

Project : Capstone I

You have been hired as a Sr. DevOps Engineer in Abode Software. They want to implement DevOps Lifecycle in their company. You have been asked to implement this lifecycle as fast as possible. Abode Software is a product-based company and their product is available on this GitHub link.

<https://github.com/hshar/website.git>

Following are the specifications of the lifecycle:

1. Install the necessary software on the machines using a configuration management tool
2. Git workflow has to be implemented
3. CodeBuild should automatically be triggered once a commit is made to master branch or develop branch.
 - a. If a commit is made to master branch, test and push to prod
 - b. If a commit is made to develop branch, just test the product, do not push to prod
4. The code should be containerized with the help of a Dockerfile. The Dockerfile should be built every time there is a push to GitHub. Use the following pre-built container for your application: hshar/webapp
The code should reside in '/var/www/html'
5. The above tasks should be defined in a Jenkins Pipeline with the following jobs:
 - a. Job1 : build
 - b. Job2 : test
 - c. Job3 : prod

Solution:

Launch 3 instances for master, test and prod

<input type="checkbox"/>	Project1-master	i-0c9933c7e2298e88f	Running	t2.micro	2/2 checks passed View alarms +	ap-sc
<input type="checkbox"/>	Project1-test	i-093b896d0fb164098	Running	t2.micro	2/2 checks passed View alarms +	ap-sc
<input type="checkbox"/>	Project1-prod	i-0e84565cd3964ba37	Running	t2.micro	2/2 checks passed View alarms +	ap-sc

Connect to the instances and update all

```
Building dependency tree... Done
Reading state information... Done
77 packages can be upgraded. Run 'apt list --upgradable' to see them.
ubuntu@ip-172-31-23-82:~$
```

i-0c9933c7e2298e88f (Project1-master)

PublicIPs: 54.179.90.103 PrivateIPs: 172.31.23.82

```
Reading state information... Done
77 packages can be upgraded. Run 'apt list --upgradable' to see them.
ubuntu@ip-172-31-30-253:~$
```

i-093b896d0fb164098 (Project1-test)

PublicIPs: 13.215.141.128 PrivateIPs: 172.31.30.253

```
Building dependency tree... Done
Reading state information... Done
77 packages can be upgraded. Run 'apt list --upgradable' to see them.
ubuntu@ip-172-31-23-210:~$
```

i-0e84565cd3964ba37 (Project1-prod)

PublicIPs: 52.74.219.177 PrivateIPs: 172.31.23.210

In master branch create a.sh file and install ansible

```
ubuntu@ip-172-31-23-82:~$ sudo nano a.sh
ubuntu@ip-172-31-23-82:~$ bash a.sh
```

Create a keypair \$ ssh-keygen

```
Generating public/private ed25519 key pair.
Enter file in which to save the key (/home/ubuntu/.ssh/id_ed25519):
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /home/ubuntu/.ssh/id_ed25519
Your public key has been saved in /home/ubuntu/.ssh/id_ed25519.pub
The key fingerprint is:
SHA256:ObKqF8NJfHDxHrD68x9gG+e4O7VdFV/EJp+kFIC4rK8 ubuntu@ip-172-31-23-82
The key's randomart image is:
+--[ED25519 256]--+
|    o.. .....o.|
|    . .= .   ..o+|
|    . oo +   . o+=|
|    o..+ o   . .+|
|    o.oo S .   . |
|    =o + O.   .  |
|    o= o.oo .   |
|    .. +.....   |
|    .o.E. ++.   |
+-----[SHA256]-----+
```

Go inside ssh there you will find the keys – private key and public key

```
ubuntu@ip-172-31-23-82:~$ cd .ssh
ubuntu@ip-172-31-23-82:~/.ssh$ ls
authorized_keys  id_ed25519  id_ed25519.pub
ubuntu@ip-172-31-23-82:~/.ssh$ sudo cat id_ed25519.pub
ssh-ed25519 AAAAC3NzaC1lZDI1NTE5AAAAIDsq1GAdstaT0KDSQzVoRYCtMGQr0lBxyE6weOiOIkeV ubuntu@ip-172-31-23-82
```

Go inside authorized key

```
ubuntu@ip-172-31-30-253:~/.ssh$ sudo nano authorized_keys
ubuntu@ip-172-31-30-253:~/.ssh$
```

and paste the public key in both test and prod servers

```
GNU nano 7.2 authorized_keys *
ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAQCAha9lFDdaSWXxfAL/v61BpNUoZV6D8QmKbn1ipj7XTSnlI
ssh-ed25519 AAAAC3NzaC1lZDI1NTE5AAAAIDsq1GAdstaT0KDSQzVoRYCtMGQr0lBxyE6weOiOIkeV ubun
```

Come to master node go to the location /etc/ansible/hosts

```
ubuntu@ip-172-31-23-82:~/.ssh$ cd
ubuntu@ip-172-31-23-82:~$ cd /etc/ansible/
ubuntu@ip-172-31-23-82:/etc/ansible$ ls
ansible.cfg  hosts  roles
ubuntu@ip-172-31-23-82:/etc/ansible$ sudo nano hosts
ubuntu@ip-172-31-23-82:/etc/ansible$
```

Create the hosts adding private ip of test and prod server

```
GNU nano 7.2
[group]
Test ansible_host=172.31.30.253
Prod ansible_host=172.31.23.210
```

