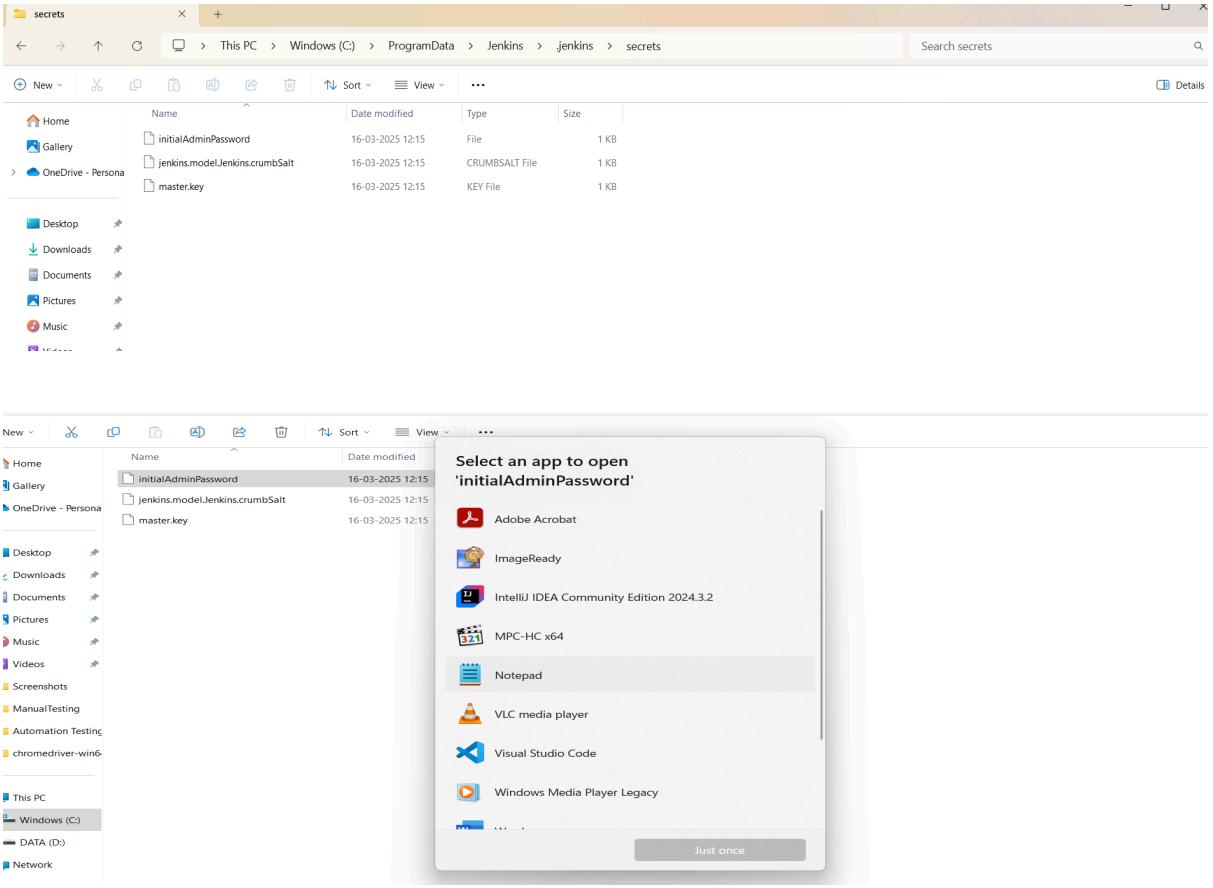




Step 3: Go to my computer and paste the path on the top as shown in the image after pasting hit enter

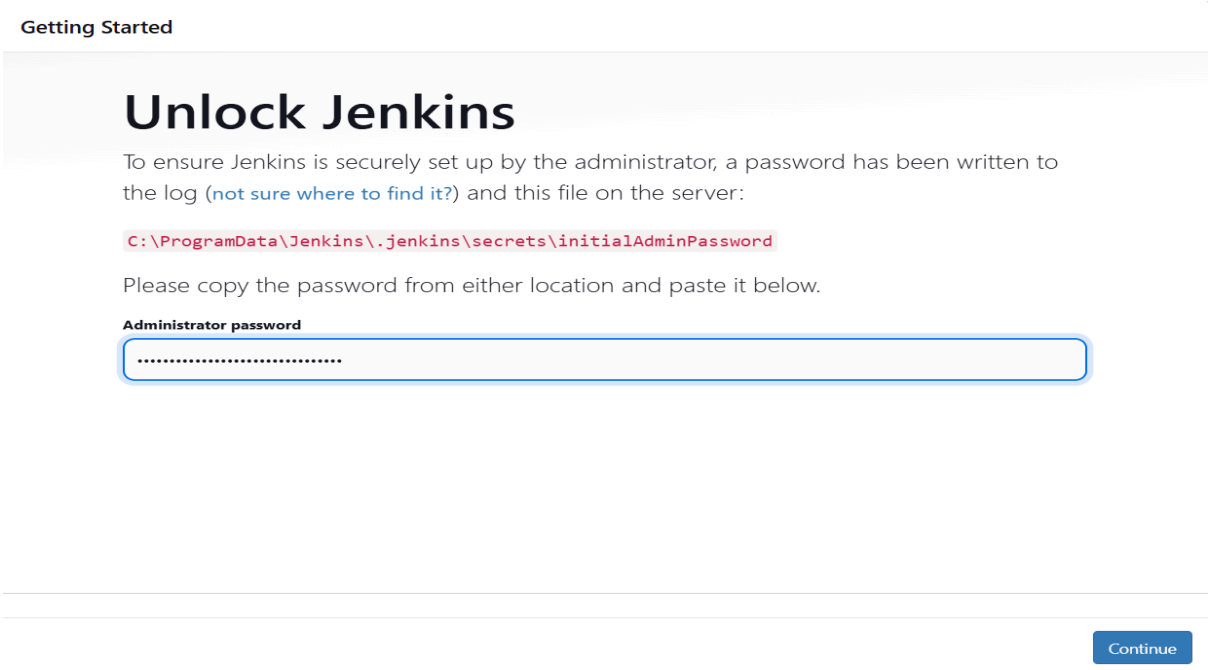


Step 4: In the next screen open initialAdminPassword [Right click and open it in notepad]

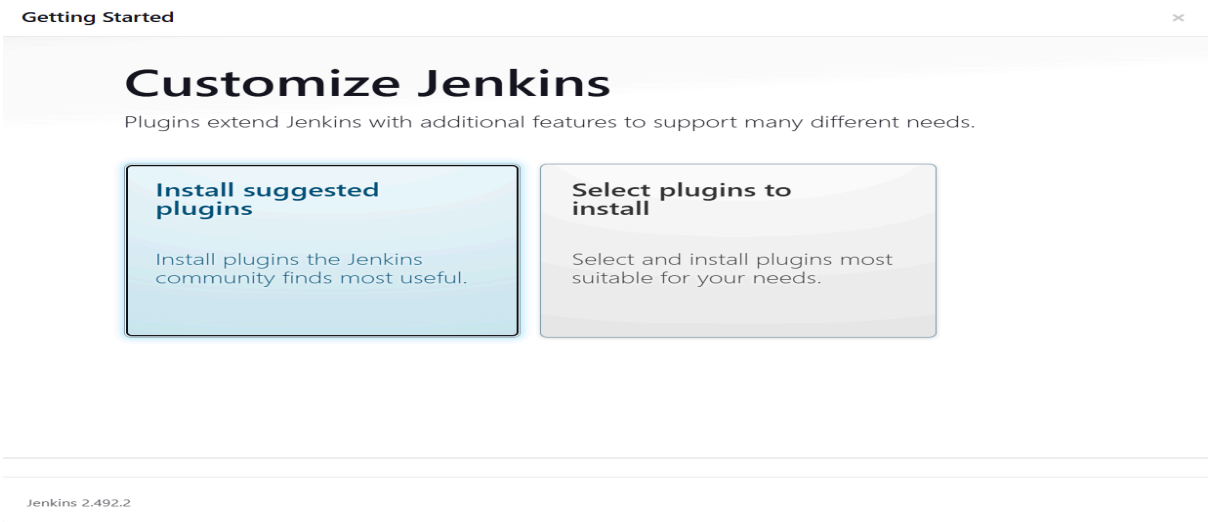


Step 5: Copy whatever you got in the notepad and paste it in the Administrative password [In the getting started chrome page] as shown below

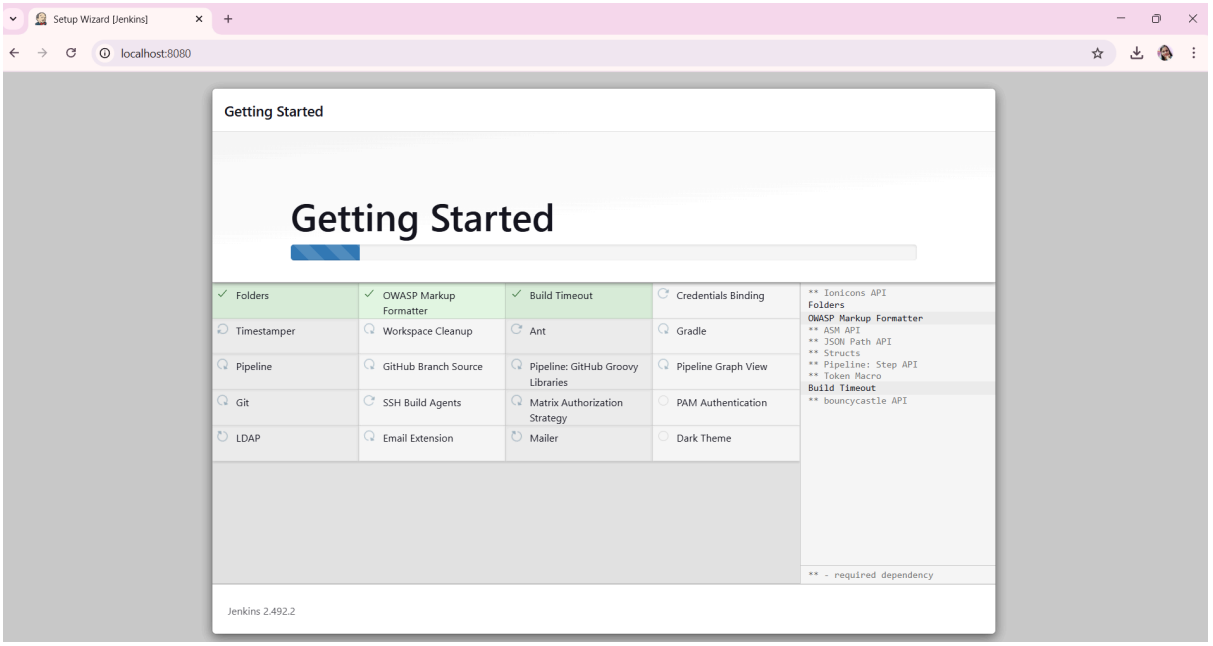
And click continue



Step 6: In the next page “Customize Jenkins” simply click on install suggested plugins



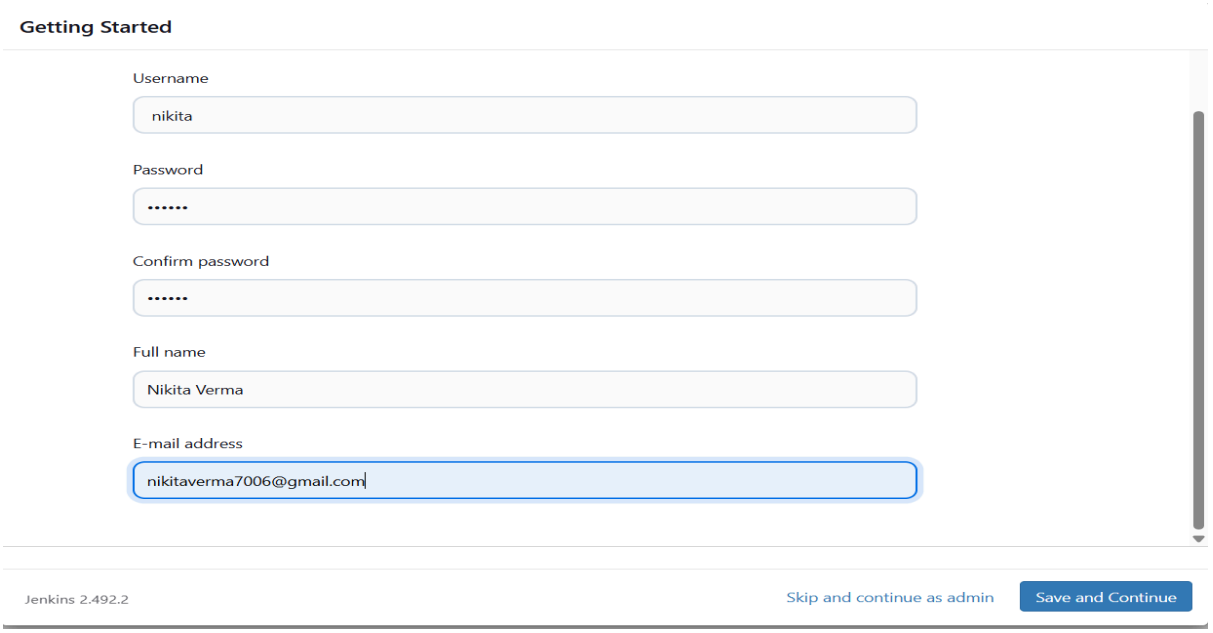
Now it will automatically install required plugins



After Successful installation of the plugins, you will be automatically redirected to the “CREATE FIRST ADMIN USER”

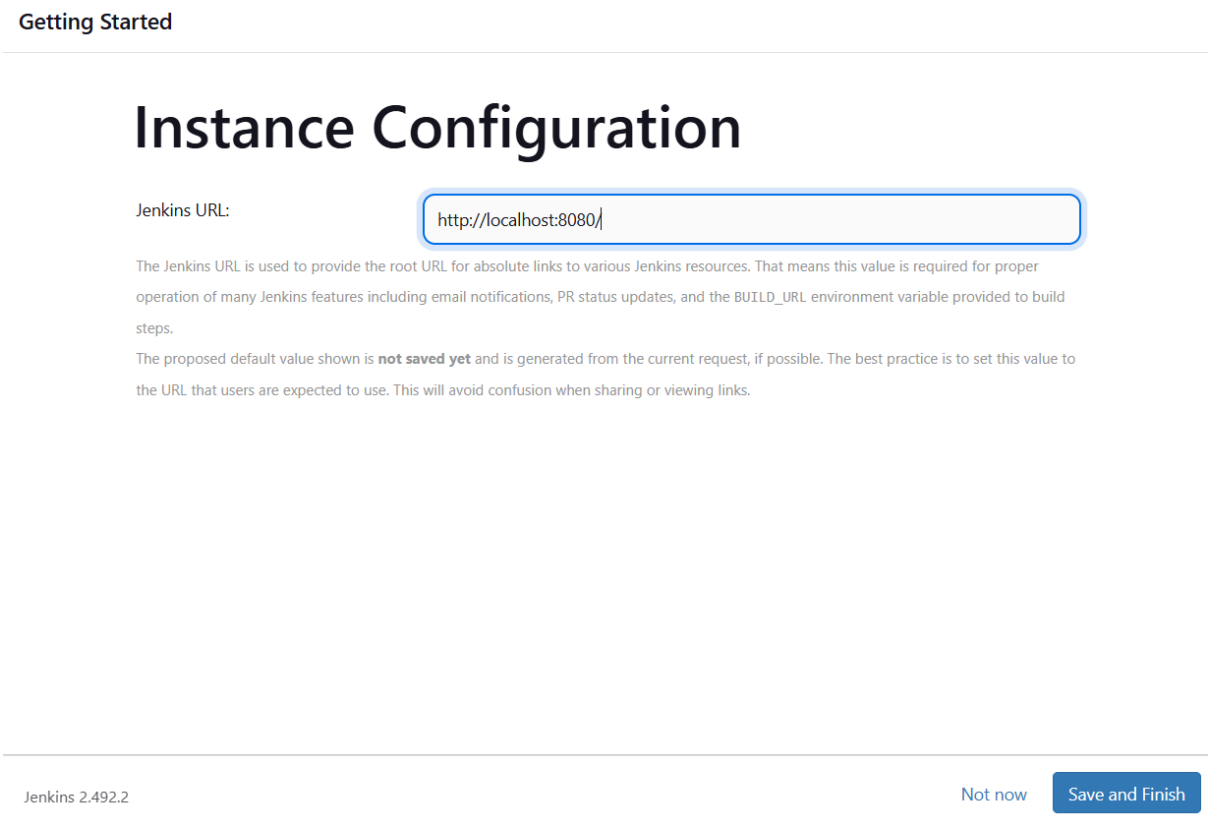
*If your plugins fails by chance just click retry and after successful installation if not directed to next page directly then, click CONTINUE to go to “CREATE FIRST ADMIN USER”

Step 7: In you “CREATE FIRST ADMIN USER” give any username, password and other details and Click SAVE AND CONTINUE

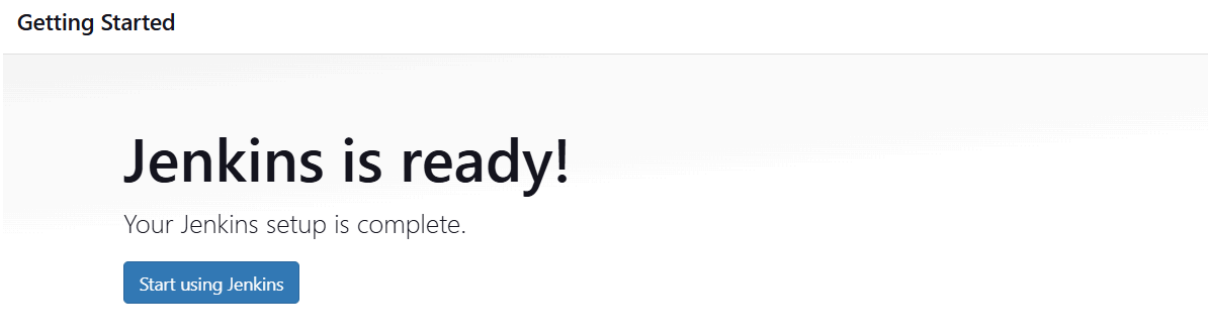


Step 8: Next Page is the INSTANCE CONFIGURATION

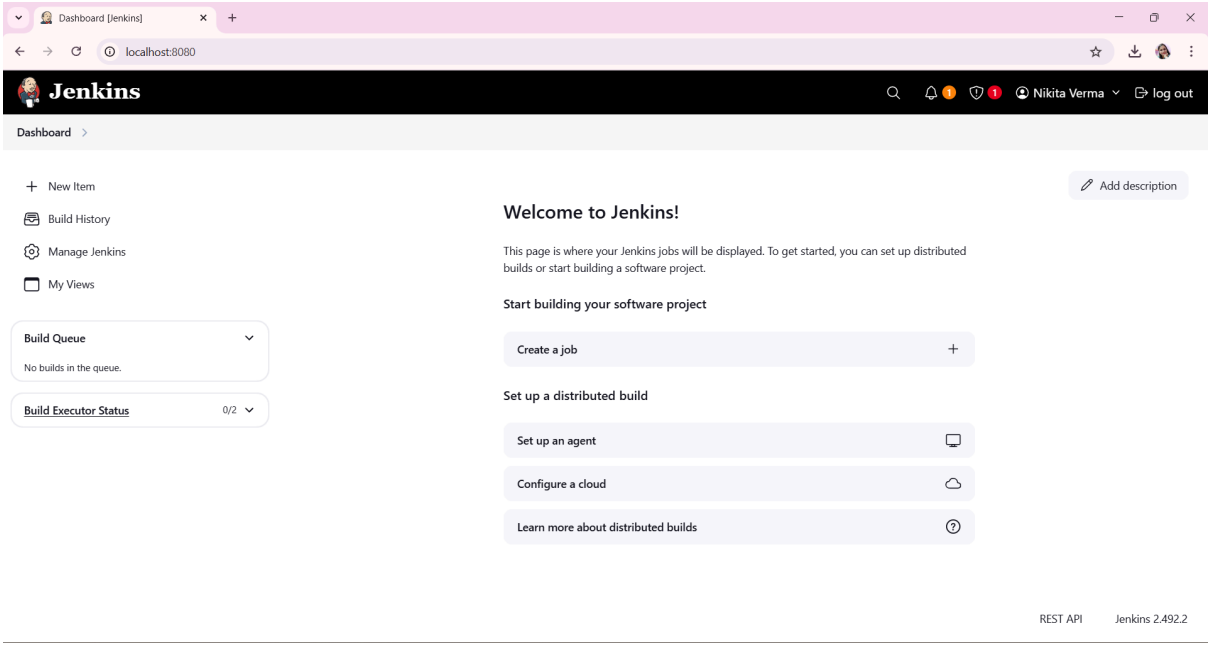
Click on Save and Finish



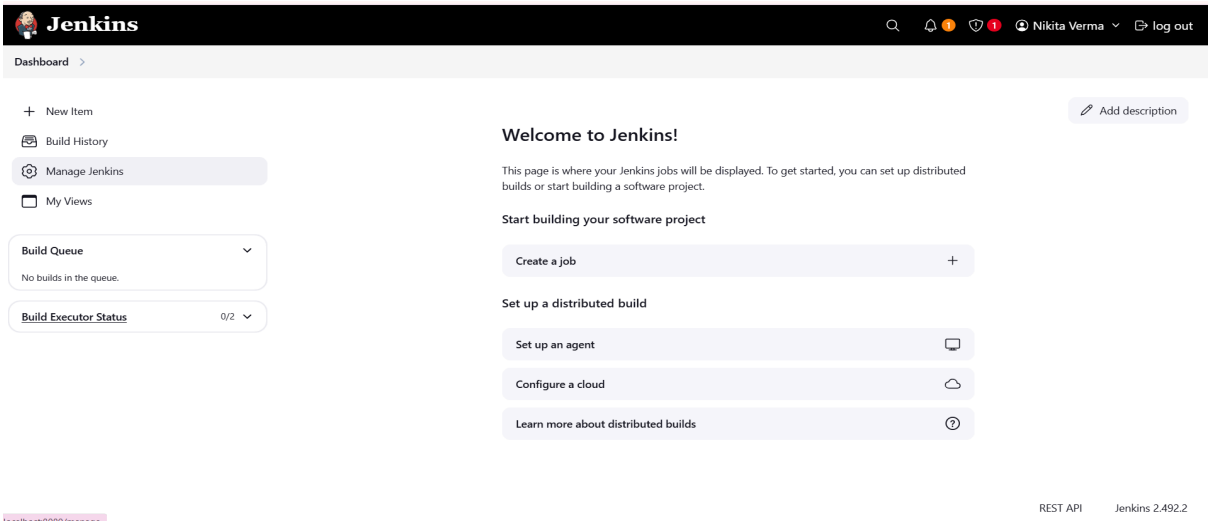
Click on Start Using Jenkins

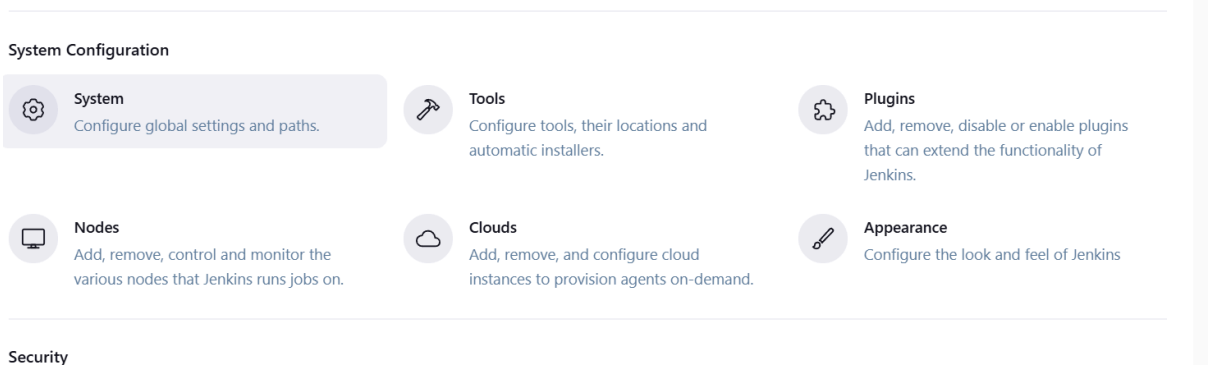


After successfully completing the above steps you will see your JENKINS Dashboard

