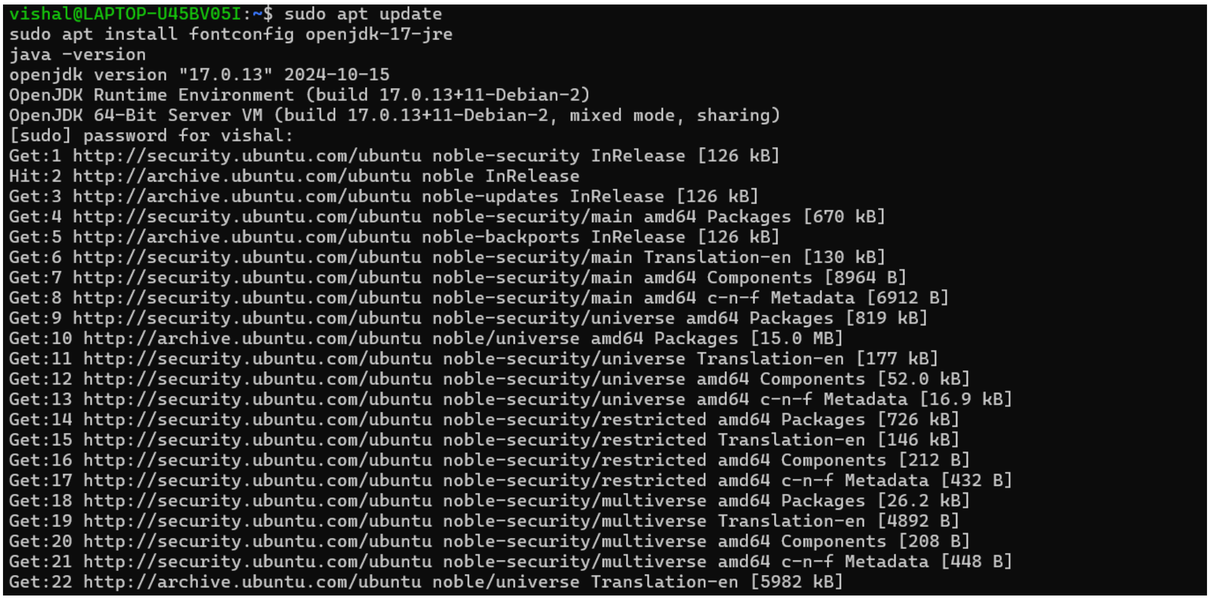
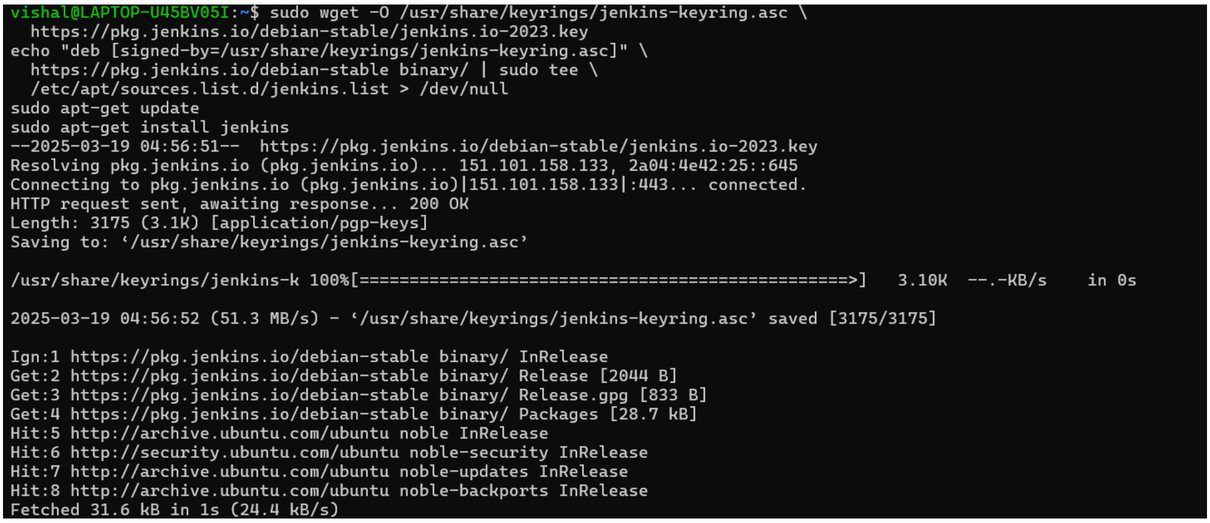
TASK 1

