Name: B. Bharanidharan [24MCR010]

Class: I – MCA – "A"

TASK - 1

DEVOPS TRAINING

Step 1: (Installing Ubuntu)

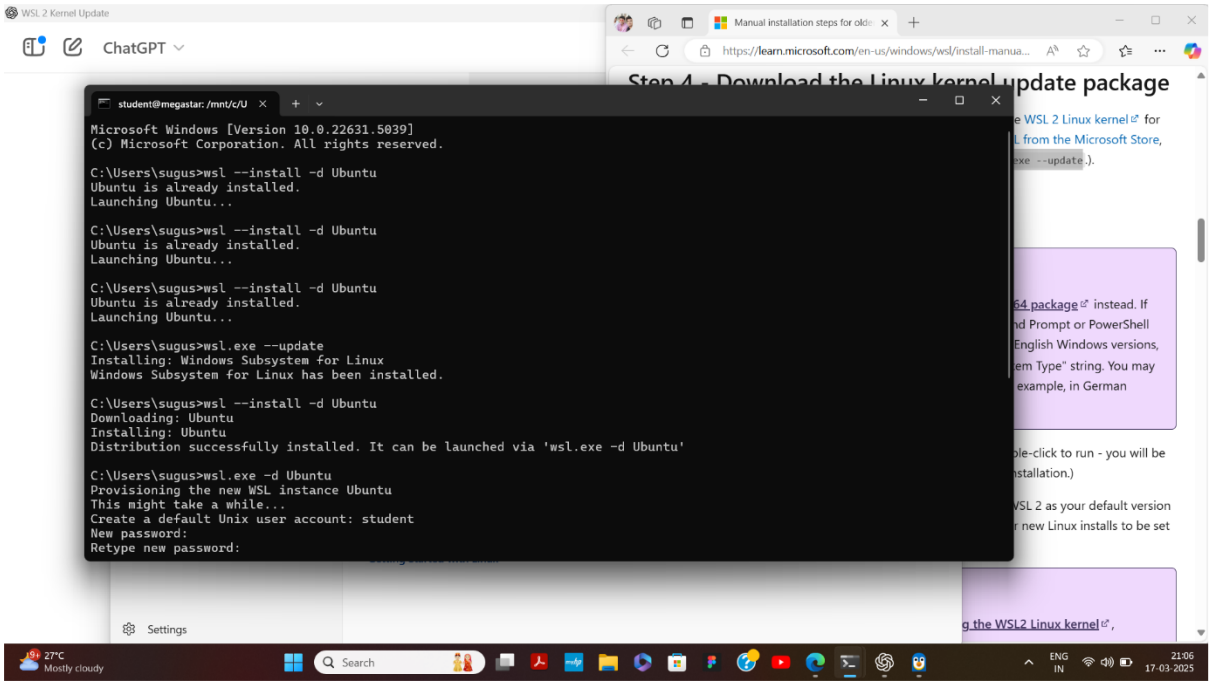
Enable WSL

Before installing Ubuntu, ensure that WSL is enabled on your Windows system.

Enable WSL Feature

1. Open **PowerShell** as Administrator and run:

2. wsl –install



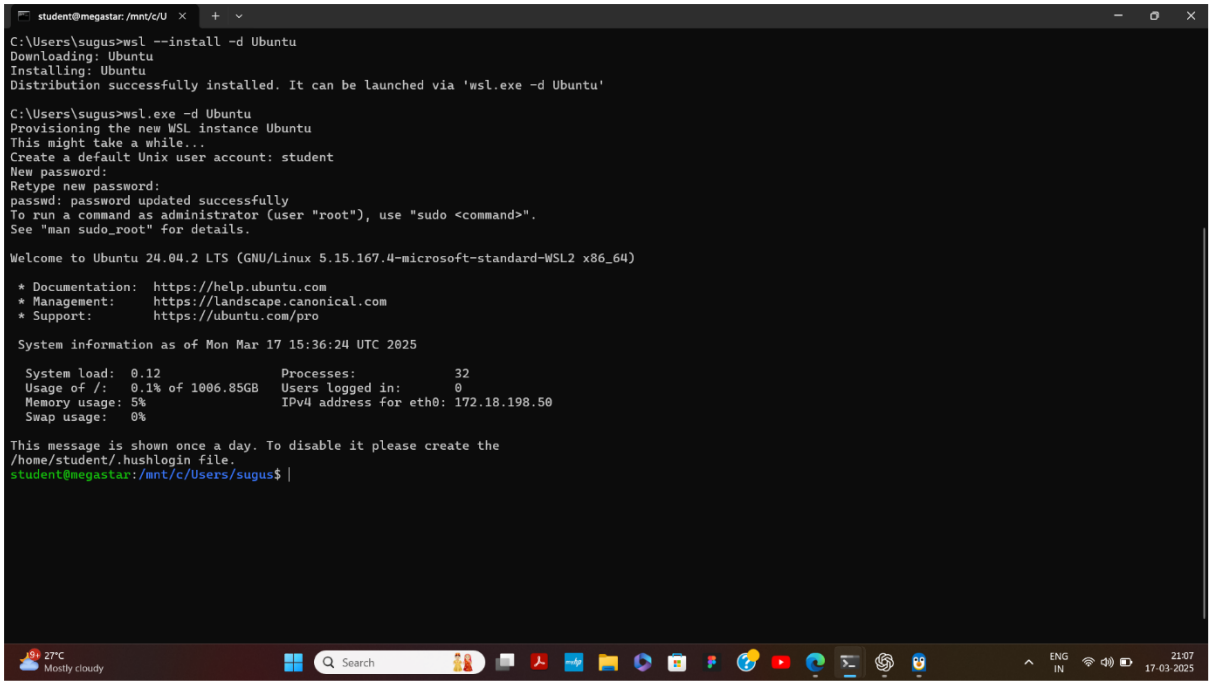
Step 2: (Set New Password) Set Up Ubuntu

When Ubuntu runs for the first time, it will ask you to create a new user account.

1. **Enter a username** (must start with a lowercase letter or underscore, and contain only lowercase letters, digits, underscores, and dashes).

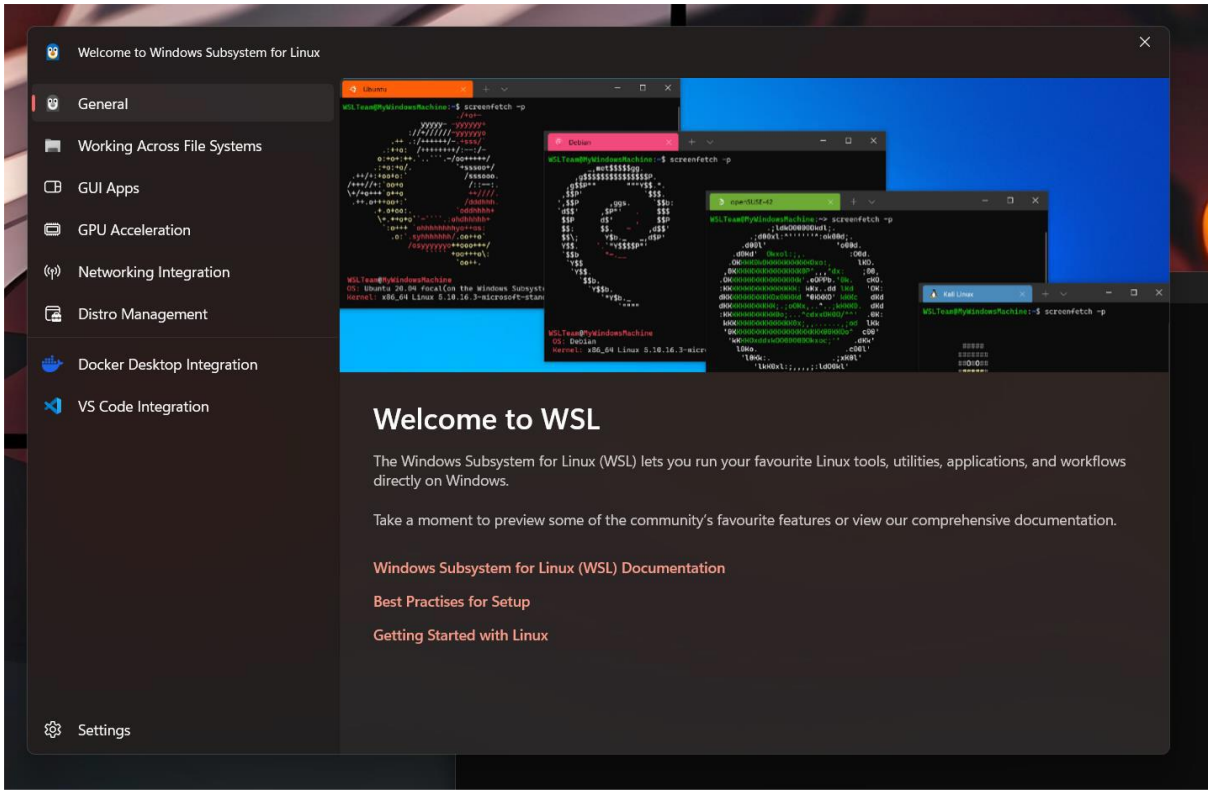
2. **Set a password** (enter and confirm the password). If passwords do not match, you will need to retry.

