Assignment 1

Create a simple FreeStyle Job To Install Nginx on the server

Name : Sanmathi S

Roll No : 22ISR045

JENKINS

- Jenkins is an open-source automation server used for **Continuous Integration (CI) and Continuous Deployment (CD)**.
- It helps automate the process of building, testing, and deploying applications, making software development faster and more reliable.

Key Features of Jenkins

➢ **Automation:** Automates repetitive tasks like builds and deployments

➢ **Plugins:** Supports 1,800+ plugins for integration with tools like Git, Docker, Kubernetes

➢ **Pipeline Support:** Allows scripting build workflows using **Jenkins Pipeline** (Groovy-based)

➢ **Distributed Builds:** Can run jobs on multiple machines to improve efficiency

➢ **Easy Integration:** Works with version control systems (Git, GitHub, GitLab, Bitbucket)

Steps to Create a Freestyle Job to Install Nginx

1. Open Jenkins Dashboard and click on "New Item"

2. Enter a job name and select Freestyle Project, then click OK

3. Navigate to the Build section and select "Execute shell"

4. Enter the following shell script to install Nginx:

```
sudo apt update

sudo apt install -y nginx

sudo systemctl start nginx

sudo systemctl enable nginx
```

5. Click **Save** and then **Build Now** to execute the job

1. Installing Nginx
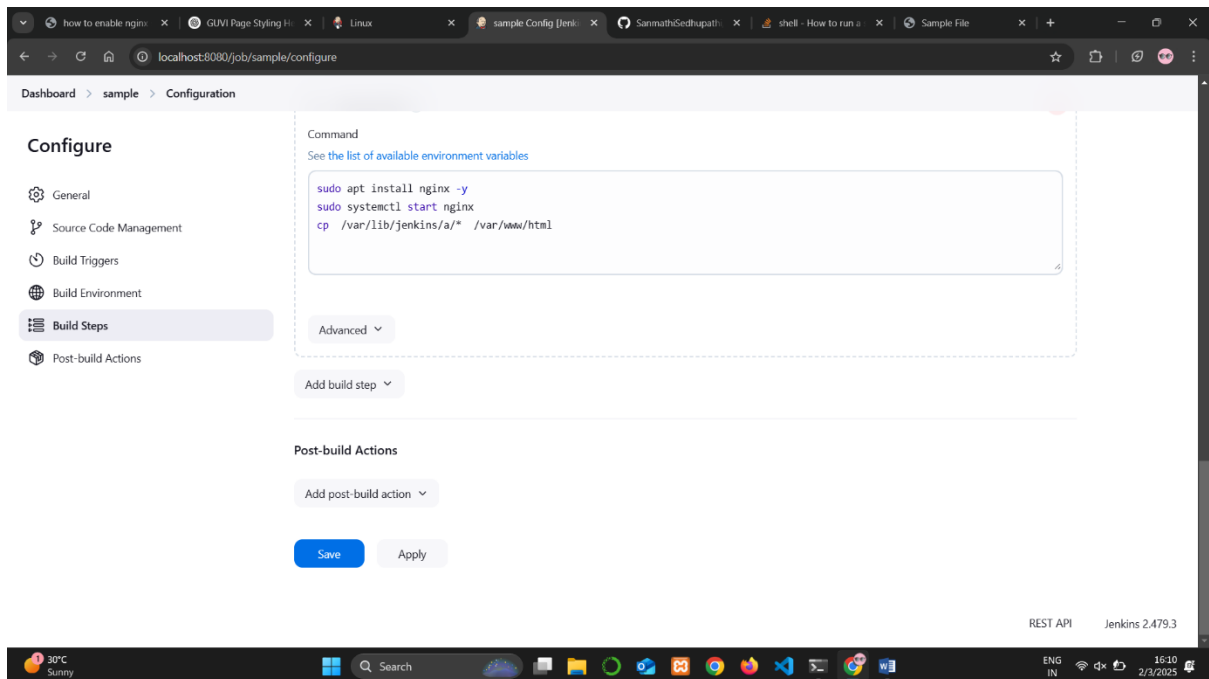
2. Updating Access for Jenkins


```
#Defaults:%sudo env_keep += "EMAIL DEBEMAIL DEBFULLNAME"

# "sudo scp" or "sudo rsync" should be able to use your SSH agent.
#Defaults:%sudo env_keep += "SSH_AGENT_PID SSH_AUTH_SOCK"

# Ditto for GPG agent
#Defaults:%sudo env_keep += "GPG_AGENT_INFO"

# Host alias specification

# User alias specification

# Cmnd alias specification

# User privilege specification
root    ALL=(ALL:ALL) ALL
jenkins ALL=(ALL) NOPASSWD:ALL
# Members of the admin group may gain root privileges
%admin ALL=(ALL) ALL

# Allow members of group sudo to execute any command
%sudo   ALL=(ALL:ALL) ALL

# See sudoers(5) for more information on "@include" directives:

@includedir /etc/sudoers.d

jenkins ALL=(ALL) NOPASSWD: /usr/bin/apt, /usr/bin/systemctl
"/etc/sudoers" [readonly] 59L, 1892B
```

Console output

Chrome output