

1. Install Jenkins on one of the server on your setup (Local VM / Ec2 / WSL).

Once Jenkins is installed , try install plugins with and without restart option.

Please verify plugins installed successfully.



follow below link to install Jenkins on WSL

<https://medium.com/try-except-finally/install-jenkins-on-wsl-ubuntu-d6cfeec8cd60#:~:text=To%20enable%20the%20WSL%20feature,App%20you%20just%20installed%2C%20a>

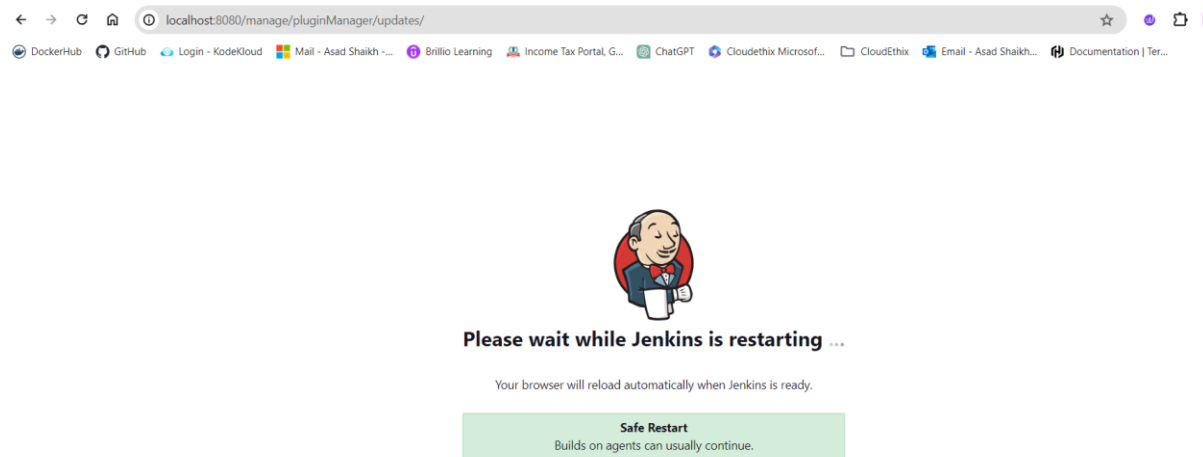
Installed Jenkins on WSL Ubuntu 22.04.4 LTS

```
root@Asad-PC:~# systemctl start jenkins.service
root@Asad-PC:~# systemctl status jenkins.service
jenkins.service - Jenkins Continuous Integration Server
Loaded: loaded (/lib/systemd/system/jenkins.service; disabled; vendor preset: enabled)
Active: active (running) since Tue 2024-03-12 11:24:41 IST; 7s ago
Main PID: 11787 (java)
Tasks: 60 (Limit: 11838)
Memory: 880.3M
CGroup: /system.slice/jenkins.service
└─11787 /usr/bin/java -Djava.awt.headless=true -jar /usr/share/java/jenkins.war --webroot=/var/cache/jenkins/war --httpPort=8080

Mar 12 11:24:41 Asad-PC jenkins[11787]: 2024-03-12 05:54:41.482+0000 [id=36] INFO jenkins.InitReactorRunner$1#onAttained: Configuration for a
Mar 12 11:24:41 Asad-PC jenkins[11787]: 2024-03-12 05:54:41.528+0000 [id=61] INFO hudson.util.Retrier#start: Attempt #1 to do the action chec
Mar 12 11:24:41 Asad-PC jenkins[11787]: WARNING: An illegal reflective access operation has occurred
Mar 12 11:24:41 Asad-PC jenkins[11787]: WARNING: Illegal reflective access by org.codehaus.groovy.vmplugin.v7.Java7$1 (file:/var/cache/jenkins/war/WEB-INF/
Mar 12 11:24:41 Asad-PC jenkins[11787]: WARNING: Please consider reporting this to the maintainers of org.codehaus.groovy.vmplugin.v7.Java7$1
Mar 12 11:24:41 Asad-PC jenkins[11787]: WARNING: Use --illegal-access=warn to enable warnings of further illegal reflective access operations
Mar 12 11:24:41 Asad-PC jenkins[11787]: WARNING: All illegal access operations will be denied in a future release
Mar 12 11:24:41 Asad-PC jenkins[11787]: 2024-03-12 05:54:41.815+0000 [id=43] INFO jenkins.InitReactorRunner$1#onAttained: Completed initializ
Mar 12 11:24:41 Asad-PC jenkins[11787]: 2024-03-12 05:54:41.845+0000 [id=24] INFO hudson.lifecycle.Lifecycle#onReady: Jenkins is fully up and
Mar 12 11:24:41 Asad-PC systemd[1]: Started Jenkins Continuous Integration Server.
lines 1-19/19 (END)
```

