Module 6: Jenkins Assignment - 1

Tasks To Be Performed:

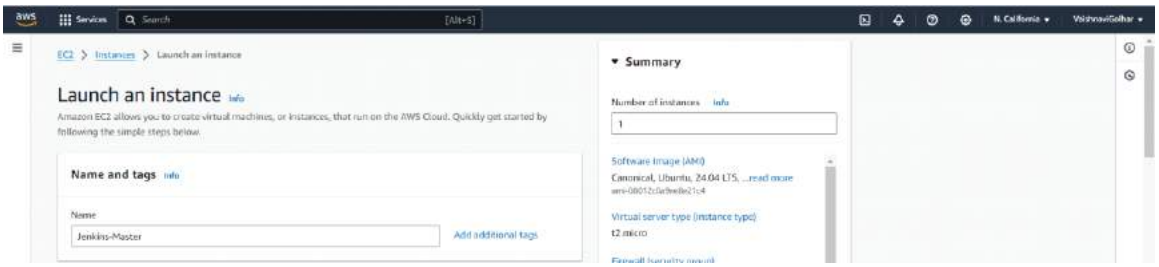
1. Trigger a pipeline using Git when push on develop branch

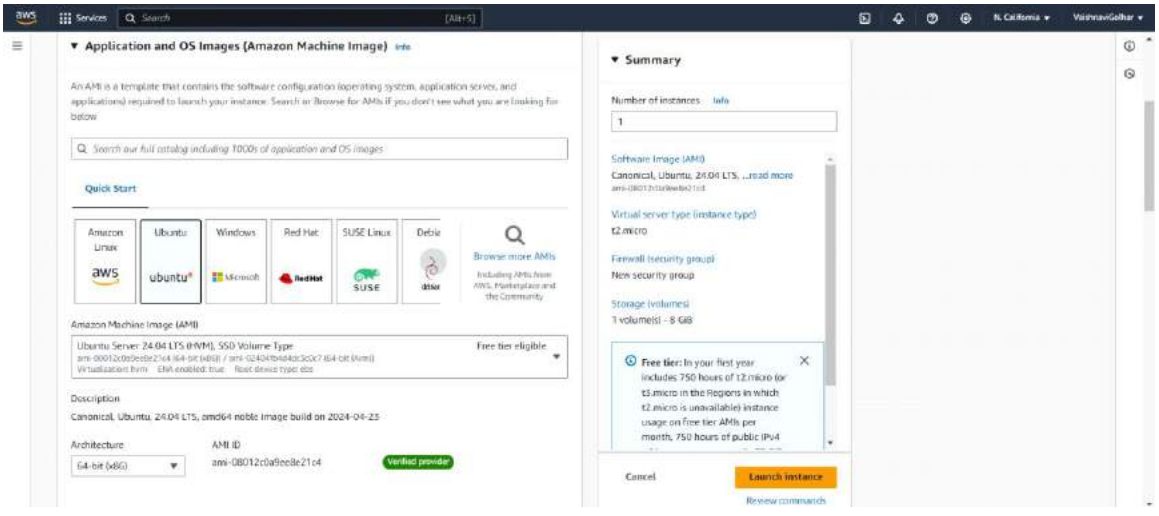
2. Pipeline should pull Git content to a folder

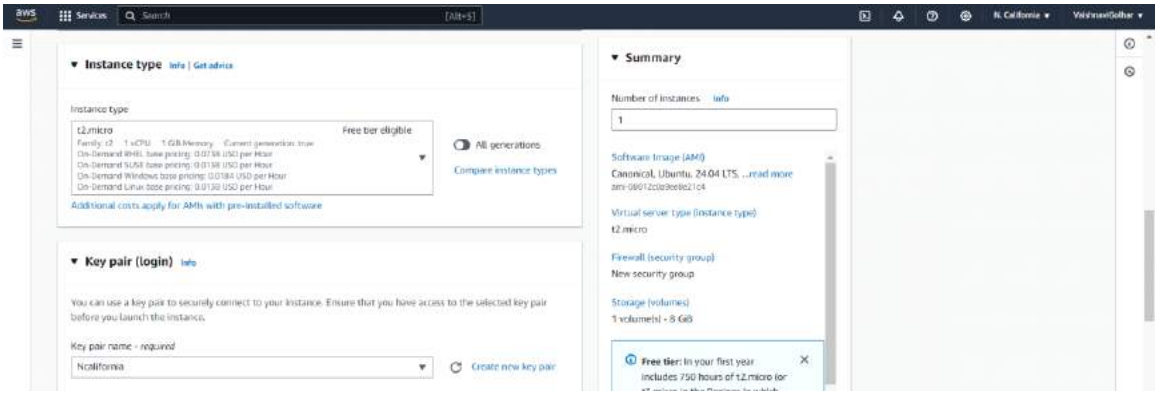
Answer:

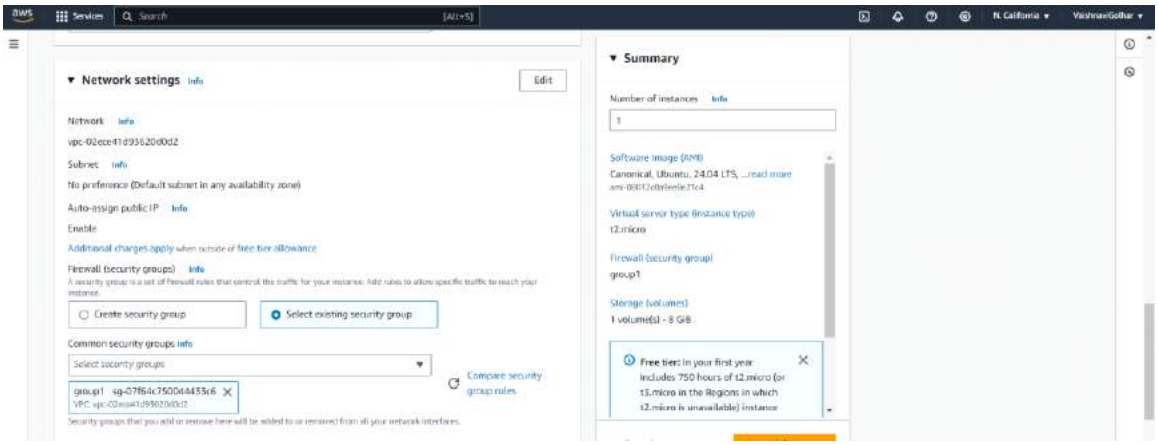
Step 1: Install to server Jenkins-Master and Jenkins-Slave