Step 1:

Install java and then install jenkins



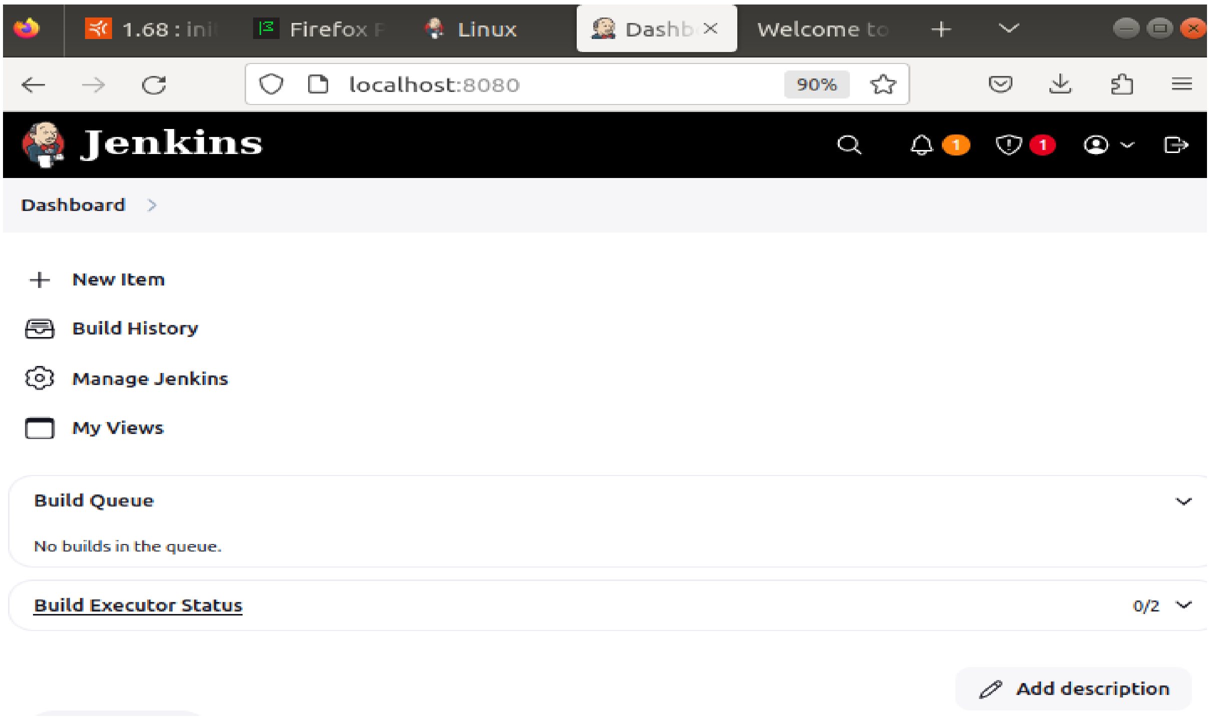
```
vishal@LAPTOP-U45BV05I:~$ sudo apt update
sudo apt install fontconfig openjdk-17-jre
java -version
openjdk version "17.0.13" 2024-10-15
OpenJDK Runtime Environment (build 17.0.13+11-Debian-2)
OpenJDK 64-Bit Server VM (build 17.0.13+11-Debian-2, mixed mode, sharing)
[sudo] password for vishal:
Get:1 http://security.ubuntu.com/ubuntu noble-security InRelease [126 kB]
Hit:2 http://archive.ubuntu.com/ubuntu noble InRelease
Get:3 http://archive.ubuntu.com/ubuntu noble-updates InRelease [126 kB]
Get:4 http://security.ubuntu.com/ubuntu noble-security/main amd64 Packages [670 kB]
Get:5 http://archive.ubuntu.com/ubuntu noble-backports InRelease [126 kB]
Get:6 http://security.ubuntu.com/ubuntu noble-security/main Translation-en [130 kB]
Get:7 http://security.ubuntu.com/ubuntu noble-security/main amd64 Components [8964 B]
Get:8 http://security.ubuntu.com/ubuntu noble-security/main amd64 c-n-f Metadata [6912 B]
Get:9 http://security.ubuntu.com/ubuntu noble-security/universe amd64 Packages [819 kB]
Get:10 http://archive.ubuntu.com/ubuntu noble/universe amd64 Packages [15.0 MB]
Get:11 http://security.ubuntu.com/ubuntu noble-security/universe Translation-en [177 kB]
Get:12 http://security.ubuntu.com/ubuntu noble-security/universe amd64 Components [52.0 kB]
Get:13 http://security.ubuntu.com/ubuntu noble-security/universe amd64 c-n-f Metadata [16.9 kB]
Get:14 http://security.ubuntu.com/ubuntu noble-security/restricted amd64 Packages [726 kB]
Get:15 http://security.ubuntu.com/ubuntu noble-security/restricted Translation-en [146 kB]
Get:16 http://security.ubuntu.com/ubuntu noble-security/restricted amd64 Components [212 B]
Get:17 http://security.ubuntu.com/ubuntu noble-security/restricted amd64 c-n-f Metadata [432 B]
Get:18 http://security.ubuntu.com/ubuntu noble-security/multiverse amd64 Packages [26.2 kB]
Get:19 http://security.ubuntu.com/ubuntu noble-security/multiverse Translation-en [4892 B]
Get:20 http://security.ubuntu.com/ubuntu noble-security/multiverse amd64 Components [208 B]
Get:21 http://security.ubuntu.com/ubuntu noble-security/multiverse amd64 c-n-f Metadata [448 B]
Get:22 http://archive.ubuntu.com/ubuntu noble/universe Translation-en [5982 kB]
```



```
vishal@LAPTOP-U45BV05I:~$ 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
--2025-03-19 04:56:51--  https://pkg.jenkins.io/debian-stable/jenkins.io-2023.key
Resolving pkg.jenkins.io (pkg.jenkins.io)... 151.101.158.133, 2a04:4e42:25::645
Connecting to pkg.jenkins.io (pkg.jenkins.io)|151.101.158.133|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 3175 (3.1K) [application/pgp-keys]
Saving to: ‘/usr/share/keyrings/jenkins-keyring.asc’

/usr/share/keyrings/jenkins-k 100%[===============================================>]   3.10K  --.-KB/s    in 0s

2025-03-19 04:56:52 (51.3 MB/s) - ‘/usr/share/keyrings/jenkins-keyring.asc’ saved [3175/3175]

Ign:1 https://pkg.jenkins.io/debian-stable binary/ InRelease
Get:2 https://pkg.jenkins.io/debian-stable binary/ Release [2044 B]
Get:3 https://pkg.jenkins.io/debian-stable binary/ Release.gpg [833 B]
Get:4 https://pkg.jenkins.io/debian-stable binary/ Packages [28.7 kB]
Hit:5 http://archive.ubuntu.com/ubuntu noble InRelease
Hit:6 http://security.ubuntu.com/ubuntu noble-security InRelease
Hit:7 http://archive.ubuntu.com/ubuntu noble-updates InRelease
Hit:8 http://archive.ubuntu.com/ubuntu noble-backports InRelease
Fetched 31.6 kB in 1s (24.4 kB/s)
```