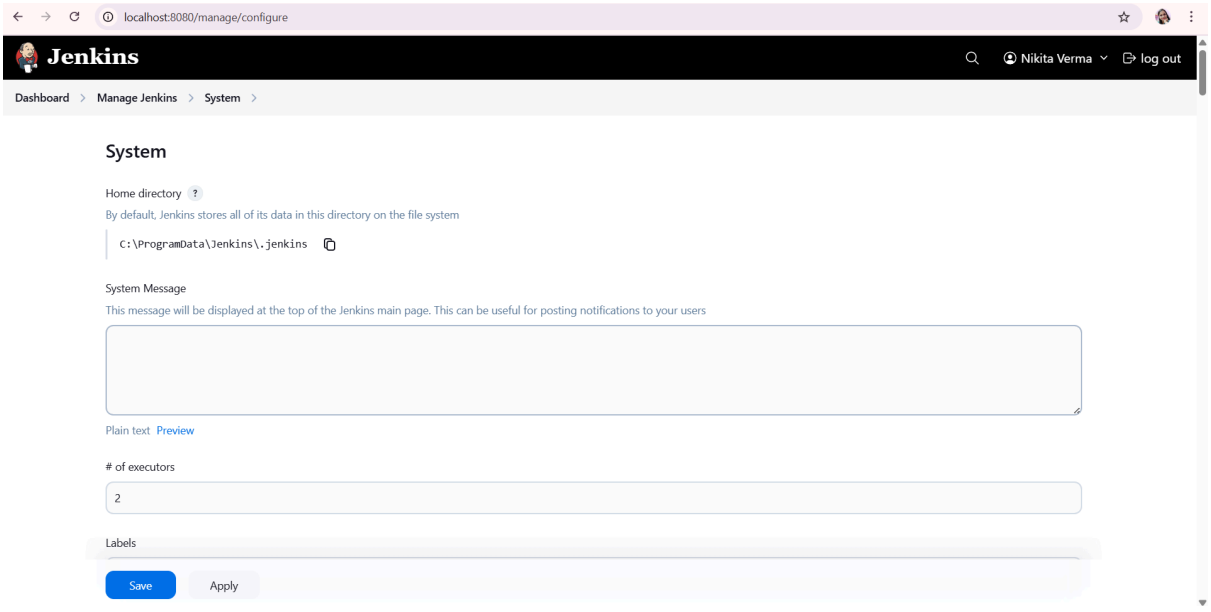


Step 9: Click On manage jenkins ------> Click On “SYSTEM”





On the System Page don't change anything, just Click SAVE



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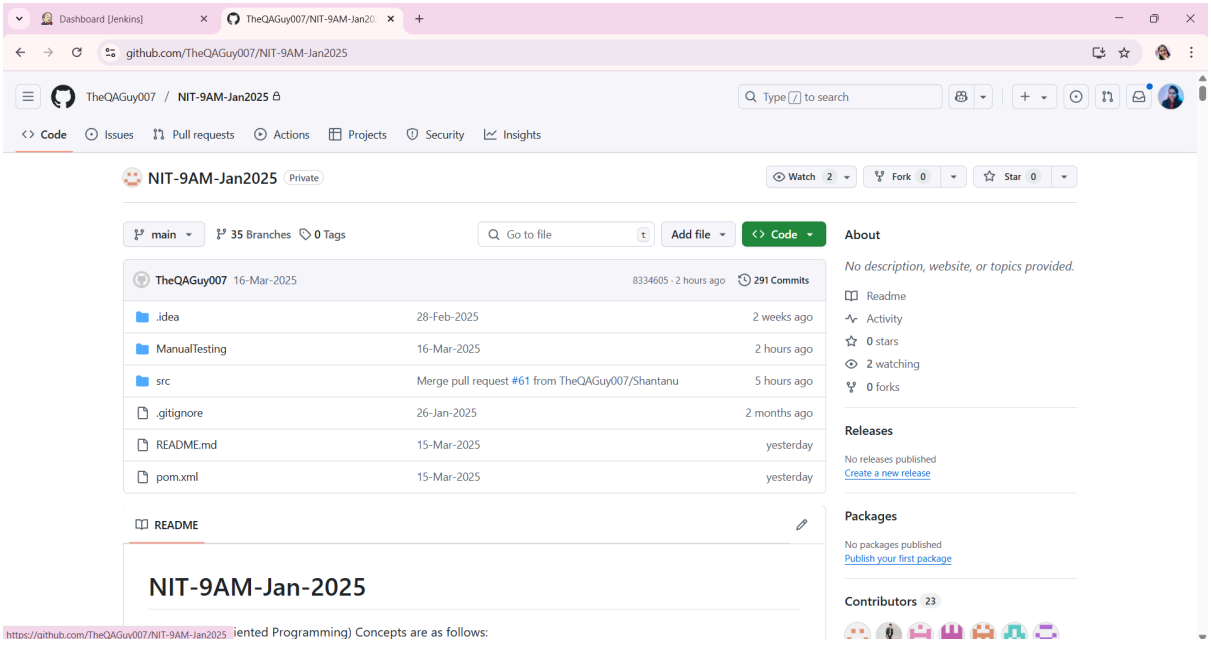
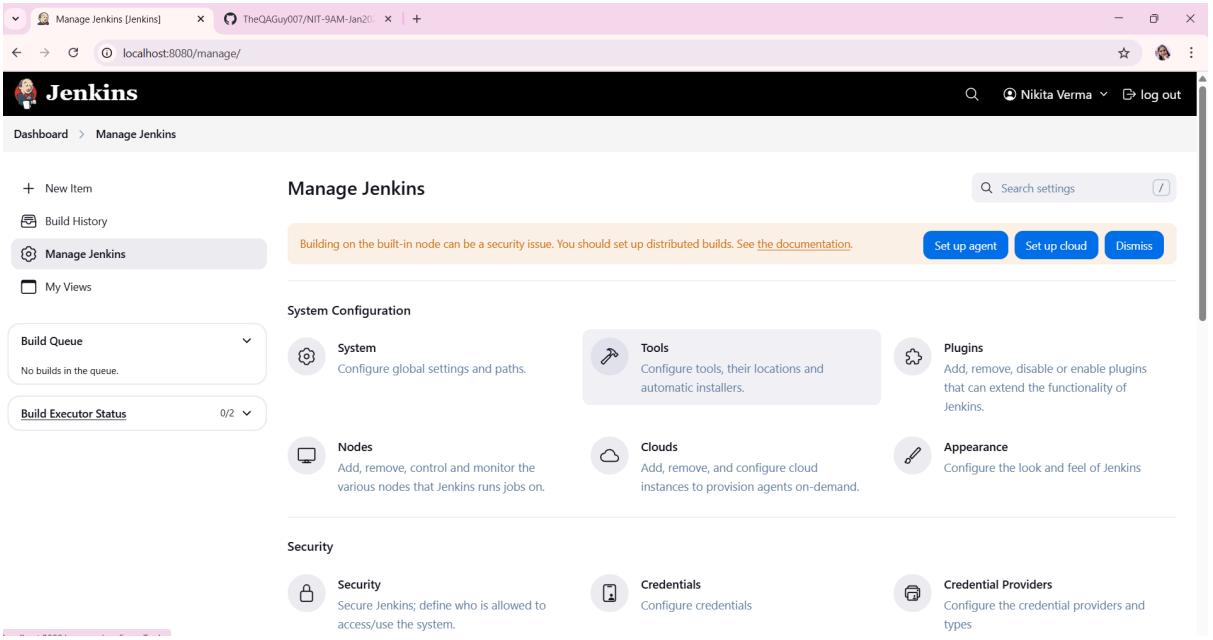
HOW TO ADD JDK, GIT AND MAVEN TO JENKINS

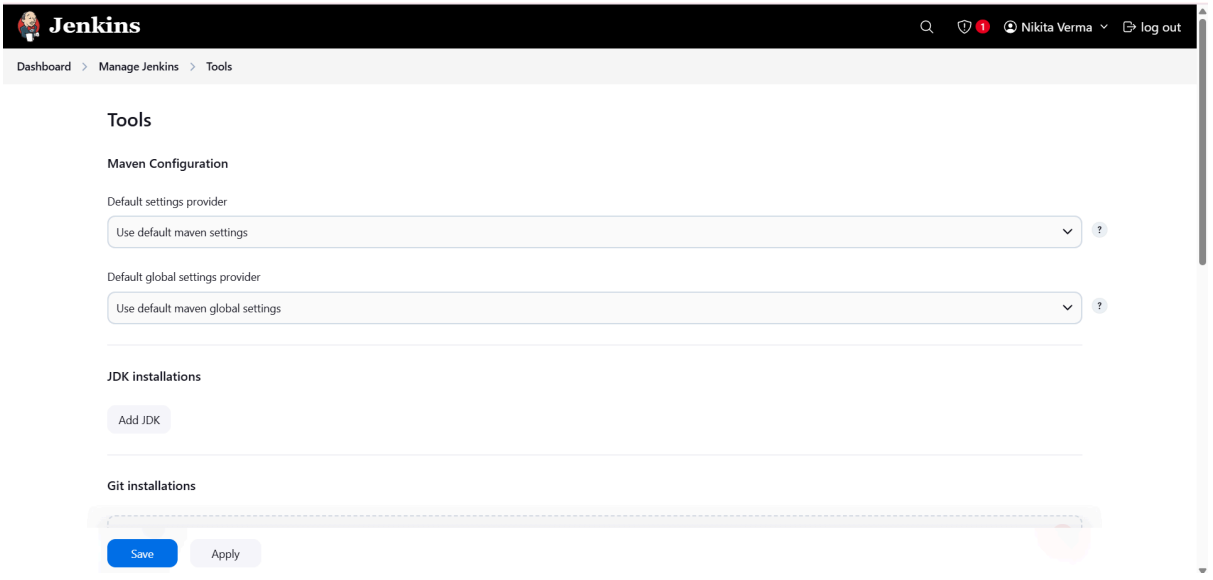
Open GITHUB ----------> Open NIT Project



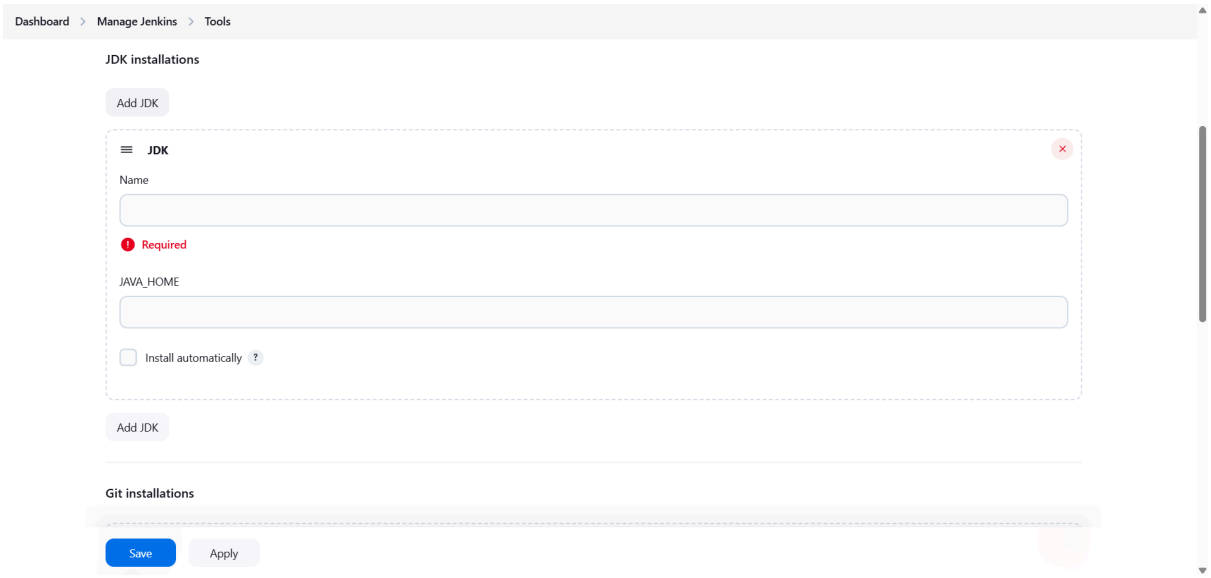
Step 1: From JENKINS dashboard Click Manage Jenkins ----------> Click TOOLS



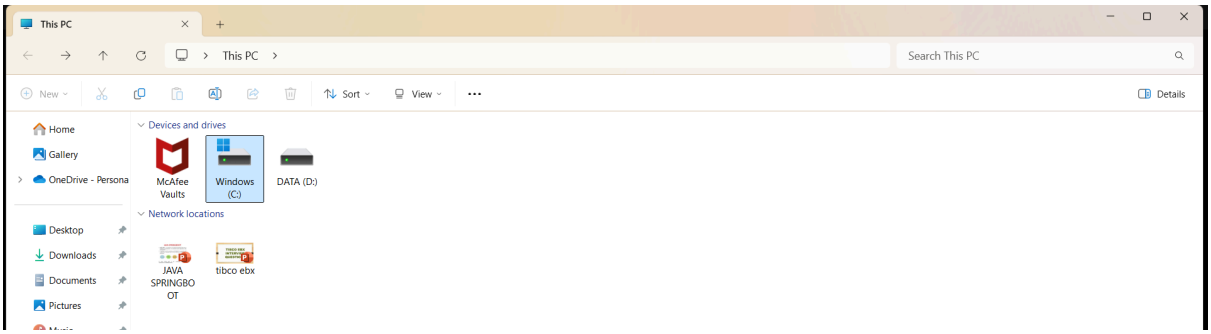
Stepp 2: In tools page Click ADD JDK

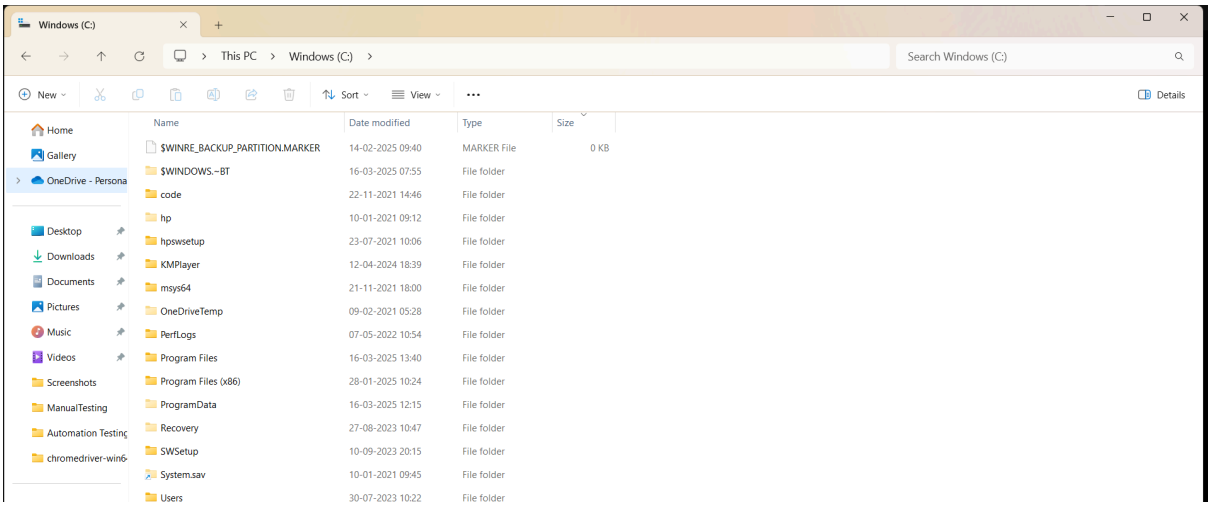


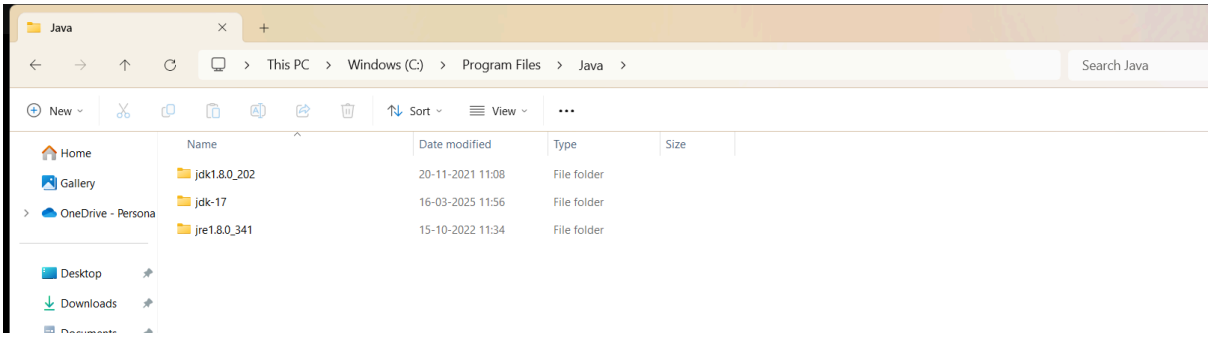
In NAME write- JAVA

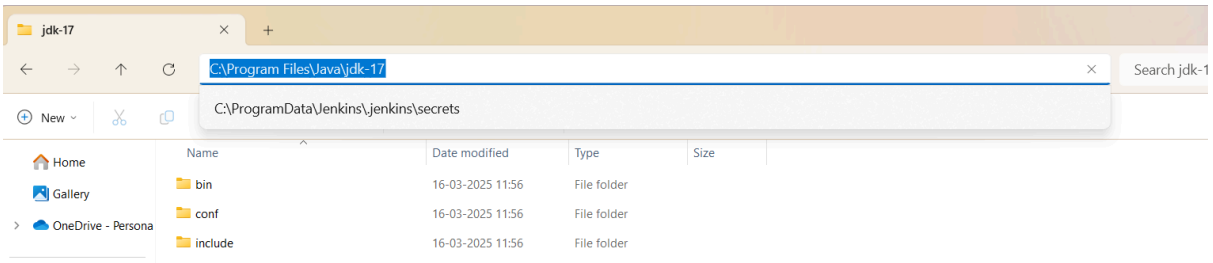


Step 3: Go to MY COMPUTER --------> CDRIVE ----------> Open Program Files ----------> Open JAVA ----------> Open JDK folder and then copy the path

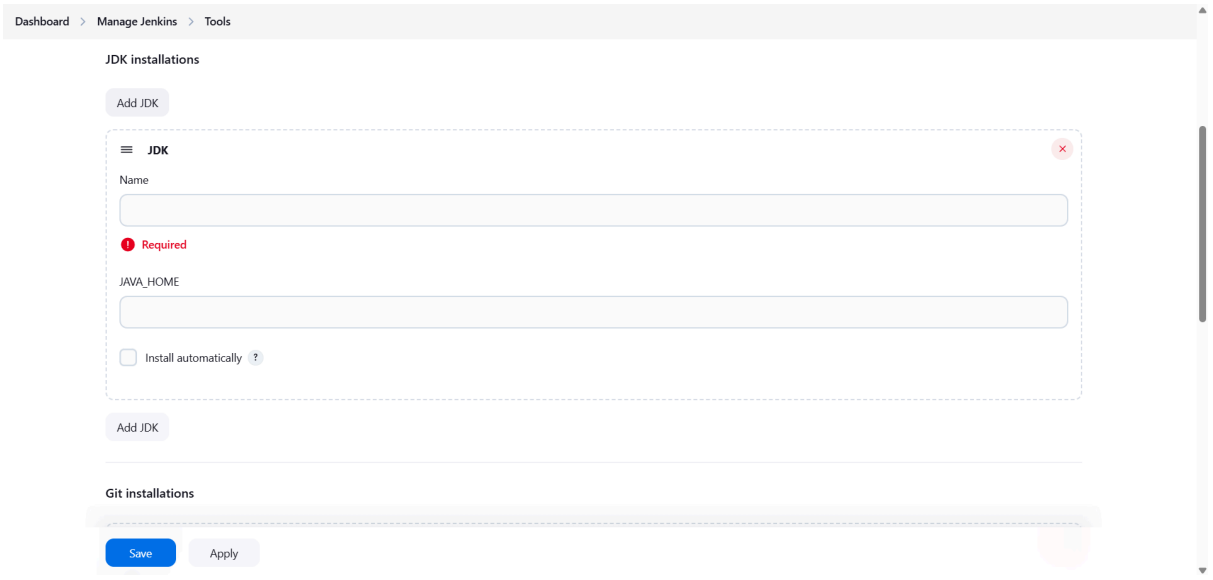








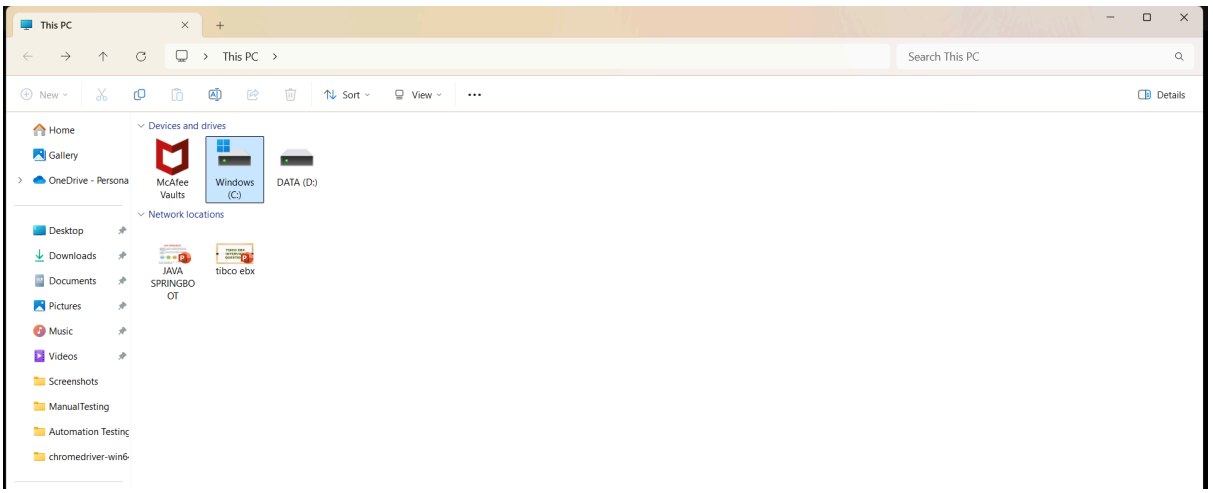
Step 4: Paste this path in JAVA_HOME section in jenkins

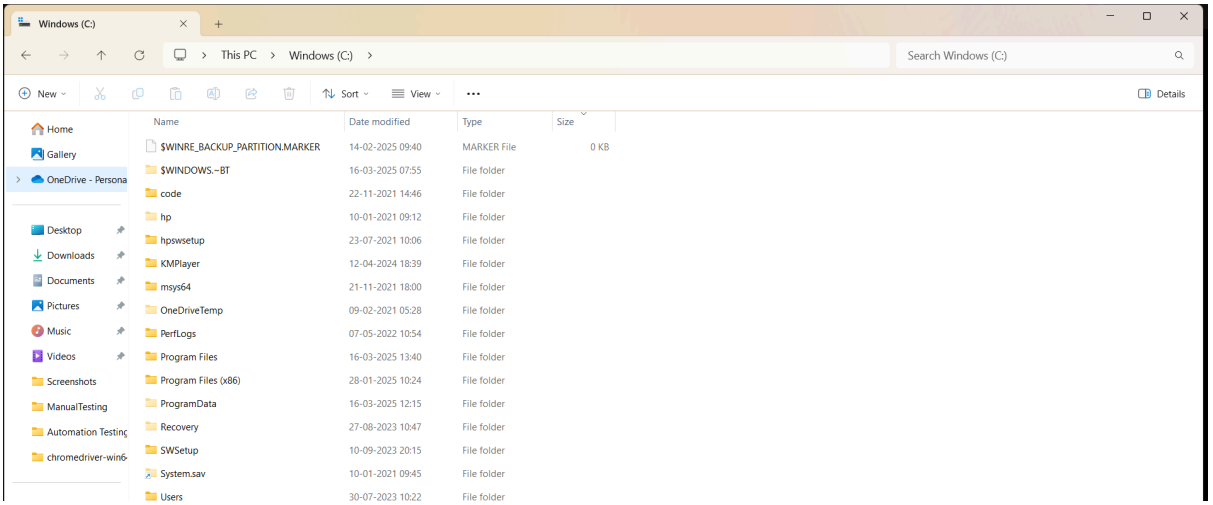


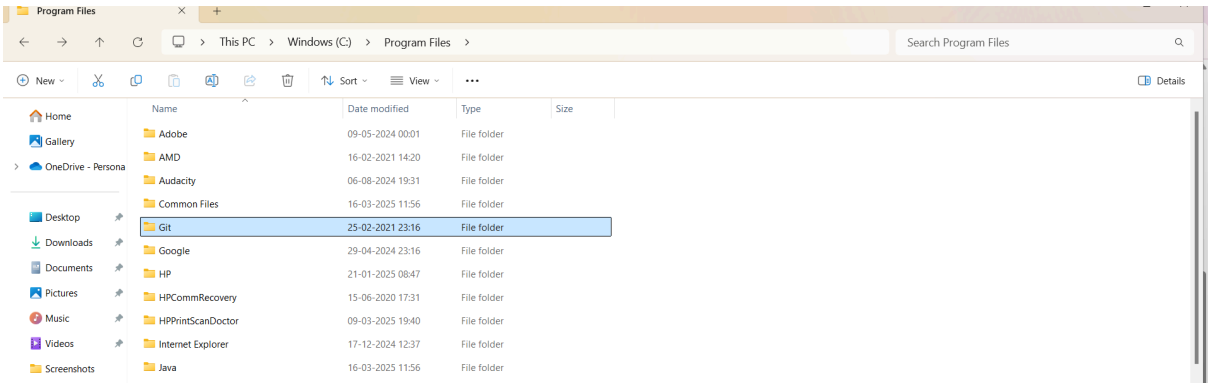
Step 5: Scroll Down and you will see GIT INSTALLATION just below JDK INSTALLATION