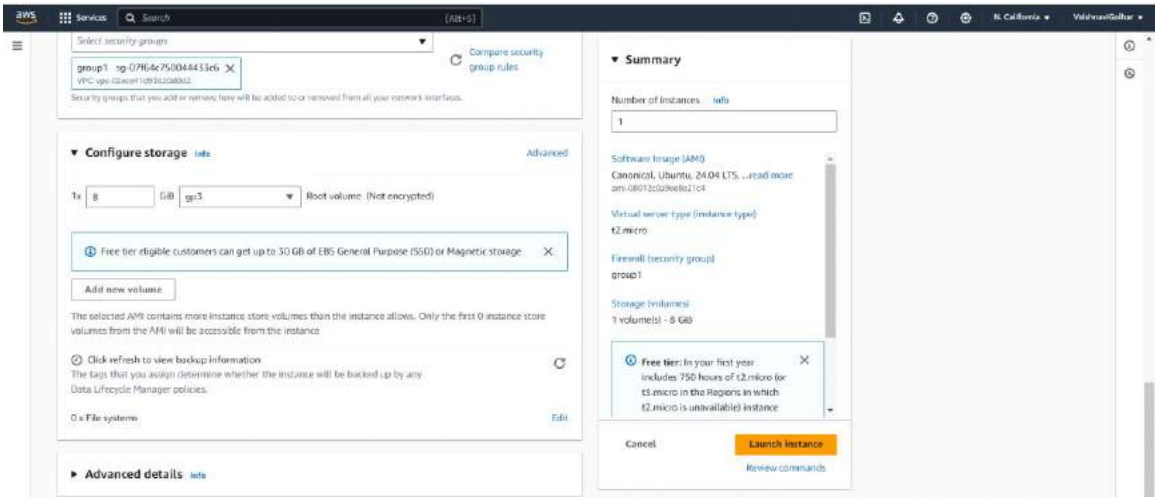
a) Jenkins-Master

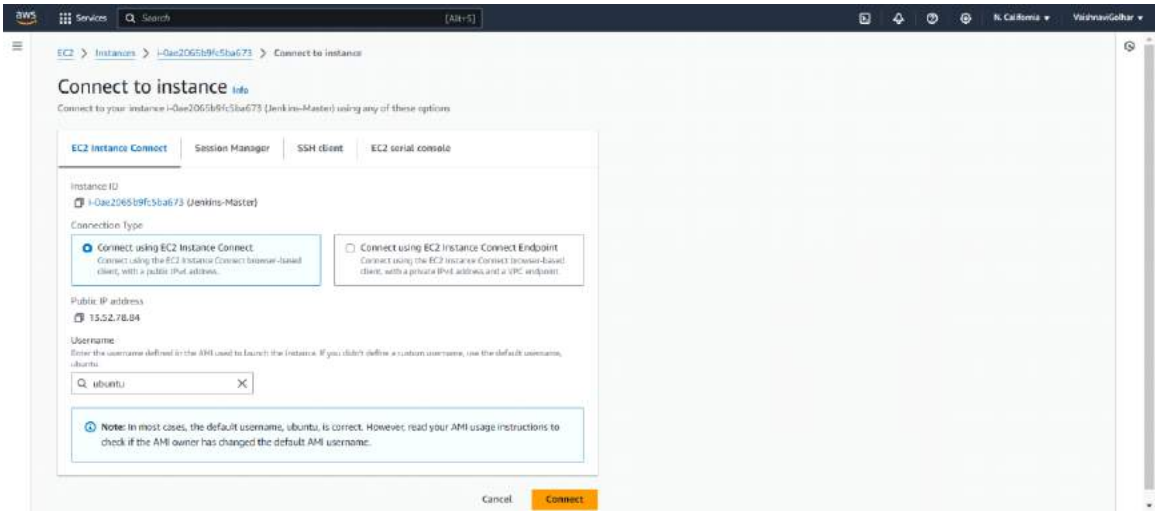




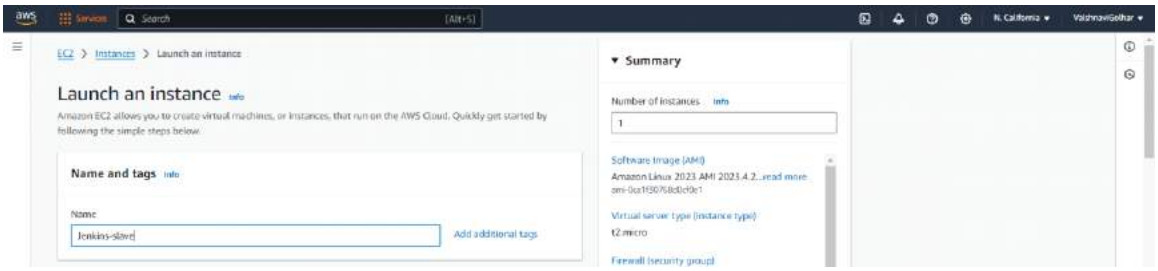

Services
Search
[Alt+S]
N. California
VaishnaviGolhar
Instance type Info | Get advice
Instance type
t2.micro
Free tier eligible
Family: t2 1 vCPU 1 GiB Memory Current generation: true
On-Demand RHEL base pricing: 0.0758 USD per Hour
On-Demand SUSE base pricing: 0.0138 USD per Hour
On-Demand Windows base pricing: 0.0184 USD per Hour
On-Demand Linux base pricing: 0.0138 USD per Hour
All generations
Compare instance types
Additional costs apply for AMIs with pre-installed software
Key pair (login) Info
You can use a key pair to securely connect to your instance. Ensure that you have access to the selected key pair before you launch the instance.
Key pair name - required
Ncalifornia
Create new key pair
Summary
Number of instances Info
1
Software Image (AMI)
Canonical, Ubuntu, 24.04 LTS, ...read more
Virtual server type (instance type)
t2.micro
Firewall (security group)
New security group
Storage (volumes)
1 volume(s) - 8 GiB
Free tier: In your first year includes 750 hours of t2.micro (or

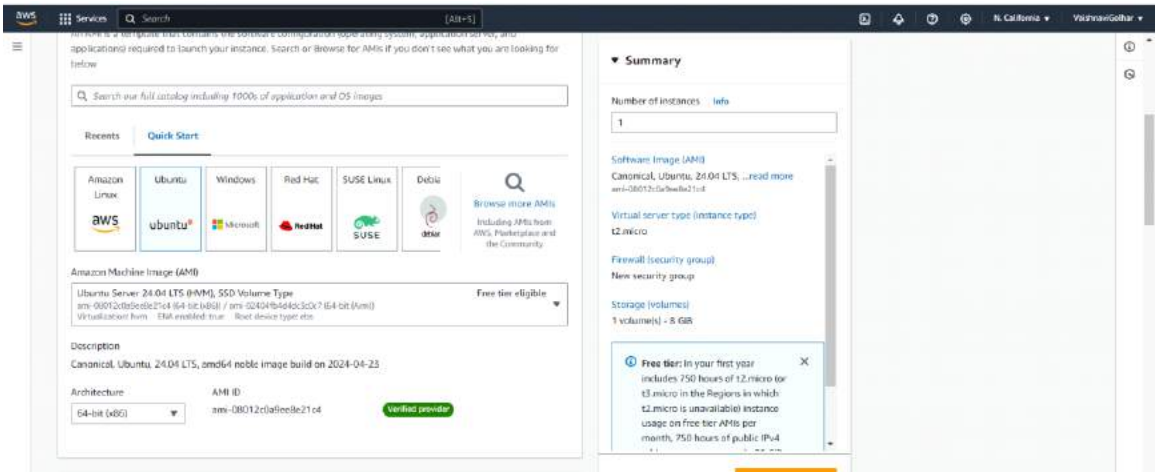

Services
Search
[Alt+S]
N. California
VaishnaviGolhar
Network settings Info
Edit
Network Info
vpc-02ece41d93620d0d2
Subnet Info
No preference (Default subnet in any availability zone)
Auto-assign public IP Info
Enable
Additional charges apply when outside of free tier allowance
Firewall (security groups) Info
A security group is a set of firewall rules that control the traffic for your instance. Add rules to allow specific traffic to reach your instance.
Create security group
Select existing security group
Common security groups Info
Select security groups
group1 sg-07f64c750044433c6
VPC: vpc-02ece41d93620d0d2
Compare security group rules
Security groups that you add or remove here will be added to or removed from all your network interfaces.
Summary
Number of instances Info
1
Software Image (AMI)
Canonical, Ubuntu, 24.04 LTS, ...read more
Virtual server type (instance type)
t2.micro
Firewall (security group)
group1
Storage (volumes)
1 volume(s) - 8 GiB
Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable) instance

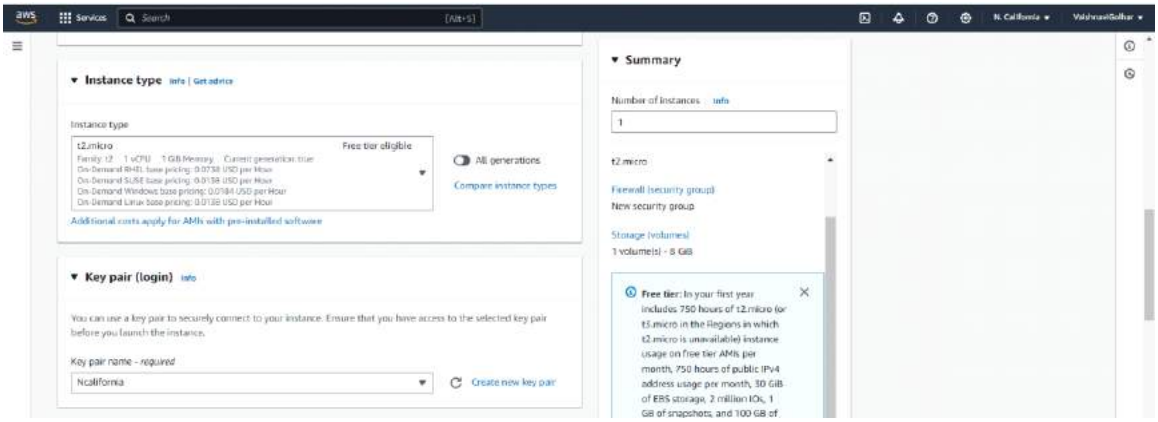

Services
Search
[Alt+S]
N. California
VaishnaviGolhar
Select security groups
group1 sg-07f64c750044433c6
VPC: vpc-02ece41d93620d0d2
Compare security group rules
Security groups that you add or remove here will be added to or removed from all your network interfaces.
Configure storage Info
Advanced
1x 8 GiB gp3 Root volume (Not encrypted)
Free tier eligible customers can get up to 30 GB of EBS General Purpose (SSD) or Magnetic storage
Add new volume
The selected AMI contains more instance store volumes than the instance allows. Only the first 0 instance store volumes from the AMI will be accessible from the instance
Click refresh to view backup information
The tags that you assign determine whether the instance will be backed up by any Data Lifecycle Manager policies.
0 x File systems
Edit
Advanced details Info
Summary
Number of instances Info
1
Software Image (AMI)
Canonical, Ubuntu, 24.04 LTS, ...read more
Virtual server type (instance type)
t2.micro
Firewall (security group)
group1
Storage (volumes)
1 volume(s) - 8 GiB
Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable) instance
Cancel
Launch instance
Review commands

