JENKINS AND NGINX

STEP 1: Install Ubuntu and use the Ubuntu OS
STEP2 : Open the terminal in the Ubuntu
STEP 3: Make sure your Ubuntu has java . If not install java using

sudo apt install openjdk-17-jdk -y

Once you install java , check the version like this below image

```
rithikkha@Rithikkha:~$ sudo apt install openjdk-17-jdk -y
[sudo] password for rithikkha:
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
openjdk-17-jdk is already the newest version (17.0.14+7-1~24.04).
The following package was automatically installed and is no longer required:
  libllvm17t64
Use 'sudo apt autoremove' to remove it.
0 upgraded, 0 newly installed, 0 to remove and 2 not upgraded.
rithikkha@Rithikkha:~$ java -version
openjdk version "17.0.14" 2025-01-21
OpenJDK Runtime Environment (build 17.0.14+7-Ubuntu-124.04)
OpenJDK 64-Bit Server VM (build 17.0.14+7-Ubuntu-124.04, mixed mode, sharing)
```

STEP 4: Now install jenkins , create a **nano filename.sh** file and add the following commands

**sudo wget -O /usr/share/keyrings/jenkins-keyring.asc **
https://pkg.jenkins.io/debian-stable/jenkins.io-2023.key

**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

sudo apt-get update

sudo apt-get install jenkins

```
rithikkha@Rithikkha:~$ 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
rithikkha@Rithikkha:~$ sudo apt-get update
Ign:1 https://pkg.jenkins.io/debian-stable binary/ InRelease
Hit:2 https://pkg.jenkins.io/debian-stable binary/ Release
Hit:4 http://security.ubuntu.com/ubuntu noble-security InRelease
Hit:5 http://archive.ubuntu.com/ubuntu noble InRelease
Get:6 http://archive.ubuntu.com/ubuntu noble-updates InRelease [126 kB]
Hit:7 http://archive.ubuntu.com/ubuntu noble-backports InRelease
Get:8 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 Packages [921 kB]
Get:9 http://archive.ubuntu.com/ubuntu noble-updates/universe amd64 Packages [1040 kB]
Fetched 2087 kB in 4s (560 kB/s)
Reading package lists... Done
rithikkha@Rithikkha:~$ sudo apt-get install jenkins
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
jenkins is already the newest version (2.492.2).
The following package was automatically installed and is no longer required:
  libllvm17t64
Use 'sudo apt autoremove' to remove it.
0 upgraded, 0 newly installed, 0 to remove and 2 not upgraded.
```

STEP 5: After step 5 , run the follwing commands to run the jenkins

sudo systemctl enable jenkins
sudo systemctl start jenkins
sudo system status jenkins

```
rithikkha@Rithikkha:~$ sudo systemctl start jenkins
rithikkha@Rithikkha:~$ sudo systemctl status jenkins
● jenkins.service - Jenkins Continuous Integration Server
     Loaded: loaded (/usr/lib/systemd/system/jenkins.service; enabled; preset: enabled)
     Active: active (running) since Tue 2025-03-18 11:16:42 UTC; 10min ago
   Main PID: 191 (java)
      Tasks: 54 (limit: 4575)
     Memory: 480.3M ()
     CGroup: /system.slice/jenkins.service
             └─191 /usr/bin/java -Djava.awt.headless=true -jar /usr/share/java/jenkins.war --webroo>

Mar 18 11:16:36 Rithikkha jenkins[191]: Jenkins initial setup is required. An admin user has been c>
Mar 18 11:16:36 Rithikkha jenkins[191]: Please use the following password to proceed to installatio>
Mar 18 11:16:36 Rithikkha jenkins[191]: 3f0df041e12243c7b2526731907c205b
Mar 18 11:16:36 Rithikkha jenkins[191]: This may also be found at: /var/lib/jenkins/secrets/initial>
Mar 18 11:16:36 Rithikkha jenkins[191]: ************************************************************>
Mar 18 11:16:36 Rithikkha jenkins[191]: ************************************************************>
Mar 18 11:16:36 Rithikkha jenkins[191]: ************************************************************>
Mar 18 11:16:42 Rithikkha jenkins[191]: 2025-03-18 11:16:42.654+0000 [id=43]        INFO        jen>
Mar 18 11:16:42 Rithikkha jenkins[191]: 2025-03-18 11:16:42.678+0000 [id=25]        INFO        hud>
Mar 18 11:16:42 Rithikkha systemd[1]: Started jenkins.service - Jenkins Continuous Integration Serv>
lines 1-19/19 (END)
```

STEP 6: Now your jenkins in run , go to localhost:8080 , you should see the administration page .

STEP 7 : :In the terminal again type the following command ,

sudo cat /var/lib/jenkins/secrets/initialAdminPassword

```
rithikkha@Rithikkha:~$ sudo cat /var/lib/jenkins/secrets/initialAdminPassword
```

STEP 8: Now you have your password generated , enter this password in the admin page and enter basic details and finish necessary resources installation and you,ll be taken into the jenkins interface .

STEP 9: Give your project a name , and in configure in the shell , type in the following commands and save it .