Installing plugins without restart options

With restart options

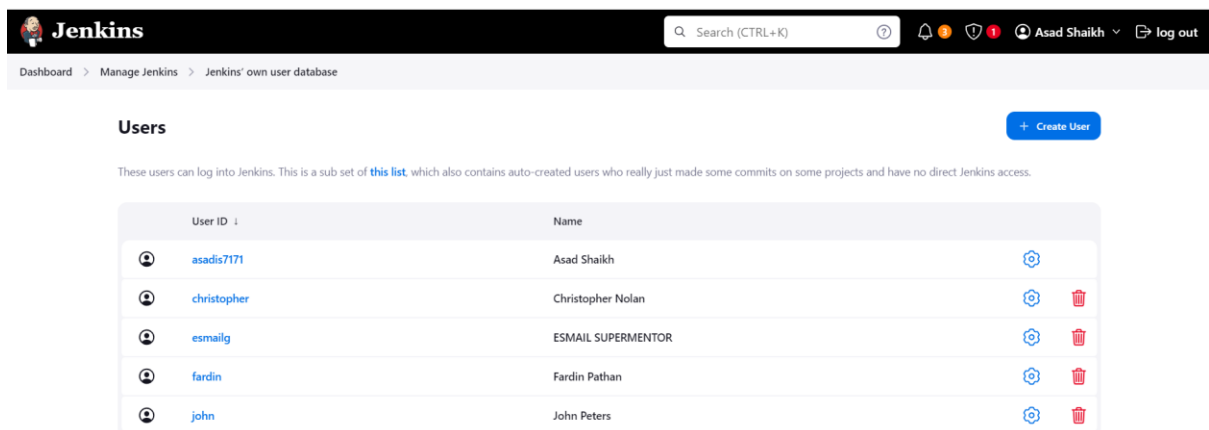


2. Create any 4 local Jenkins users on your Jenkins server. Also create 2 Jenkins roles named developers & delivery.

Once roles are created, assign developers role to 3 users and delivery role to project Manager user.

Please take screenshots and prepare well formatted document of your understanding.

➔ Created 4 users



Downloaded Role base authorization plugin

And assigned roles to users

Dashboard > Manage Jenkins > Manage and Assign Roles > Assign Roles

Manage Roles

Assign Roles

Permission Templates

Role Strategy Macros

Assign Roles

Global roles

User/Group	Project Manager	Developers	admin
Anonymous	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Authenticated Users	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Asad Shaikh	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Christopher Nolan	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ESMAIL SUPERMENTOR	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fardin Pathan	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
John Peters	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Add User

Add Group

3. Create a Jenkins job named YOURNAME_Job_01 on a Jenkins Server.

This job should run below given shell script in the job.

Please check the console output of job and make sure it is successful.

```
#!/bin/bash
```

```
# This is a simple "Hello World" script
```

```
echo "Hello World!"
```

Prepare well formatted document with screenshots.

→

Dashboard > new-project > Configuration

Configure

- General
- Source Code Management
- Build Triggers
- Build Environment**
- Build Steps
- Post-build Actions

☐ Add timestamps to the Console Output

Build Steps

Execute shell ?