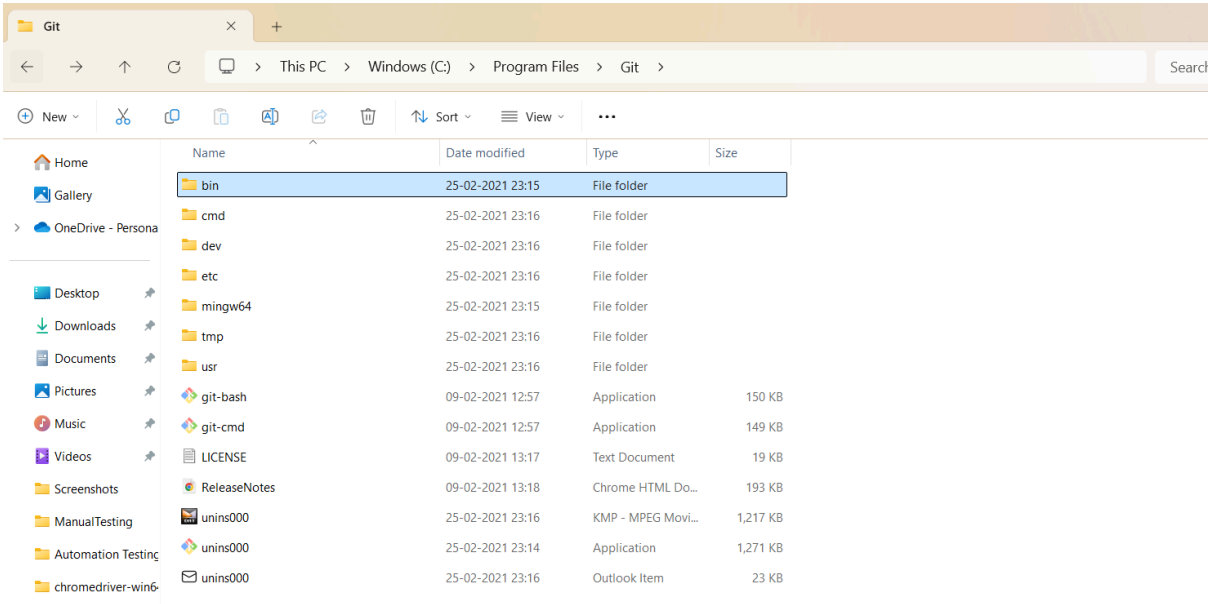
Now to get GIT path :

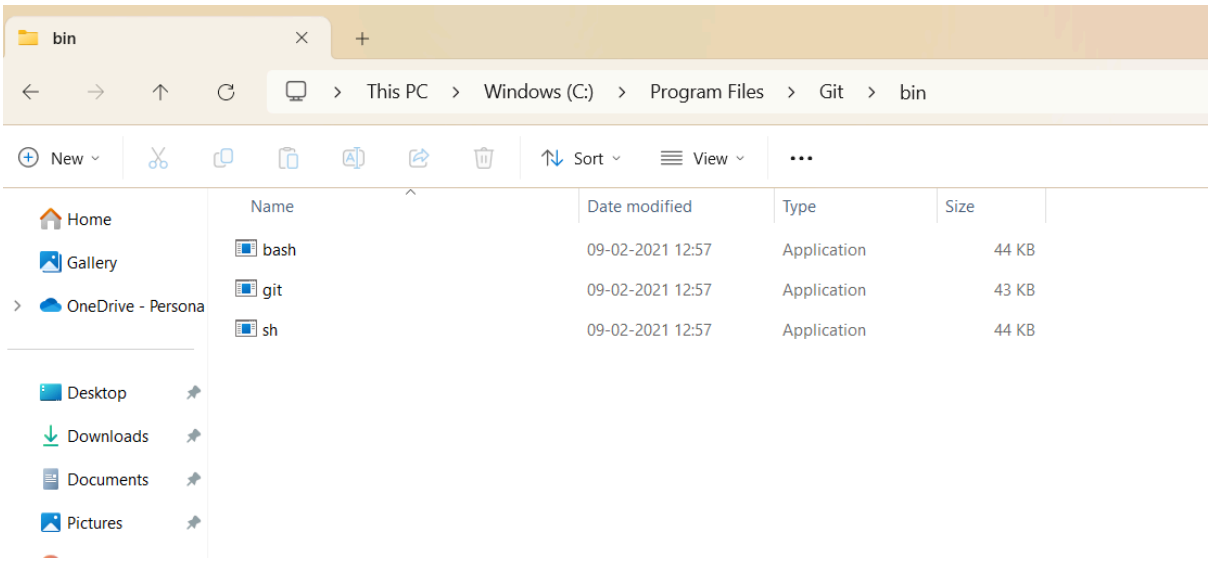
Go to my computer --------> open Program files --------> Open Git folder --------> Open Bin --------> Copy Path

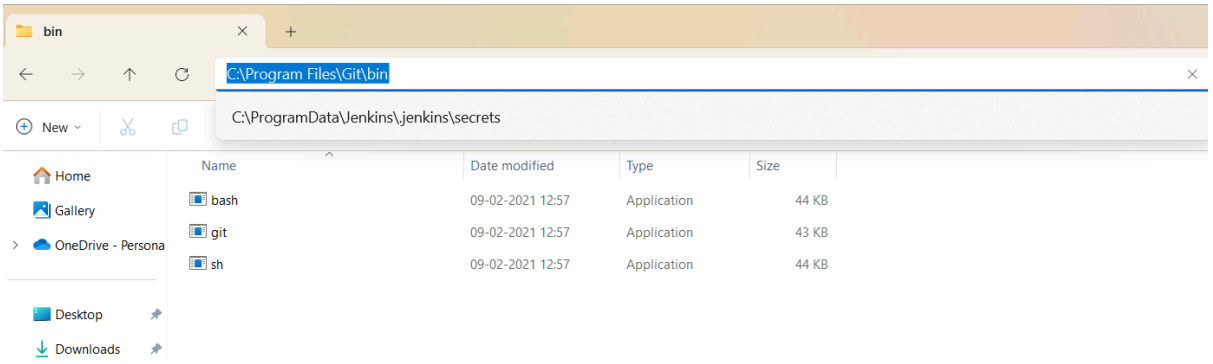

This PC
This PC
Search This PC
New
Sort
View
Details
Home
Gallery
OneDrive - Persona
Desktop
Downloads
Documents
Pictures
Music
Videos
Screenshots
ManualTesting
Automation Testing
chromedriver-win6
Devices and drives
McAfee Vaults
Windows (C:)
DATA (D:)
Network locations
JAVA SPRINGBOOT
tibco ebx


Windows (C:)
This PC
Windows (C:)
Search Windows (C:)
New
Sort
View
Details
Home
Gallery
OneDrive - Persona
Desktop
Downloads
Documents
Pictures
Music
Videos
Screenshots
ManualTesting
Automation Testing
chromedriver-win6
Name
Date modified
Type
Size
$WINRE_BACKUP_PARTITION.MARKER 14-02-2025 09:40 MARKER File 0 KB
$WINDOWS.~BT 16-03-2025 07:55 File folder
code 22-11-2021 14:46 File folder
hp 10-01-2021 09:12 File folder
hpswsetup 23-07-2021 10:06 File folder
KMPlayer 12-04-2024 18:39 File folder
msys64 21-11-2021 18:00 File folder
OneDriveTemp 09-02-2021 05:28 File folder
PerfLogs 07-05-2022 10:54 File folder
Program Files 16-03-2025 13:40 File folder
Program Files (x86) 28-01-2025 10:24 File folder
ProgramData 16-03-2025 12:15 File folder
Recovery 27-08-2023 10:47 File folder
SWSetup 10-09-2023 20:15 File folder
System.sav 10-01-2021 09:45 File folder
Users 30-07-2023 10:22 File folder

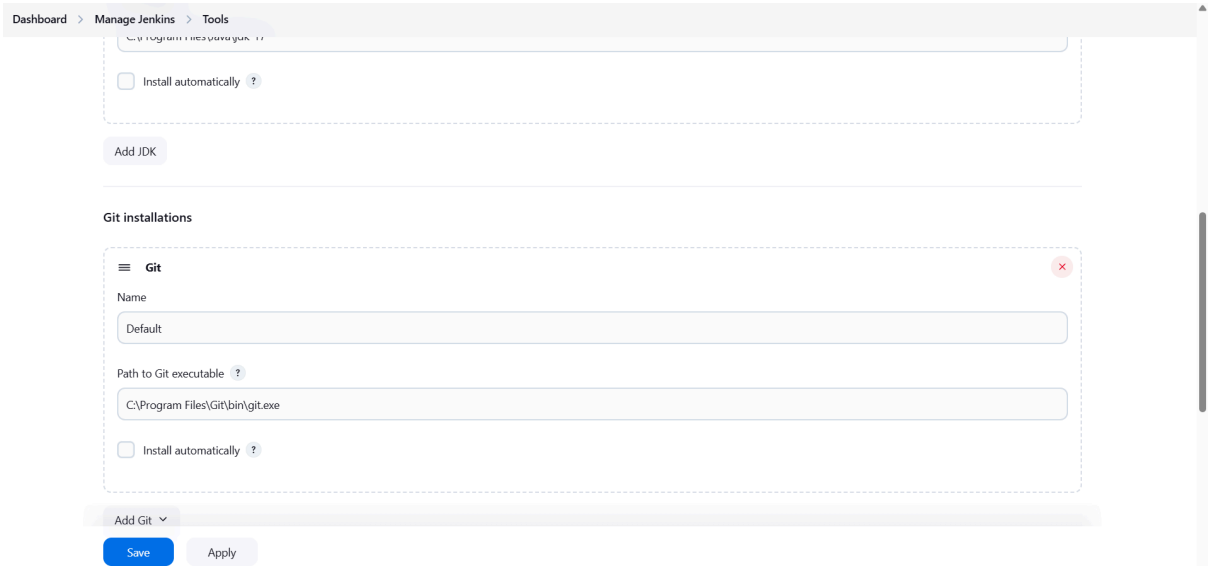

Program Files
This PC
Windows (C:)
Program Files
Search Program Files
New
Sort
View
Details
Home
Gallery
OneDrive - Persona
Desktop
Downloads
Documents
Pictures
Music
Videos
Screenshots
Name
Date modified
Type
Size
Adobe 09-05-2024 00:01 File folder
AMD 16-02-2021 14:20 File folder
Audacity 06-08-2024 19:31 File folder
Common Files 16-03-2025 11:56 File folder
Git 25-02-2021 23:16 File folder
Google 29-04-2024 23:16 File folder
HP 21-01-2025 08:47 File folder
HPCommRecovery 15-06-2020 17:31 File folder
HPPrintScanDoctor 09-03-2025 19:40 File folder
Internet Explorer 17-12-2024 12:37 File folder
Java 16-03-2025 11:56 File folder



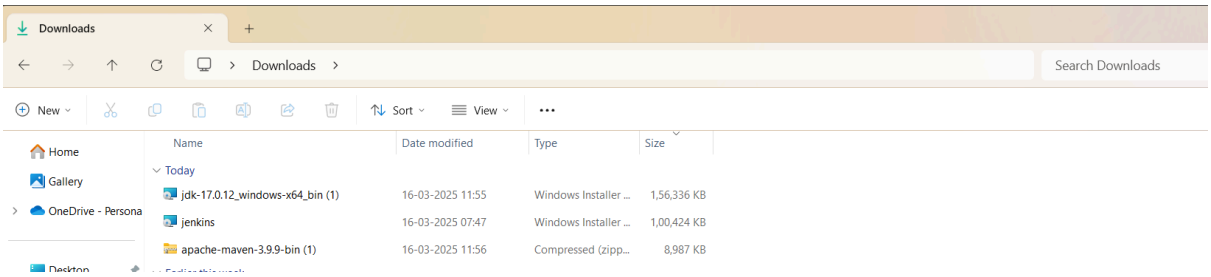




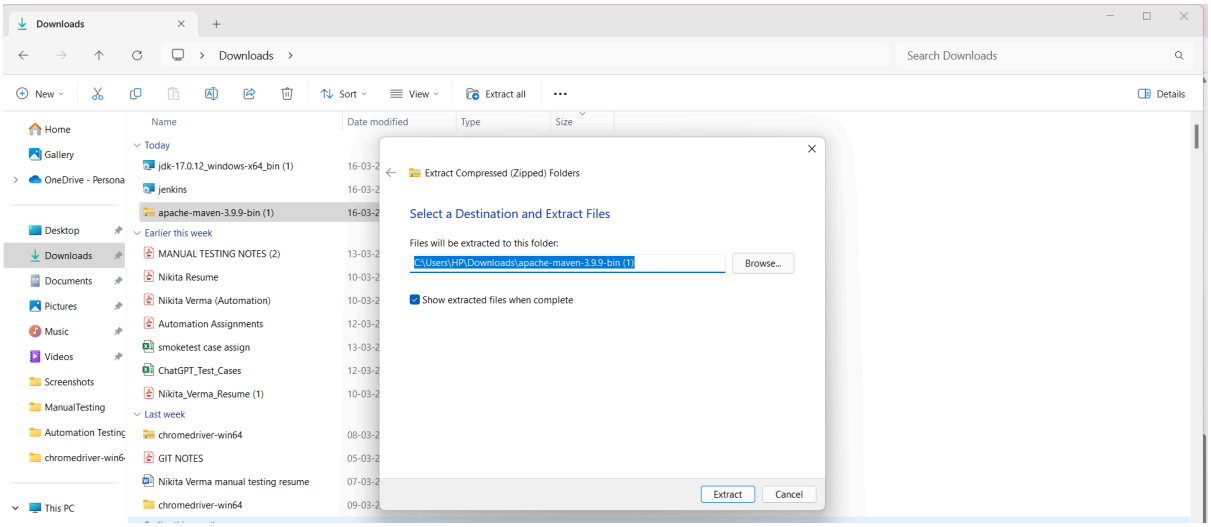
And paste it in the GIT path in jenkins



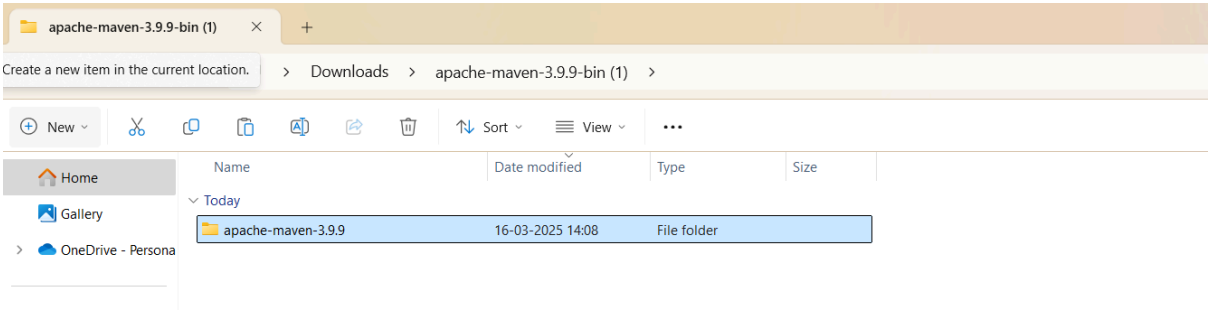
Step 6 : Now Go to MAVEN that you have downloaded
[Maven download link : - https://maven.apache.org/download.cgi - Windows Users should download the "apache-maven-3.9.9-bin.zip" file.]

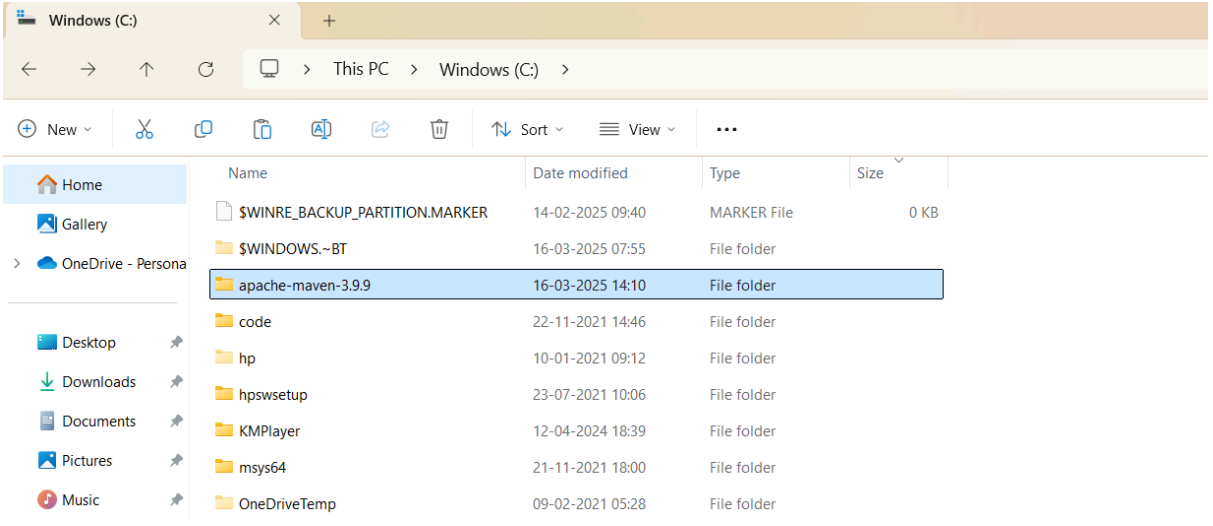


Right Click and extract it

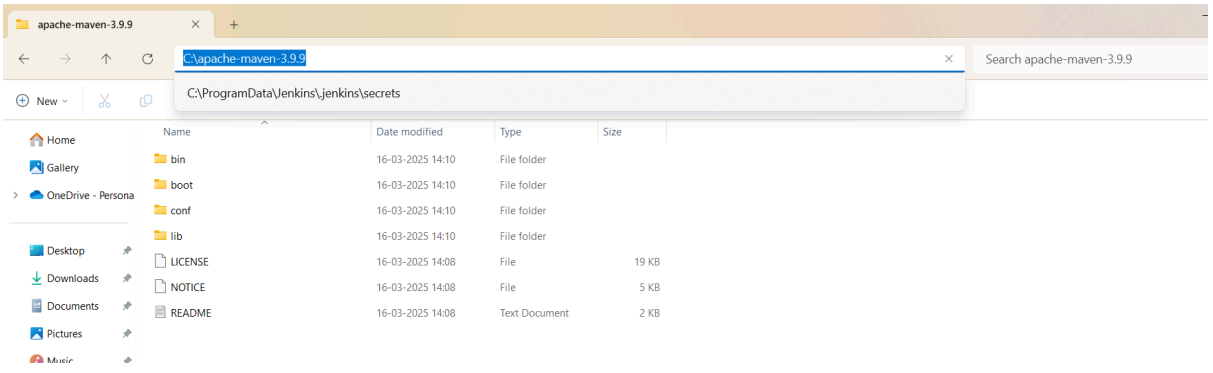


Copy the extracted folder and paste it in the CDRIVE

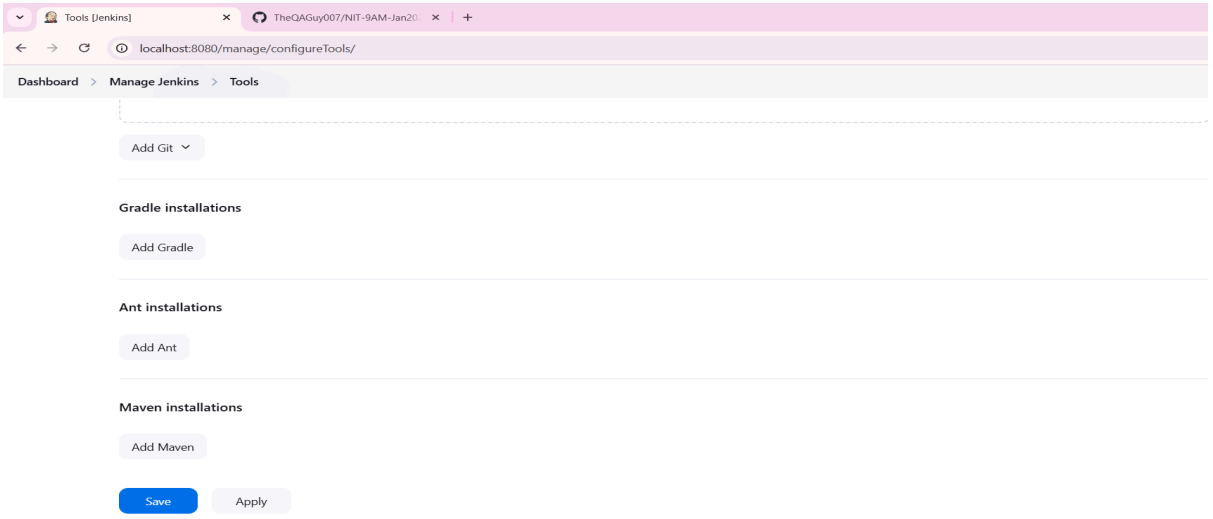




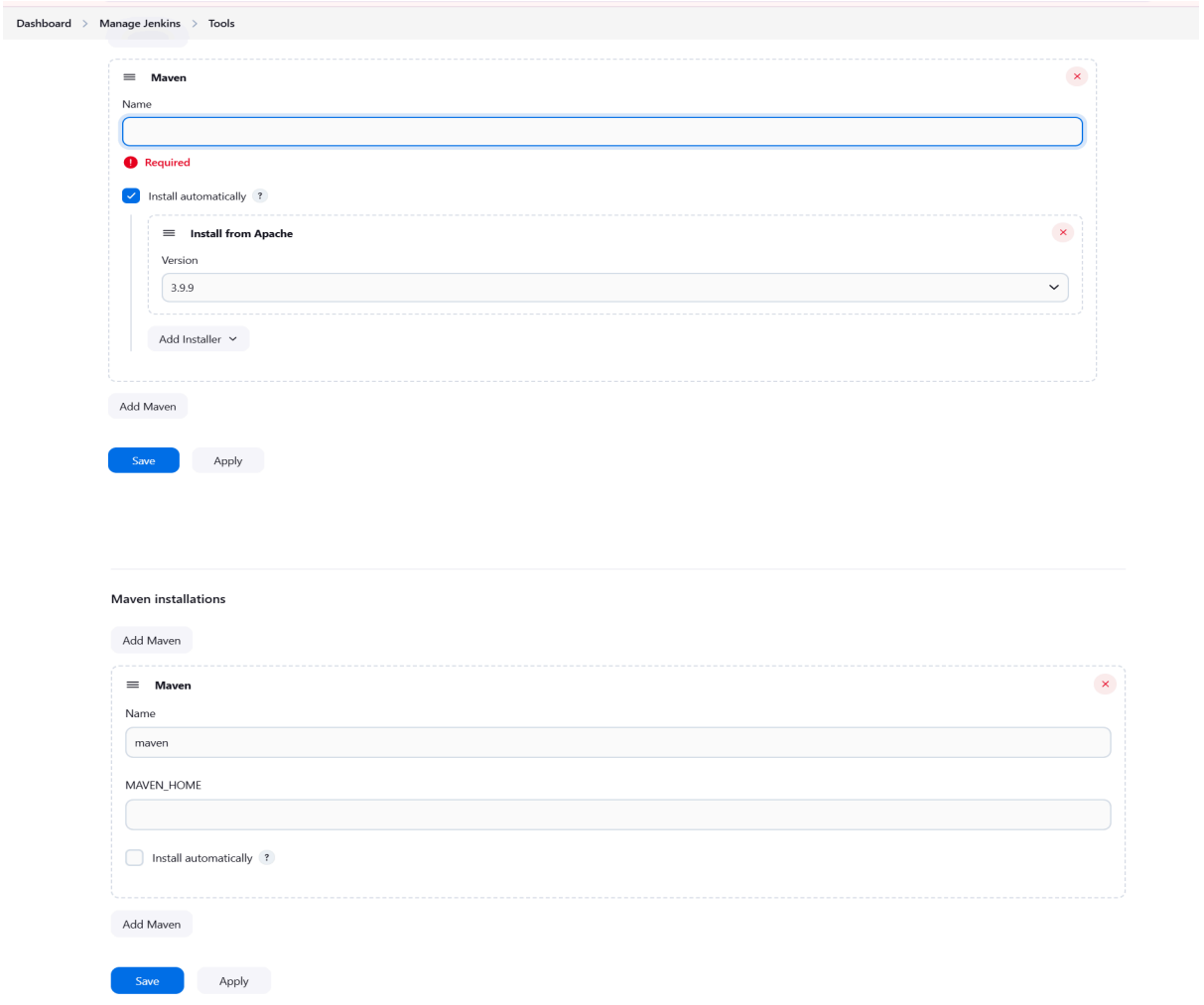
Step 7: Go inside that folder and copy the path



