Name: S. Elamugil [24MCR023]

Class: I - MCA - "A"

TASK - 1

DEVOPS TRAINING

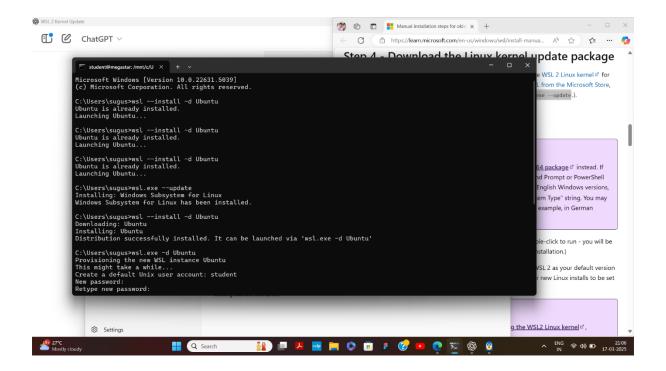
Step 1: (Installing Ubuntu)

Enable WSL

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

Enable WSL Feature

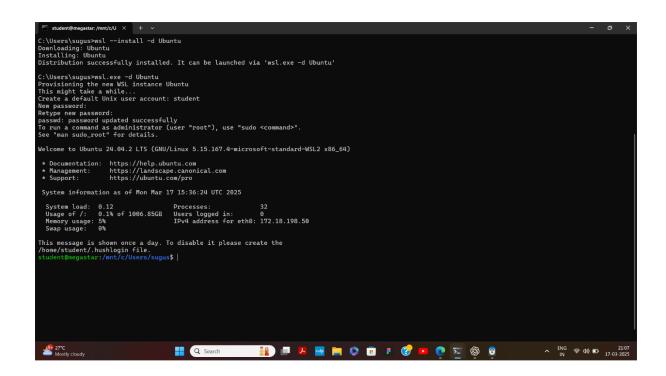
- 1. Open PowerShell as Administrator and run:
- 2. wsl -install



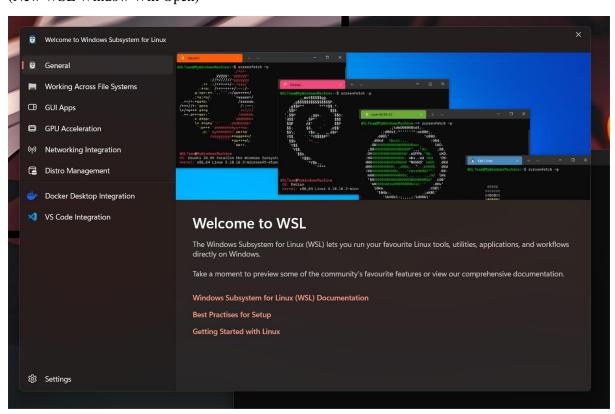
Step 2: (Set New Password) Set Up Ubuntu

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

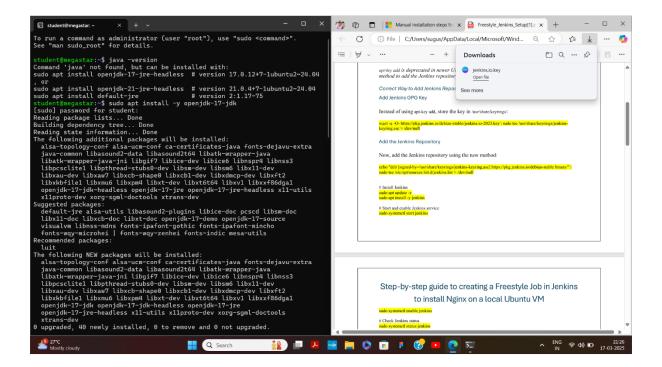
echo "deb [signed-by=/usr/share/keyrings/jenkins-keyring.asc] https://pkg.jenkins.io/debian-stable binary/" | sudo tee /etc/apt/sources.list.d/jenkins.list > /dev/null

Install Jenkins

sudo apt update -y

sudo apt install -y jenkins

Start and enable Jenkins service sudo systemetl start Jenkins



```
### State | St
```

```
Q indemical APPO NEWARCA.

O X September 100 (100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 100 / 10
```