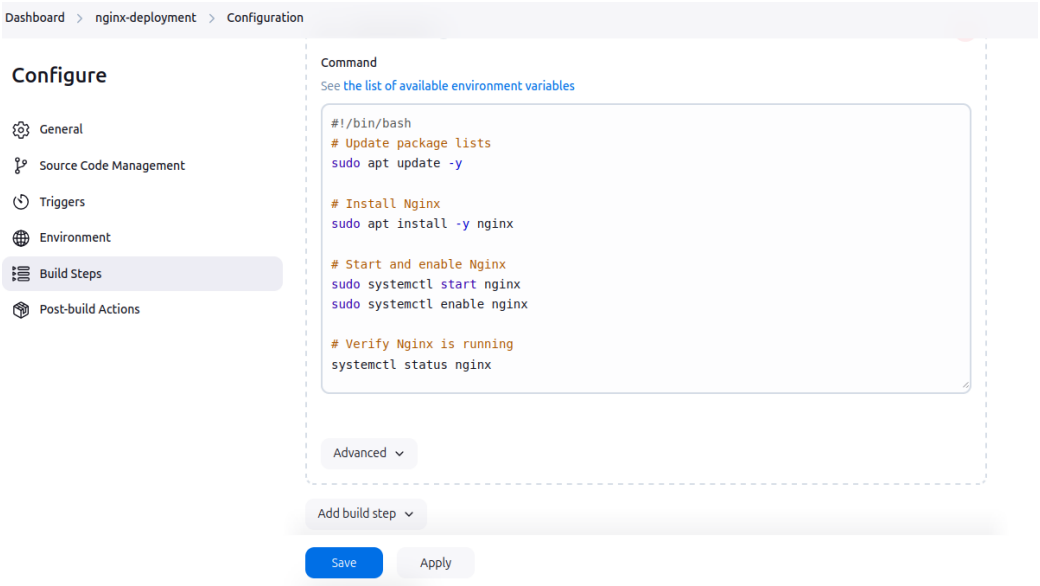
#!/bin/bash
 # Update package lists
sudo apt update -y

 # Install Nginx
sudo apt install -y nginx

 # Start and enable Nginx

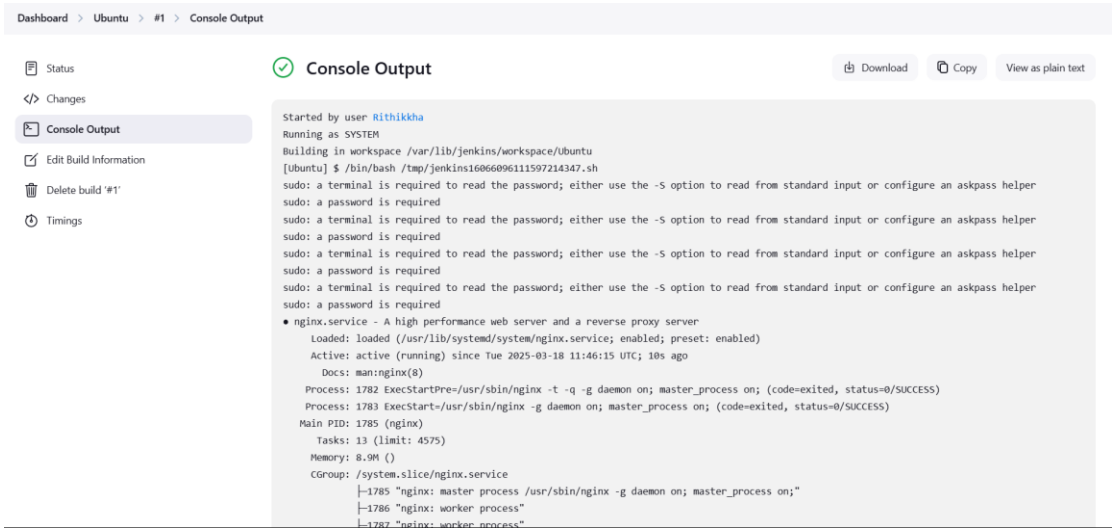
sudo systemctl start nginx
sudo systemctl enable nginx

 # Verify Nginx is running
systemctl status nginx



STEP 10: Go to your terminal and run the following command ,

sudo apt-get install nginx
sudo systemctl restart nginx

```
rithikkha@Rithikkha:~$ sudo apt-get install nginx
[sudo] password for rithikkha:
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following package was automatically installed and is no longer required:
  libllvm17t64
Use 'sudo apt autoremove' to remove it.
The following additional packages will be installed:
  nginx-common
Suggested packages:
  fcgiwrap nginx-doc ssl-cert
The following NEW packages will be installed:
  nginx nginx-common
0 upgraded, 2 newly installed, 0 to remove and 2 not upgraded.
Need to get 552 kB of archives.
After this operation, 1596 kB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 nginx-common all 1.24.0-2ubuntu7.1 [31.2 kB]
Get:2 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 nginx amd64 1.24.0-2ubuntu7.1 [521 kB]
Fetched 552 kB in 3s (204 kB/s)
Preconfiguring packages ...
Selecting previously unselected package nginx-common.
(Reading database ... 42896 files and directories currently installed.)
Preparing to unpack .../nginx-common_1.24.0-2ubuntu7.1_all.deb ...
Unpacking nginx-common (1.24.0-2ubuntu7.1) ...
Selecting previously unselected package nginx.
Preparing to unpack .../nginx_1.24.0-2ubuntu7.1_amd64.deb ...
Unpacking nginx (1.24.0-2ubuntu7.1) ...
Setting up nginx (1.24.0-2ubuntu7.1) ...
Setting up nginx-common (1.24.0-2ubuntu7.1) ...
Created symlink /etc/systemd/system/multi-user.target.wants/nginx.service → /usr/lib/systemd/system/nginx.service.
Processing triggers for man-db (2.12.0-4build2) ...
rithikkha@Rithikkha:~$ sudo systemctl restart nginx
```

STEP 12: If you have a successful build , your console output looks like this !