Step 8: Go back to the same page where you have pasted git nd jdk path, in the same page scroll down you will see MAVEN INSTALLATION, Click ADD MAVEN

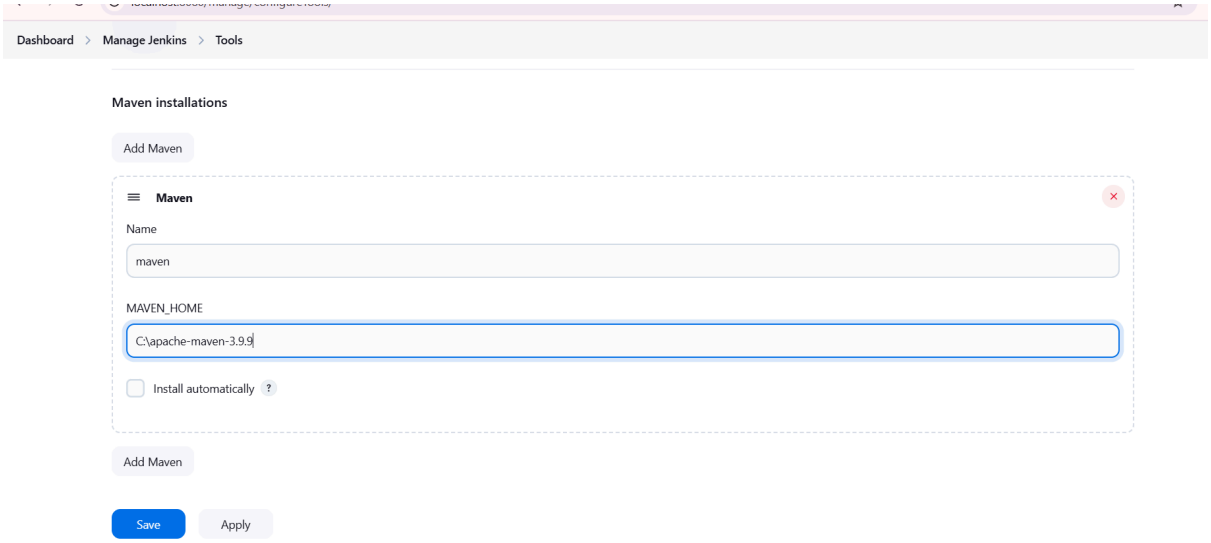


In name section write maven
And DESELECT INSTALL AUTOMATICALLY



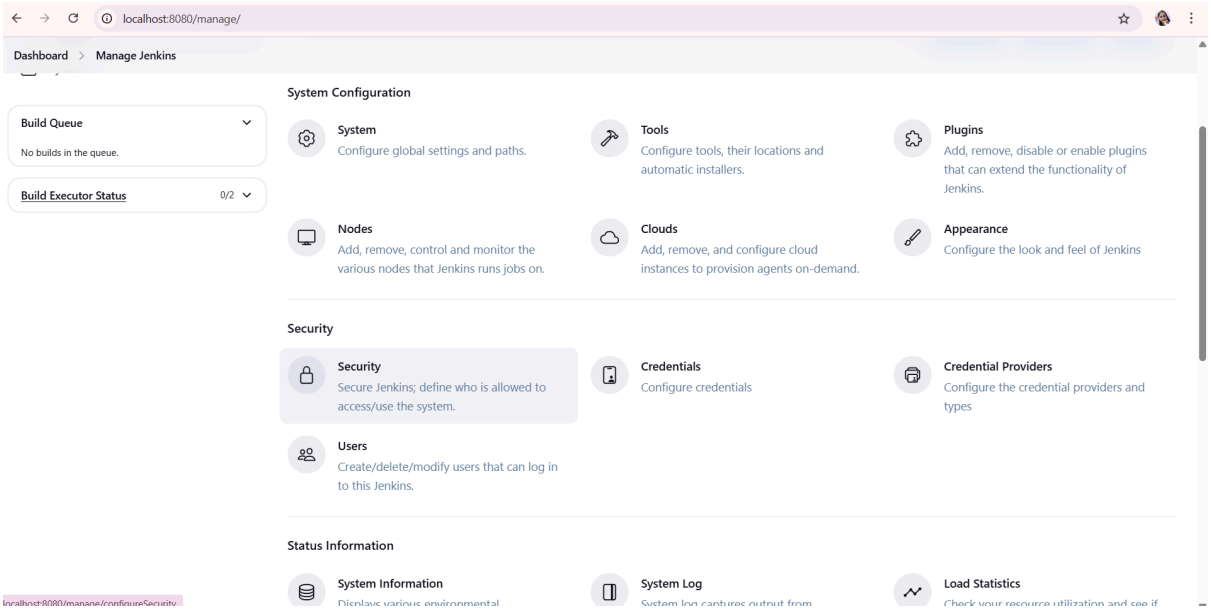
Then paste the copied path here in MAVEN_HOME

CLICK SAVE AND YOU ARE DONE

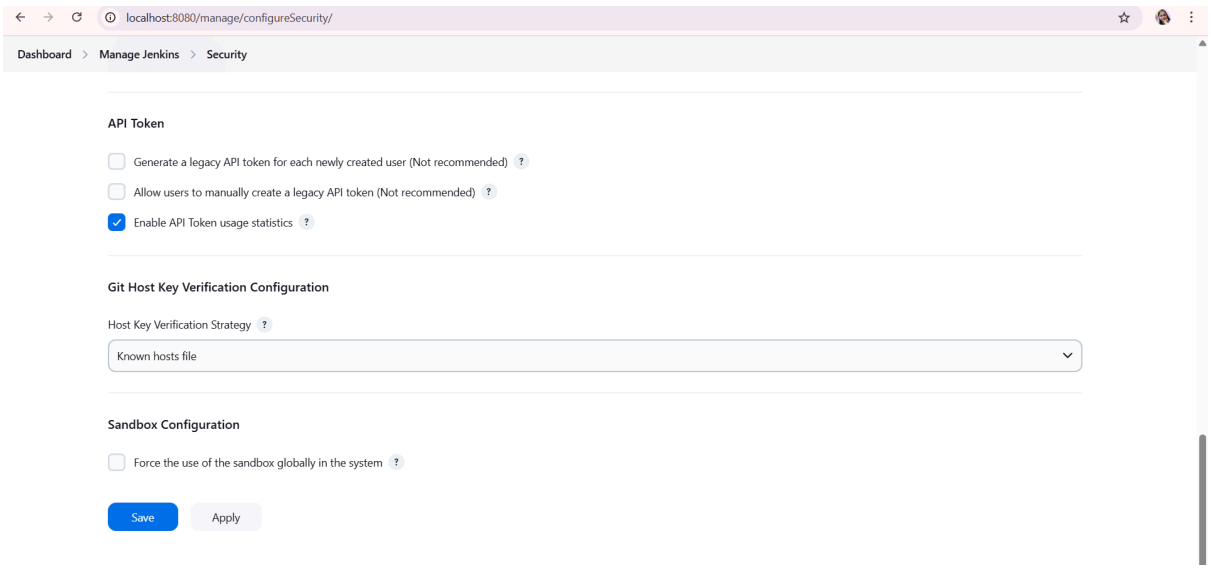


SECURITY CONFIGURATION

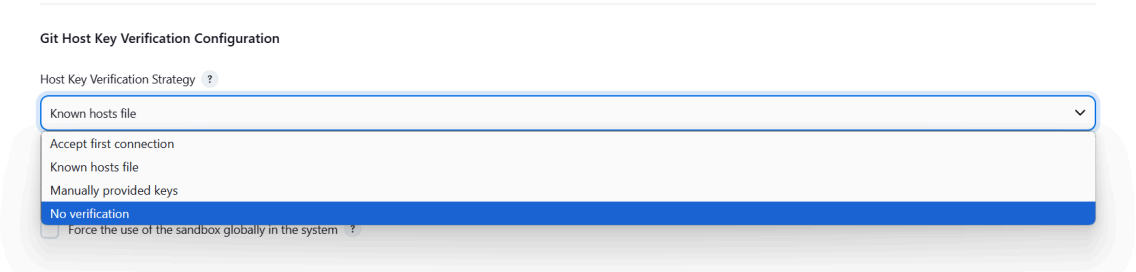
Step 1 : Now Again go back to Dashboard —----------> Manage Jenkins —----------> And Open Security



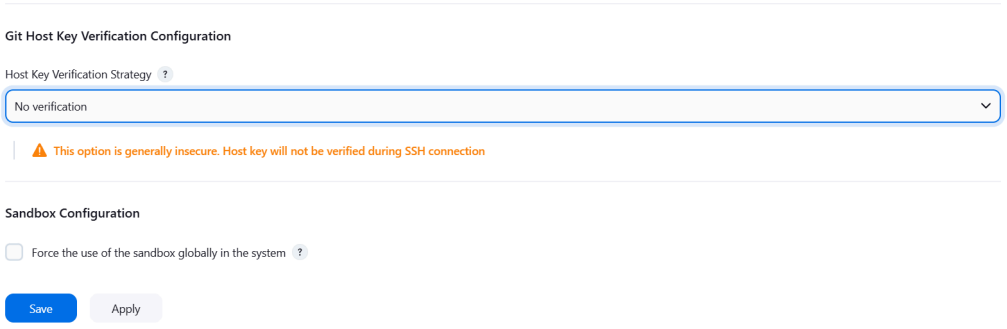
Step 2 : Go to Git host Key Verification Configuration



Here select NO VERIFICATION from drop down



And click SAVE

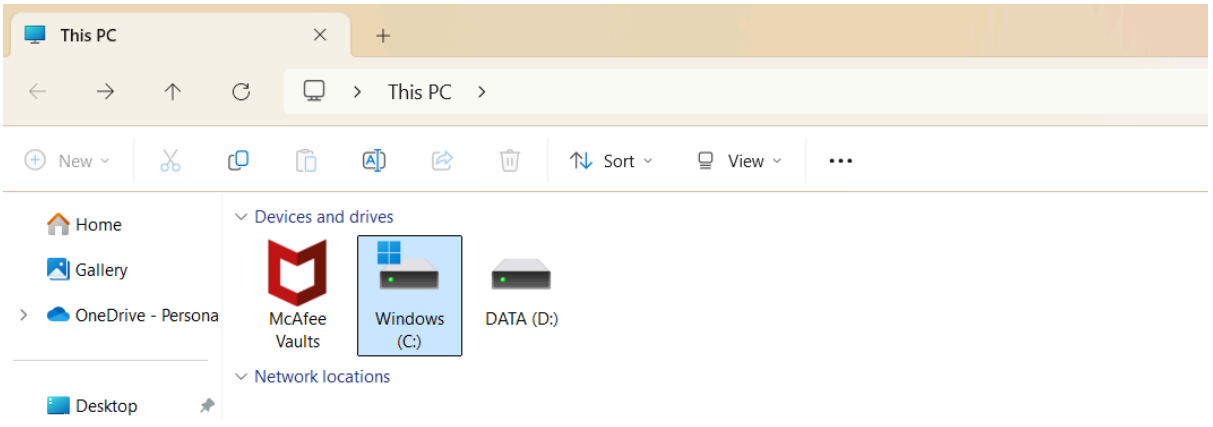


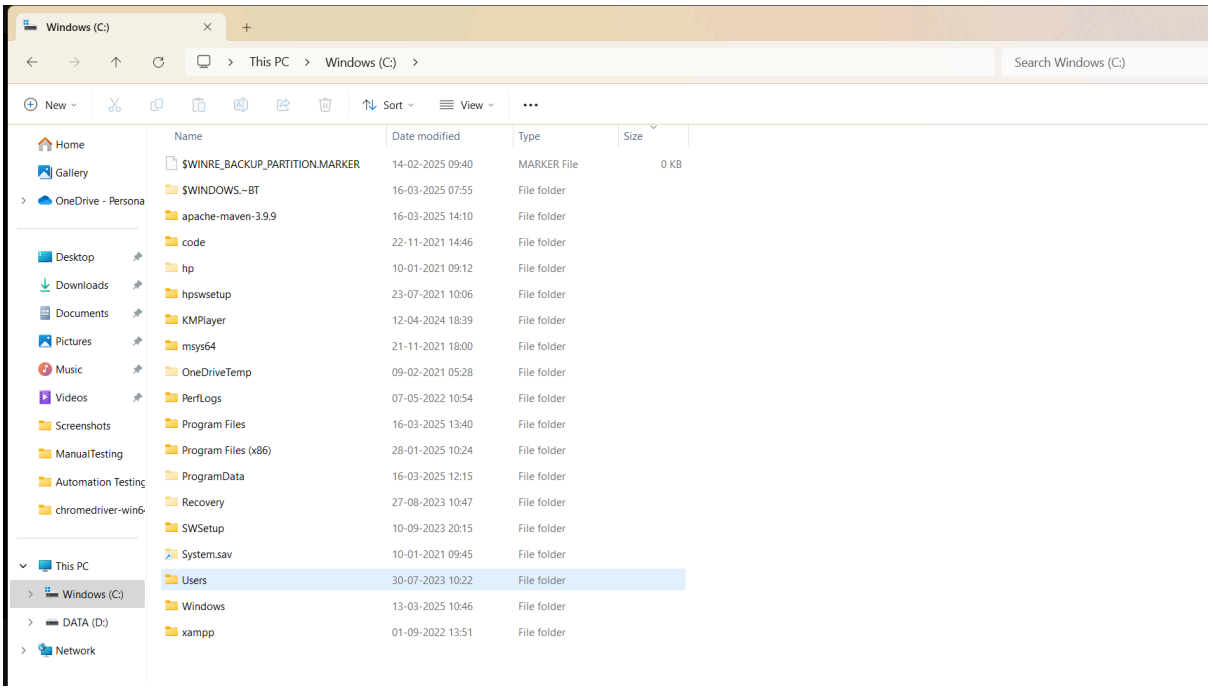
By now all setup are completed and now, we have to CREATE JOBS

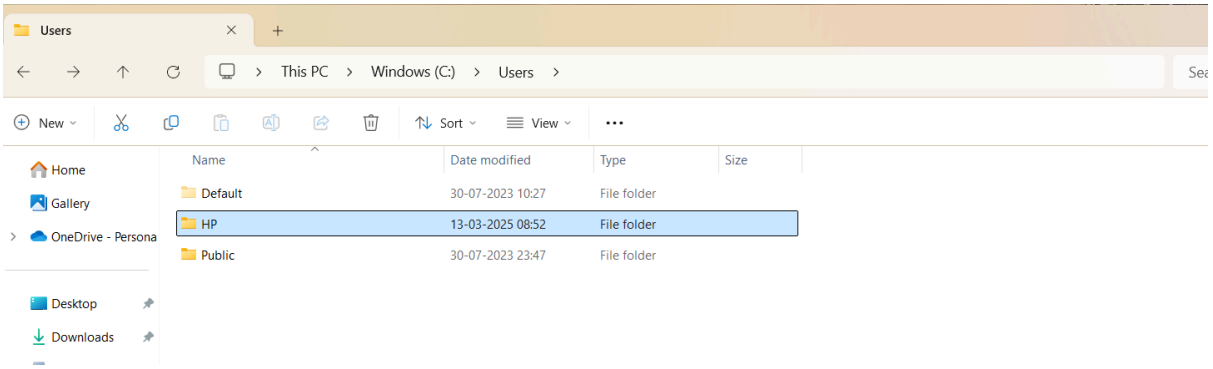
INTEGRATING GITHUB WITH JENKINS

SSH KEY GENERATION

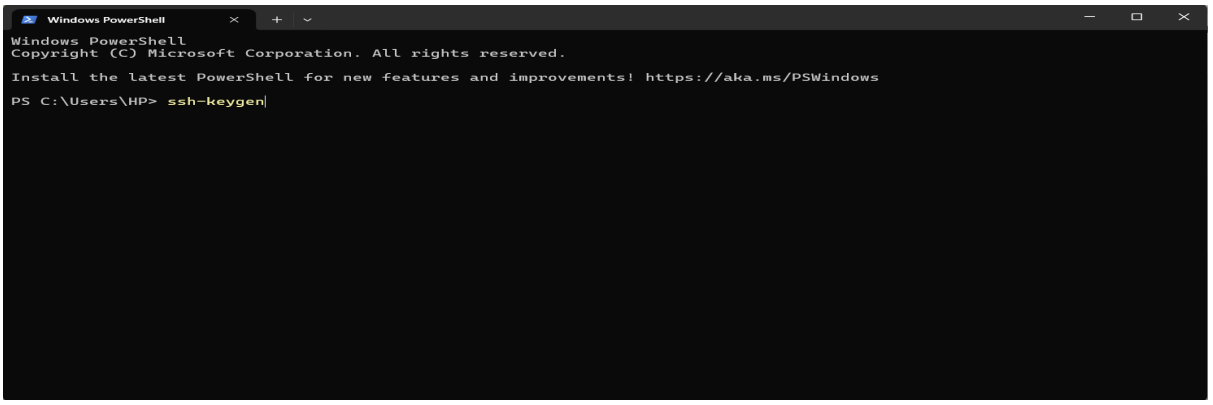
Step 1: Go to Cdrive ----------> Users --------->And select your Laptop User --------->Open it --------->Go to View---------> Click Show ---------> Hidden Items

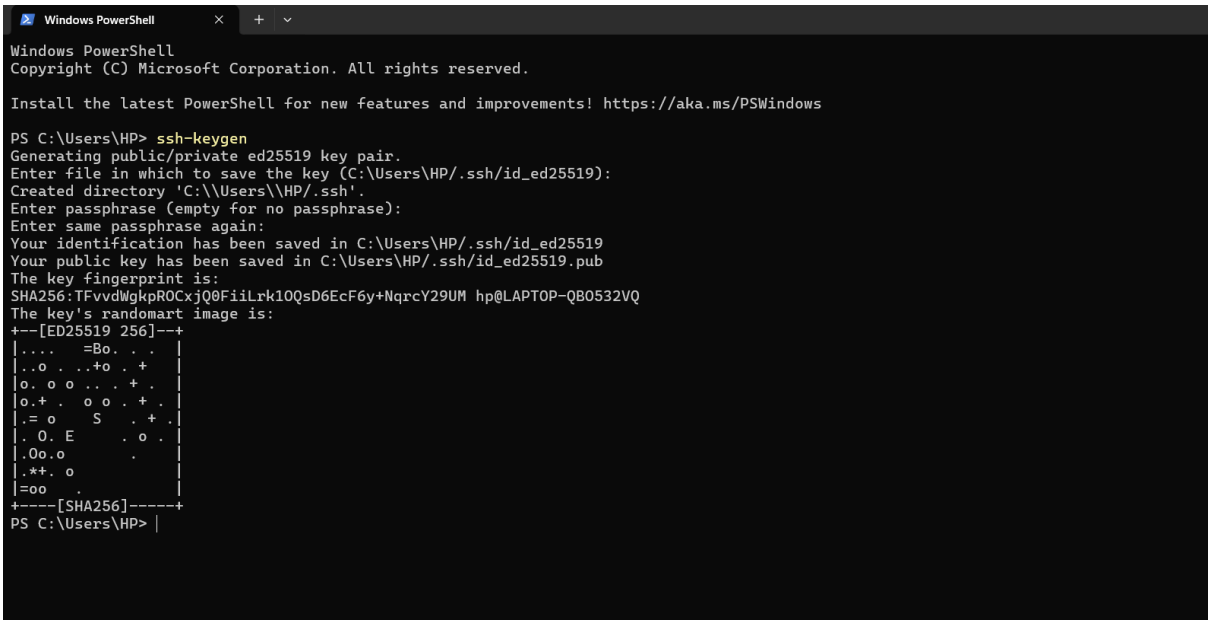




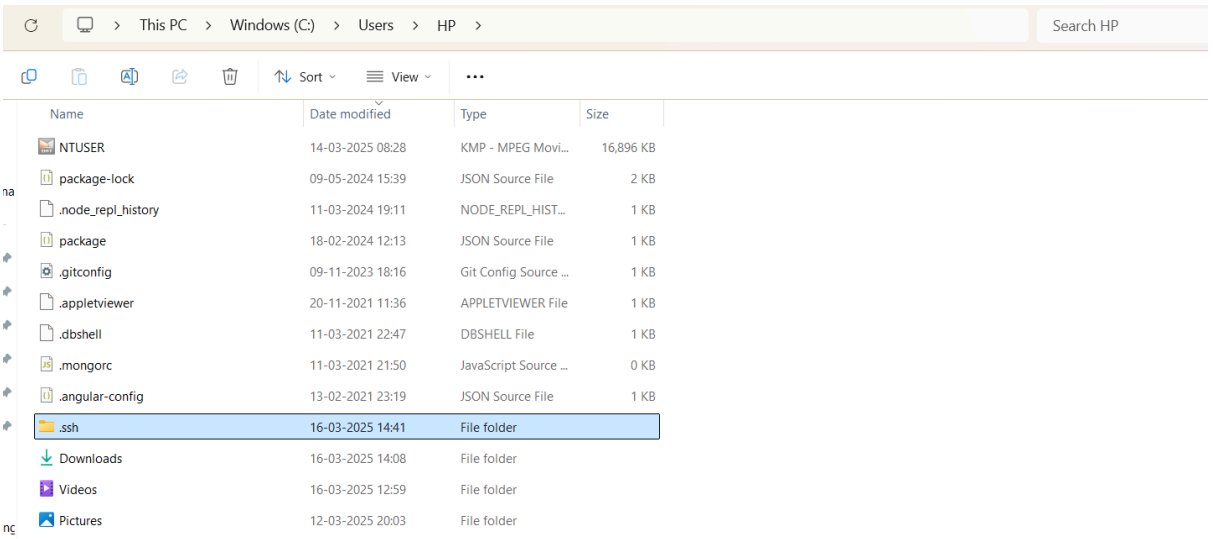


After unhiding the items, right click Randomly and select OPEN IN TERMINAL
In terminal type **ssh-keygen**
And keep on clicking till you get a triangular pattern