Step 5: Install Jenkins

sudo apt update -y sudo apt install -y jenkins

```
### Company of the Co
```

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

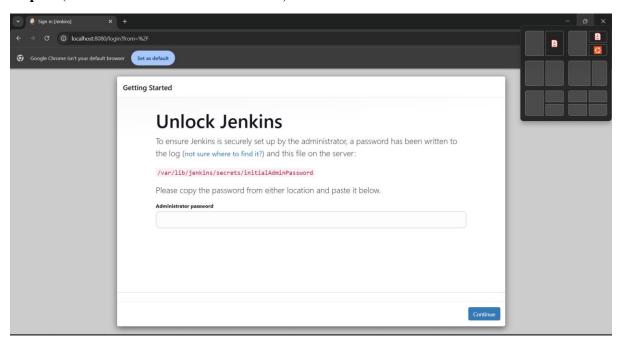
Add the following line at the end:

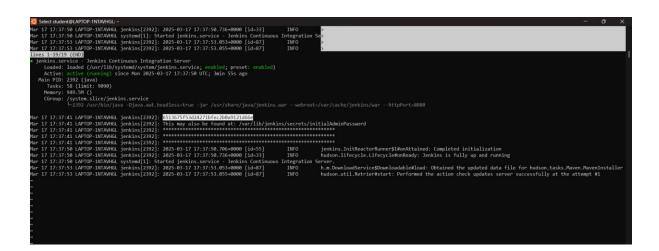
jenkins ALL=(ALL) NOPASSWD: ALL

Save and exit.

```
| Section | Microscopy | Micros
```

Step 7: (Enter the Administrator Password)





Step 8: Access Jenkins Web Interface

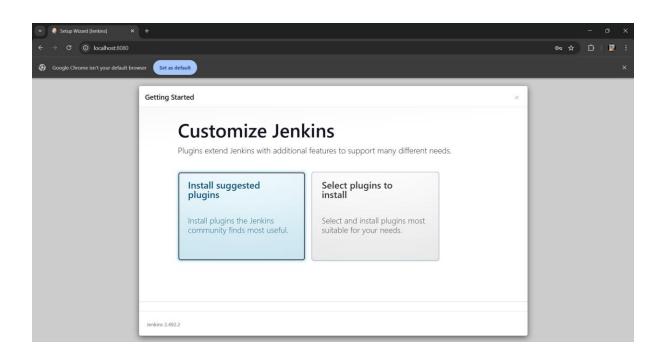
Jenkins will be available at http://localhost:8080

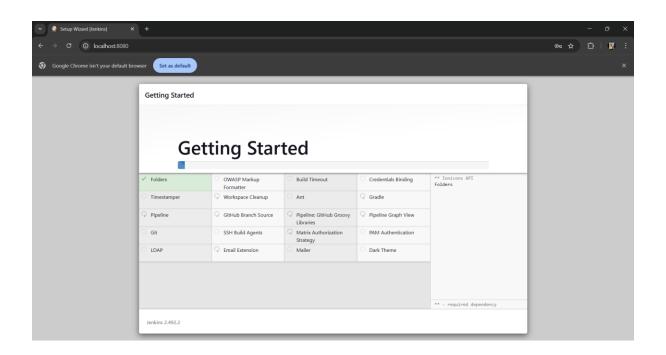
To Get the Jenkins Server URL, Follow These Steps:

Method 1: Check the Default URL

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

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



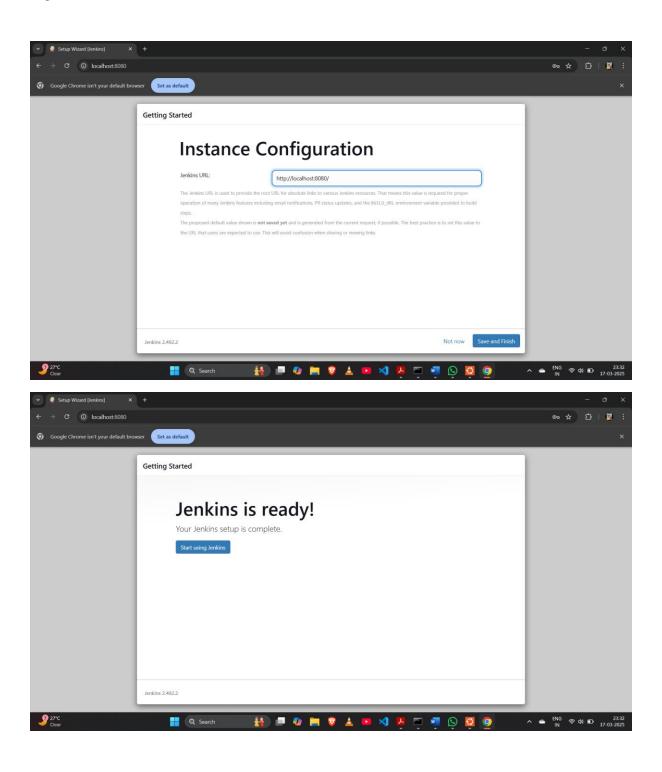


Step 9: (Create First Admin User)

Step 10: (Enter the URL)

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

http://localhost:8080



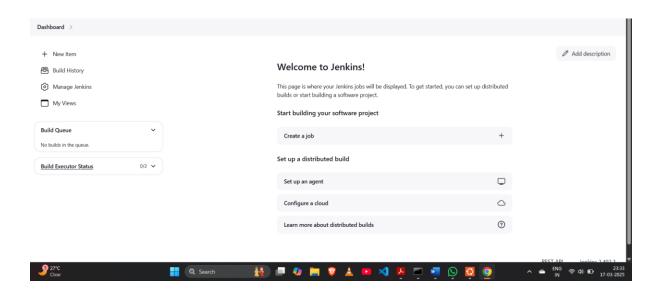
Step 11:

(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** \rightarrow Click *Add build step* \rightarrow 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

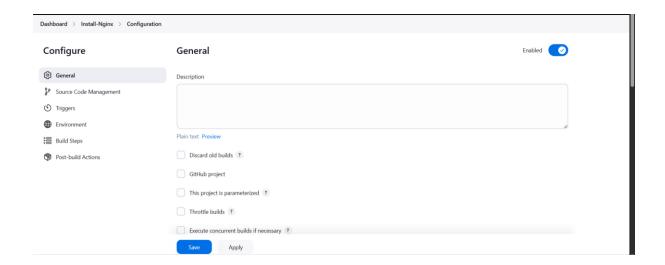
systemctl status nginx

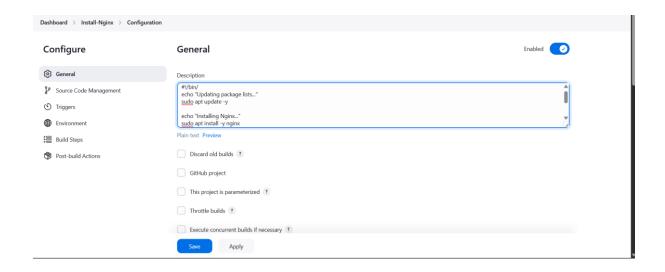
If running, you should see output like "active (running)".

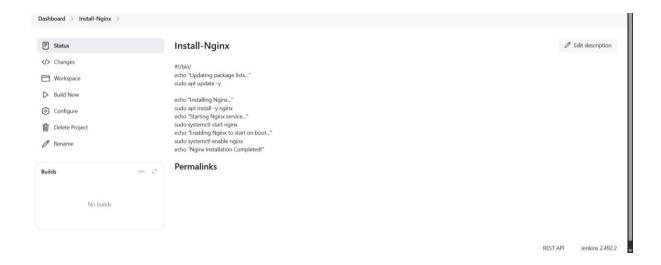
2. Open Nginx in Browser

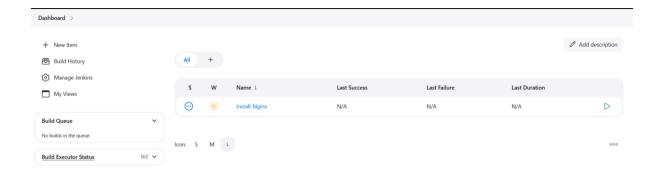
http://localhost:80

You should see the default Nginx welcome page









REST API Jenkins 2.492.2