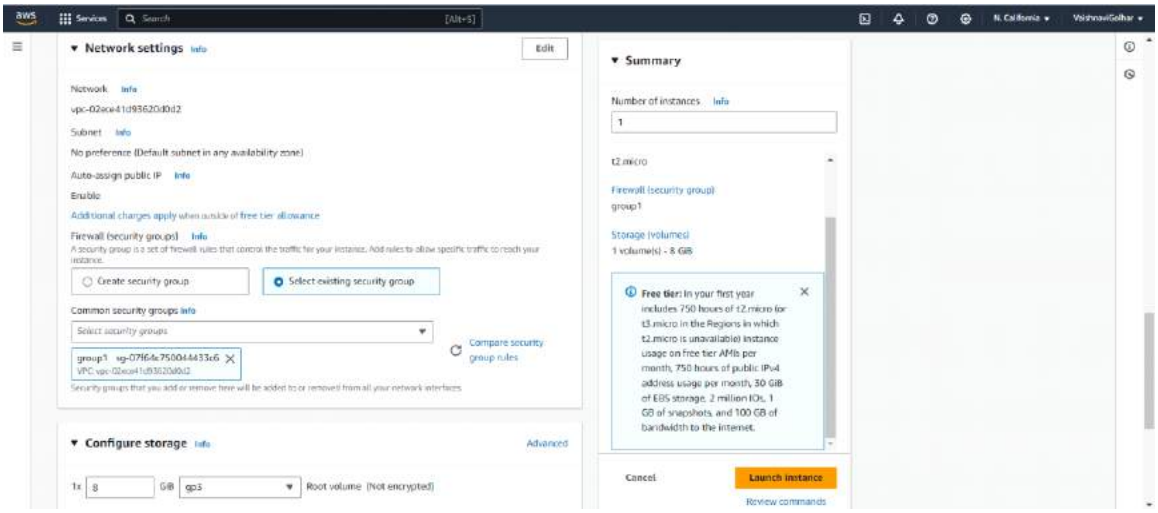


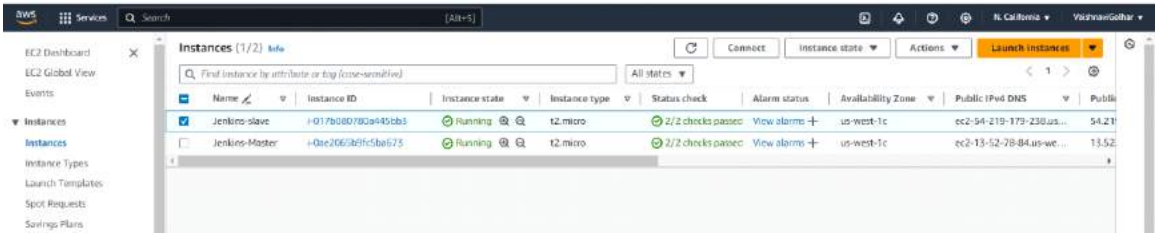
b)Jenkins-Slave



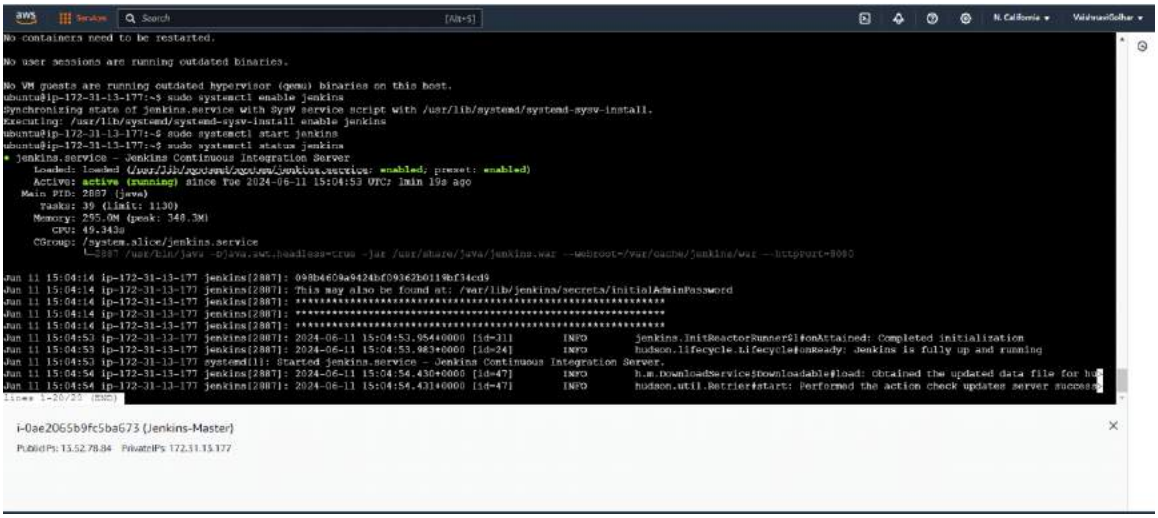


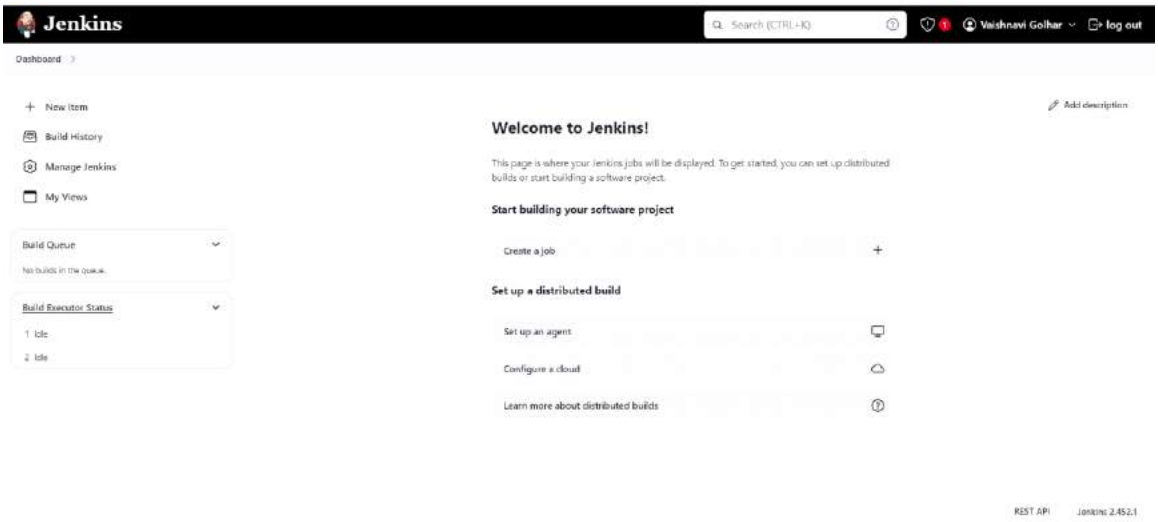




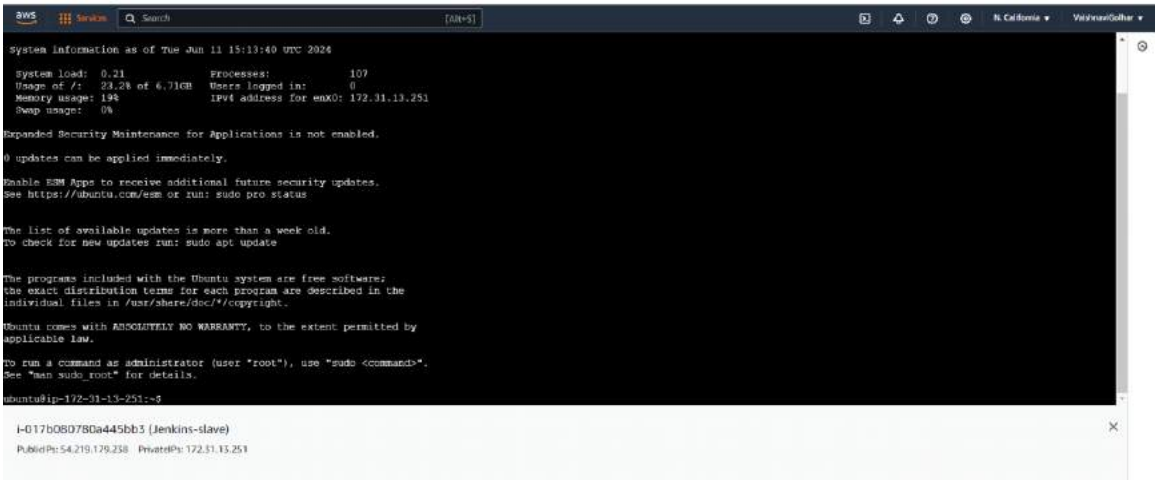


c) Install “Jenkins” Over the Master (Jenkins-Master) Machine

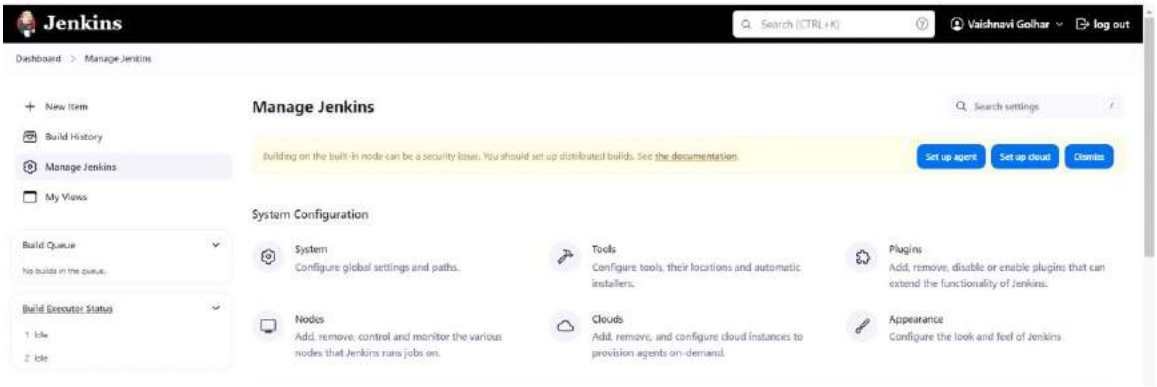


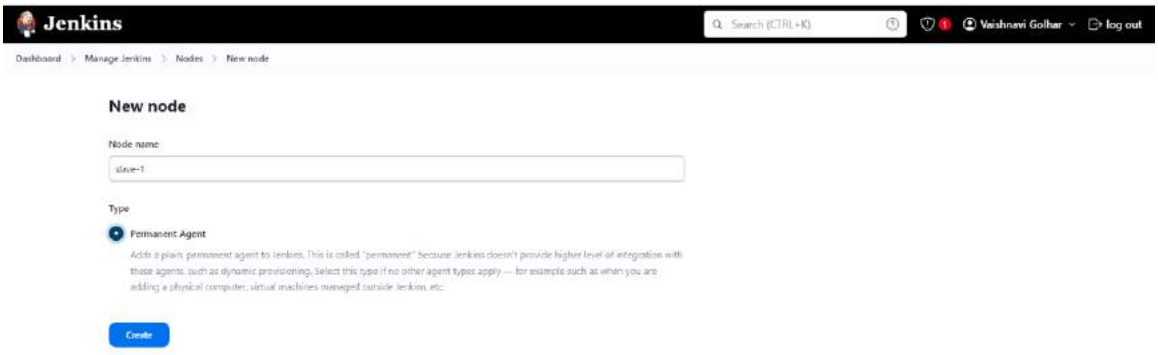


d) Install “Java” Over Slave (Jenkins-Slave) Machine

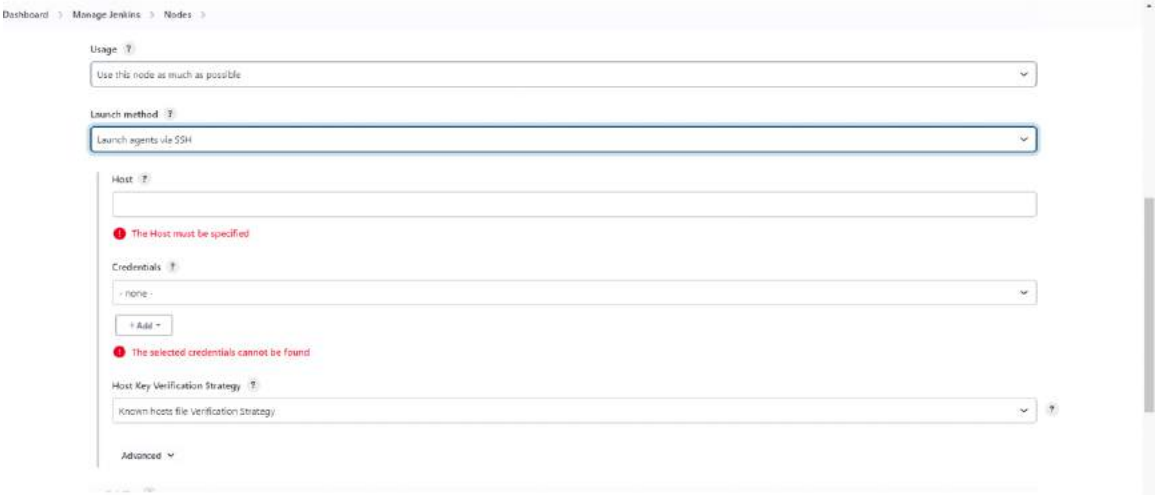


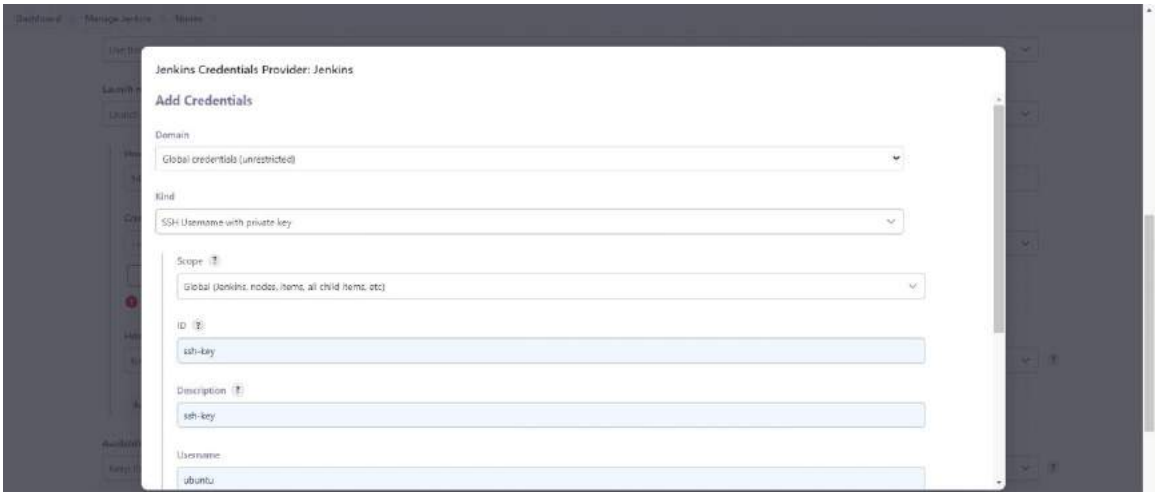
e) Add a Node in Jenkins-Master using “Private Key”

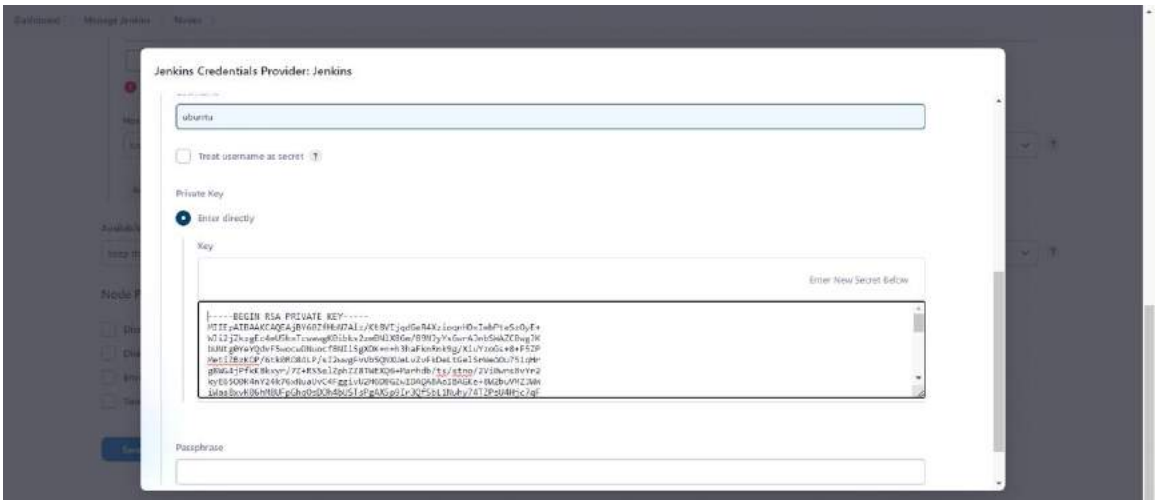




Jenkins
Search (CTRL+K)
Vaishnavi Golhar
log out
Dashboard > Manage Jenkins > Nodes >
Name
slave-1
Description
/home/ubuntu/slave
Plain text Preview
Number of executors
2
Remote root directory
/home/ubuntu/slave
Labels
slave-1


Dashboard > Manage Jenkins > Nodes >
Usage
Use this node as much as possible
Launch method
Launch agents via SSH
Host
The Host must be specified
Credentials
- none -
+ Add
The selected credentials cannot be found
Host Key Verification Strategy
Known hosts file Verification Strategy
Advanced


Jenkins Credentials Provider: Jenkins
