Task For DevOps

1) Installation of Java is required for Jenkins

   Command:

   sudo apt update

   sudo apt install fontconfig openjdk-17-jre
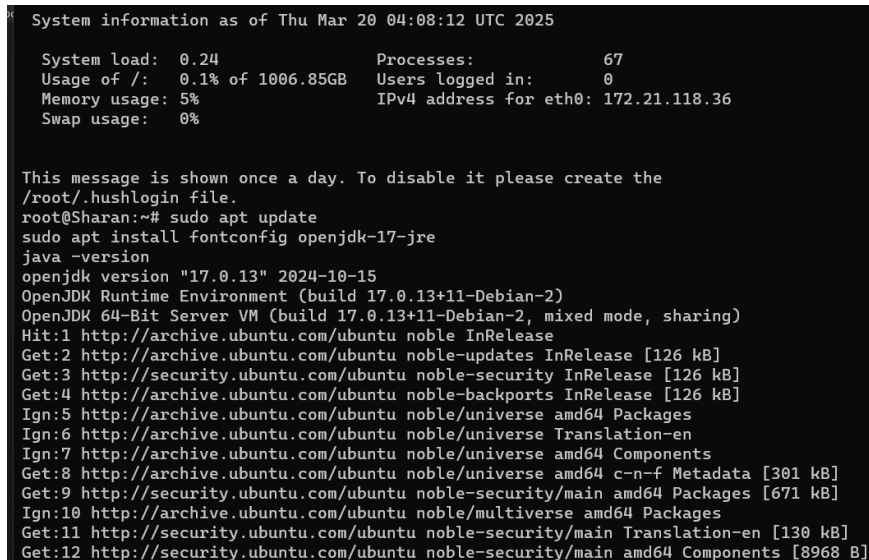
   java -version

   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)

   ScreenShot:

   ```
   System information as of Thu Mar 20 04:08:12 UTC 2025

     System load:  0.24              Processes:           67
     Usage of /:   0.1% of 1006.85GB  Users logged in:     0
     Memory usage: 5%                IPv4 address for eth0: 172.21.118.36
     Swap usage:   0%


   This message is shown once a day. To disable it please create the
   /root/.hushlogin file.
   root@Sharan:~# 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)
   Hit:1 http://archive.ubuntu.com/ubuntu noble InRelease
   Get:2 http://archive.ubuntu.com/ubuntu noble-updates InRelease [126 kB]
   Get:3 http://security.ubuntu.com/ubuntu noble-security InRelease [126 kB]
   Get:4 http://archive.ubuntu.com/ubuntu noble-backports InRelease [126 kB]
   Ign:5 http://archive.ubuntu.com/ubuntu noble/universe amd64 Packages
   Ign:6 http://archive.ubuntu.com/ubuntu noble/universe Translation-en
   Ign:7 http://archive.ubuntu.com/ubuntu noble/universe amd64 Components
   Get:8 http://archive.ubuntu.com/ubuntu noble/universe amd64 c-n-f Metadata [301 kB]
   Get:9 http://security.ubuntu.com/ubuntu noble-security/main amd64 Packages [671 kB]
   Ign:10 http://archive.ubuntu.com/ubuntu noble/multiverse amd64 Packages
   Get:11 http://security.ubuntu.com/ubuntu noble-security/main Translation-en [130 kB]
   Get:12 http://security.ubuntu.com/ubuntu noble-security/main amd64 Components [8968 B]
   ```

   The Java JDK has been successfully installed

2) Install Jenkins

   Command:

   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

ScreenShot:

```
   /etc/apt/sources.list.d/jenkins.list > /dev/null
sudo apt-get update
sudo apt-get install jenkins
--2025-03-20 04:11:43--  https://pkg.jenkins.io/debian-stable/jenkins.io-2023.key
Resolving pkg.jenkins.io (pkg.jenkins.io)... 151.101.130.133, 151.101.194.133, 151.101.2.133, ...
Connecting to pkg.jenkins.io (pkg.jenkins.io)|151.101.130.133|: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 0.07s

2025-03-20 04:11:43 (44.5 KB/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 (34.2 kB/s)
Reading package lists... Done
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  net-tools
The following NEW packages will be installed:
```

JenKins has been successfully installed

Now, Go to the Jenkins page in the Browser running in Localhost:8080 and login with your credentials