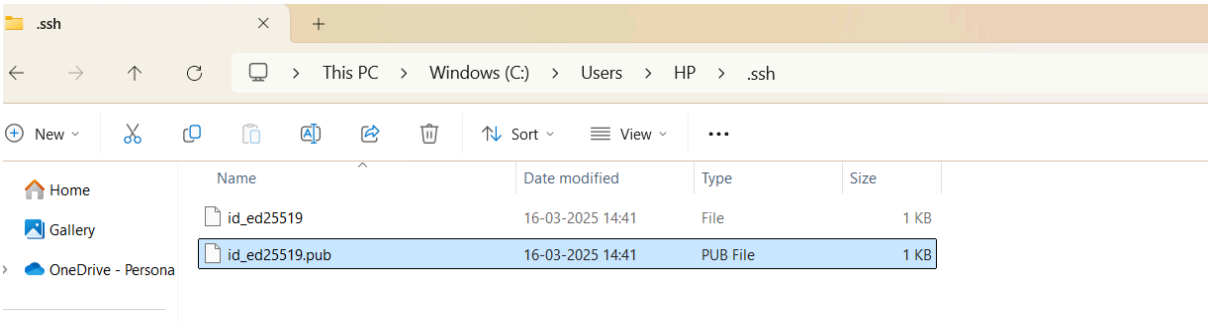


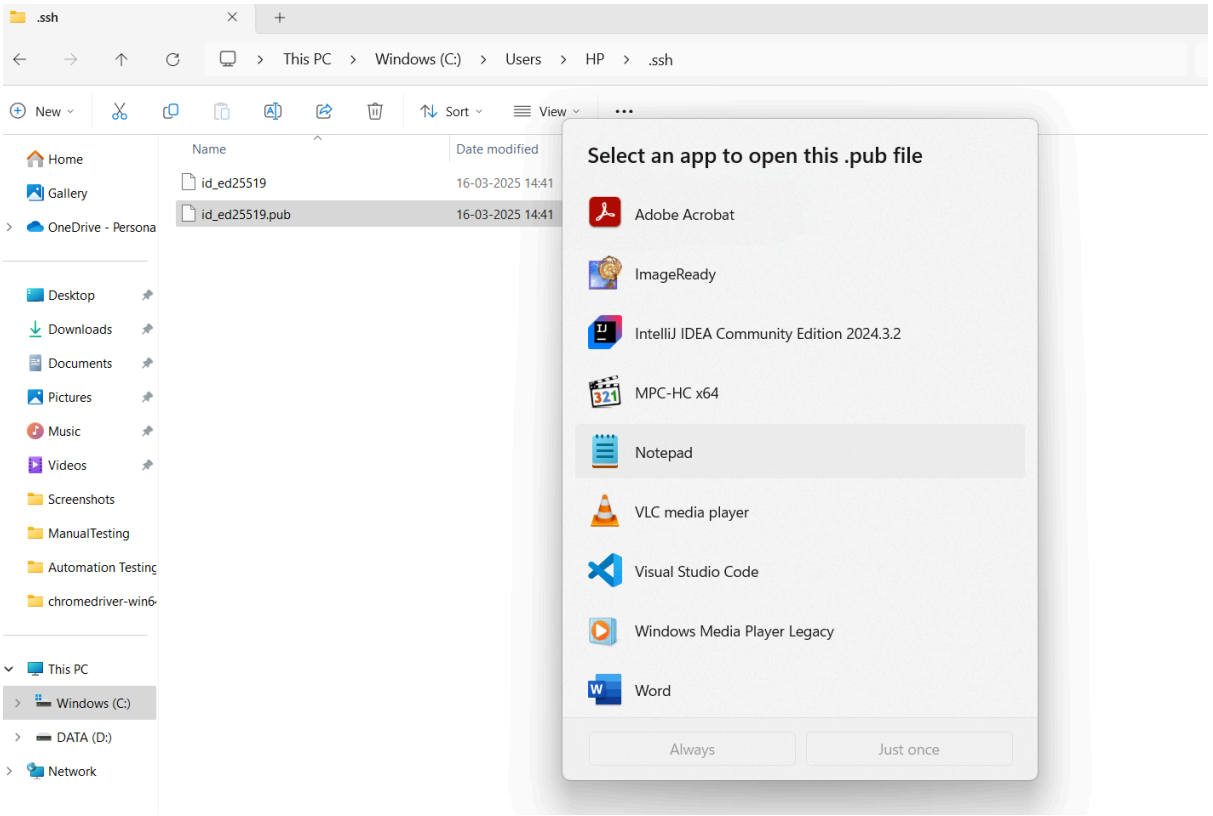


Step 2: Now again go to th User Folder and you will see **.ssh** folder



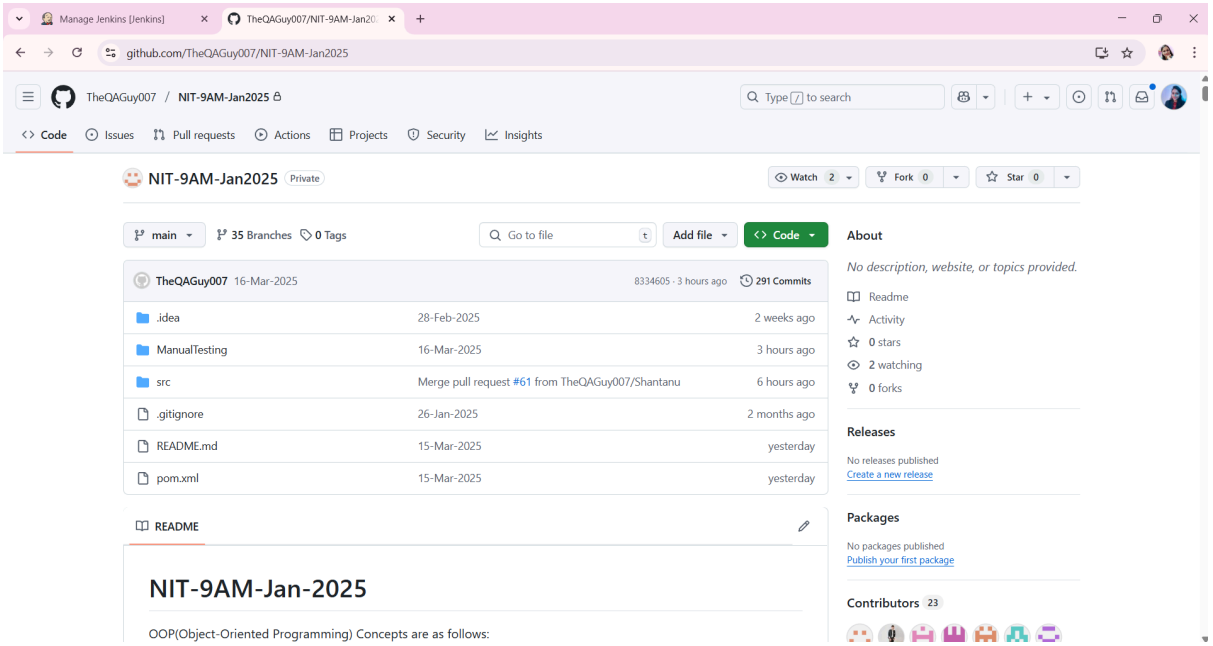
Step 3: Open the .ssh folder—-------> Right Click on the **.pub** file and open it in notepad

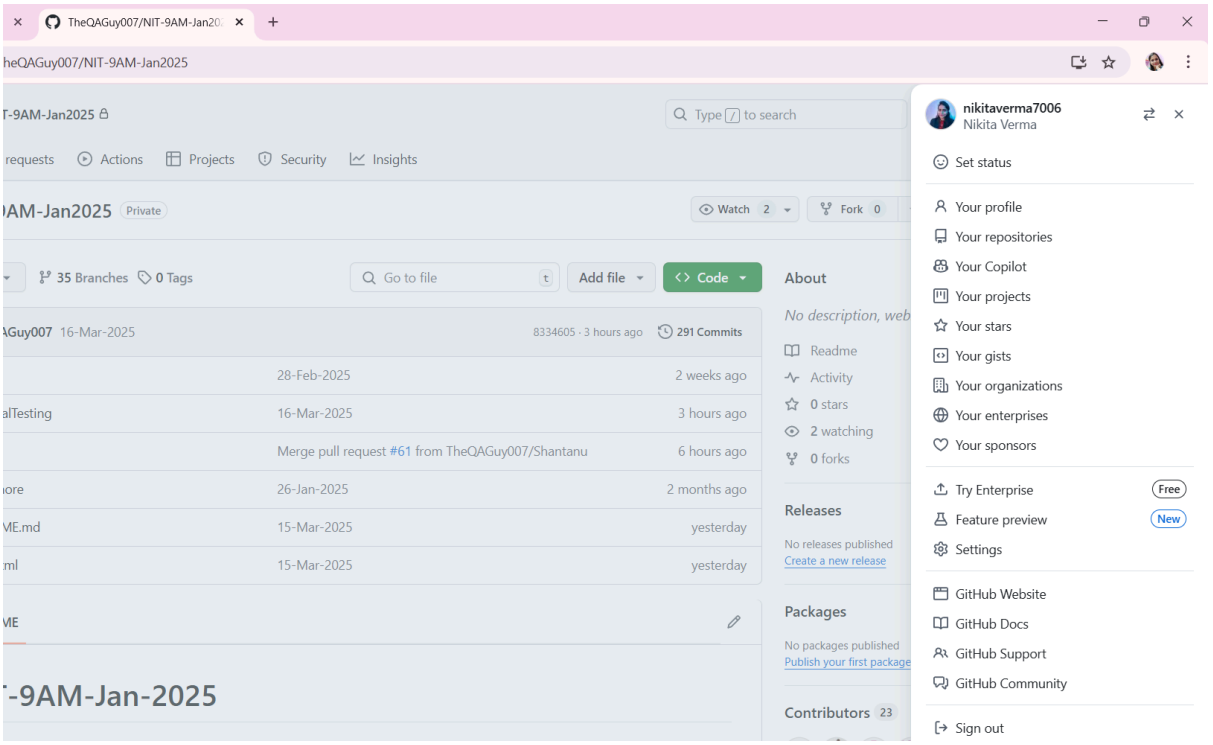


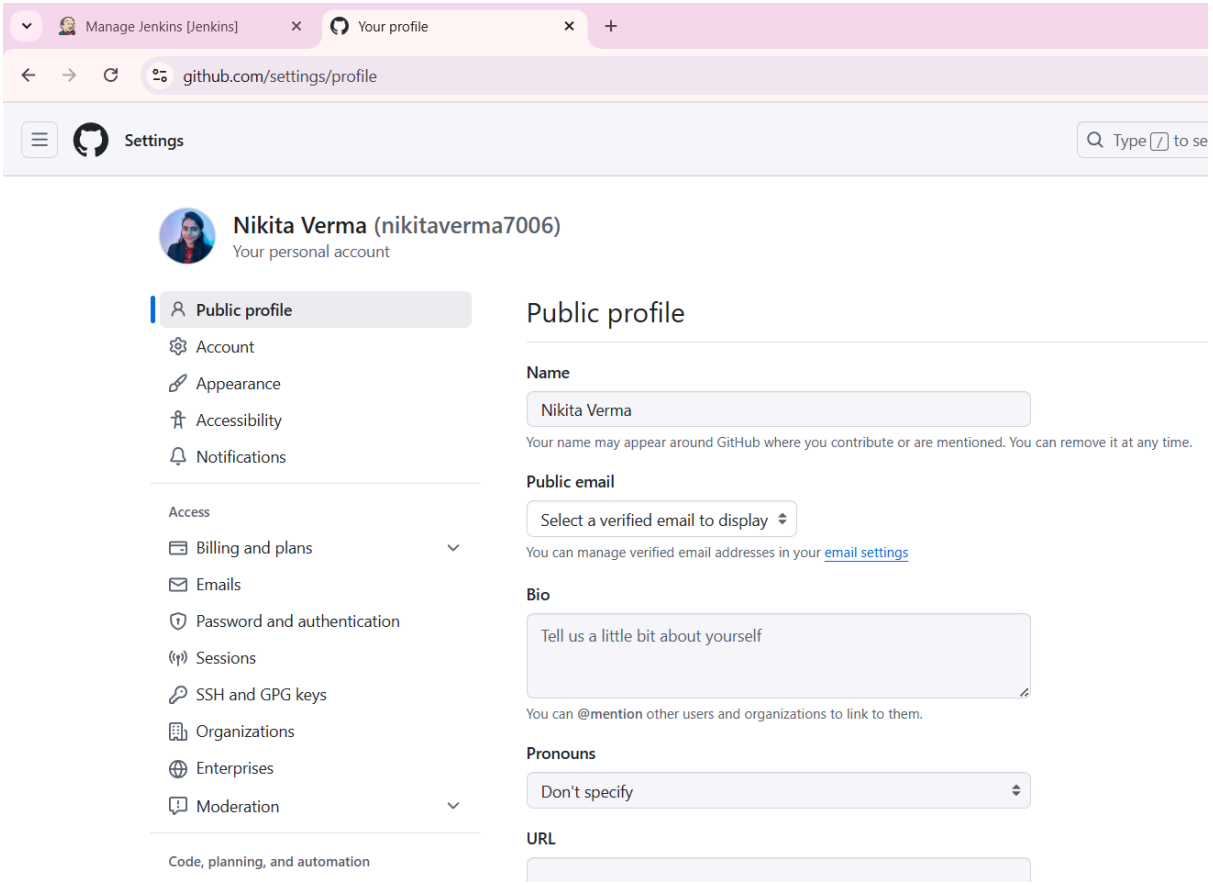


Copy Everything that you got in your notepad

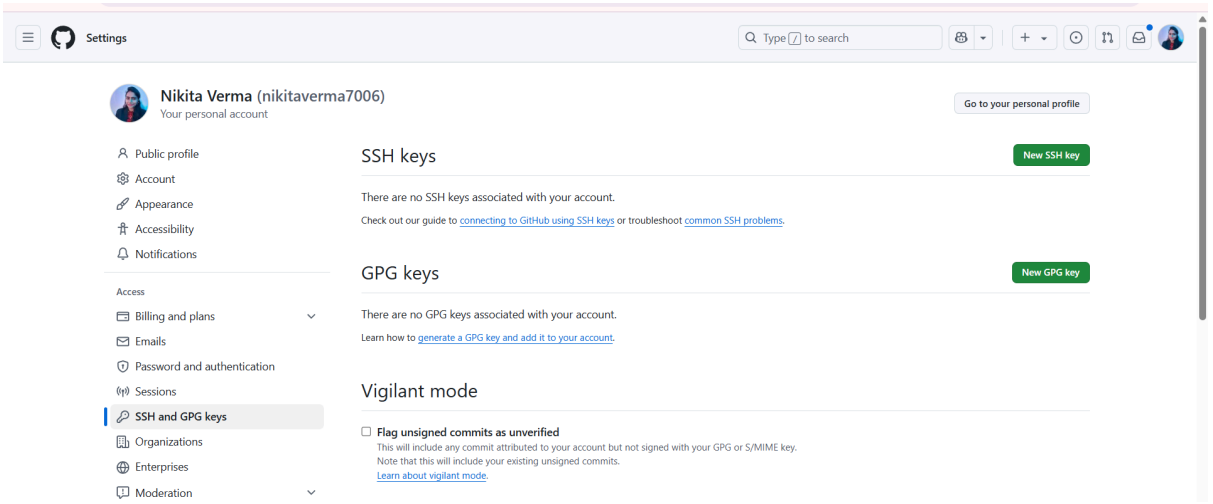
Step 4: Go to GitHub —----------> On right side top click on your profile picture icon —---------> Go to settings


Manage Jenkins [Jenkins]
TheQAGuy007/NIT-9AM-Jan20
github.com/TheQAGuy007/NIT-9AM-Jan2025
TheQAGuy007 / NIT-9AM-Jan2025
Type / to search
Code
Issues
Pull requests
Actions
Projects
Security
Insights
NIT-9AM-Jan2025
Private
Watch 2
Fork 0
Star 0
main
35 Branches
0 Tags
Go to file
Add file
Code
About
No description, website, or topics provided.
Readme
Activity
0 stars
2 watching
0 forks
TheQAGuy007 16-Mar-2025
8334605 · 3 hours ago
291 Commits
.idea 28-Feb-2025 2 weeks ago
ManualTesting 16-Mar-2025 3 hours ago
src Merge pull request #61 from TheQAGuy007/Shantanu 6 hours ago
.gitignore 26-Jan-2025 2 months ago
README.md 15-Mar-2025 yesterday
pom.xml 15-Mar-2025 yesterday
Releases
No releases published
Create a new release
Packages
No packages published
Publish your first package
Contributors 23
README
NIT-9AM-Jan-2025
OOP(Object-Oriented Programming) Concepts are as follows:


nikitaverma7006
Nikita Verma
Set status
Your profile
Your repositories
Your Copilot
Your projects
Your stars
Your gists
Your organizations
Your enterprises
Your sponsors
Try Enterprise
Free
Feature preview
New
Settings
GitHub Website
GitHub Docs
GitHub Support
GitHub Community
Sign out

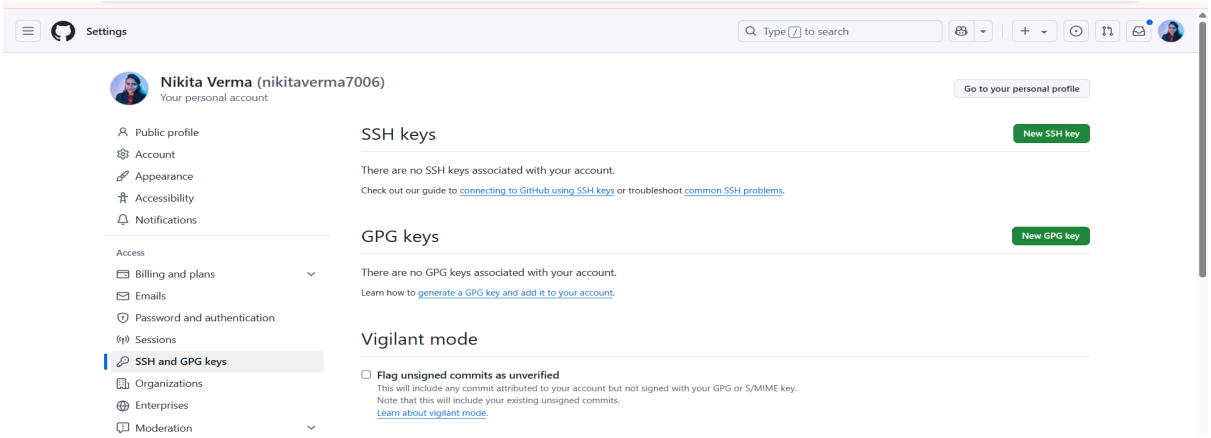


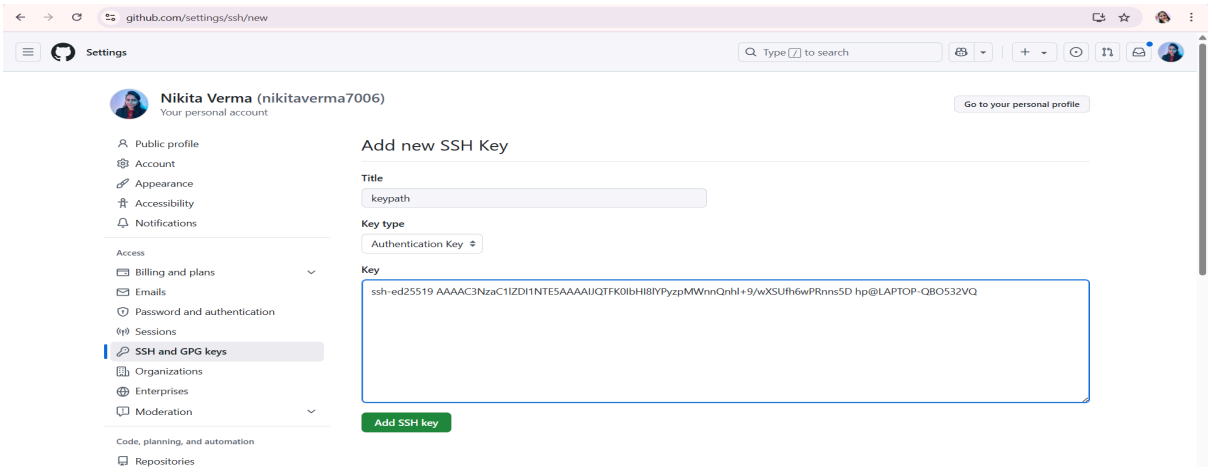
Step 5: On left hand side you will see SSH & GPG key , Click it



Step 6: Click On NEW SSH KEY —----------> give some title —---------> paste that thing that you copied (from the notepad by opening the pub file) in the key section —----------> Click ADD SSH KEY

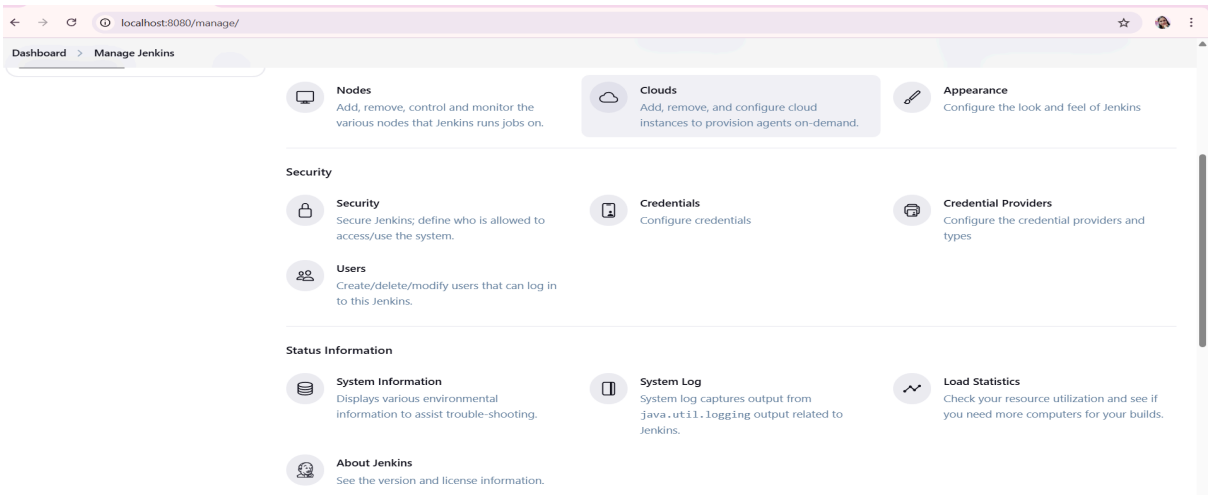
And it's done



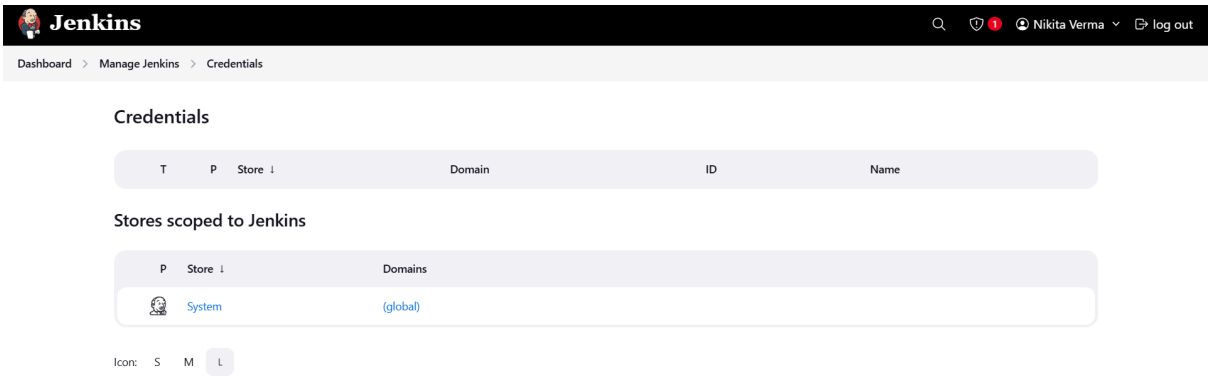


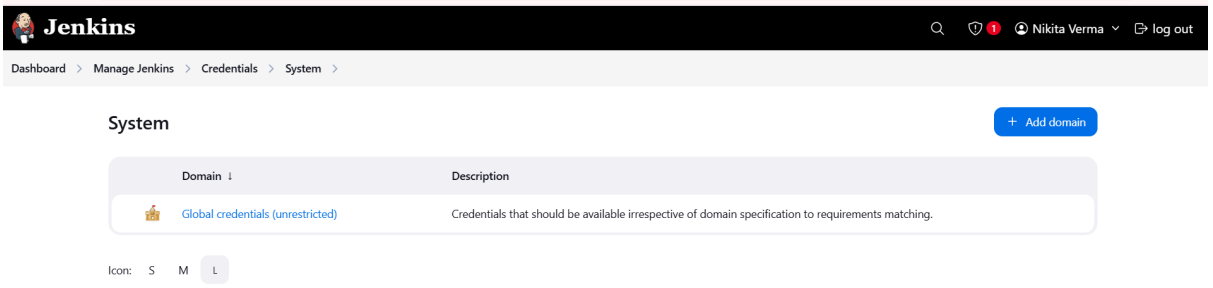
CREDENTIALS Settings

Step1 : GO to the dashboard of JENKINS ----------> Manage Jenkins ----------> Go to Credentials