Add Credentials
Domain
Global credentials (unrestricted)
Kind
SSH Username with private key
Scope
Global (Jenkins, nodes, items, all child items, etc)
ID
ssh-key
Description
ssh-key
Username
ubuntu


Jenkins Credentials Provider: Jenkins
ubuntu
Treat username as secret
Private Key
Enter directly
Key
Enter New Secret Below
-----BEGIN RSA PRIVATE KEY-----
Passphrase

Dashboard > Manage Jenkins > Nodes
Usage
Use this node as much as possible
Launch method
Launch agents via SSH
Host
54.219.179.238
Credentials
ubuntu (ssh-key)
+ Add
Host Key Verification Strategy
Non verifying Verification Strategy
Advanced
Availability
Keep this agent online as much as possible
Save

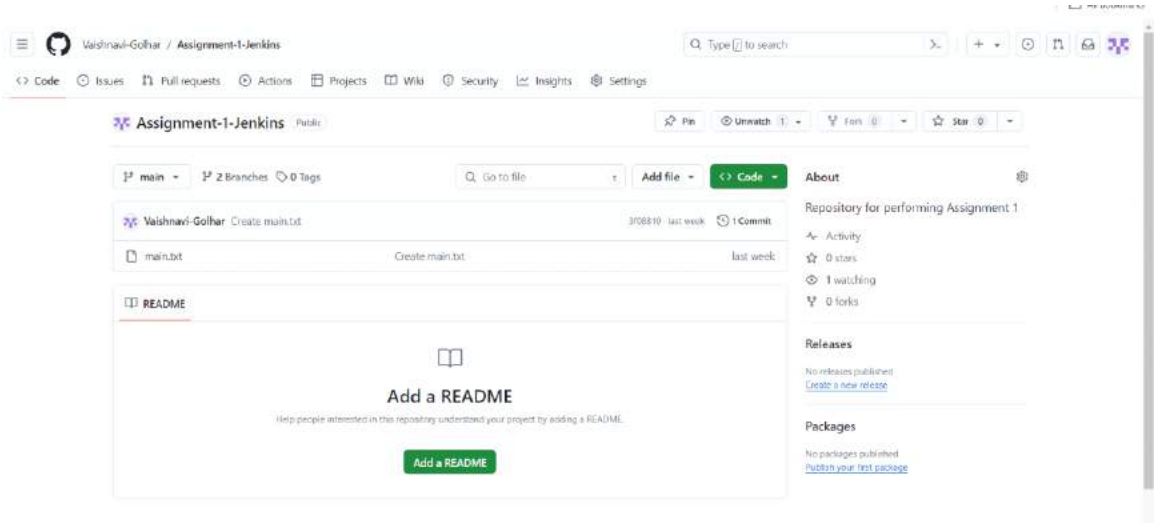
Jenkins
Search (CTRL+K)
Vaishnavi Golhar
log out
Dashboard > Manage Jenkins > Nodes
Nodes
Clouds
Build Queue
No builds in the queue.
Build Executor Status
Built-In Node
1 Idle
Nodes
+ New Node
Configure Monitors
S
Name
Architecture
Clock Difference
Free Disk Space
Free Swap Space
Free Temp Space
Response Time
Built-In Node
Linux (amd64)
In sync
4.47 GiB
0 B
4.47 GiB
0ms
slave-1
N/A
N/A
N/A
N/A
N/A
Data obtained
6 ms
4 ms
3 ms
5 ms
4 ms
1 ms
Icon: S M L
Legend