3. Once successful, Ubuntu will be set up and ready to use.



Step 3:

(New WSL Window Will Open)



Step 4:

(Check JDK Version**)** If not available install it .

Install Jenkins on Ubuntu

Update package lists

sudo apt update -y

Install Java (Required for Jenkins) sudo apt install -y openjdk-17-jdk

#verify java version java -version

Add Jenkins GPG Key

wget -q -O- https://pkg.jenkins.io/debian-stable/jenkins.io-2023.key | sudo tee /usr/share/keyrings/jenkins- keyring.asc > /dev/null

Add the Jenkins Repository

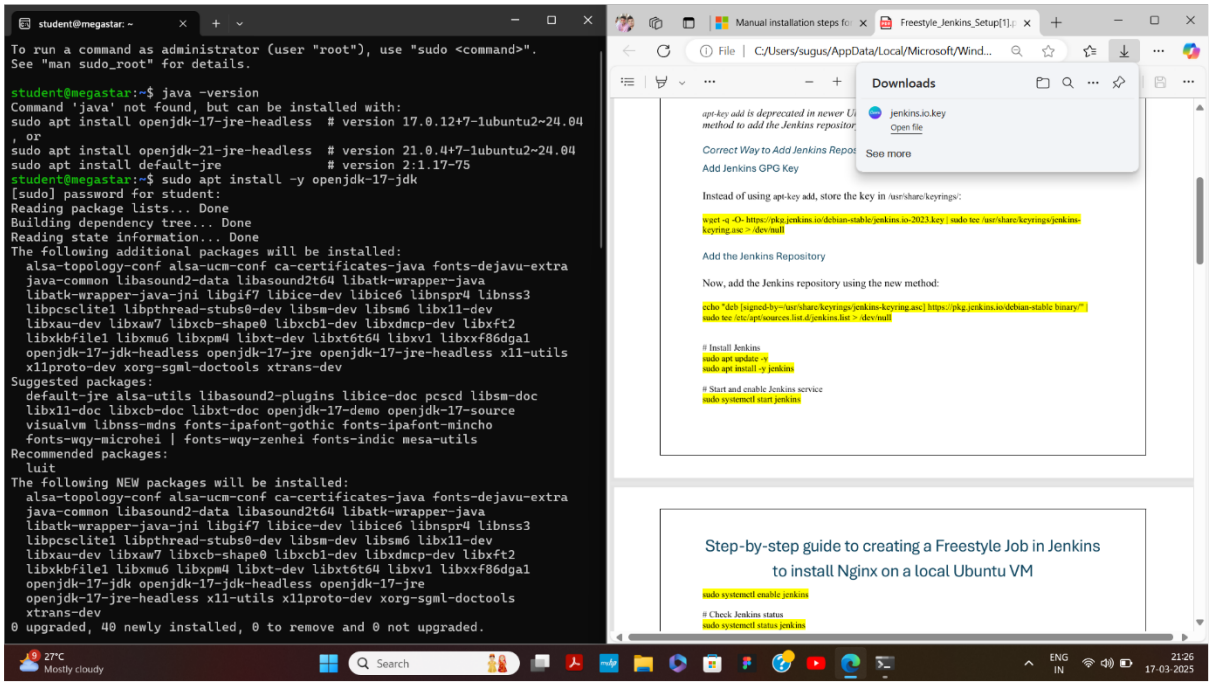
echo "deb [signed-by=/usr/share/keyrings/jenkins-keyring.asc] https://pkg.jenkins.io/debian-stable binary/" | sudo tee /etc/apt/sources.list.d/jenkins.list > /dev/null