Unlock Jenkins

To ensure Jenkins is securely set up by the administrator, a password has been written to the log (not sure where to find it?) and this file on the server:
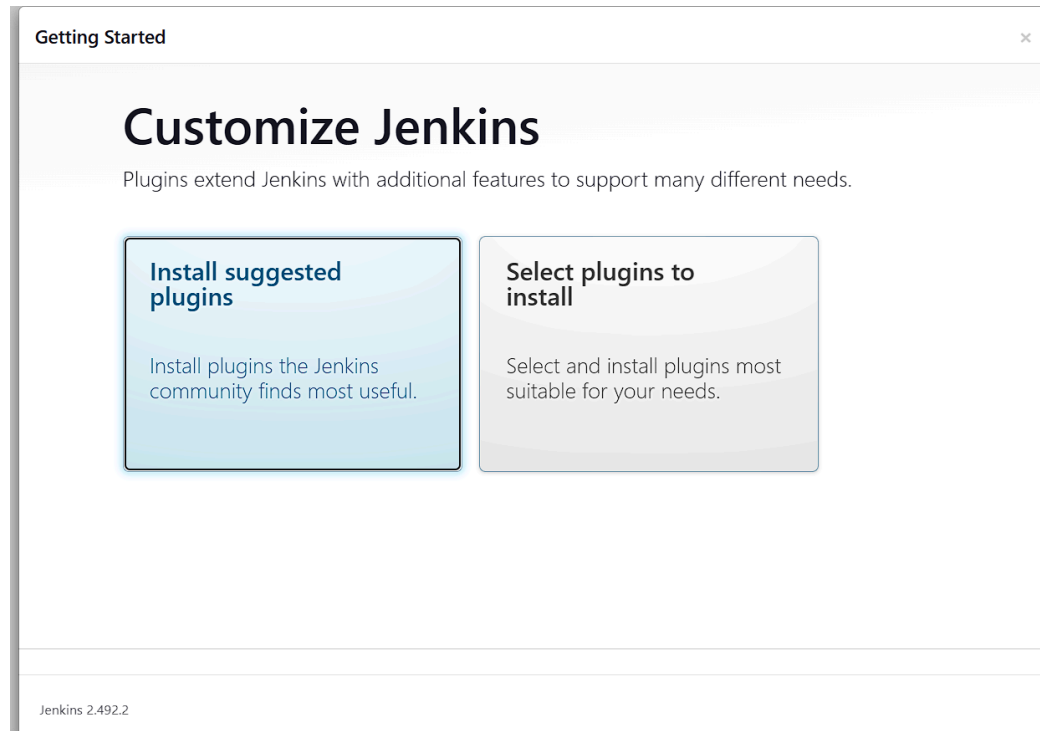
`/var/lib/jenkins/secrets/initialAdminPassword`

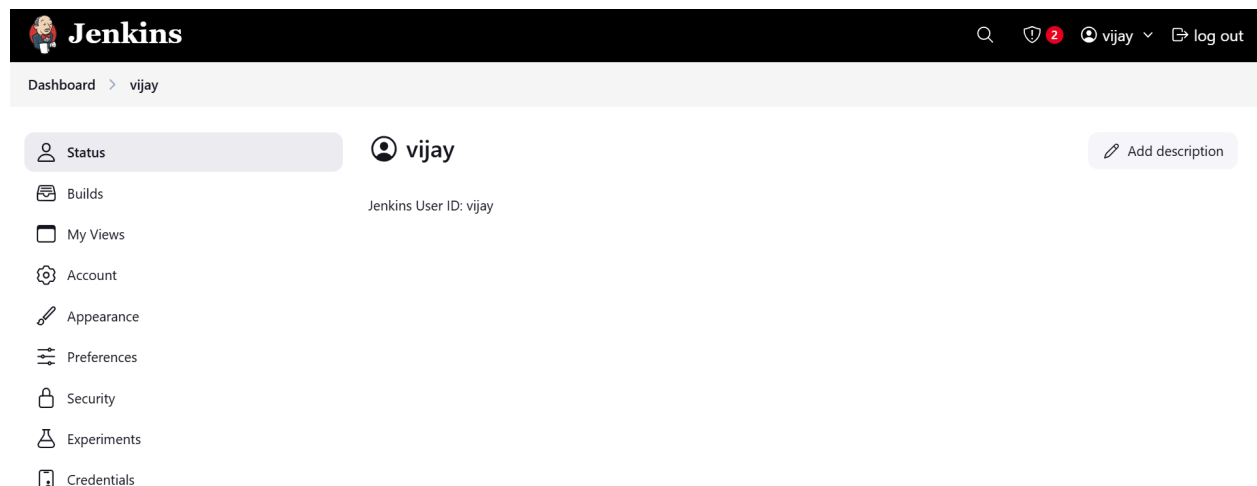Please copy the password from either location and paste it below.

Administrator password

······························

Continue

Install the Suggested plugins required

Proceed by Creating the First Admin User

Now Jenkins is ready to use

Jenkins is ready!

Your Jenkins setup is complete.

Start using Jenkins

Jenkins 2.492.2

Now create a new item

Jenkins

Dashboard >

+ New Item

Build History

Manage Jenkins

My Views

Build Queue ⌄
No builds in the queue.

Build Executor Status 0/2 ⌄

Welcome to Jenkins!

This page is where your Jenkins jobs will be displayed. To get started, you can set up distributed builds or start building a software project.

Start building your software project

Create a job   +

Set up a distributed build

Set up an agent   🖥

Configure a cloud   ☁

Learn more about distributed builds   ?

Give an item name and select the item type as free-style project

New Item

Enter an item name

Nginx

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.

▤ **Multi-configuration project**
Suitable for projects that need a large number of different configurations, such as testing on multiple environments, platform-specific builds, etc.

Build the steps using the commands

Configure

- ⚙ General
- ⌥ Source Code Management
- ⟳ Triggers
- 🌐 Environment
- ▤ Build Steps
- ▥ Post-build Actions

Build Steps

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

☰ **Execute shell** ？   ✕

Command

See the list of available environment variables

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

Advanced ⌄

Add build step ⌄

Post-build Actions

Define what happens after a build completes, like sending notifications, archiving artifacts, or triggering other jobs.

Save   Apply

After the successful compilation of the build, Nginx will be opened in localhost, once the ip address is given

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.