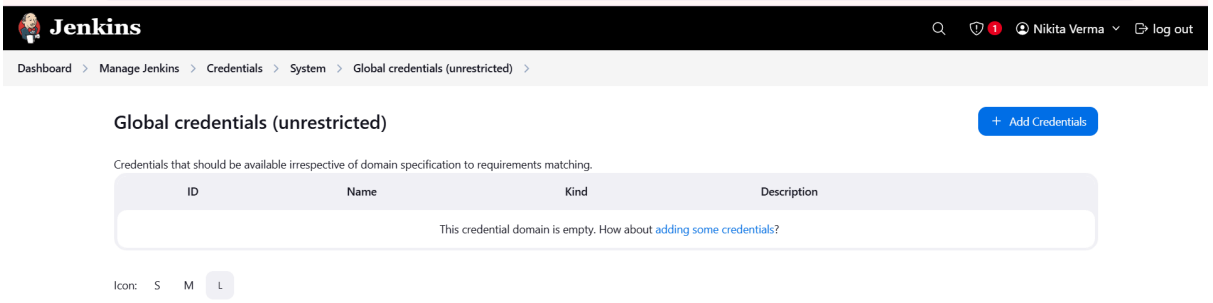


Step 2 : Go to System ----------> Global Credentials





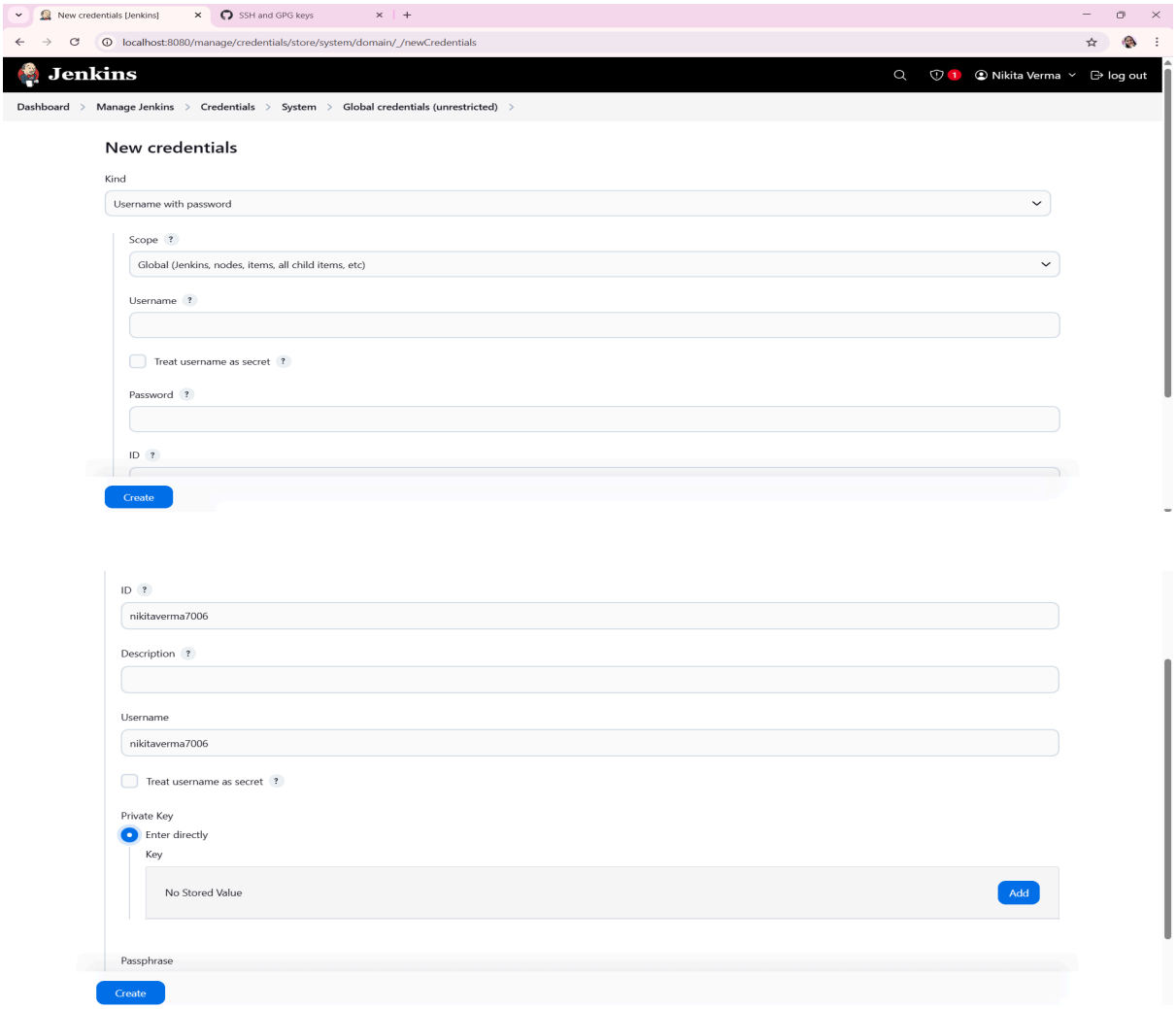
Step 3: Click On ADD CREDENTIALS



Step 4 : Now in credentials Page

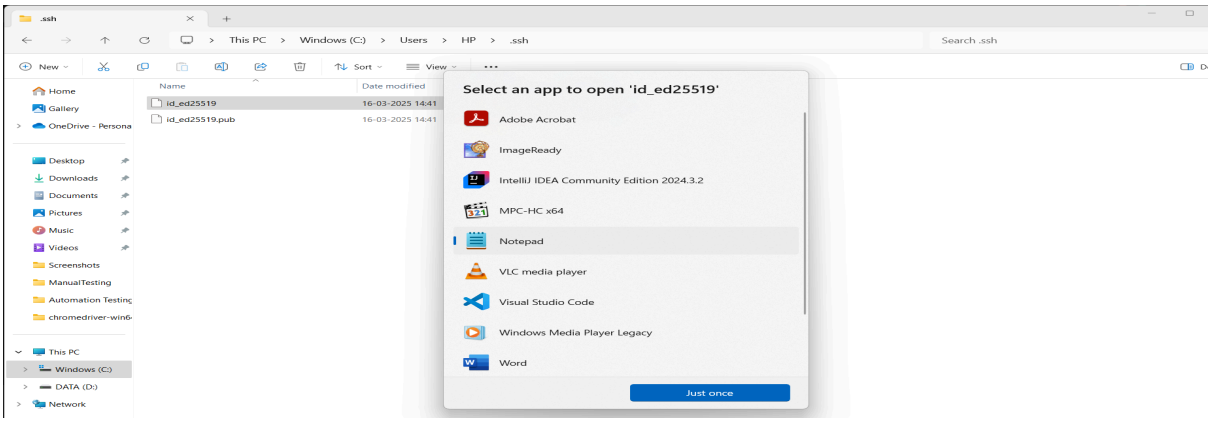
In KIND choose “SSH USER NAME WITH PRIVATE KEY”
In ID - give your Github user name
In Username - write the same githuhub user name

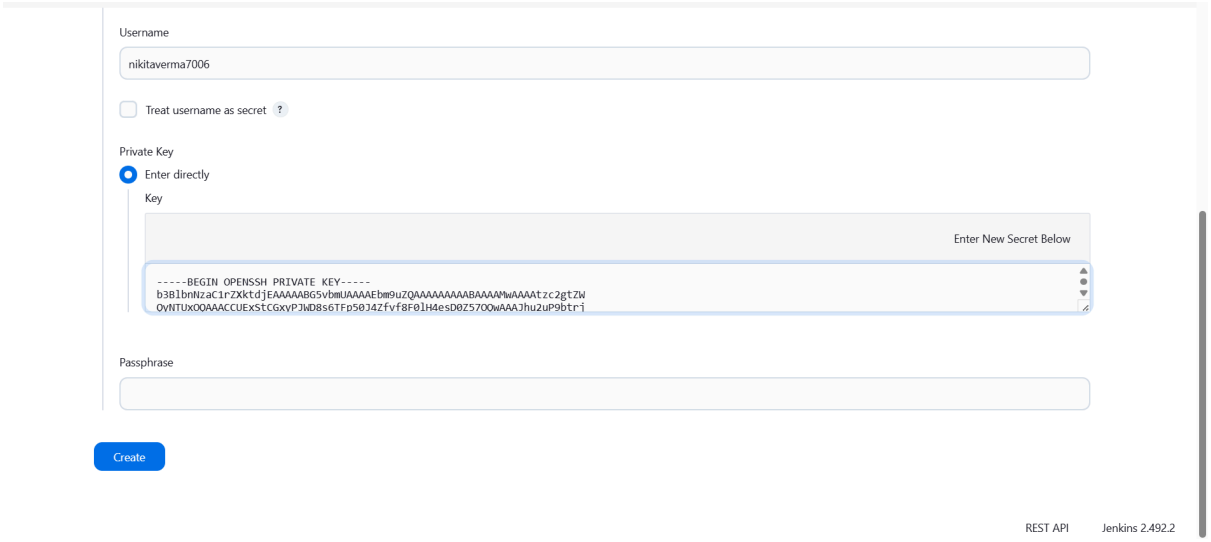
In private key - Select Enter Directly



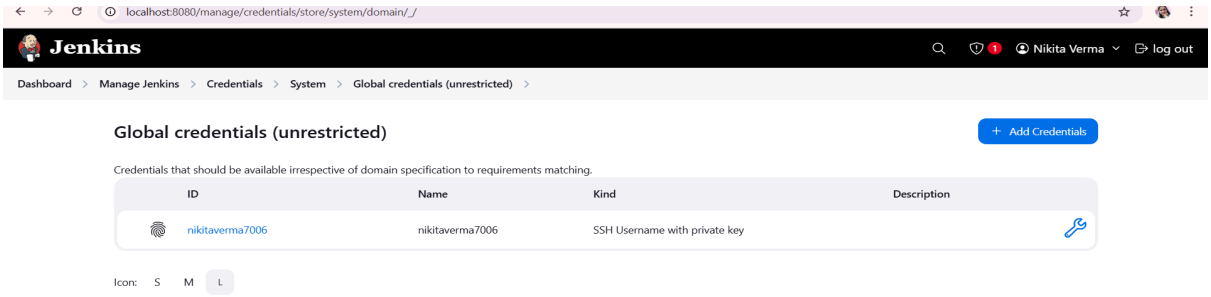
Step 5 : Now go back to the SSH Folder in Cdriver and copy the other file data and paste it in KEY SECTION

And Click CREATE



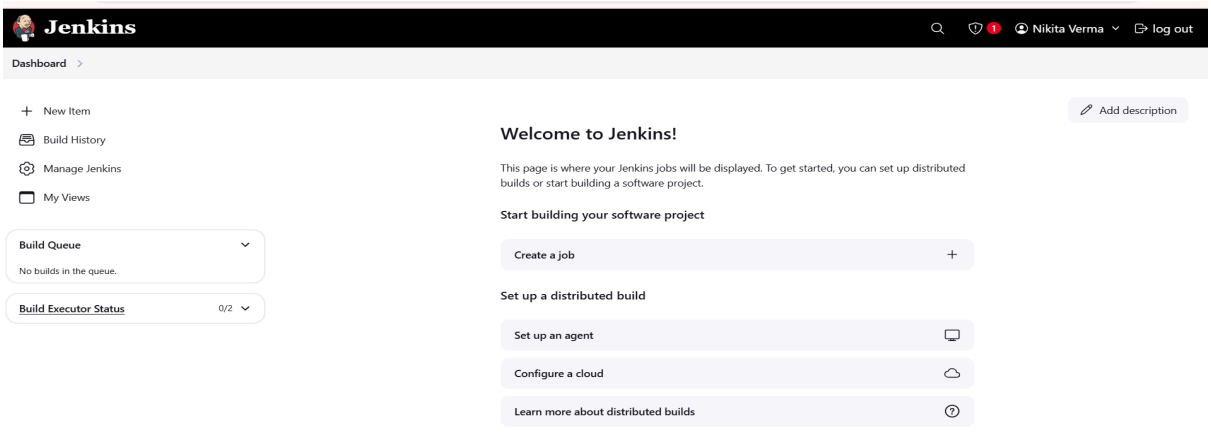


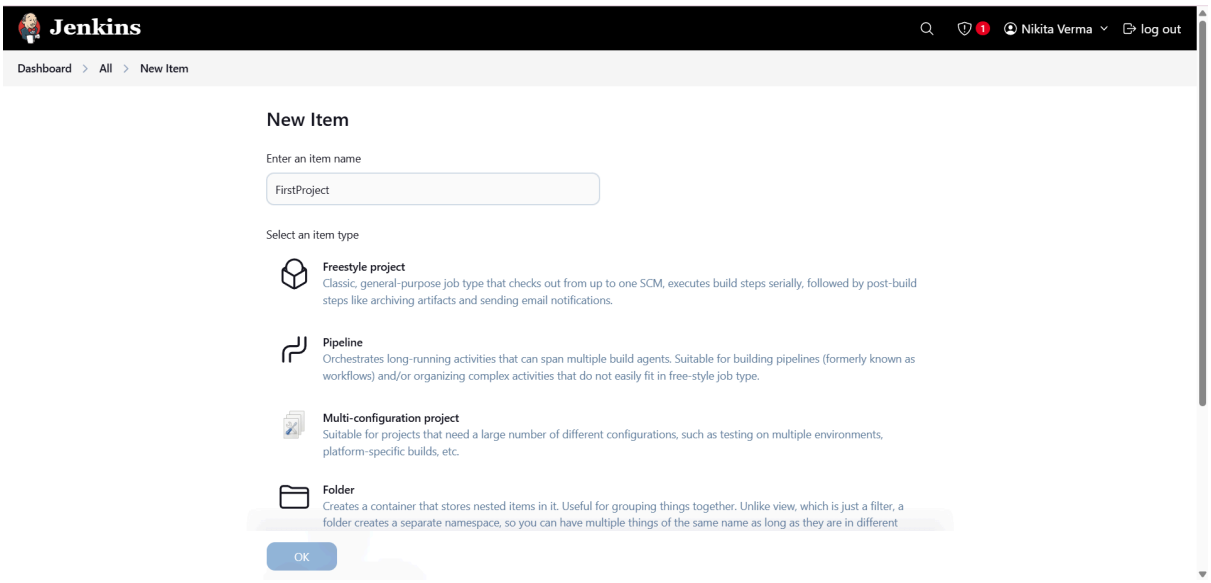
And your GLOBAL CREDENTIALS is CREATED



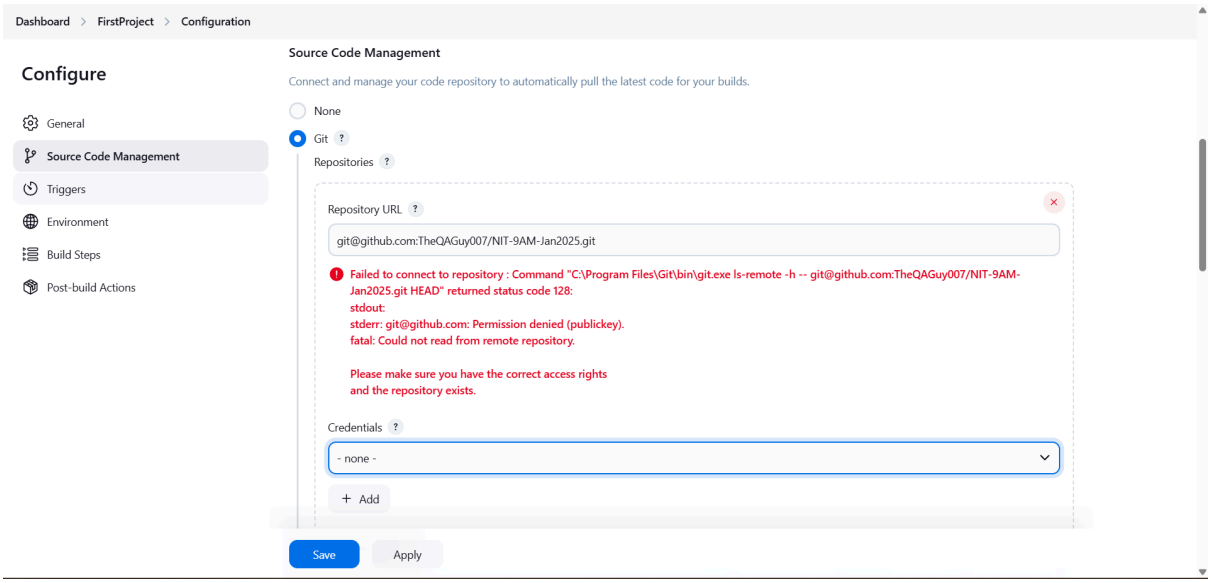
CREATING JOBS IN JENKINS

Step 1 : GO to Jenkins DASHBOARD ----------> Click New Items ----------> Enter an item name ----------> Click on FreeStyle Project ----------> Click Ok



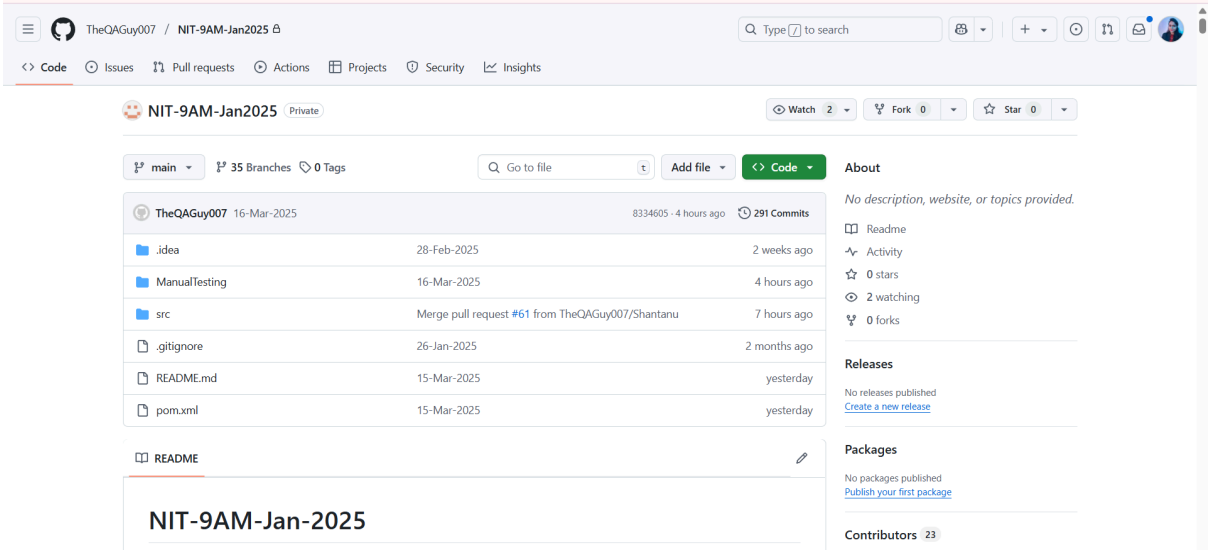


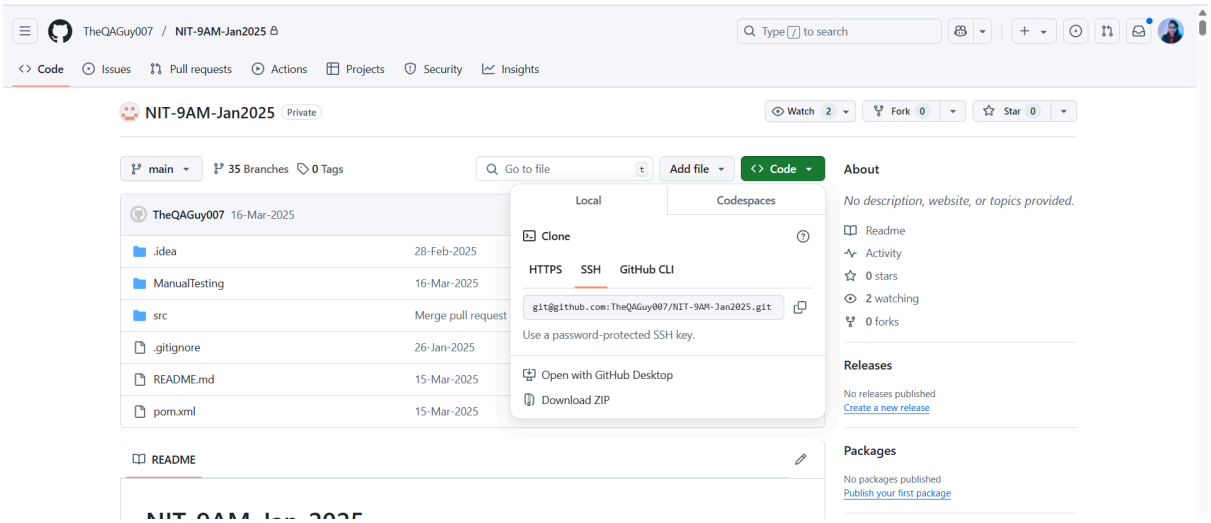
Step 2: Go to your Job that you have created now , In the “Source Code Management” —--------. Select Git

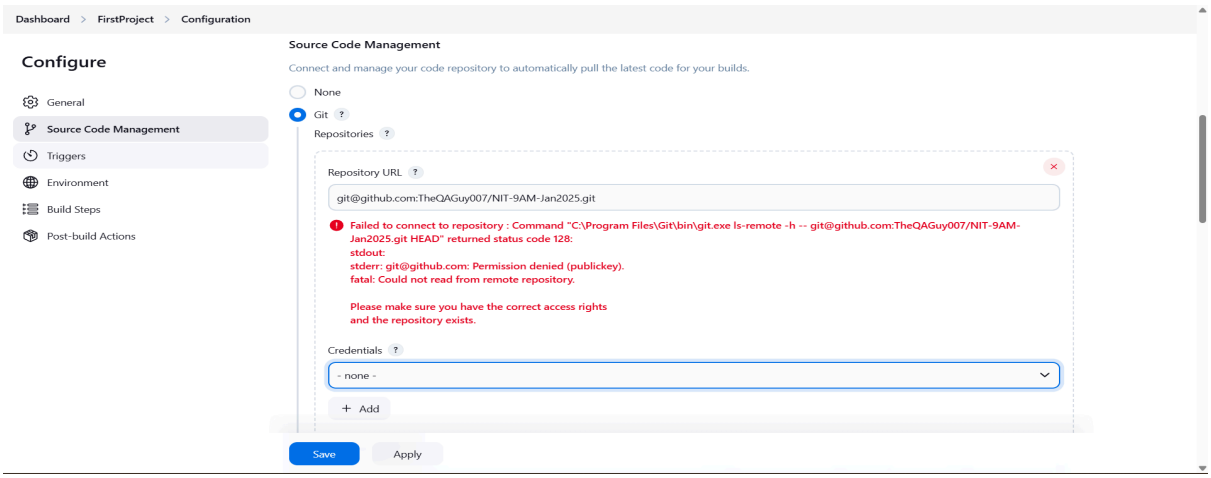


Step 3 : Go to Your Project in GitHub —--------> Click on the Green colour Code Button present under NIT-9AM-JAN2025