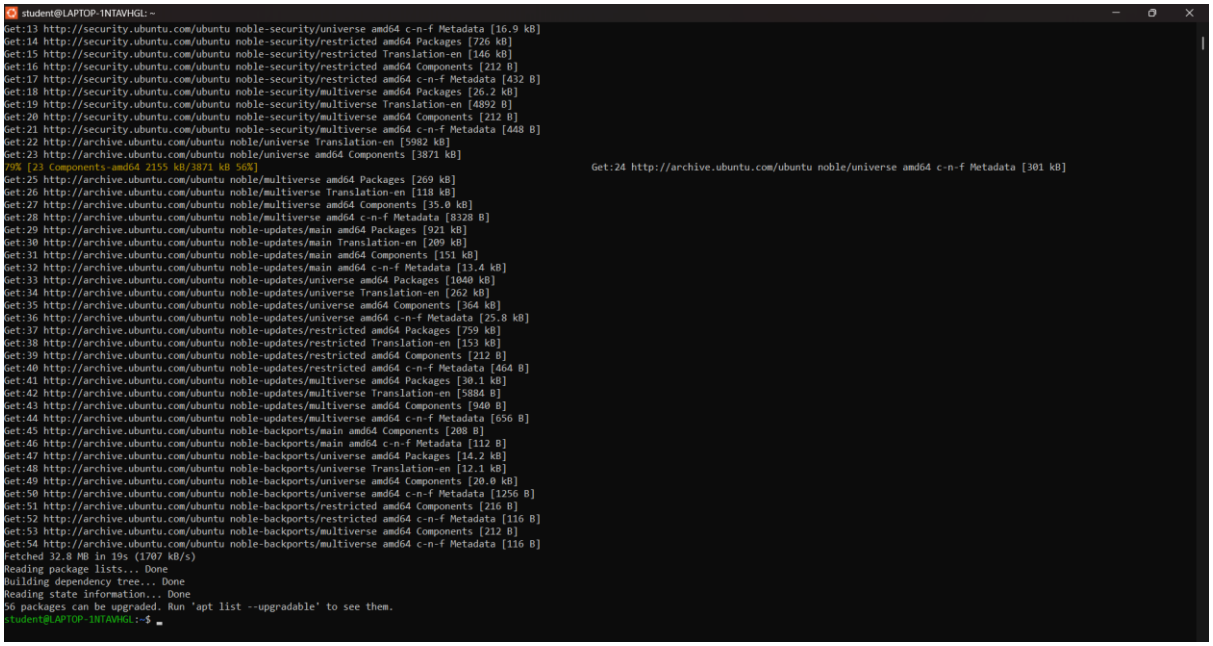
 # Install Jenkins

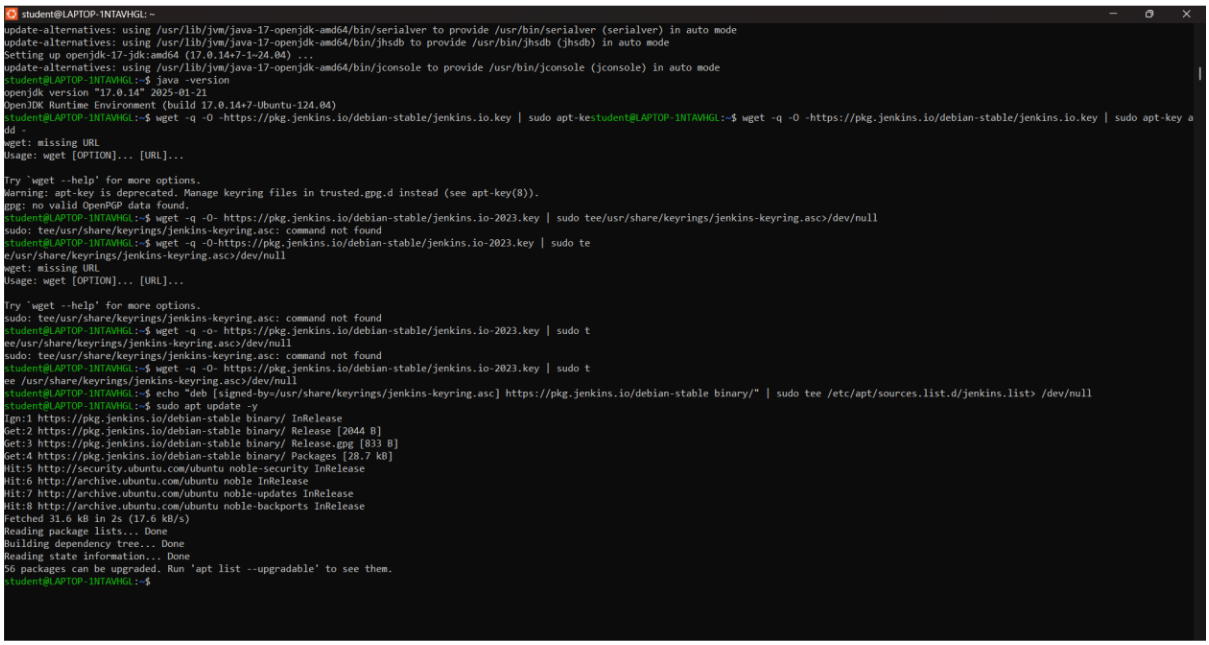
sudo apt update -y

sudo apt install -y jenkins

 # Start and enable Jenkins service sudo systemctl start Jenkins



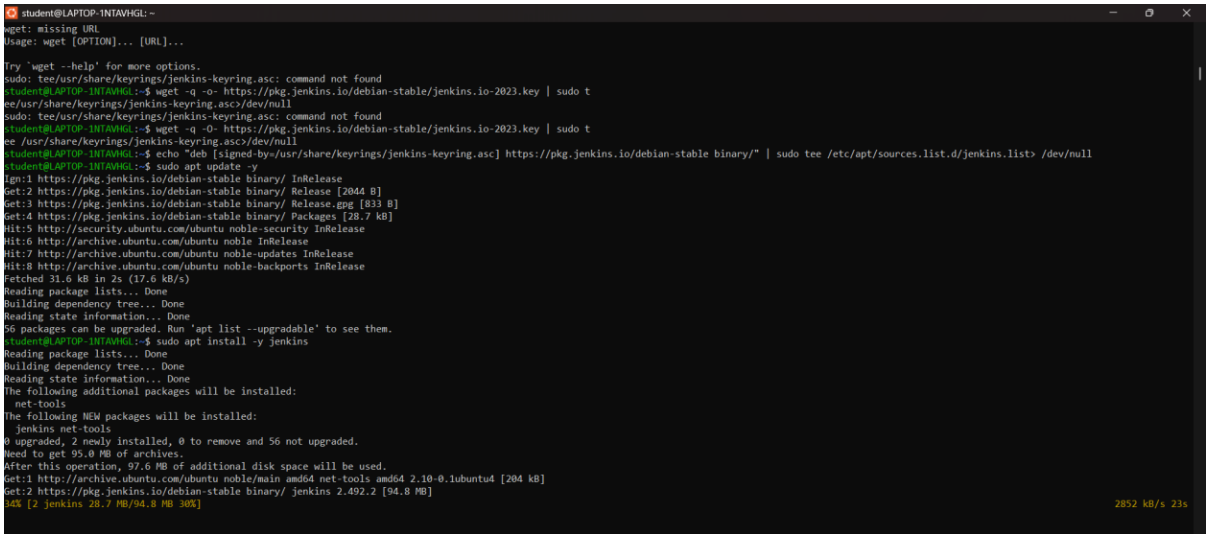




Step 5: Install Jenkins

sudo apt update -y

sudo apt install -y jenkins



Step 6: Check Jenkins Status

sudo systemctl status jenkins

cat copy the localhost:8080 admin path

display the password

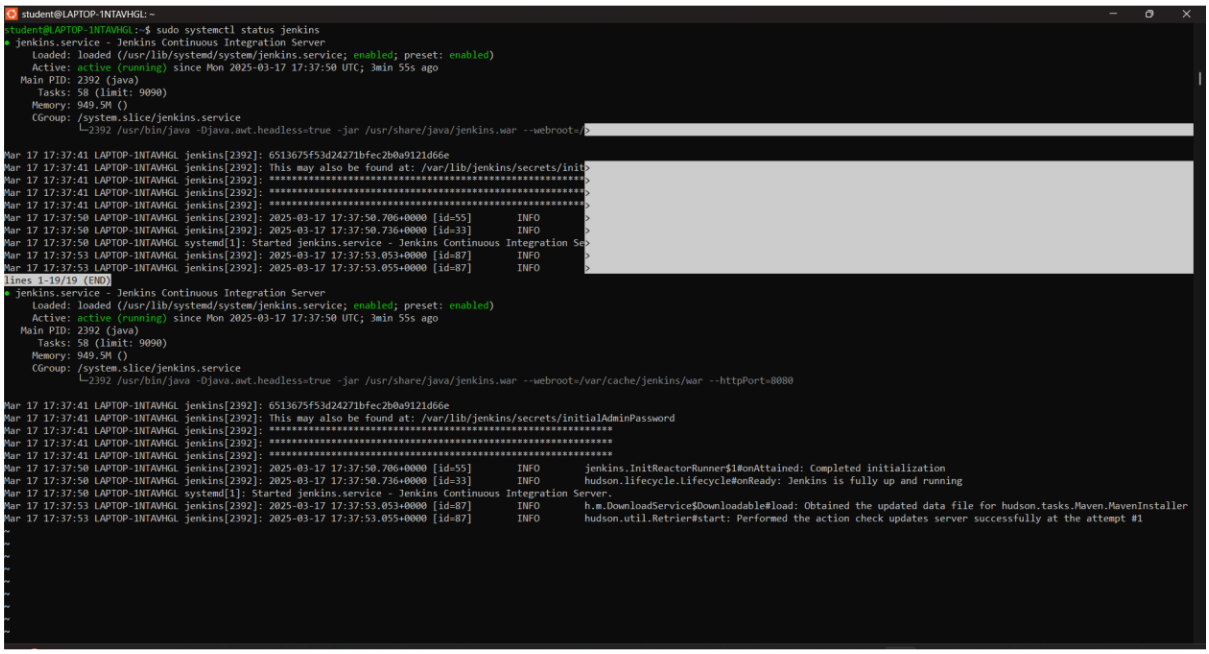
=>By default, Jenkins runs as a system user (jenkins). If your script requires sudo, you must allow the Jenkins user to run commands without a password.