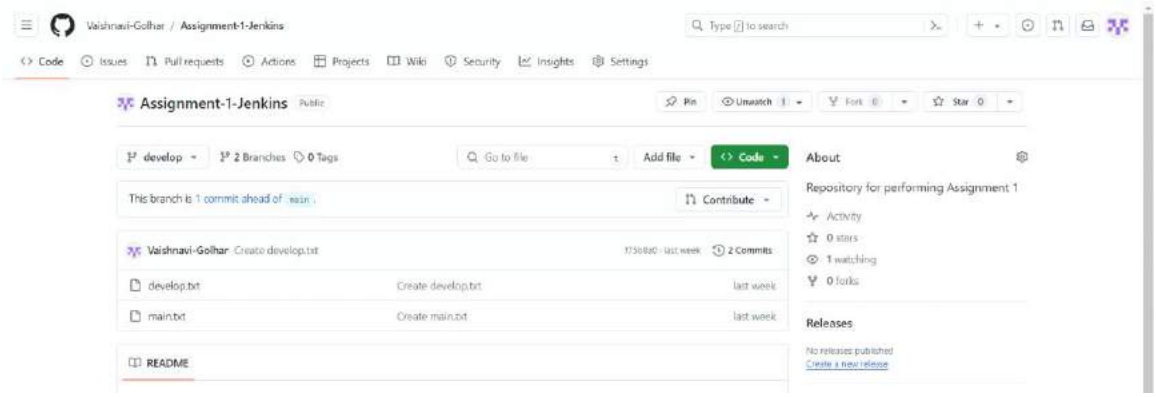
Problem (1) Solution: Trigger a pipeline using Git when pushing on the develop branch:

Solution:

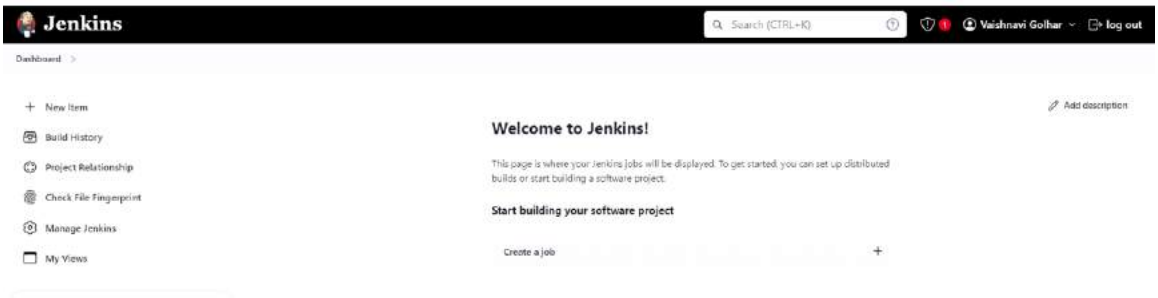
a)First Create a Repository named “Assignment1” in "GitHub"

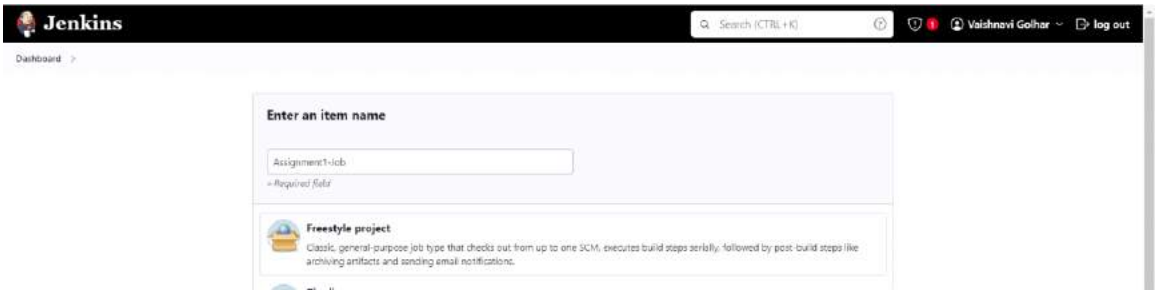
Create the “Main” & “Develop” Branches with .txt File

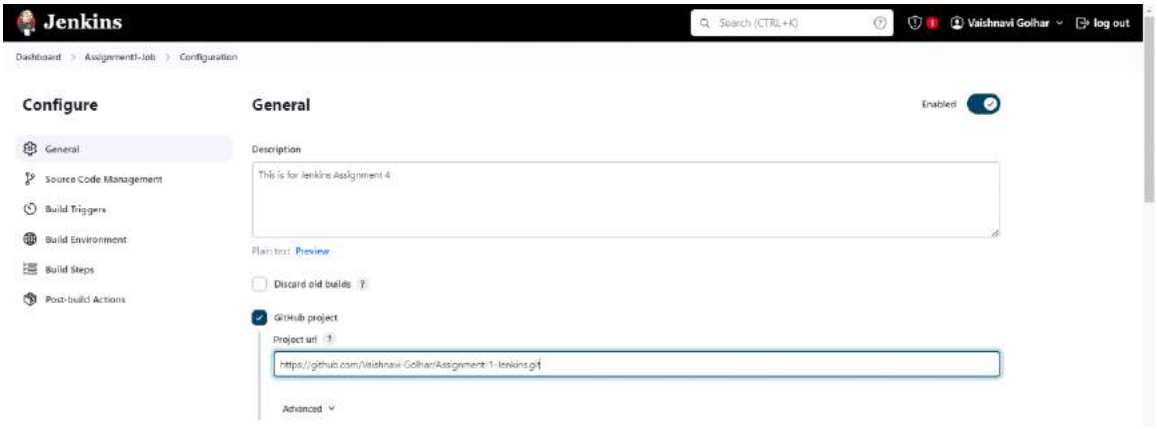


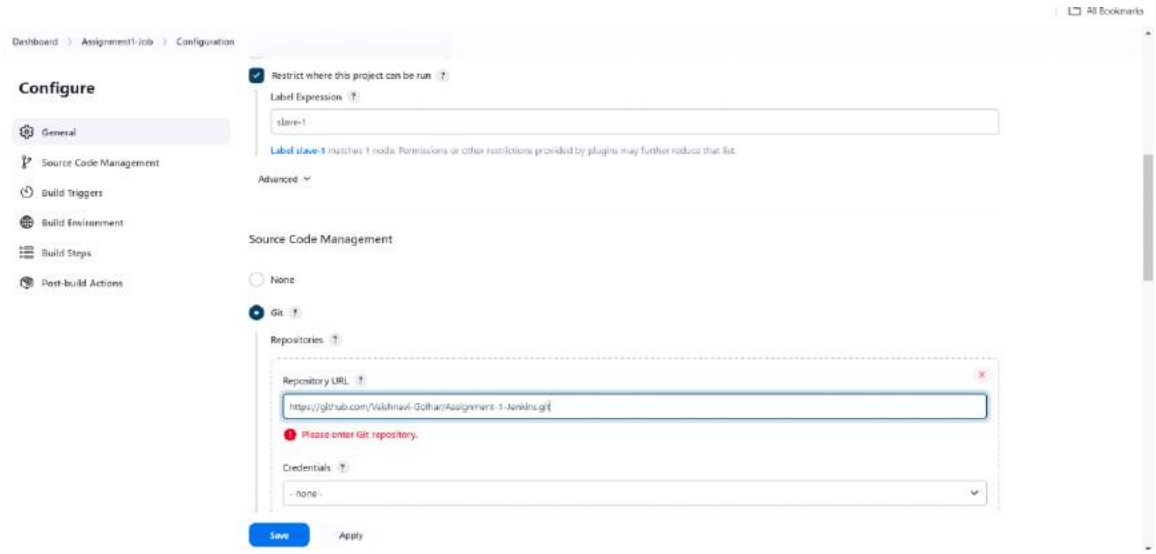


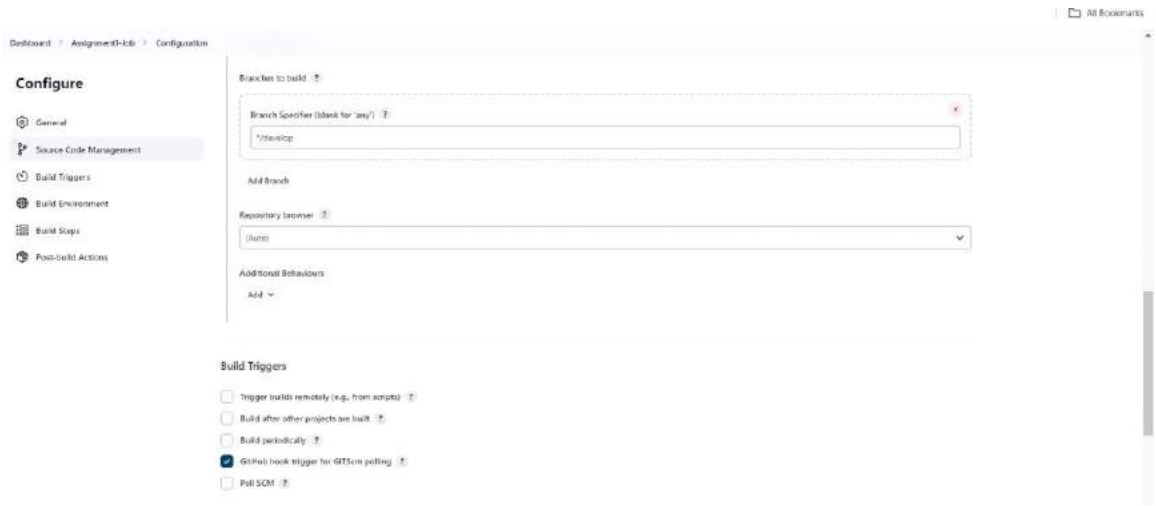
b) Create a Job in “Jenkins” to Trigger the Pipeline


Jenkins
Search (CTRL+K)
Vaishnavi Golhar
log out
Dashboard
New Item
Build History
Project Relationship
Check File Fingerprint
Manage Jenkins
My Views
Add description
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


Jenkins
Search (CTRL+K)
Vaishnavi Golhar
log out
Dashboard
Enter an item name
Assignment1-Job
» Required field
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.