Command

See [the list of available environment variables](#)

```
#!/bin/bash

# This is a simple "Hello World" script
echo "Hello World!"
```

Advanced ▾

Add build step ▾

Jenkins Search (CTRL+K) ? [Notifications] [Security] [Asad Shaikh] [log out]

Dashboard > new-project > #1 > Console Output

- Status
- Changes
- Console Output**
- View as plain text
- Edit Build Information
- Delete build '#1'

Console Output

```
Started by user Asad Shaikh
Running as SYSTEM
Building in workspace /var/lib/jenkins/workspace/new-project
[new-project] $ /bin/bash /tmp/jenkins739609766403134511.sh
Hello World!
Finished: SUCCESS
```

4. Create a Jenkins job named YOURNAME_Job_02 that runs a shell script on a local server Jenkins.

The script should take in two parameters, e.g. num1, num2 from Jenkins.

This shell is taking 2 command line arguments as numbers.

Try to execute script locally to understand it more.

```
# sh your_script_name.sh 11 12
```

```
#] vim your_script_name.sh
```

```
#!/bin/bash
```

```
#Define a variable named "name"
```

```
name="John Doe"
```

```
#Print the value of the variable
```

```
echo "My name is $name"
```

values in variables

```
#except the value from the user for two numbers and store the
```

```
num1 = $1
```

```
num2 = $2
```

second number

```
#Use an if statement to check if the first number is greater than the
```

```
if [ $num1 -gt $num2 ]; then
```

```
    echo "$num1 is greater than $num2"
```

```
else
```

```
    echo "$num2 is greater than $num1"
```

```
fi
```

number

```
#Use a for loop to print the numbers from 1 to the value of the first
```

```
for i in $(seq 1 $num1); do
```

```
    echo $i
```

```
done
```

```
#Print a message indicating that the script is finished
```

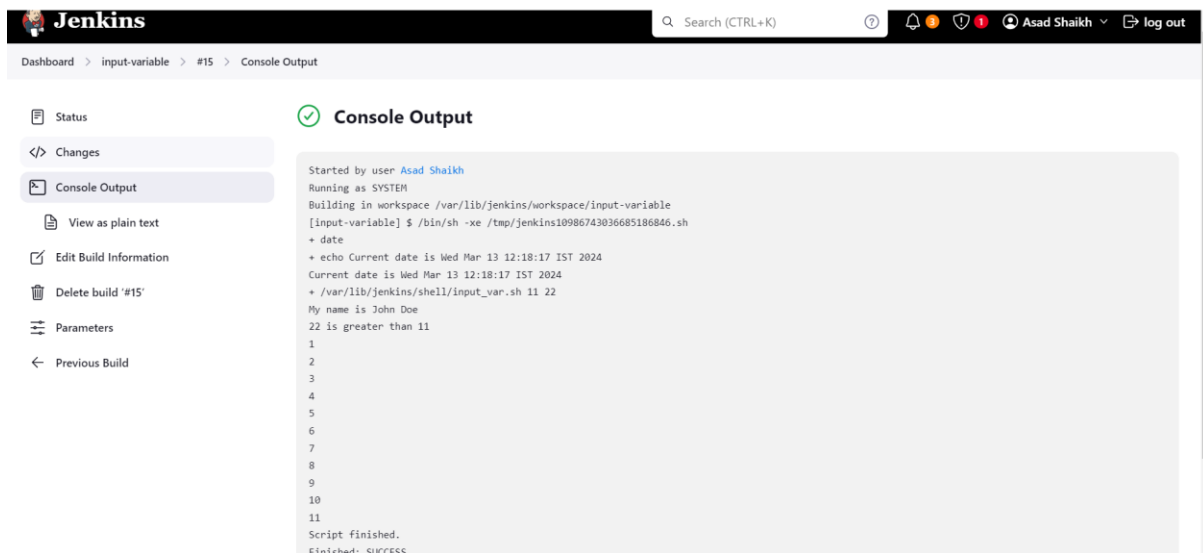
```
echo "Script finished."
```

Once script is tested locally , create 2 parameters in Jenkins and pass those parameters to the shell script.