sudo visudo

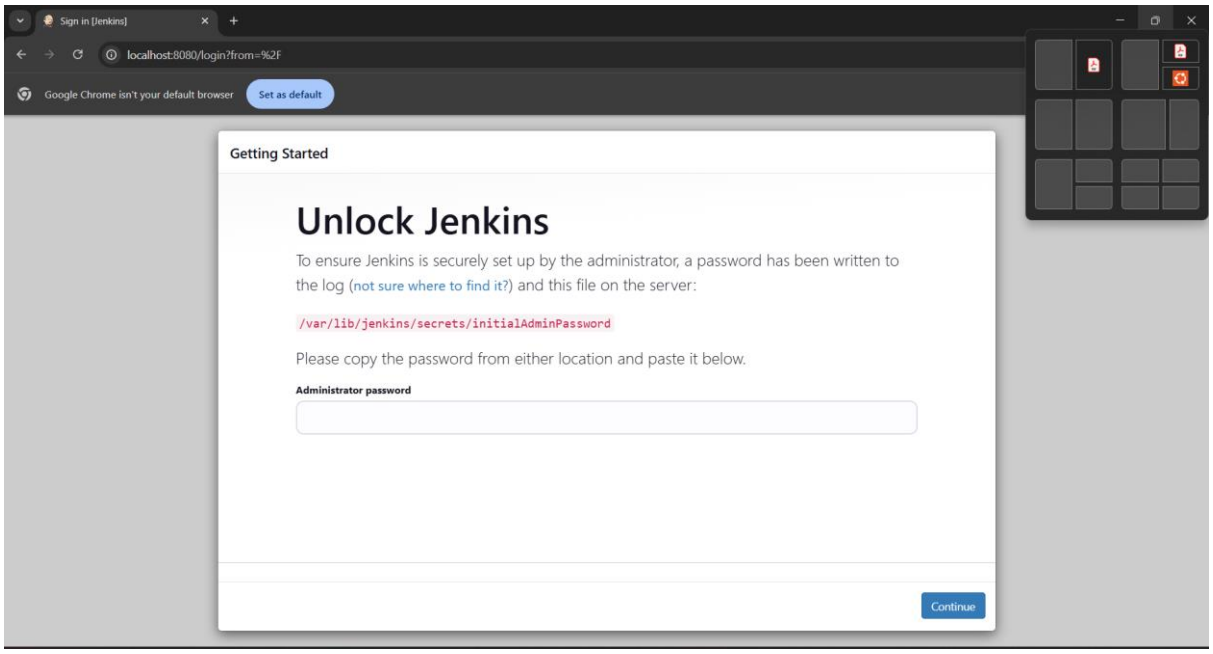
Add the following line at the end:

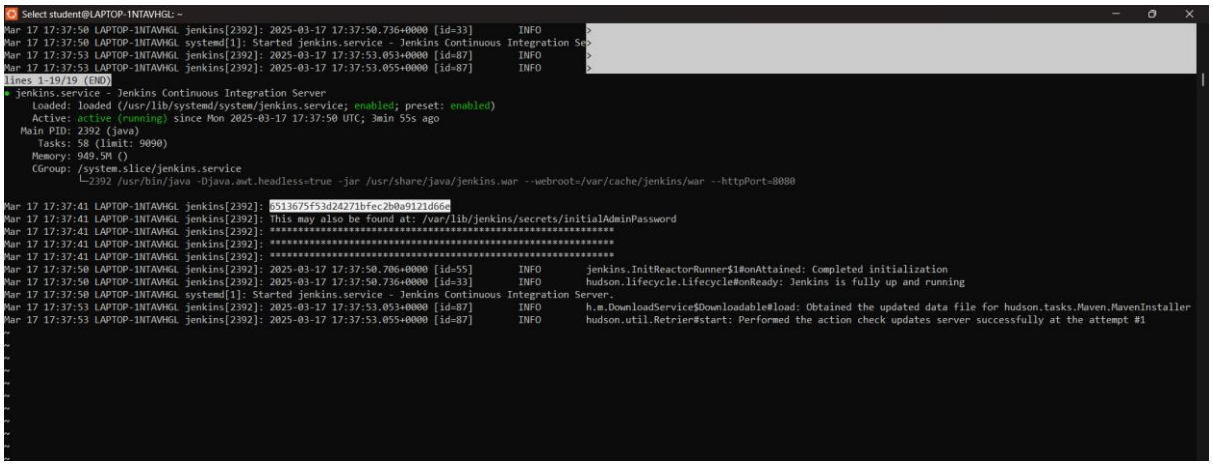
jenkins ALL=(ALL) NOPASSWD: ALL

Save and exit.



Step 7: (Enter the Administrator Password)





Step 8: Access Jenkins Web Interface

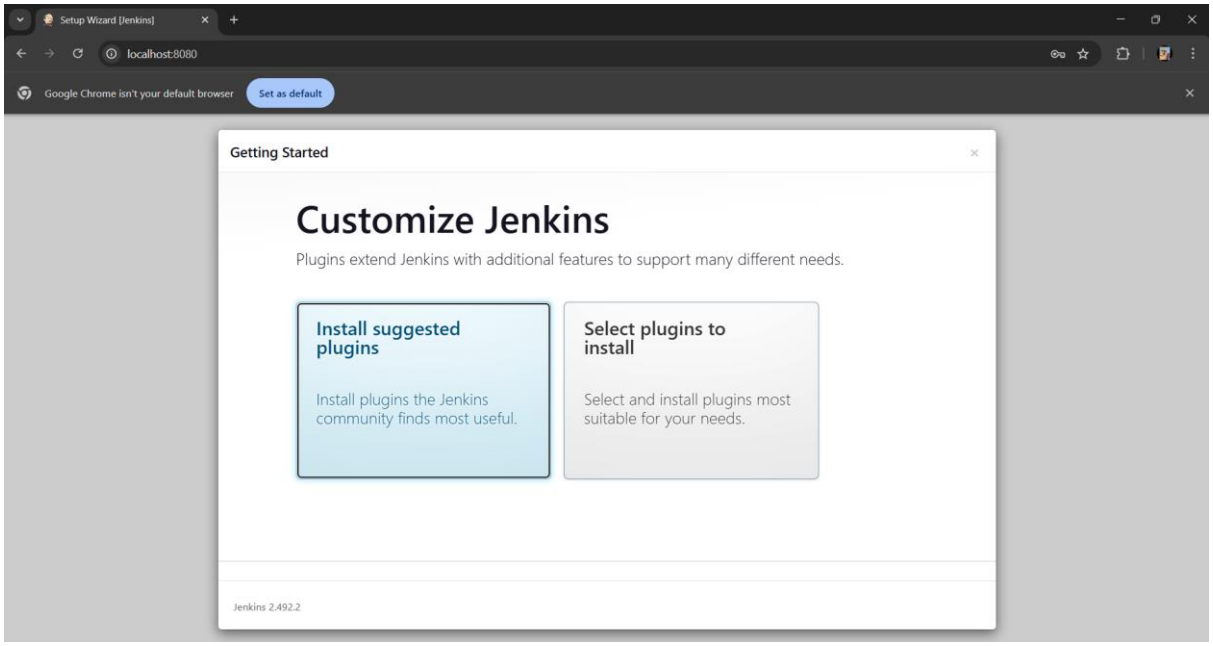
Jenkins will be available at http://localhost:8080