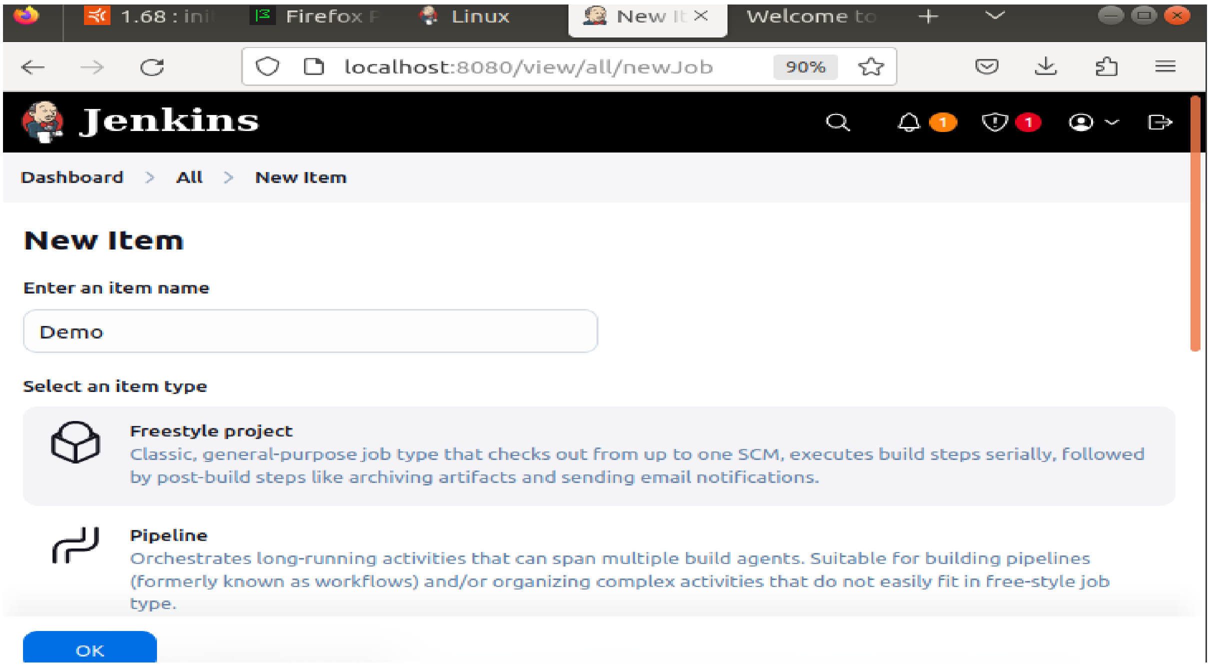
Step 2:

Go to localhost:8080 and open the jenkins and install the suggested plugins



Step 3:

Click on create a new item and enter a item name and select freestyle project and click on ok.



New Item

Enter an item name

Demo

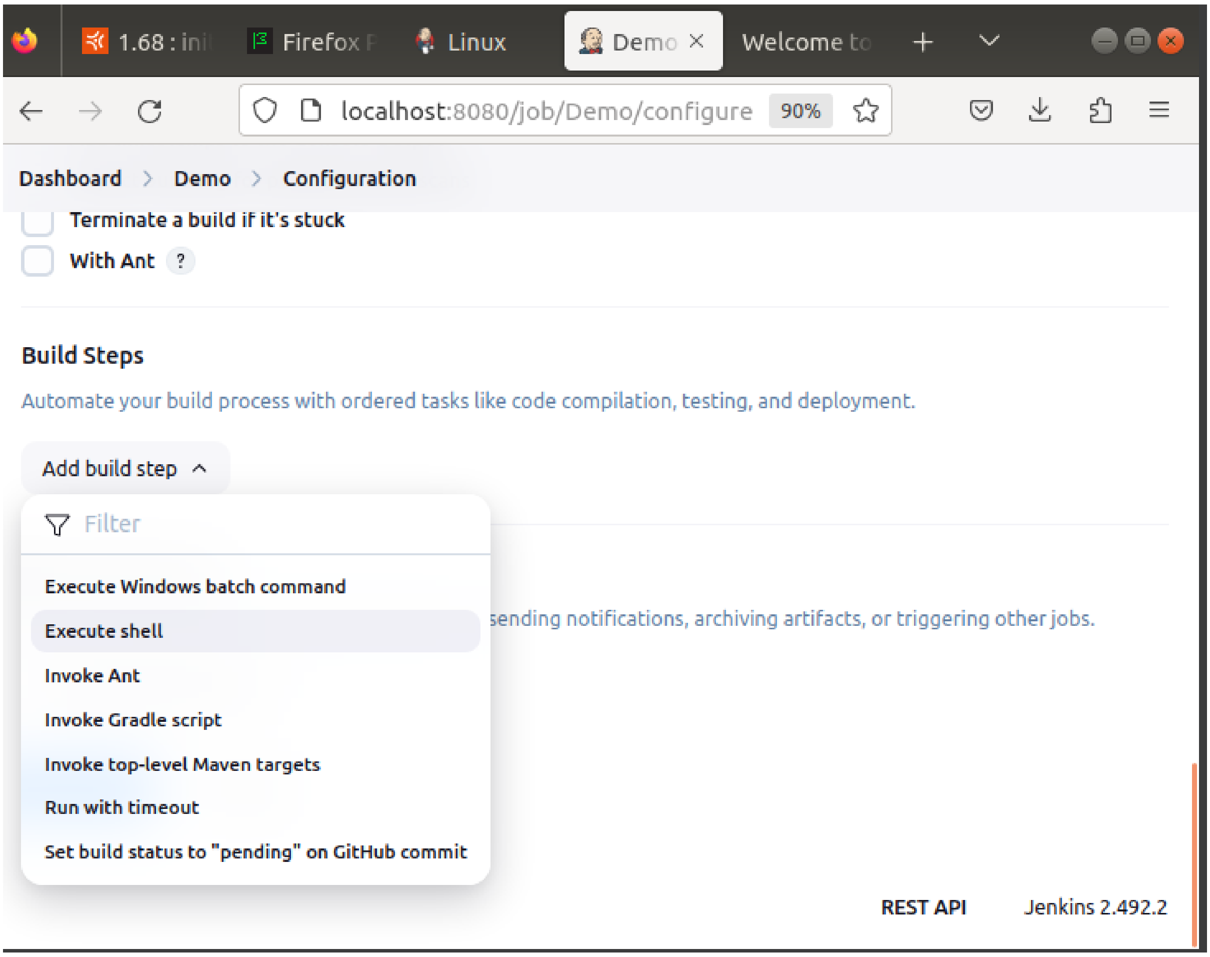
Select an item type

Freestyle project
Classic, general-purpose job type that checks out from up to one SCM, executes build steps serially, followed by post-build steps like archiving artifacts and sending email notifications.

Pipeline