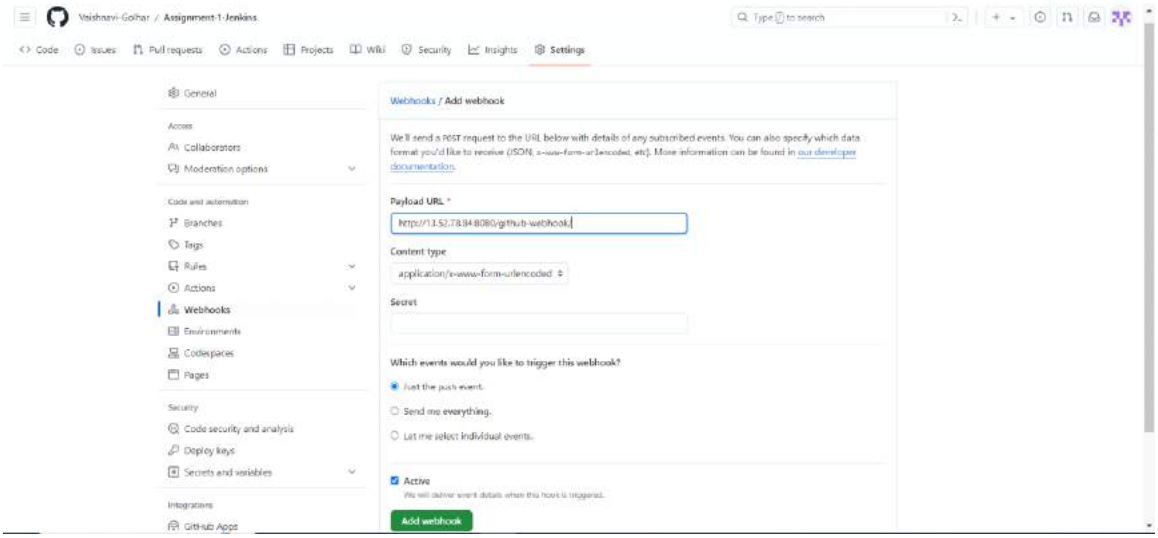

Jenkins
Search (CTRL+K)
Vaishnavi Golhar
log out
Dashboard
Assignment1-Job
Configuration
Configure
General
Source Code Management
Build Triggers
Build Environment
Build Steps
Post-build Actions
General
Enabled
Description
This is for Jenkins Assignment 4
Plain text Preview
Discard old builds
GitHub project
Project url
https://github.com/Vaishnavi-Golhar/Assignment-1-Jenkins.git
Advanced

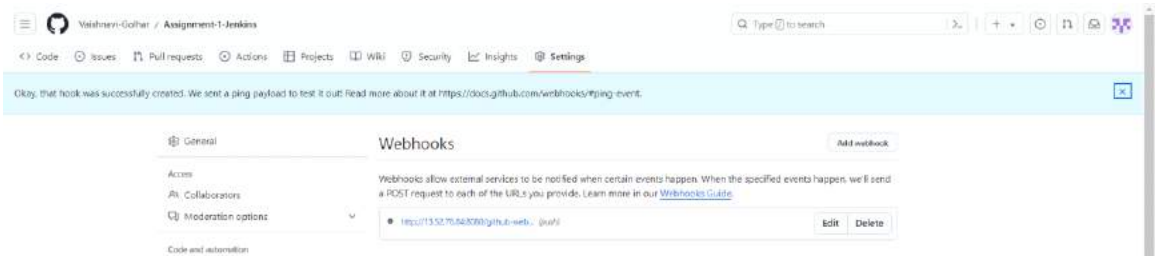


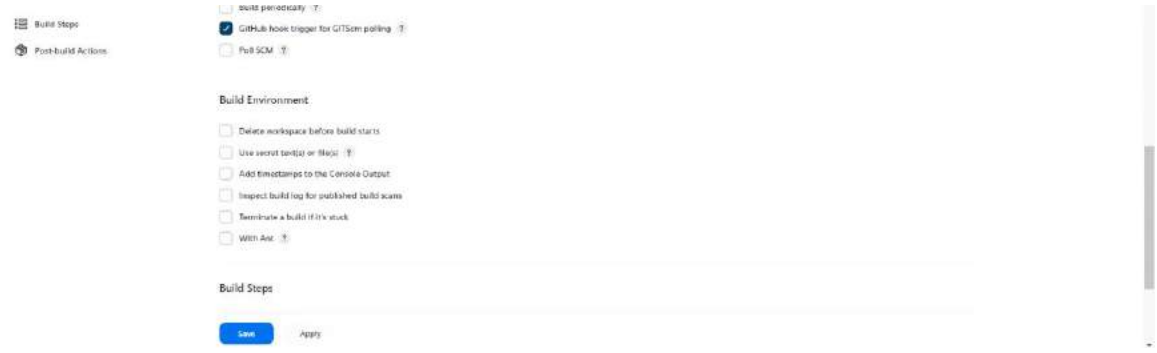


c) We have chosen this option because when we will do the change in the "develop" branch in the "Github repo", the changes will be automatically triggered by webhooks.

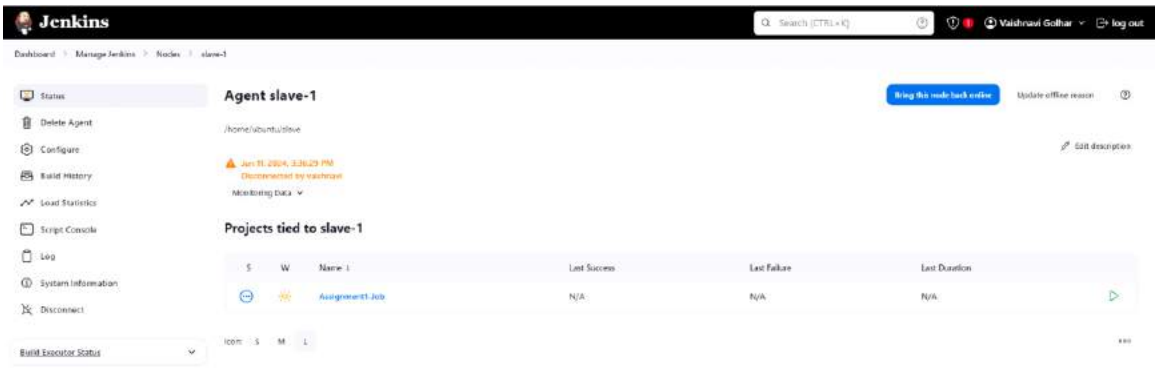
Go to the "Settings" section in the "Assignment1-Jenkins" Repository in "Git".