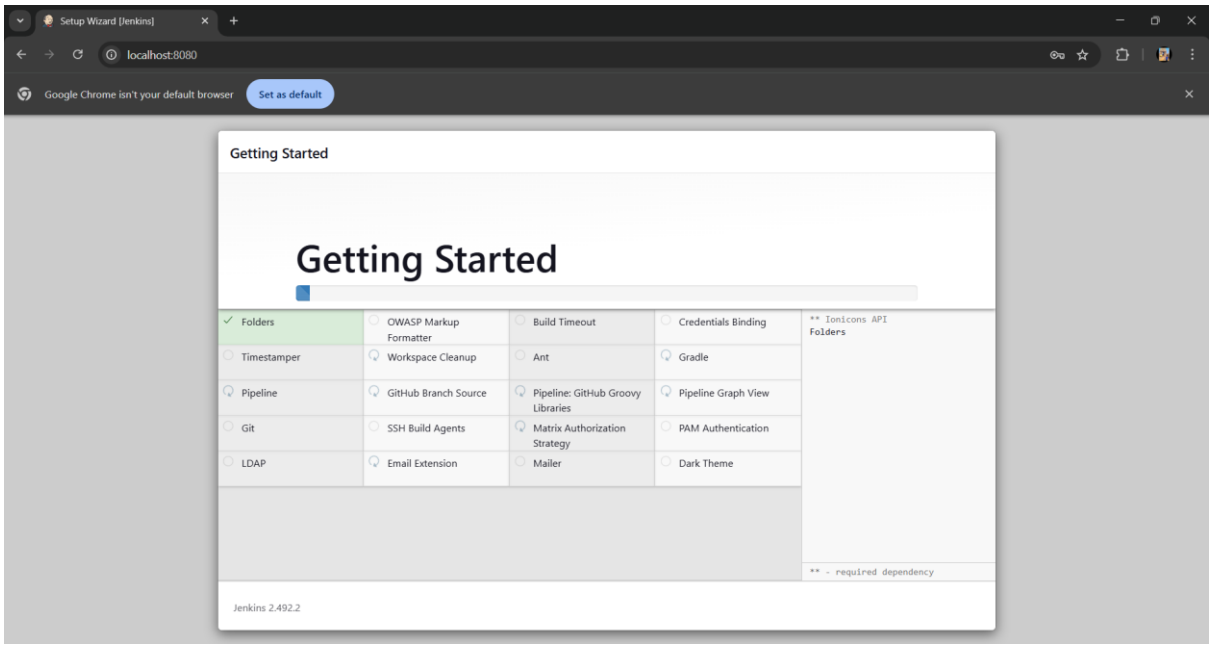
To Get the Jenkins Server URL, Follow These Steps:

Method 1: Check the Default URL

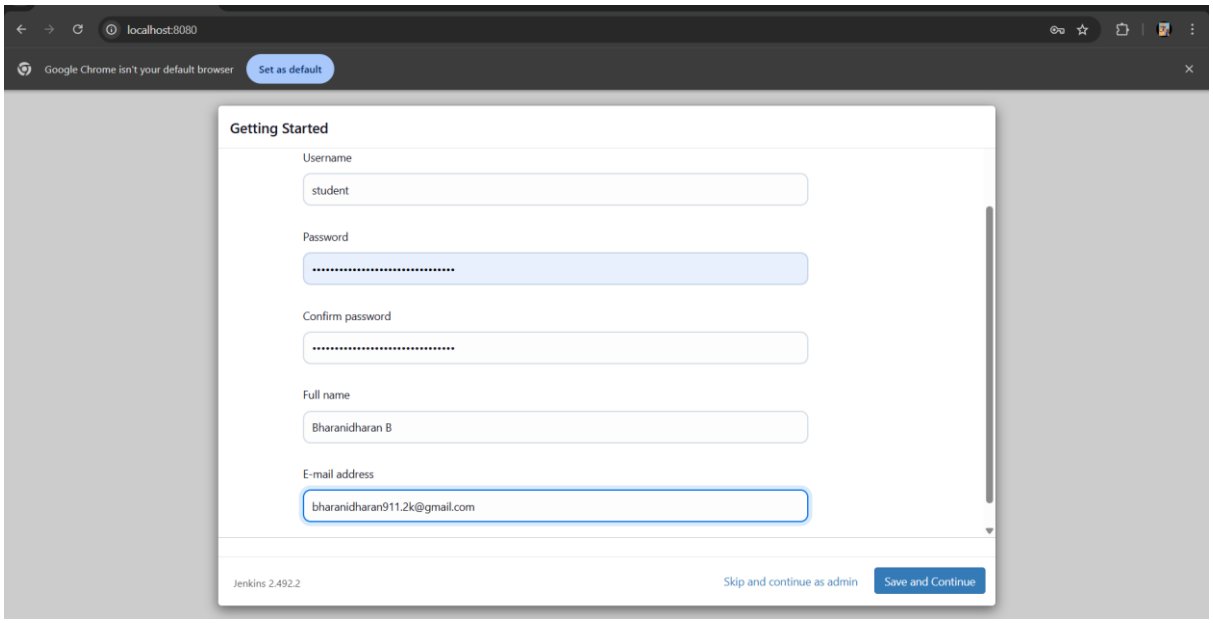
By default, Jenkins runs on port 8080. Open in a browser:

http://<your-server-ip>:8080


Setup Wizard [Jenkins]
localhost:8080
Google Chrome isn't your default browser
Set as default
Getting Started
Customize Jenkins
Plugins extend Jenkins with additional features to support many different needs.
Install suggested plugins
Install plugins the Jenkins community finds most useful.
Select plugins to install
Select and install plugins most suitable for your needs.
Jenkins 2.492.2


Setup Wizard [Jenkins]
localhost:8080
Google Chrome isn't your default browser
Set as default
Getting Started
Getting Started
Folders
OWASP Markup Formatter
Build Timeout
Credentials Binding
Timestamper
Workspace Cleanup
Ant
Gradle
Pipeline
GitHub Branch Source
Pipeline: GitHub Groovy Libraries
Pipeline Graph View
Git
SSH Build Agents
Matrix Authorization Strategy
PAM Authentication
LDAP
Email Extension
Mailer
Dark Theme
** Ionicons API
Folders
** - required dependency
Jenkins 2.492.2

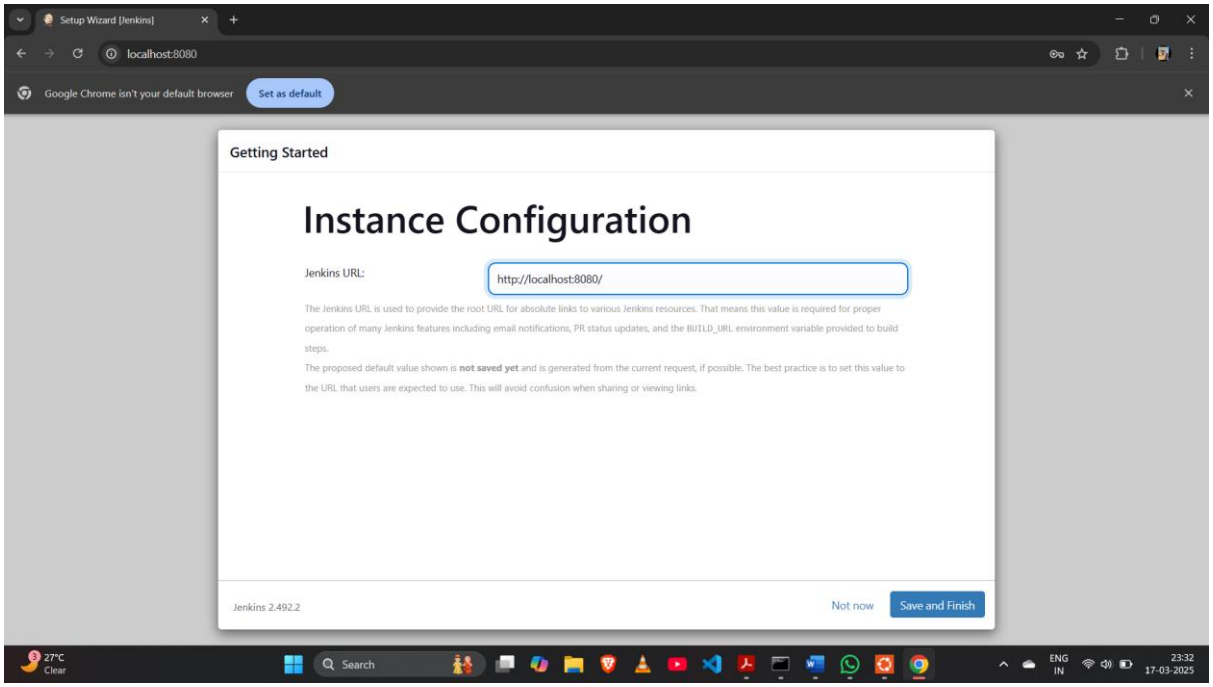
Step 9: (Create First Admin User)