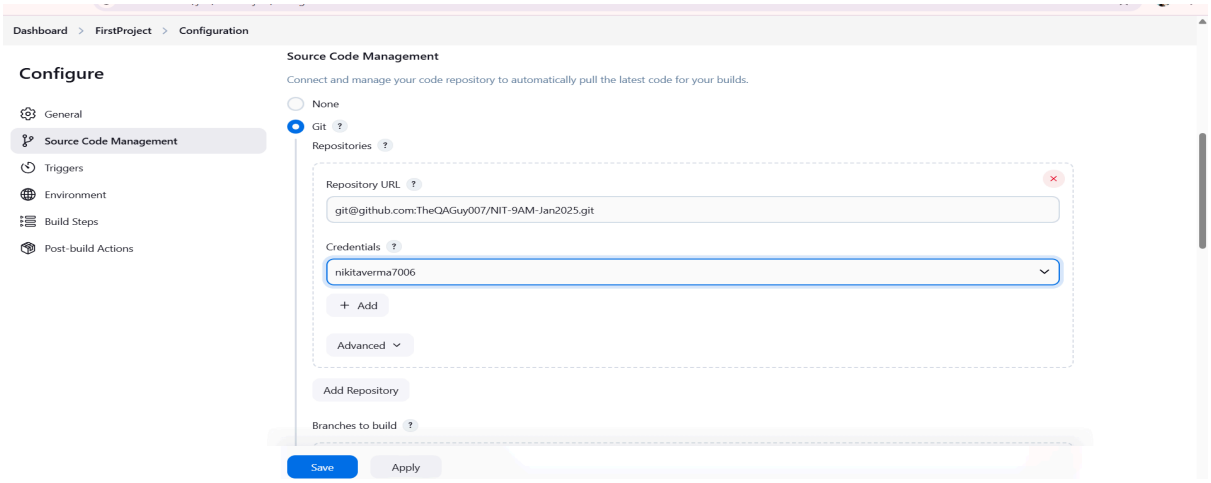
There Select “SSH” and then copy it and Paste it in The REPOSITORY URL of Jenkins


TheQAGuy007 / NIT-9AM-Jan2025
Type / to search
Code
Issues
Pull requests
Actions
Projects
Security
Insights
NIT-9AM-Jan2025
Private
Watch 2
Fork 0
Star 0
main
35 Branches
0 Tags
Go to file
Add file
Code
About
No description, website, or topics provided.
TheQAGuy007 16-Mar-2025
8334605 · 4 hours ago
291 Commits
.idea 28-Feb-2025 2 weeks ago
ManualTesting 16-Mar-2025 4 hours ago
src Merge pull request #61 from TheQAGuy007/Shantanu 7 hours ago
.gitignore 26-Jan-2025 2 months ago
README.md 15-Mar-2025 yesterday
pom.xml 15-Mar-2025 yesterday
Readme
Activity
0 stars
2 watching
0 forks
Releases
No releases published
Create a new release
Packages
No packages published
Publish your first package
Contributors 23
README
NIT-9AM-Jan-2025

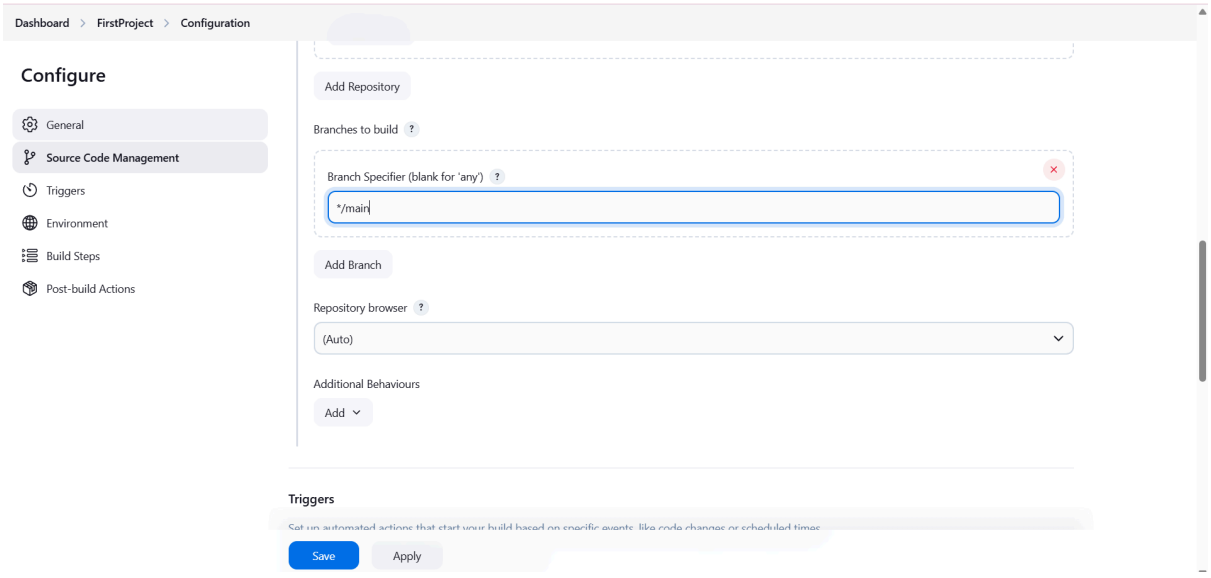

TheQAGuy007 / NIT-9AM-Jan2025
Type / to search
Code
Issues
Pull requests
Actions
Projects
Security
Insights
NIT-9AM-Jan2025
Private
Watch 2
Fork 0
Star 0
main
35 Branches
0 Tags
Go to file
Add file
Code
Local
Codespaces
Clone
HTTPS
SSH
GitHub CLI
git@github.com:TheQAGuy007/NIT-9AM-Jan2025.git
Use a password-protected SSH key.
Open with GitHub Desktop
Download ZIP
About
No description, website, or topics provided.
TheQAGuy007 16-Mar-2025
.idea 28-Feb-2025
ManualTesting 16-Mar-2025
src Merge pull request
.gitignore 26-Jan-2025
README.md 15-Mar-2025
pom.xml 15-Mar-2025
Readme
Activity
0 stars
2 watching
0 forks
Releases
No releases published
Create a new release
Packages
No packages published
Publish your first package
README


Dashboard > FirstProject > Configuration
Configure
General
Source Code Management
Triggers
Environment
Build Steps
Post-build Actions
Source Code Management
Connect and manage your code repository to automatically pull the latest code for your builds.
None
Git
Repositories
Repository URL
git@github.com:TheQAGuy007/NIT-9AM-Jan2025.git
Failed to connect to repository : Command "C:\Program Files\Git\bin\git.exe ls-remote -h -- git@github.com:TheQAGuy007/NIT-9AM-Jan2025.git HEAD" returned status code 128:
stdout:
stderr: git@github.com: Permission denied (publickey).
fatal: Could not read from remote repository.
Please make sure you have the correct access rights
and the repository exists.
Credentials
- none -
Add
Save
Apply

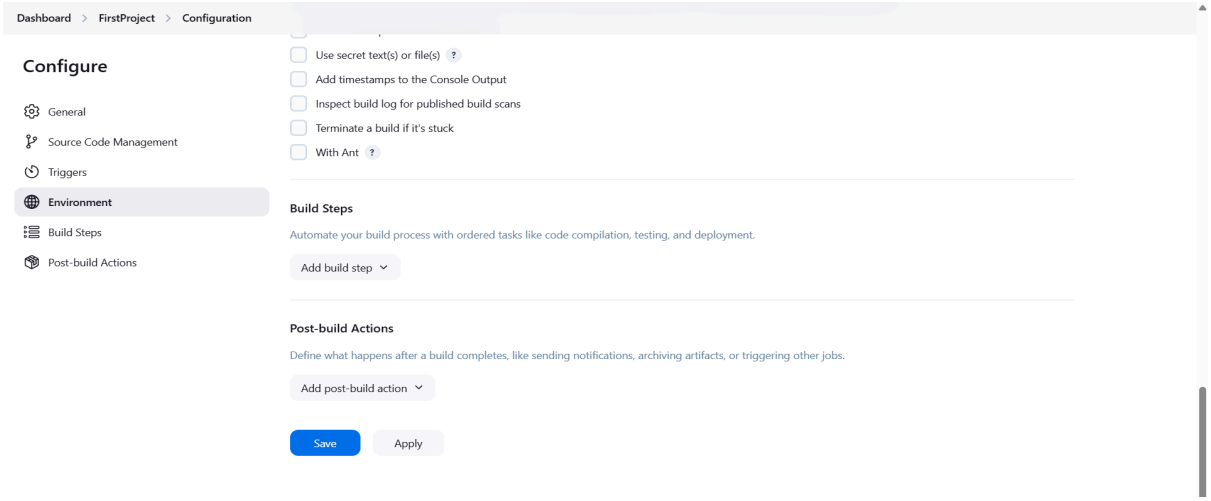
Step 4 : Select Proper Credentials and the error will be gone (will take few seconds)

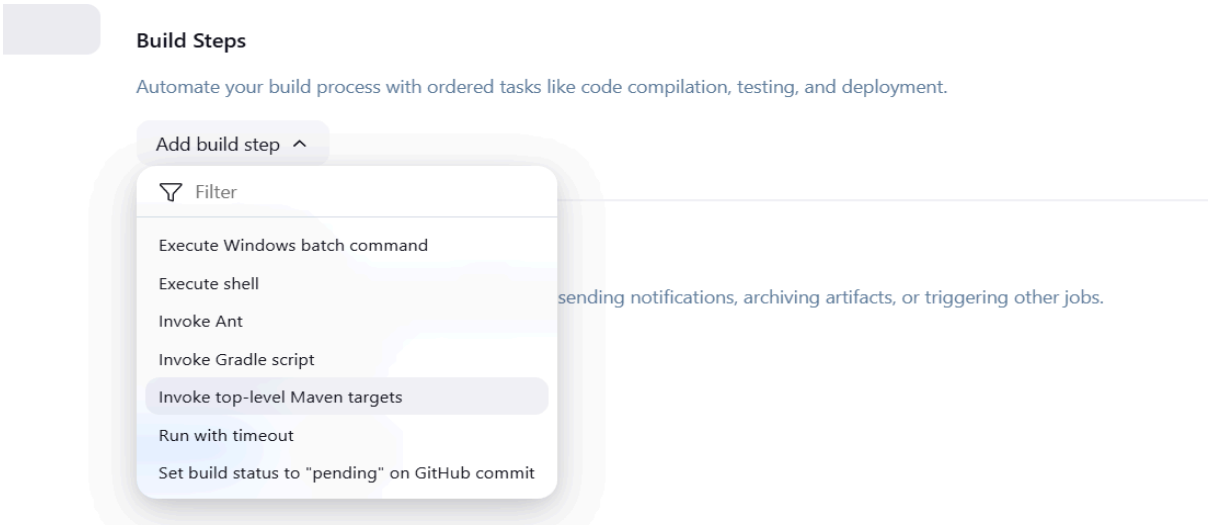


Step 5: Scroll Down and go to BRANCHES TO BUILD , write the branch name there in which you want to work

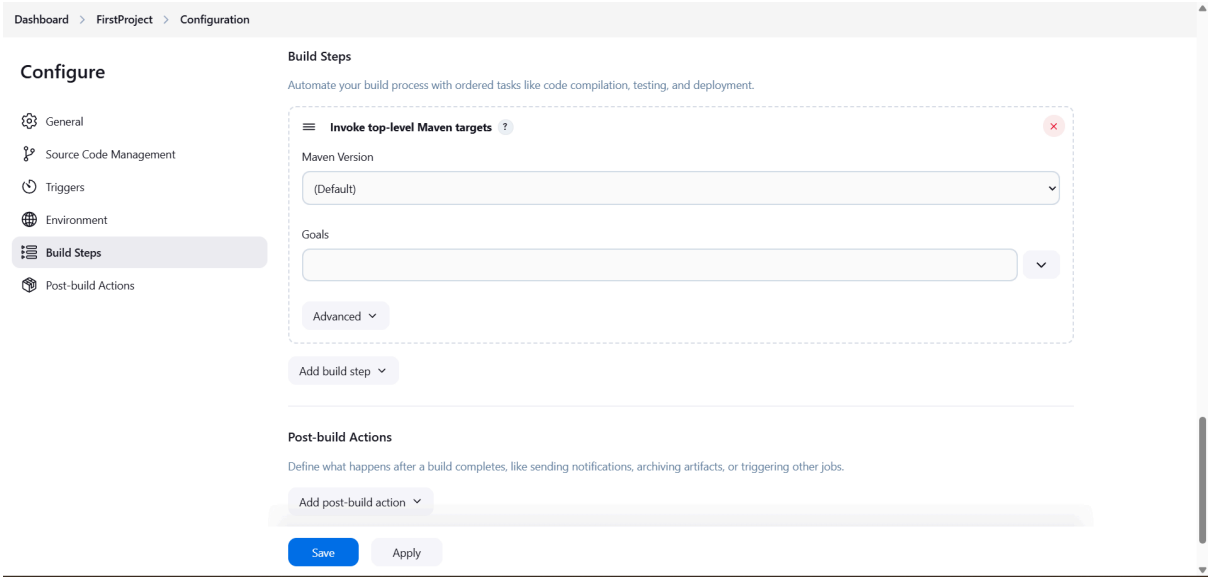


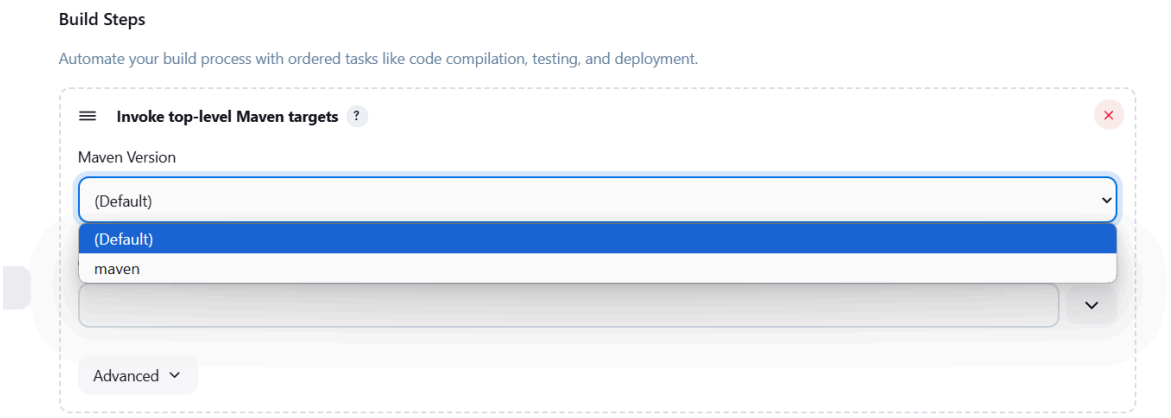
Step 6: Click ADD BUILD STEPS --------> SELECT INVOLVE-LEVEL MAVEN TARGETS



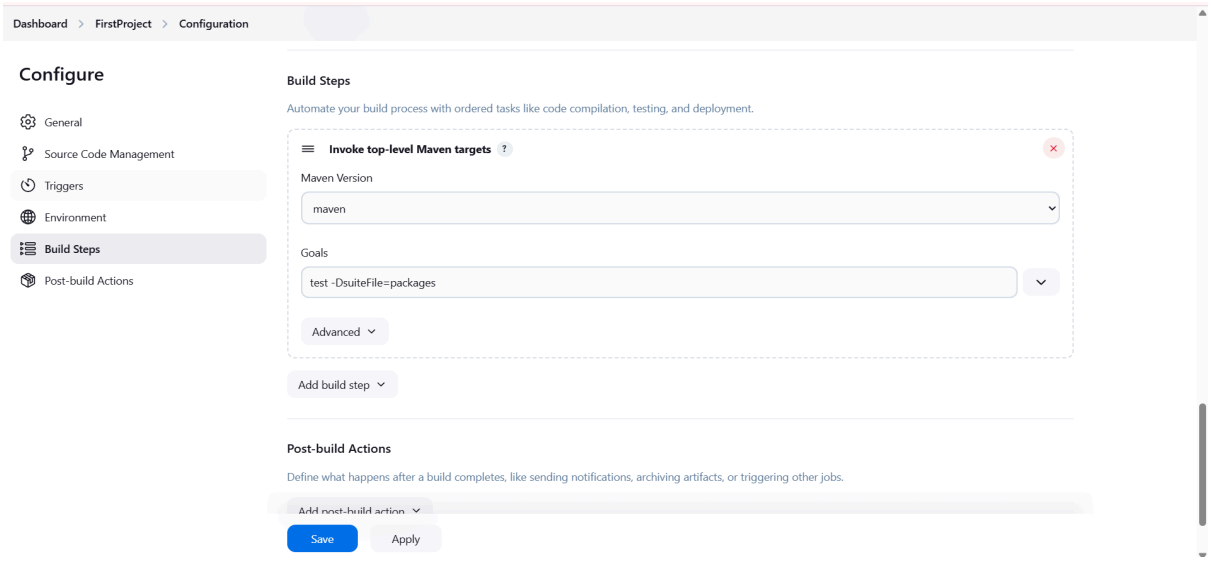


Step 7: In MAVEN VERSION select maven

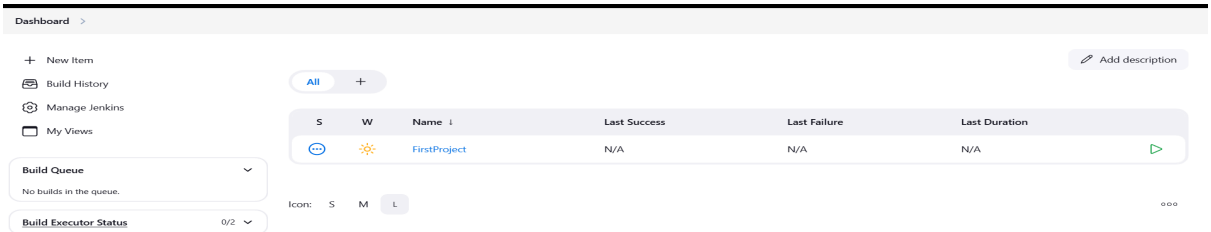




Step 8: In GOALS type **test -DsuiteFile=packages**

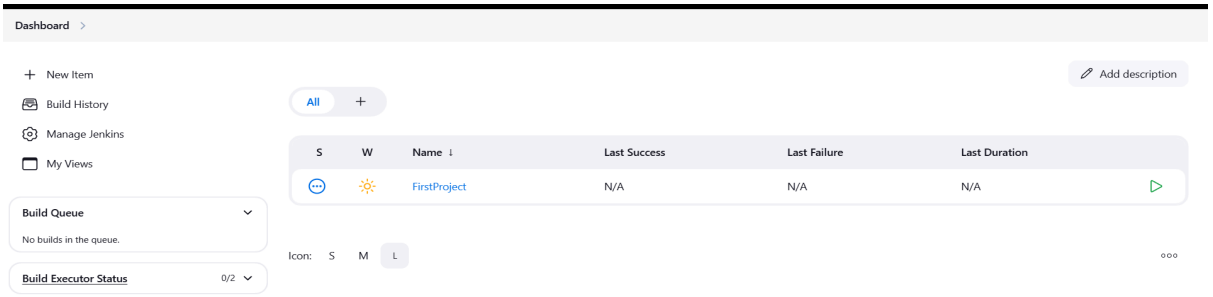


Click APPLY and then Click Save
Now go to the Dashboard and you will see Your Created job there

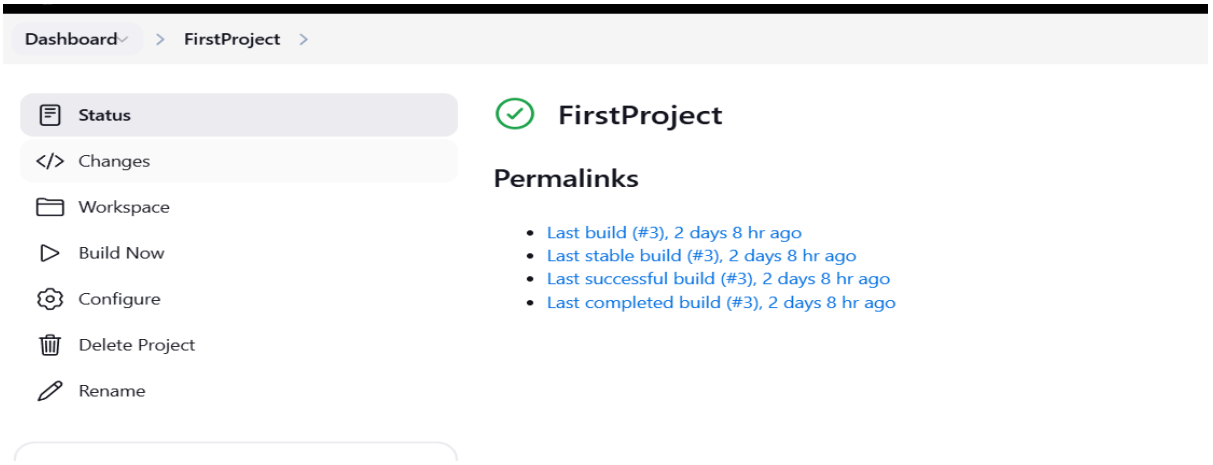


HOW TO RUN A JOB

Step 1: Open Your Job that you want to run



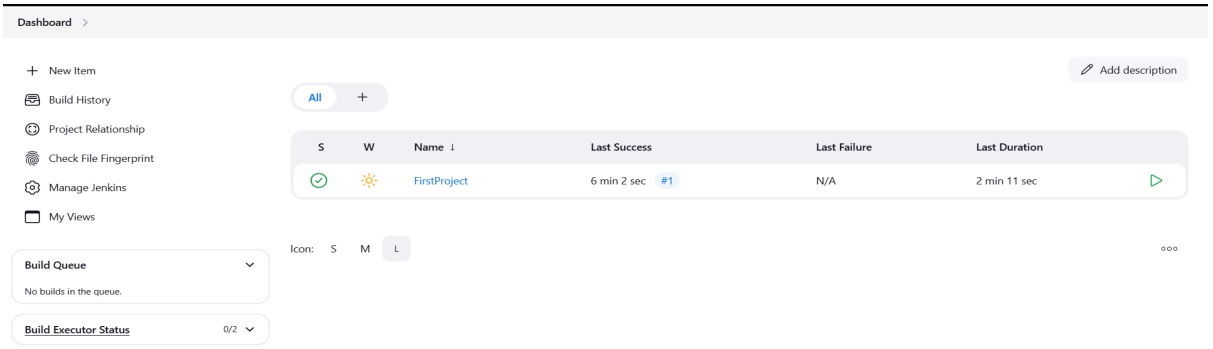
Step 2; Click on build now present on left side



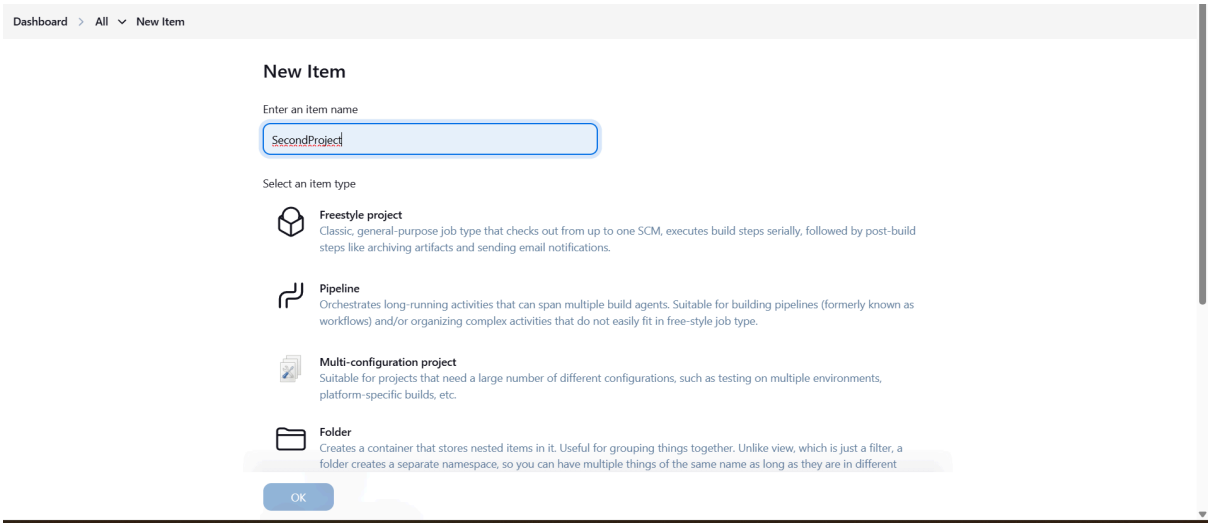
Step 3: Click on Build at the bottom and then in console output you can see the output