Orchestrates long-running activities that can span multiple build agents. Suitable for building pipelines (formerly known as workflows) and/or organizing complex activities that do not easily fit in free-style job type.

Step 4:

Now click on build steps and click add build steps and select execute shell



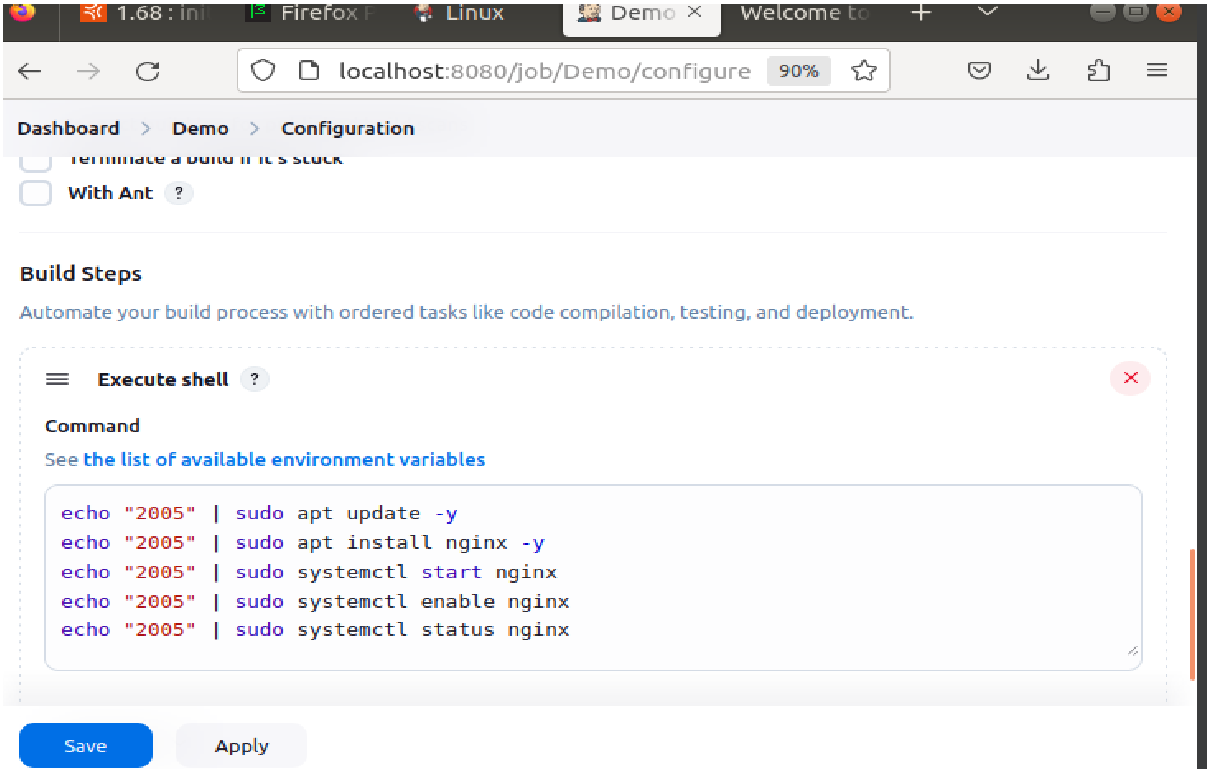
Build Steps

Automate your build process with ordered tasks like code compilation, testing, and deployment.

sending notifications, archiving artifacts, or triggering other jobs.