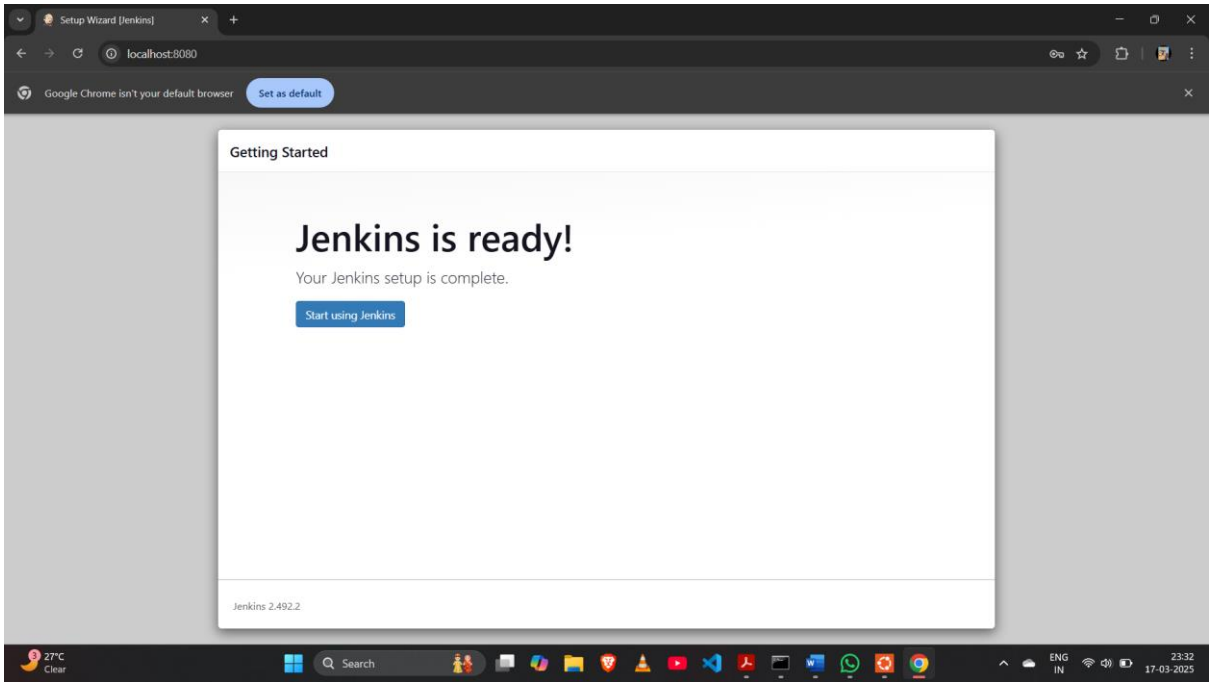


Step 10: (Enter the URL)

If you're on the same machine as Jenkins, use:

http://localhost:8080





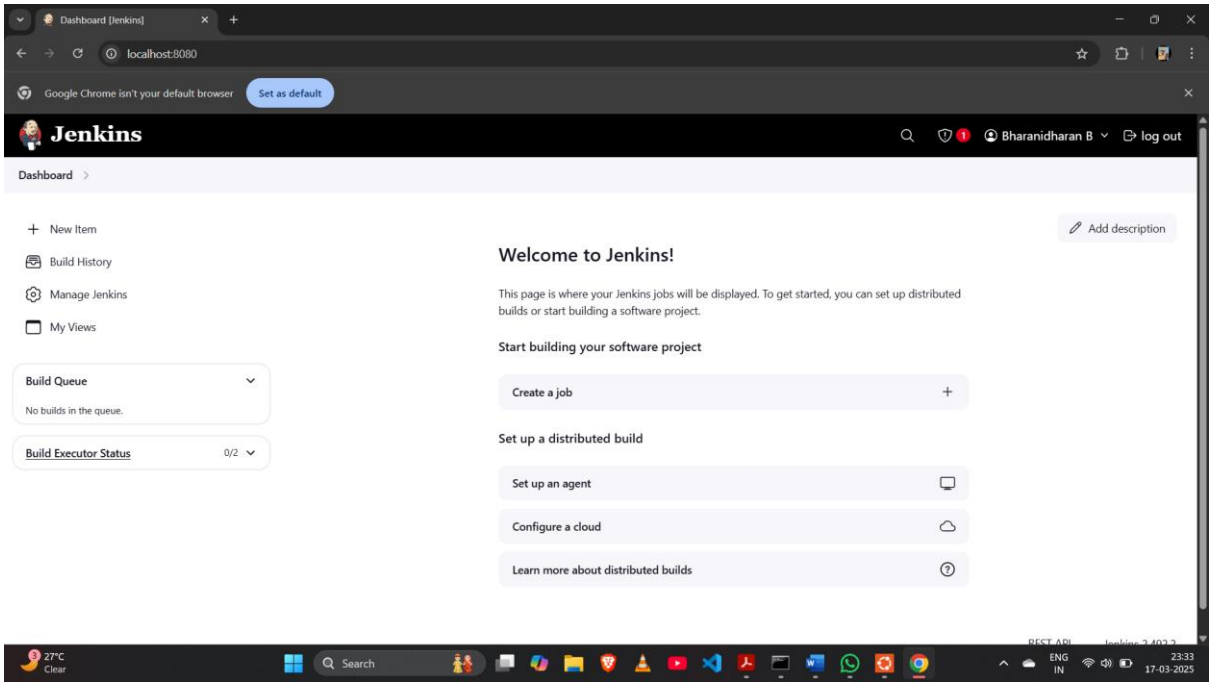
Step 11:

(Create an Project ex.ms)

(In Configure build and Select Execute shell)

(Build the Project)

SELECT BUILD NOW



Step: 12

Step-by-Step Guide to Creating a Freestyle Job in Jenkins to Install Nginx Step 1: Create a New Freestyle Job

1. Click on **New Item** from the Jenkins Dashboard.

2. Enter a name for the job, e.g., *Install-Nginx*.

3. Select **Freestyle project**.

4. Click OK.

Step 2: Configure the Job

Add Build Step

1. Scroll down to **Build** → Click *Add build step* → Select **Execute shell**. 2. Paste the following script in the command box:

```
echo "Updating package lists..."

sudo apt update -y

echo "Installing Nginx..."

sudo apt install -y nginx

echo "Starting Nginx service..."

sudo systemctl start nginx

echo "Enabling Nginx to start on boot..."

sudo systemctl enable nginx

echo "Nginx Installation Completed!"
```