CREATING ANOTHER JOB BY COPYING THE JOBS THAT ARE ALREADY PRESENT

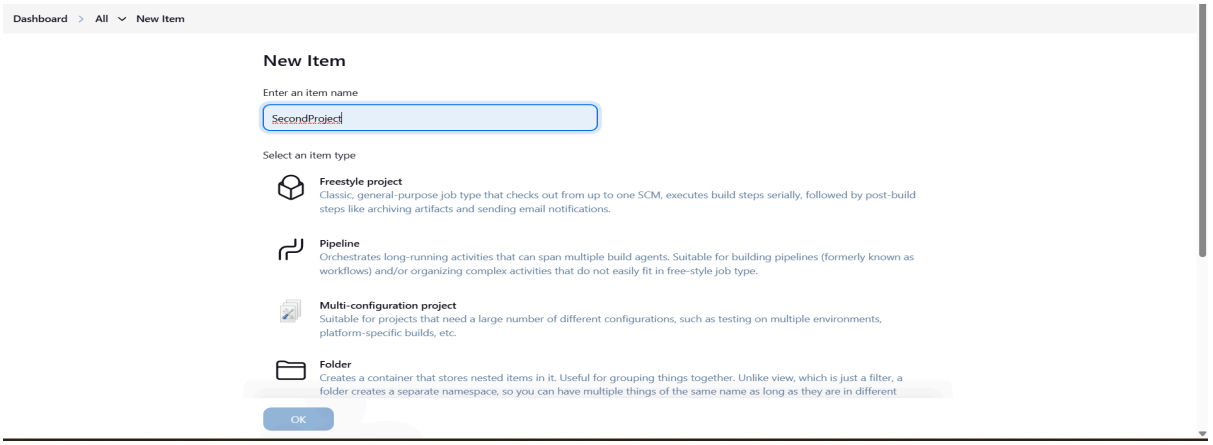
Step 1: Go to DasHBoard —----------> click NEW ITEM

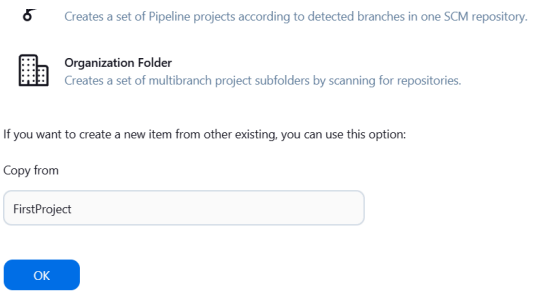


Step 2: Write the name of the item (2nd job)

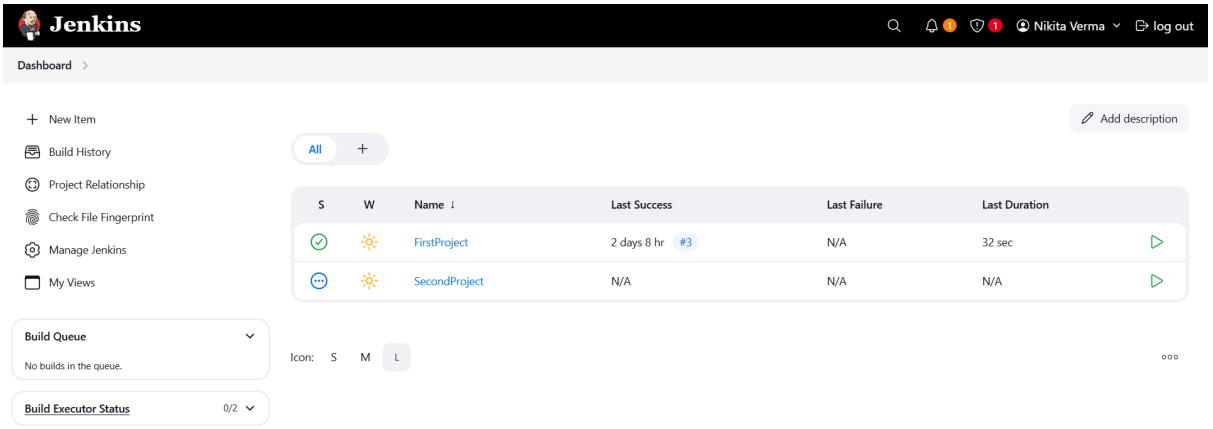


Step 3 : Scroll Down & write the name of the JOB which you want to copy & click ok



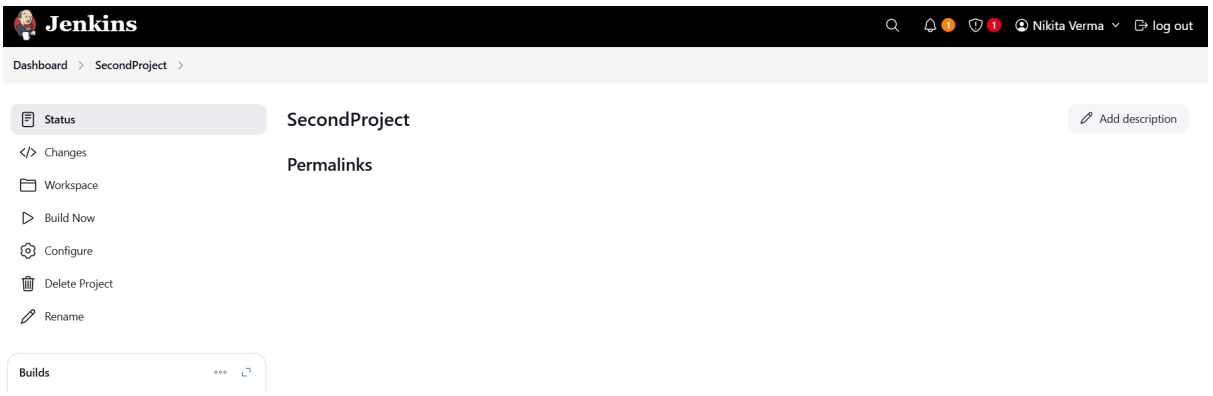


Now you can see your created job in the Dashboard



DELETING A JOB

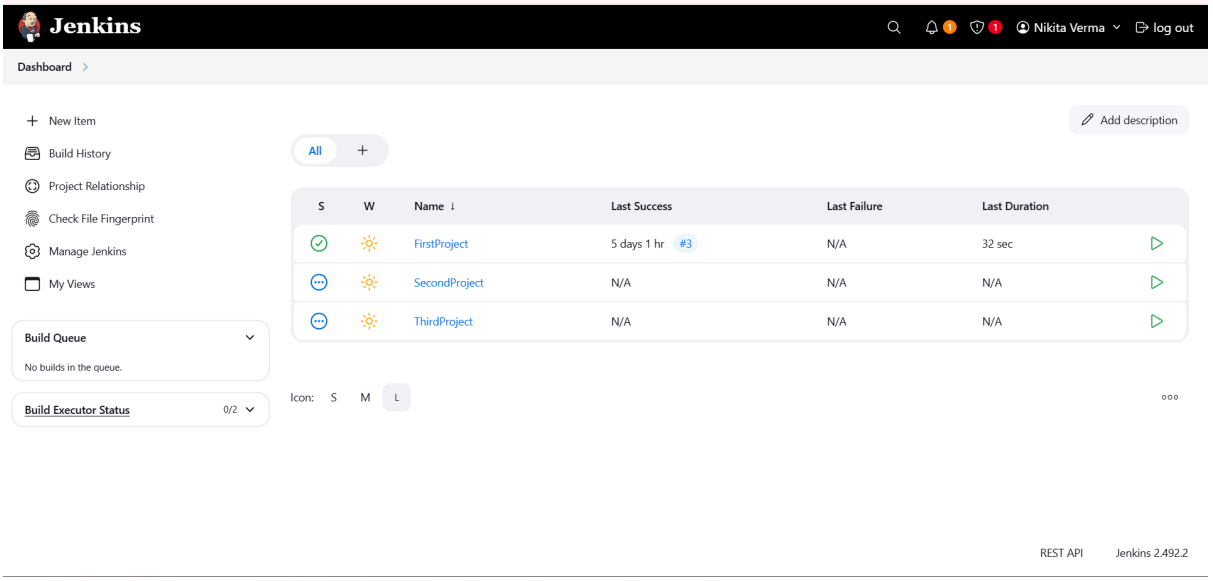
Step 1: Open you Job by clicking it, on left side you can see Delete option, delete From There

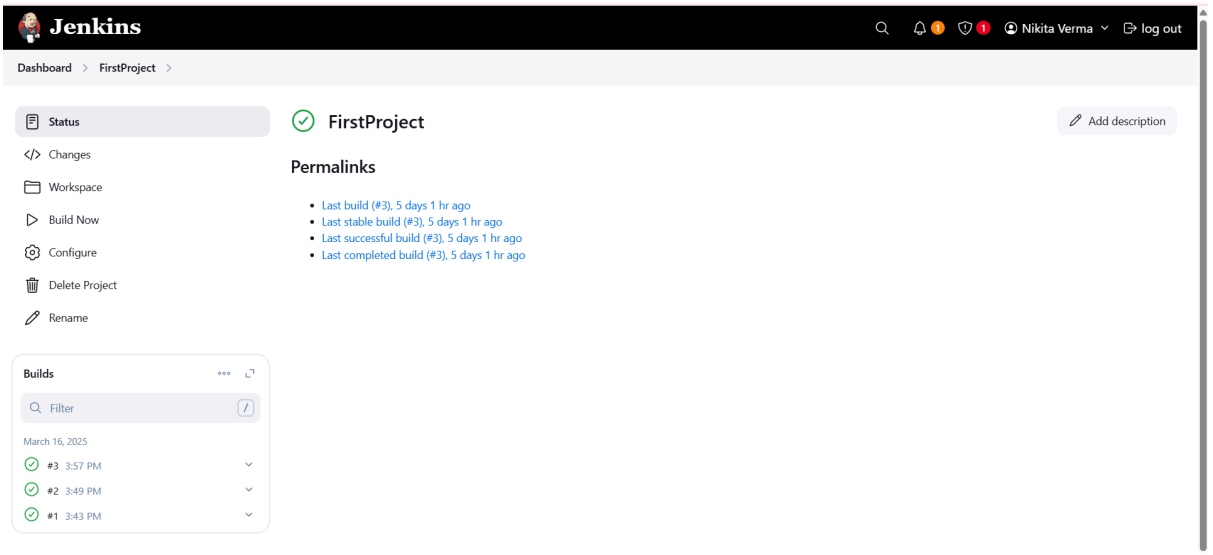


BASIC JENKINS PIPELINE

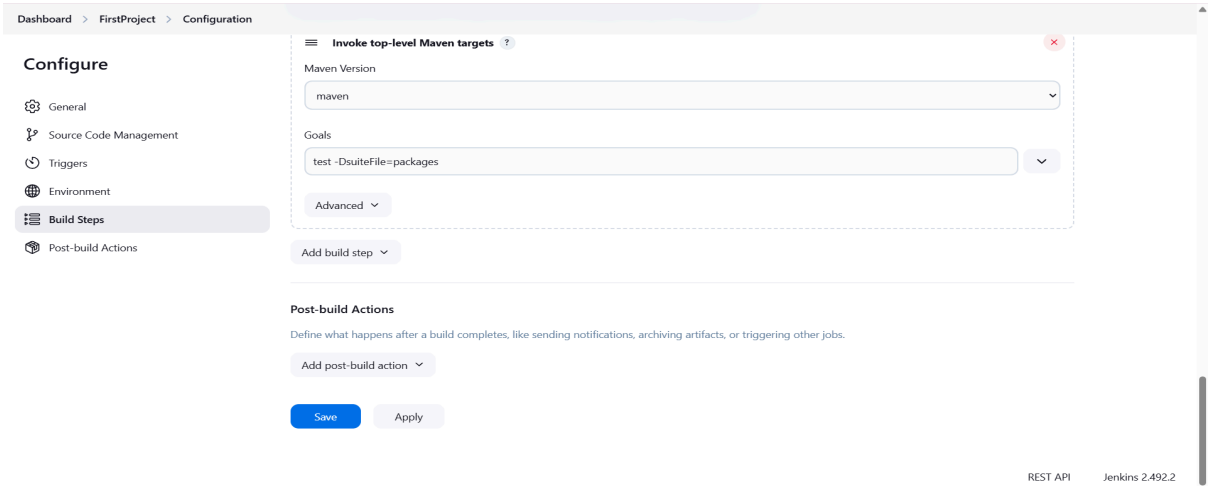
A basic Jenkins Pipeline is like : if one job is completed then the next job starts Automatically
For a basic jenkins pipeline to work there should be minimum 2 jobs

Step1 : In Dashboard, go to your 1st Project --------> Click Configure

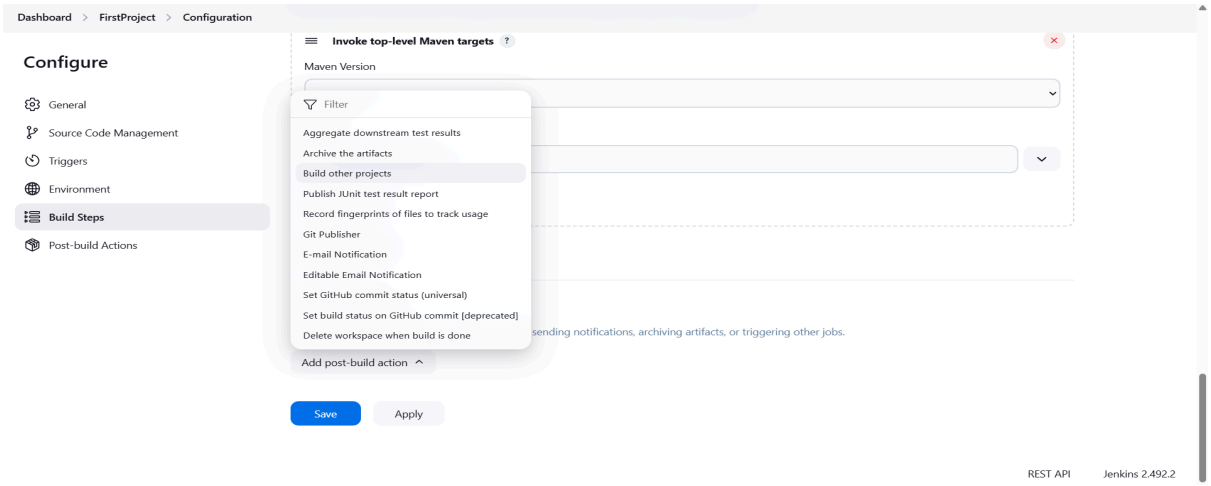




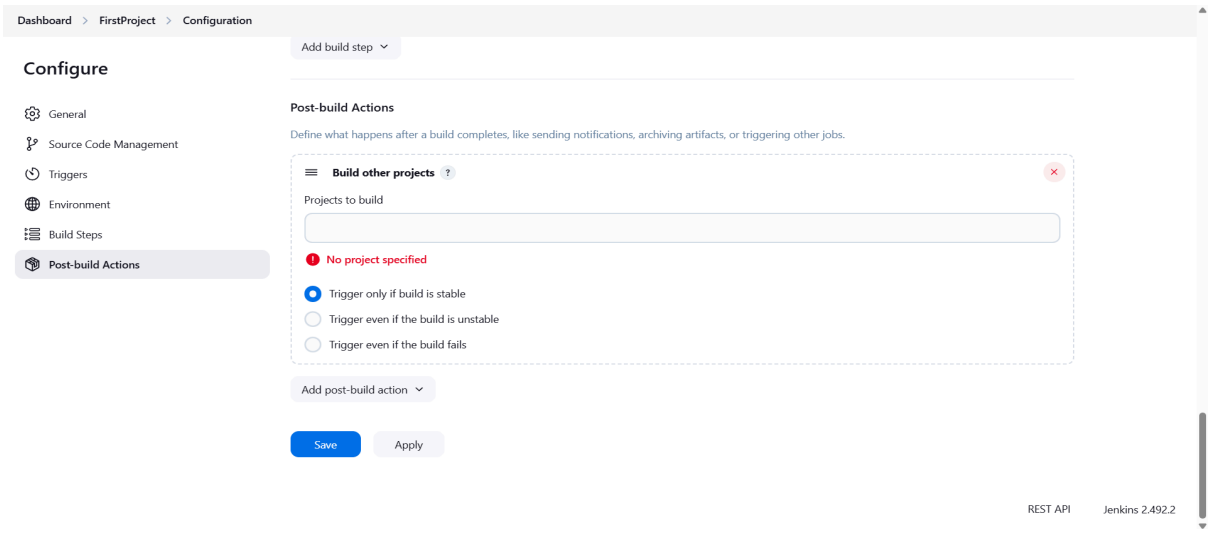
Step 2 : Scroll Down and go to Post Build Actions and Click On Add Build Actions



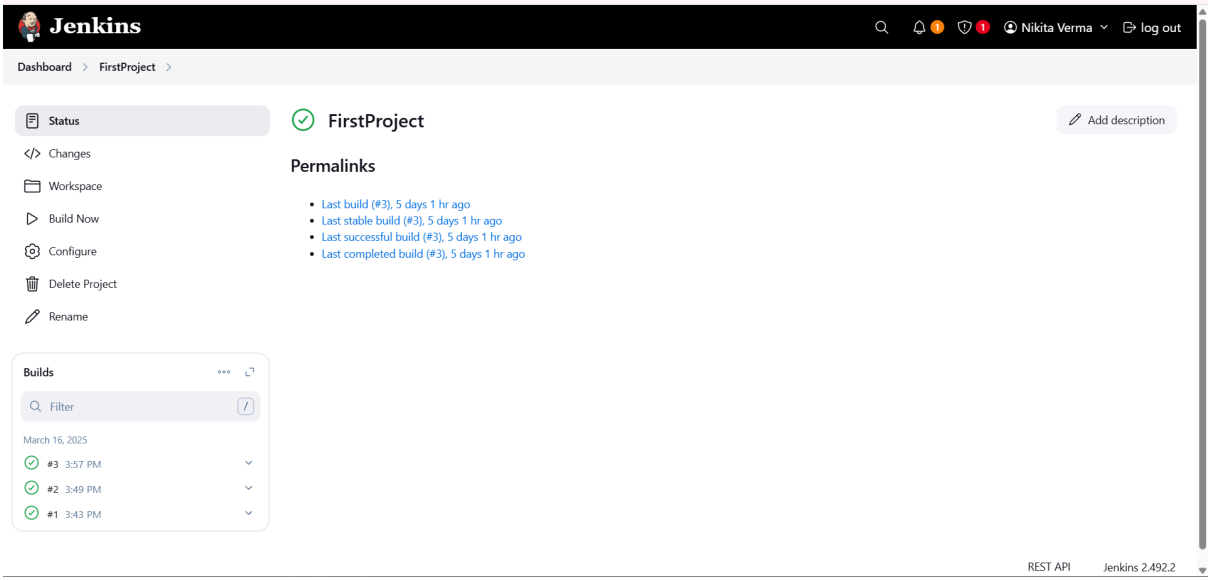
Step 3 : Select BUILD other Projects



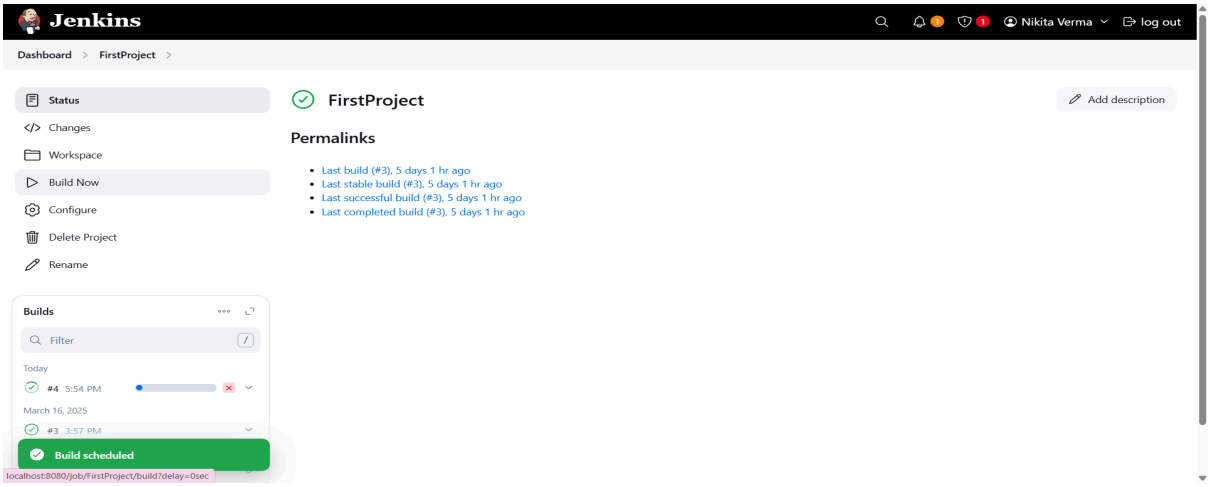
Step 4 : Write the name of your Job in “ project to Build” section that you want to get executed next. Then Click SAVE

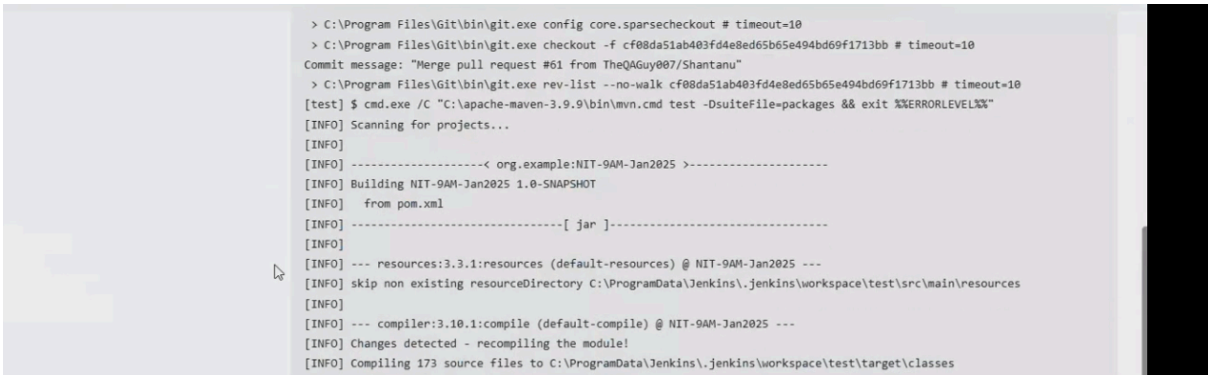


Step 5 : Now go to 1st Job and Click Build Now



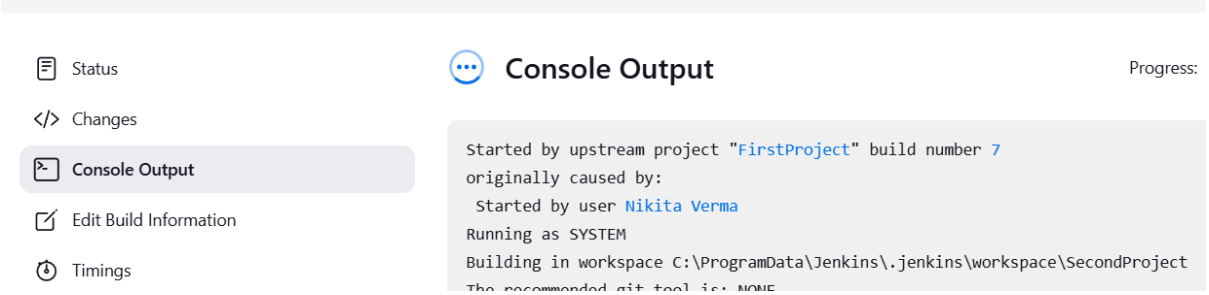
Step 6 : Your Build will start, click on that build number and in console you will see it





Once this job completes its execution immediately the next Build that you have added will start executing automatically.

In the console you can also see the message on the top “ Started by upstream Project FirstProject …“



This is how a basic pipeline works.

Jenkins: Cron Syntax:

Used for Scheduling Jobs in Jenkins.

The order of the Syntax is as follows:

Minute Hour Day(Month) Month Day(Week)

To Schedule using Cron Syntax do the following:

- Open the Job -> Configure -> Build Triggers -> Build Periodically -> Enter the appropriate Cron Syntax

Example Cron Syntax below:

`0 10 * * *` - Every day at 10 AM.
`0 10 30 * *` - Every 30th of the month at 10 AM.
`0 0 * * 0` - 12 AM Every Sunday of the week.