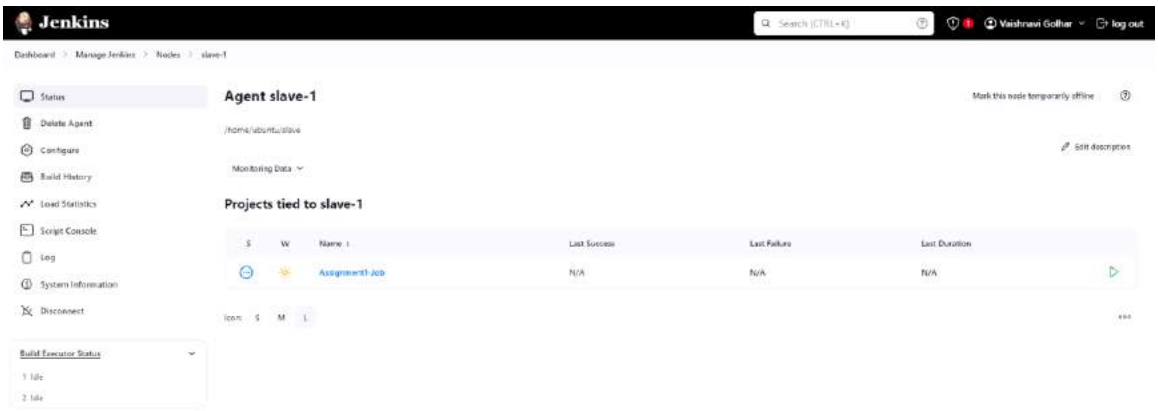


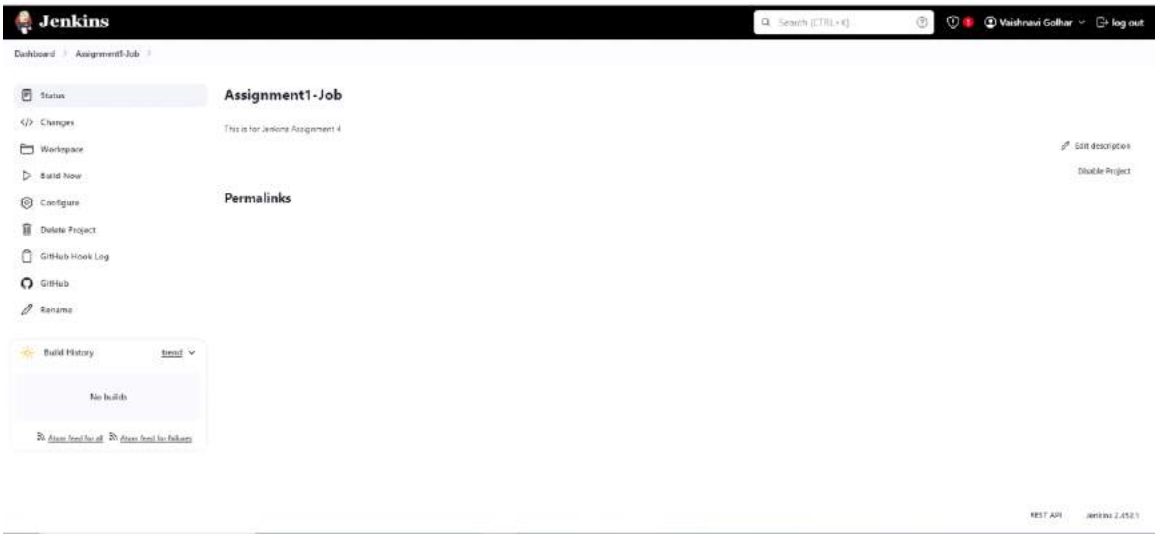




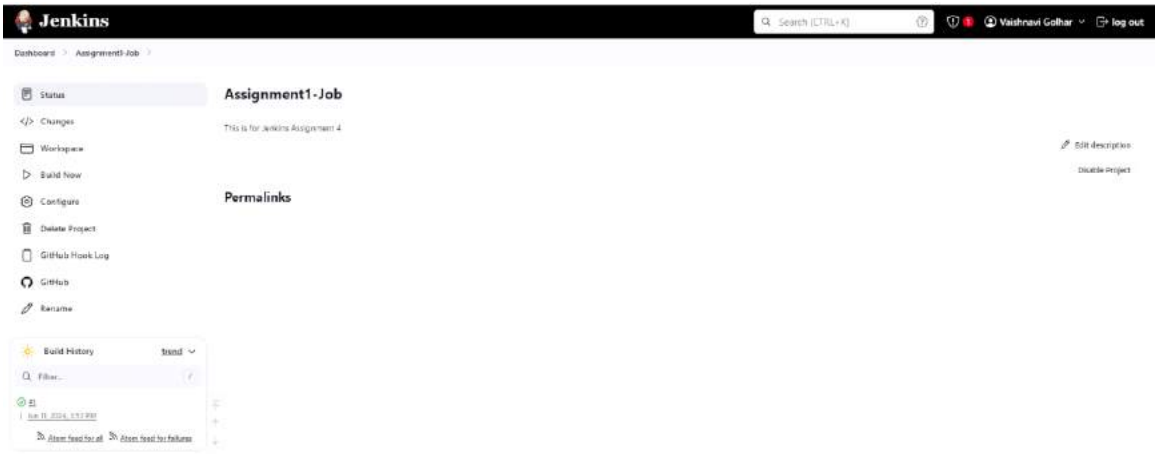
d) Job (Assignment 1-Job) has been successfully created.

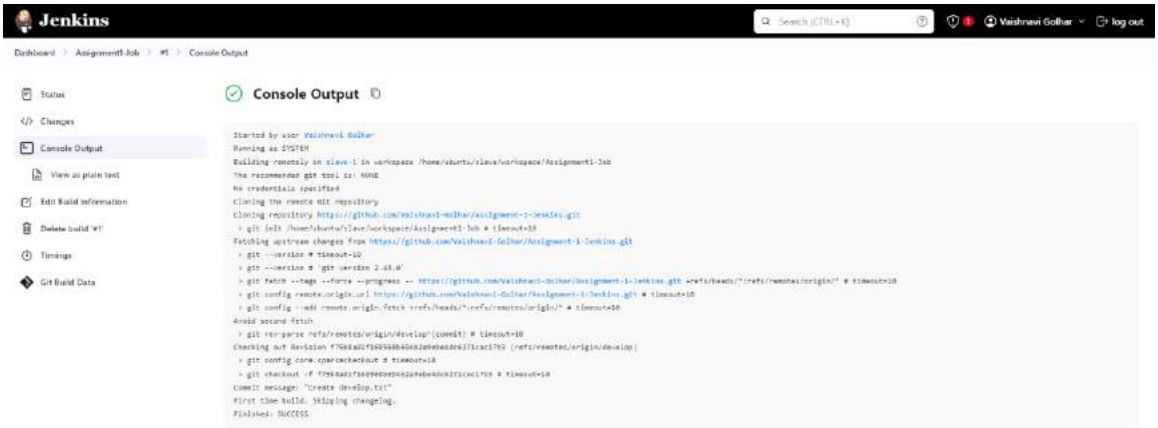

Jenkins
Search (CTRL+K)
Vaishnavi Golhar
log out
Dashboard > Manage Jenkins > Nodes > slave-1
Status
Delete Agent
Configure
Build History
Load Statistics
Script Console
Log
System Information
Disconnect
Build Executor Status
Agent slave-1
Bring this node back online
Update offline reason
/home/ubuntu/slave
Edit description
Monitoring Data
Projects tied to slave-1
S
W
Name ↓
Last Success
Last Failure
Last Duration
Assignment1-Job
N/A
N/A
N/A
Icon: S M L


Jenkins
Search (CTRL+K)
Vaishnavi Golhar
log out
Dashboard > Manage Jenkins > Nodes > slave-1
Status
Delete Agent
Configure
Build History
Load Statistics
Script Console
Log
System Information
Disconnect
Build Executor Status
1 Idle
2 Idle
Agent slave-1
Mark this node temporarily offline
/home/ubuntu/slave
Edit description
Monitoring Data
Projects tied to slave-1
S
W
Name ↓
Last Success
Last Failure
Last Duration
Assignment1-Job
N/A
N/A
N/A
Icon: S M L

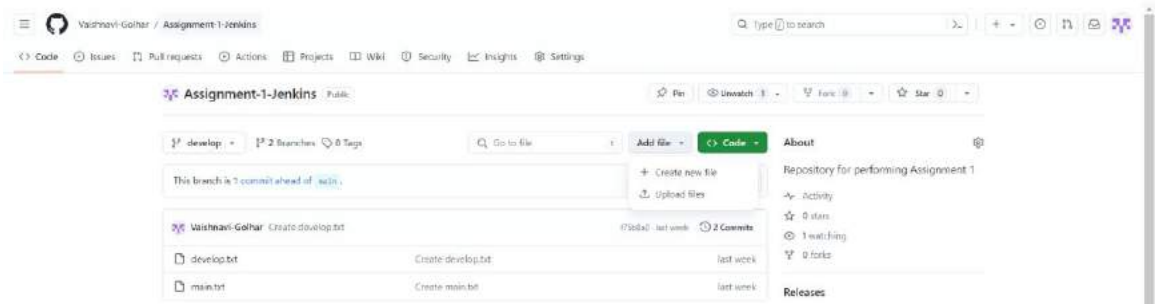

Jenkins
Search (CTRL+K)
Vaishnavi Golhar
log out
Dashboard > Assignment1-Job
Status
Changes
Workspace
Build Now
Configure
Delete Project
GitHub Hook Log
GitHub
Rename
Build History
trend
No builds
Assignment1-Job
This is for Jenkins Assignment 4
Edit description
Disable Project
Permalinks
REST API

e) Click on “Build Now”. It will have started creating the job. Click on “#1”.