Step 3: Save and Run the Job

1. Click **Save**.

2. Click **Build Now**.

3. Check the **Console Output** to verify the installation.

Step 4: Verify the Installation

1. Check Nginx Status

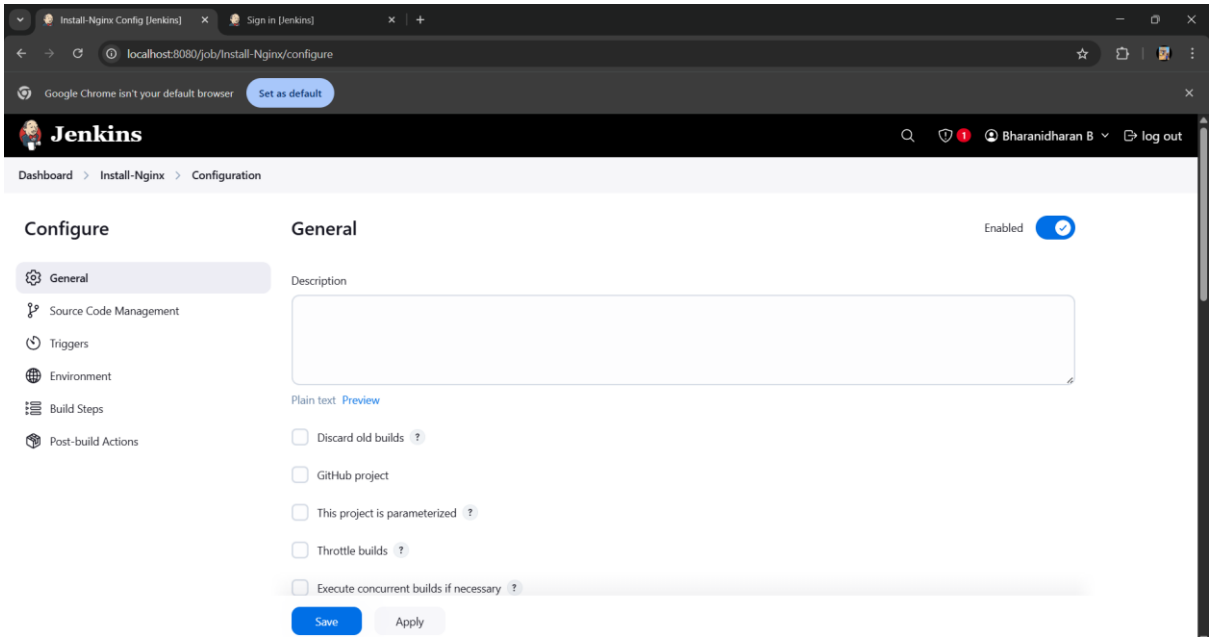
```
systemctl status nginx
```

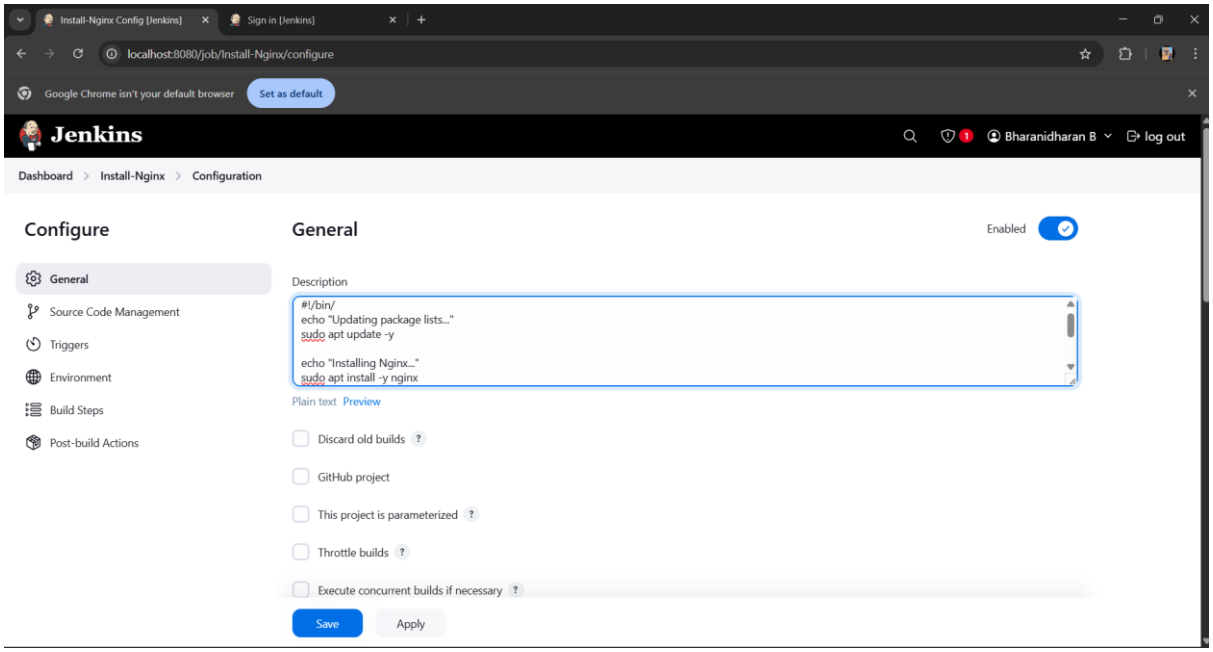
If running, you should see output like *"active (running)"*.