Step 5:

Now on the execute shell box enter the code for installing the nginx and save it.



1.68 : ini
Firefox
Linux
Demo
Welcome to
localhost:8080/job/Demo/configure
90%
Dashboard > Demo > Configuration
Terminate a build if it's stuck
With Ant ?
Execute shell ?
Save
Apply

Build Steps

Automate your build process with ordered tasks like code compilation, testing, and deployment.

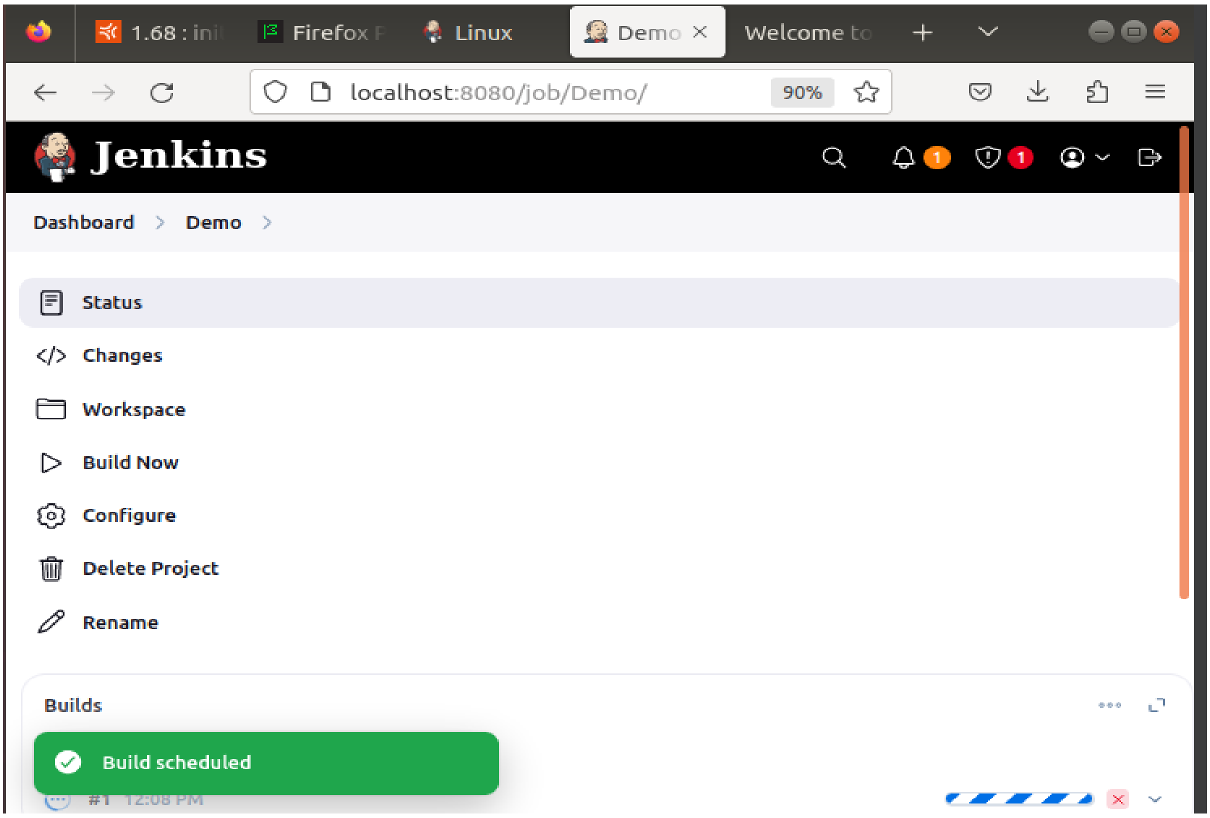
Command

See the list of available environment variables

```
echo "2005" | sudo apt update -y
echo "2005" | sudo apt install nginx -y
echo "2005" | sudo systemctl start nginx
echo "2005" | sudo systemctl enable nginx
echo "2005" | sudo systemctl status nginx
```

Step 6:

Now click on build now to run the code entered .