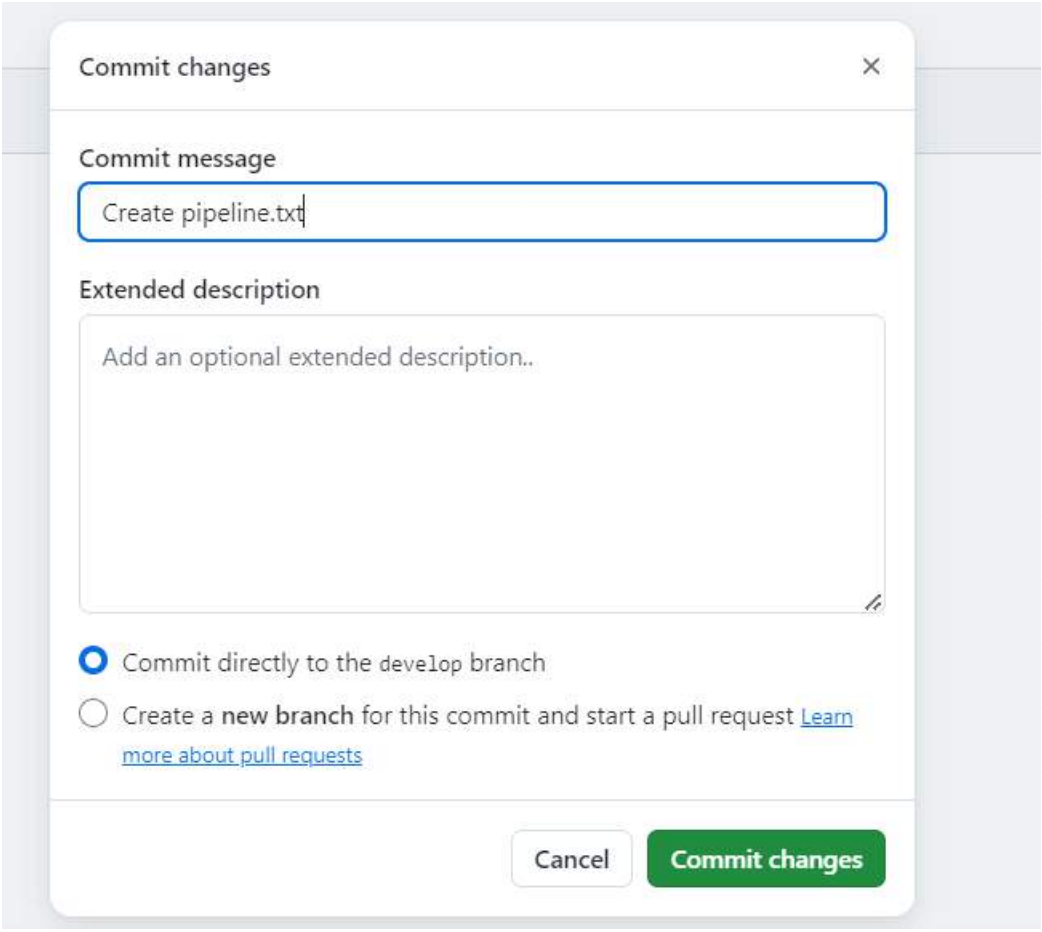


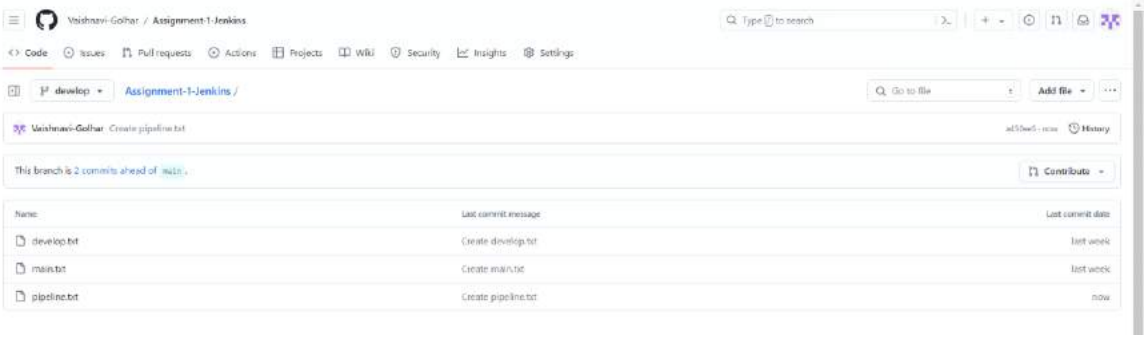


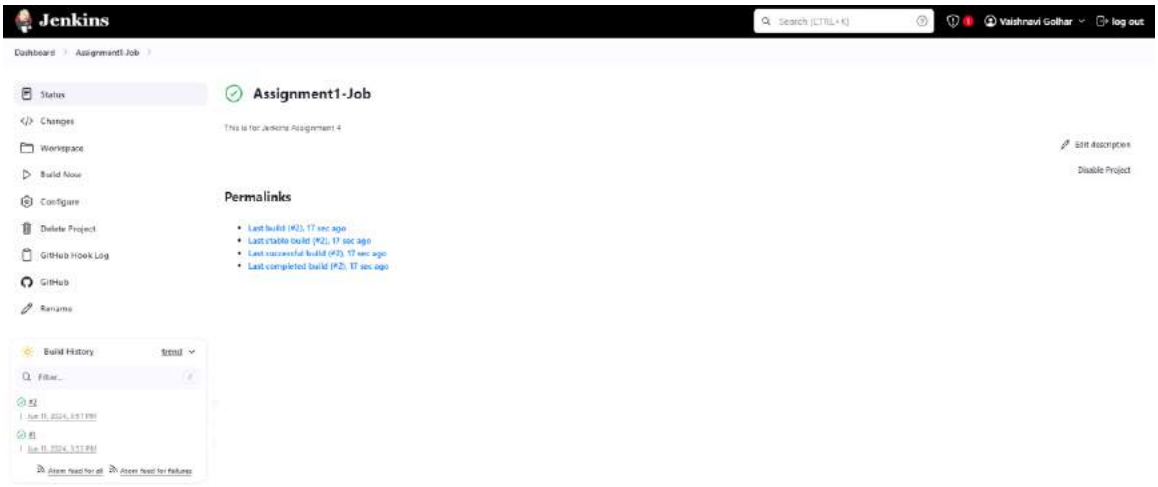
f) Test the Jenkins Pipeline (Check whether It is triggering or not after changing in Git automatically)

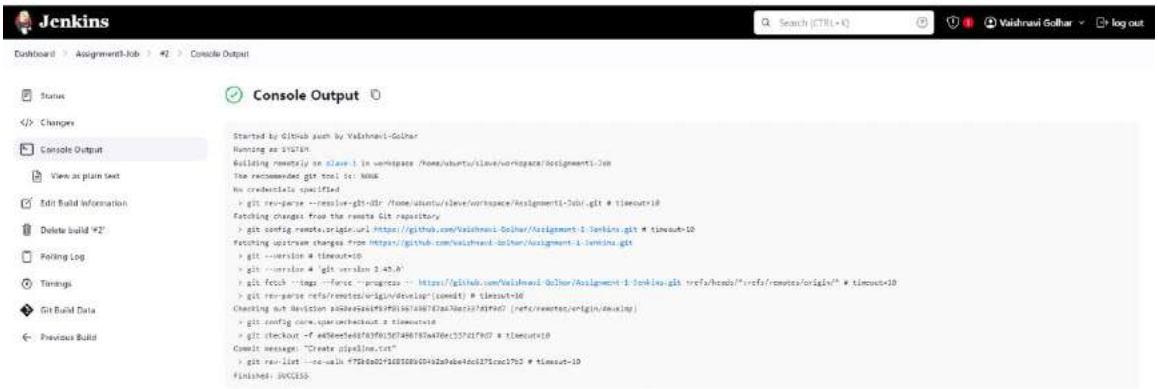


Vaishnavi-Golhar / Assignment-1-Jenkins
Code
Issues
Pull requests
Actions
Projects
Wiki
Security
Insights
Settings
Assignment-1-Jenkins / pipeline.txt
in develop
Cancel changes
Commit changes...
Edit
Preview
Code 55% faster with GitHub Copilot
Spaces
2
No wrap
1 This file to check Pipeline is workig for not.


Commit changes
Commit message
Create pipeline.txt
Extended description
Add an optional extended description..
Commit directly to the develop branch
Create a new branch for this commit and start a pull request Learn more about pull requests
Cancel
Commit changes


Vaishnavi-Golhar / Assignment-1-Jenkins
Code
Issues
Pull requests
Actions
Projects
Wiki
Security
Insights
Settings
develop
Assignment-1-Jenkins /
Go to file
Add file
Vaishnavi-Golhar Create pipeline.txt
History
This branch is 2 commits ahead of main.
Contribute
Name
Last commit message
Last commit date
develop.txt
Create develop.txt
last week
main.txt
Create main.txt
last week
pipeline.txt
Create pipeline.txt
now


Jenkins
Search (CTRL+K)
Vaishnavi Golhar
log out
Dashboard > Assignment1-Job >
Status
Changes
Workspace
Build Now
Configure
Delete Project
GitHub Hook Log
GitHub
Rename
Build History
trend
Filter...
#2
Jun 11, 2024, 5:17 PM
#1
Jun 11, 2024, 5:11 PM
Atom feed for all
Atom feed for failures
Assignment1-Job
This is for Jenkins Assignment 4
Edit description
Disable Project
Permalinks
Last build (#2), 17 sec ago
Last stable build (#2), 17 sec ago
Last successful build (#2), 17 sec ago
Last completed build (#2), 17 sec ago


Jenkins
Search (CTRL+K)
Vaishnavi Golhar
log out
Dashboard > Assignment1-Job > #2 > Console Output
Status
Changes
Console Output
View as plain text
Edit Build Information
Delete build '#2'
Polling Log
Timings
Git Build Data
Previous Build
Console Output
Started by GitHub push by Vaishnavi-Golhar
Running as SYSTEM
Building remotely on slave-1 in workspace /home/ubuntu/slave/workspace/Assignment1-Job
The recommended git tool is: NONE
No credentials specified
> git rev-parse --resolve-git-dir /home/ubuntu/slave/workspace/Assignment1-Job/.git # timeout=10
Fetching changes from the remote Git repository
> git config remote.origin.url https://github.com/Vaishnavi-Golhar/Assignment-1-Jenkins.git # timeout=10
Fetching upstream changes from https://github.com/Vaishnavi-Golhar/Assignment-1-Jenkins.git
> git --version # timeout=10
> git --version # 'git version 2.45.0'
> git fetch --tags --force --progress -- https://github.com/Vaishnavi-Golhar/Assignment-1-Jenkins.git +refs/heads/*:refs/remotes/origin/* # timeout=10
> git rev-parse refs/remotes/origin/develop^{commit} # timeout=10
Checking out Revision a4d6e45a4f93f0156748673a36e337df9d7 (refs/remotes/origin/develop)
> git config core.sparsecheckout # timeout=10
> git checkout -f a45ee45a4f93f0156748673a36e337df9d7 # timeout=10
Commit message: "Create pipeline.txt"
> git rev-list --no-walk 77b8a8d5f1603886b04a2a9abe4dc6271cac17b3 # timeout=10
Finished: SUCCESS