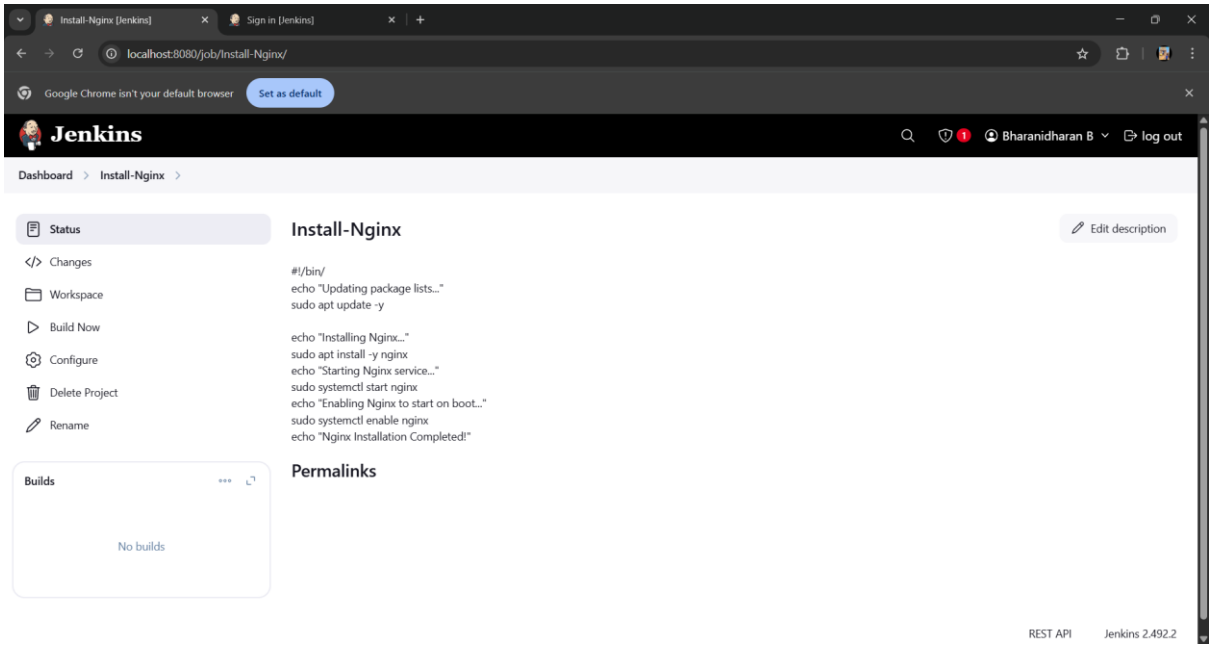
2. Open Nginx in Browser

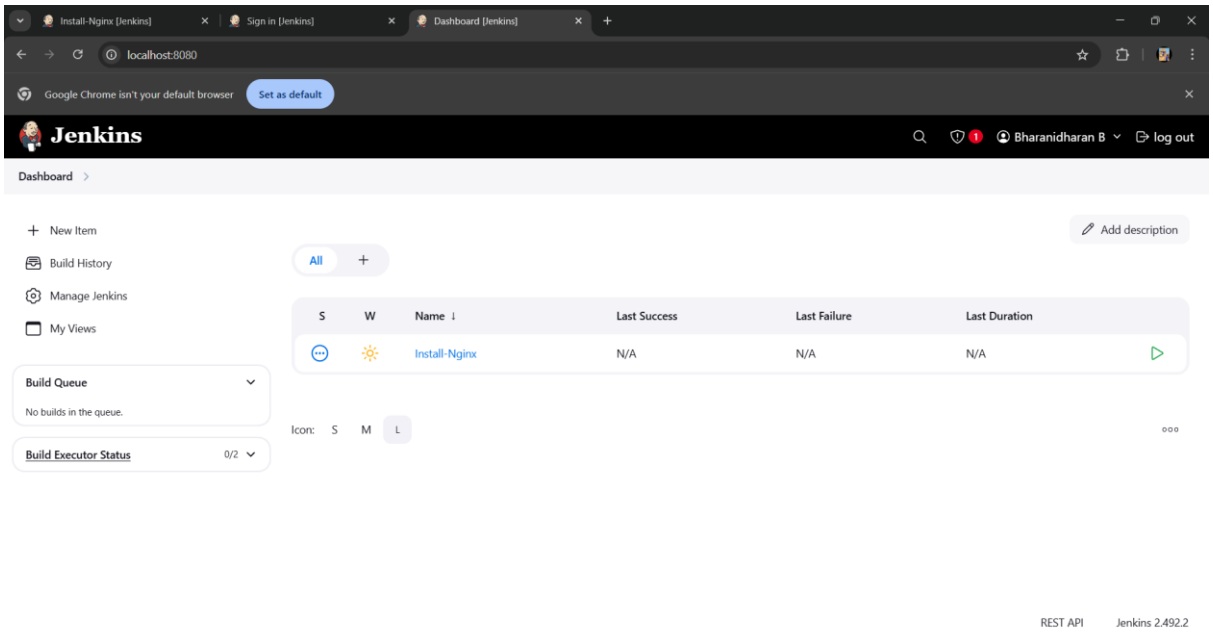
http://localhost:80

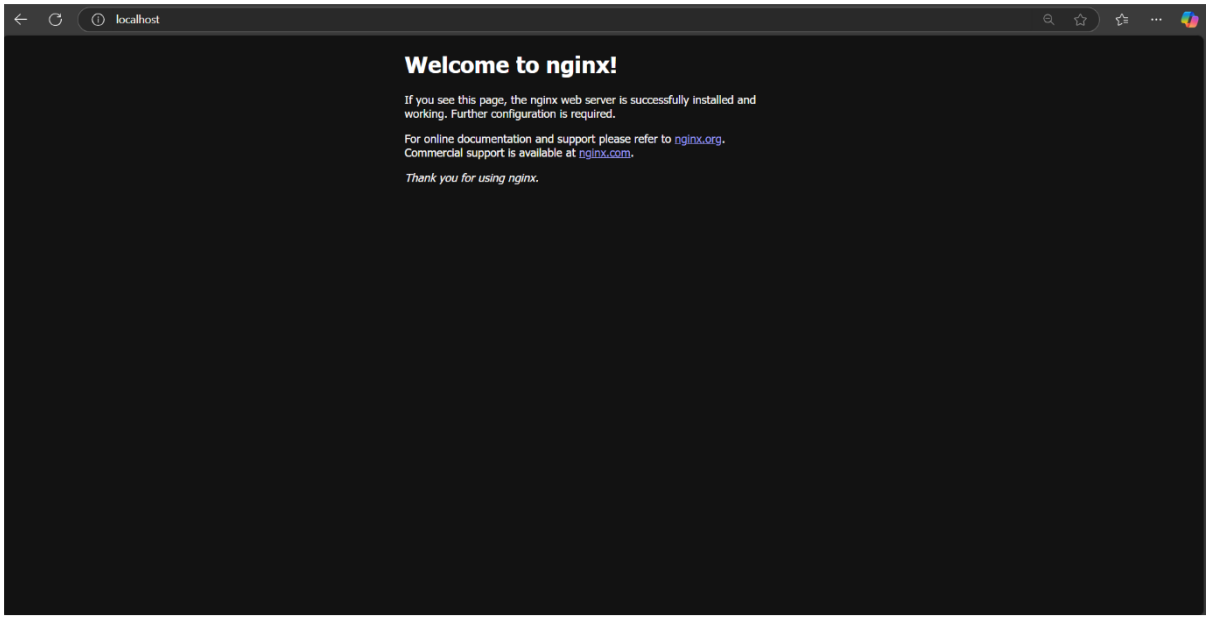
You should see the default Nginx welcome page


Install-Nginx Config [Jenkins]
Sign in [Jenkins]
localhost:8080/job/Install-Nginx/configure
Google Chrome isn't your default browser
Set as default
Jenkins
Bharanidharan B
log out
Dashboard
Install-Nginx
Configuration
Configure
General
Source Code Management
Triggers
Environment
Build Steps
Post-build Actions
General
Enabled
Description
Plain text
Preview
Discard old builds
GitHub project
This project is parameterized
Throttle builds
Execute concurrent builds if necessary
Save
Apply


Install-Nginx Config [Jenkins]
Sign in [Jenkins]
localhost:8080/job/Install-Nginx/configure
Google Chrome isn't your default browser
Set as default
Jenkins
Bharanidharan B
log out
Dashboard
Install-Nginx
Configuration
Configure
General
Source Code Management
Triggers
Environment
Build Steps
Post-build Actions
General
Enabled
Description
#!/bin/
echo "Updating package lists..."
sudo apt update -y
echo "Installing Nginx..."
sudo apt install -y nginx
Plain text
Preview
Discard old builds
GitHub project
This project is parameterized
Throttle builds
Execute concurrent builds if necessary
Save
Apply


Install-Nginx [Jenkins]
Sign in [Jenkins]
localhost:8080/job/Install-Nginx/
Google Chrome isn't your default browser
Set as default
Jenkins
Bharanidharan B
log out
Dashboard
Install-Nginx
Status
Changes
Workspace
Build Now
Configure
Delete Project
Rename
Builds
No builds
Install-Nginx
Edit description
#!/bin/
echo "Updating package lists..."
sudo apt update -y
echo "Installing Nginx..."
sudo apt install -y nginx
echo "Starting Nginx service..."
sudo systemctl start nginx
echo "Enabling Nginx to start on boot..."
sudo systemctl enable nginx
echo "Nginx Installation Completed!"
Permalinks
REST API
Jenkins 2.492.2


Install-Nginx [Jenkins]
Sign in [Jenkins]
Dashboard [Jenkins]
localhost:8080
Google Chrome isn't your default browser
Set as default
Jenkins
Bharanidharan B
log out
Dashboard
New Item
Build History
Manage Jenkins
My Views
Build Queue
No builds in the queue.
Build Executor Status
0/2
Add description
All
S
W
Name
Last Success
Last Failure
Last Duration
Install-Nginx
N/A
N/A
N/A
Icon: S M L
REST API
Jenkins 2.492.2


localhost
Welcome to nginx!
If you see this page, the nginx web server is successfully installed and working. Further configuration is required.
For online documentation and support please refer to nginx.org.
Commercial support is available at nginx.com.
Thank you for using nginx.