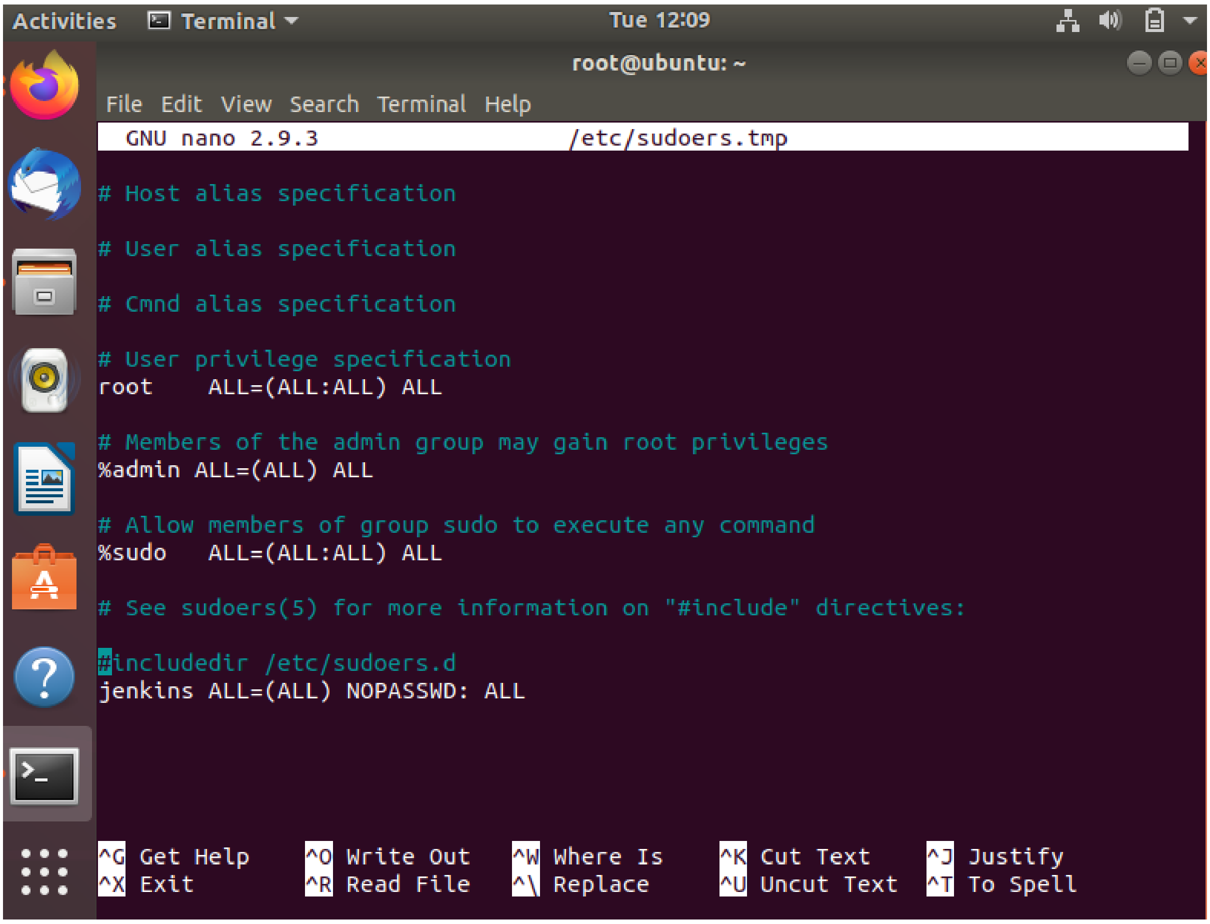


Build scheduled

Step 7:

Now in the terminal give visudo and enter

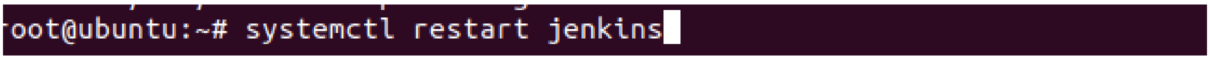
Jenkins ALL =(ALL) NOPASSWD: ALL



```
  GNU nano 2.9.3                  /etc/sudoers.tmp

# Host alias specification

# User alias specification

# Cmnd alias specification

# User privilege specification
root    ALL=(ALL:ALL) 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: ALL



^G Get Help    ^O Write Out   ^W Where Is    ^K Cut Text    ^J Justify
^X Exit        ^R Read File   ^\ Replace     ^U Uncut Text  ^T To Spell
```

Step 8:

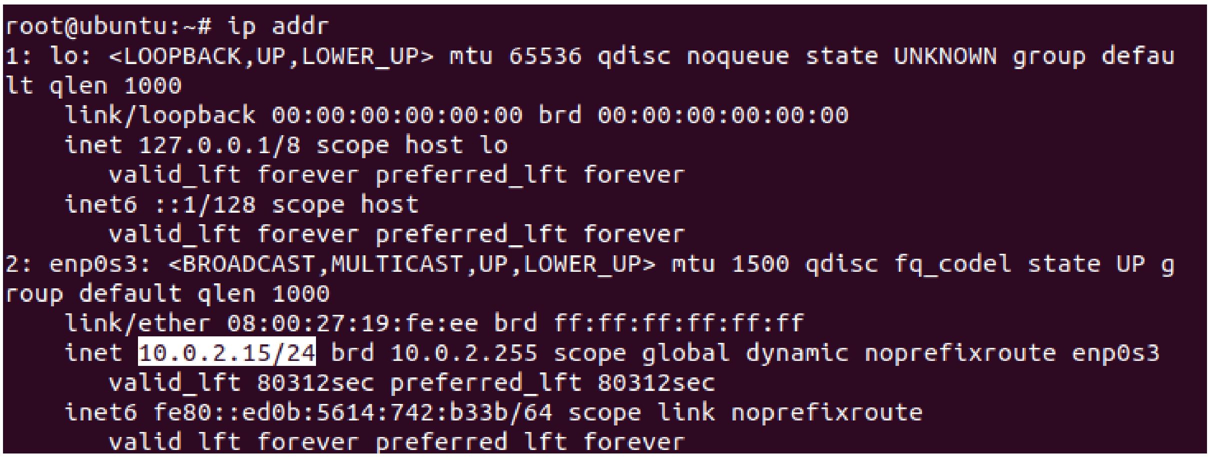
Now restart the Jenkins server



```
root@ubuntu:~# systemctl restart jenkins
```

Step 9:

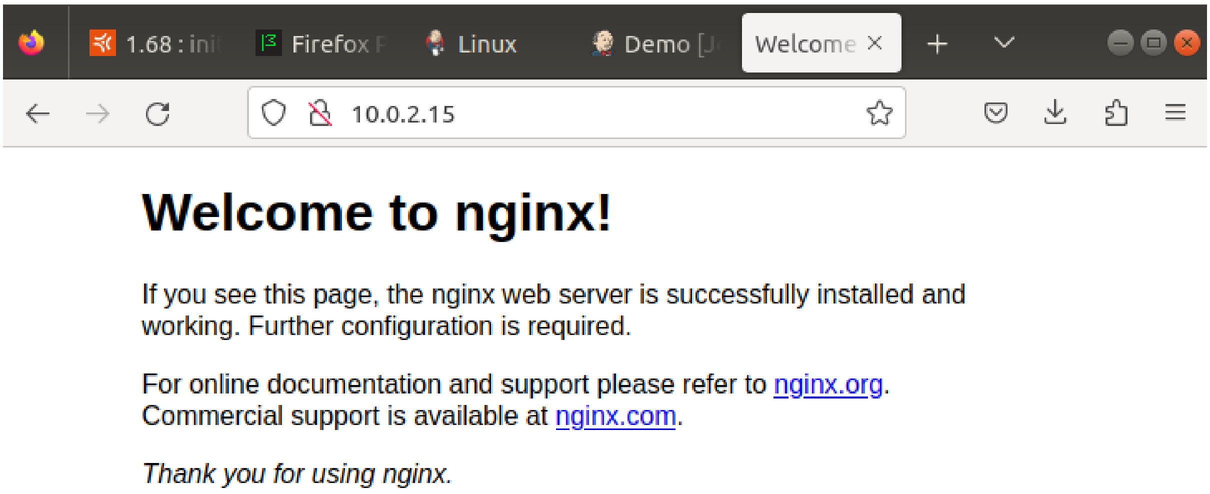
Now give ip addr and check for the ip address and paste it in the web server.



```
root@ubuntu:~# ip addr
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group defau
lt qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
       valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host
       valid_lft forever preferred_lft forever
2: enp0s3: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP g
roup default qlen 1000
    link/ether 08:00:27:19:fe:ee brd ff:ff:ff:ff:ff:ff
    inet 10.0.2.15/24 brd 10.0.2.255 scope global dynamic noprefixroute enp0s3
       valid_lft 80312sec preferred_lft 80312sec
    inet6 fe80::ed0b:5614:742:b33b/64 scope link noprefixroute
       valid_lft forever preferred_lft forever
```

Step 10:

This page is displaying the nginx page after the server is restarted



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.