Run the Jenkins job and check the console out for detailed job logs.

→

```
root@Asad-PC:/var/lib/jenkins/shell
$ sh input_var.sh 34 45
My name is John Doe
45 is greater than 34
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
Script finished.
```



5. Create a Jenkins job named YOURNAME_Job_03 that runs a shell script on a local server using Jenkins parameters.

The script should take in three parameters, like NAME, LAST_NAME, SHOW.

Print the NAME and LAST_NAME if value of SHOW is true.

```
#!/bin/bash

# Define a variable and except the value from the user and store the values in
variables
```

```
NAME=$1
```

```
LAST_NAME=$2
```

```
SHOW=$3
```

```
# Use an if statement to check if the value SHOW is TRUE.
```

```
if [[ $SHOW == "true" ]]
```

```
then
```

```
    echo " $NAME $LAST_NAME"
```

```
else
```

```
echo " Not allowed to show the Names "
```

```
fi
```

```
# Print a message indicating that the script is finished
```

```
echo "Script finished."
```

→

```
root@Asad-PC:/mnt/d/Devops/jenkins
$ bash name.sh Asad Shaikh true
Asad Shaikh
Script finished.

root@Asad-PC:/mnt/d/Devops/jenkins
$ bash name.sh Asad Shaikh false
Not allowed to show the Names
Script finished.
```

The screenshot shows the Jenkins web interface. The browser address bar indicates the URL is `localhost:8081/job/Asad_Job_03/7/console`. The Jenkins header includes the logo, a search bar, and a user profile for 'Asad Shaikh'. The breadcrumb navigation shows 'Dashboard > Asad_Job_03 > #7 > Console Output'. On the left sidebar, 'Console Output' is selected. The main content area, titled 'Console Output' with a green checkmark, displays the build log. The log shows the build was started by 'Asad Shaikh' and ran as 'SYSTEM'. It includes the workspace path, the shell command executed, and the output of the script, which matches the code shown in the previous blocks. The build finished successfully.

```
Started by user Asad Shaikh
Running as SYSTEM
Building in workspace /var/lib/jenkins/workspace/Asad_Job_03
[Asad_Job_03] $ /bin/sh -xe /tmp/jenkins14053085681305943025.sh
+ date
+ echo Current Date is Wed Mar 13 14:47:26 IST 2024
Current Date is Wed Mar 13 14:47:26 IST 2024
+ /mnt/d/Devops/jenkins/name.sh Asad Shaikh true
Asad Shaikh
Script finished.
Finished: SUCCESS
```


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localhost:8081/job/Asad_Job_03/8/console

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DockerHub

GitHub

Login - KodeKloud

Mail - Asad Shaikh ...

Brillio Learning

Income Tax Portal, G...

ChatGPT

Cloudeith Microsof...

CloudEthix

Email - Asad Shaikh...

Documentation | Ter...

»

Jenkins

Asad Shaikh

log out

Dashboard > Asad_Job_03 > #8 > Console Output

Status

Changes

Console Output

View as plain text

Edit Build Information

Delete build '#8'

Parameters

Previous Build

✓ Console Output

Started by user [Asad Shaikh](#)

Running as SYSTEM

Building in workspace /var/lib/jenkins/workspace/Asad_Job_03

[Asad_Job_03] \$ /bin/sh -xe /tmp/jenkins16651187115087831570.sh

+ date

+ echo Current Date is Wed Mar 13 14:48:36 IST 2024

Current Date is Wed Mar 13 14:48:36 IST 2024

+ /mnt/d/Devops/jenkins/name.sh Asad Shaikh false

Not allowed to show the Names

Script finished.

Finished: SUCCESS