Ping the request for slave nodes \$ ansible -m ping all

```
Prod | SUCCESS => {
  "ansible_facts": {
    "discovered_interpreter_python": "/usr/bin/python3"
  },
  "changed": false,
  "ping": "pong"
}
yes
Test | SUCCESS => {
  "ansible_facts": {
    "discovered_interpreter_python": "/usr/bin/python3"
  },
  "changed": false,
  "ping": "pong"
}
```

Now install the tools over the playbook of ansible

```
ubuntu@ip-172-31-23-82:~$ sudo nano b.sh
ubuntu@ip-172-31-23-82:~$ sudo nano c.sh
```

\$ sudo nano b.sh → for master node

```
GNU nano 7.2
sudo apt update
sudo apt install openjdk-17-jdk -y
sudo apt install docker.io -y
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 -y
```

\$ sudo nano c.sh → for slaves

```
GNU nano 7.2
sudo apt update
sudo apt install openjdk-17-jdk -y
sudo apt install docker.io -y
```

Create a playbook yaml file for execution of shell script

```
ubuntu@ip-172-31-23-82:~$ sudo cat play.yml
---
- name: executing script on master
  hosts: localhost
  become: true
  tasks:
    - name: executing b.sh script on master
      script: b.sh
- name: executing script on slaves
  hosts: all
  become: true
  tasks:
    - name: executing c.sh script on slaves
      script: c.sh
```

Do the syntax check

```
ubuntu@ip-172-31-23-82:~$ ansible-playbook play.yml --syntax-check
playbook: play.yml
ubuntu@ip-172-31-23-82:~$
```

Run the playbook

```
TASK [executing c.sh script on slaves] *****
changed: [Test]
changed: [Prod]

PLAY RECAP *****
Prod      : ok=2    changed=1    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0
Test      : ok=2    changed=1    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0
localhost : ok=2    changed=1    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0
```

Check the docker version and java version on test server

```
ubuntu@ip-172-31-30-253:~$ docker --version
Docker version 24.0.7, build 24.0.7-0ubuntu4
ubuntu@ip-172-31-30-253:~$ java --version
openjdk 17.0.11 2024-04-16
OpenJDK Runtime Environment (build 17.0.11+9-Ubuntu-1)
OpenJDK 64-Bit Server VM (build 17.0.11+9-Ubuntu-1,
ubuntu@ip-172-31-30-253:~$
```

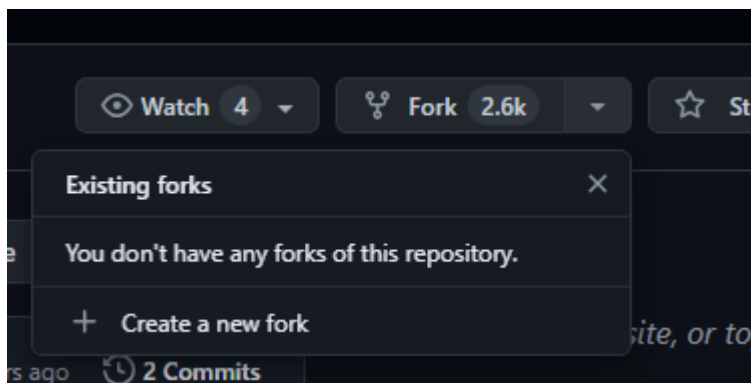
i-093b896d0fb164098 (Project1-test)

Check the docker version and java version on prod server as well

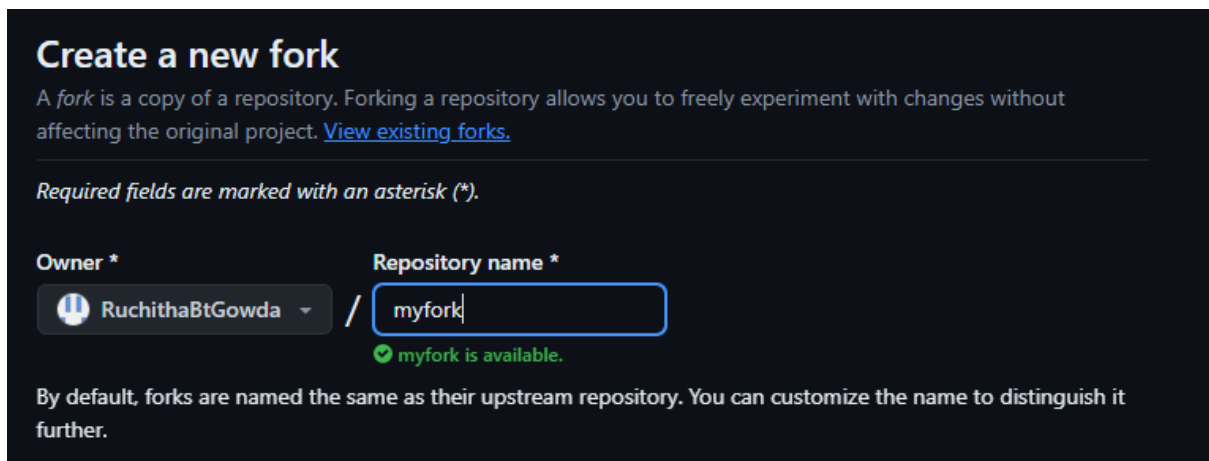
```
ubuntu@ip-172-31-23-210:~$ docker --version
Docker version 24.0.7, build 24.0.7-0ubuntu4
ubuntu@ip-172-31-23-210:~$ java --version
openjdk 17.0.11 2024-04-16
OpenJDK Runtime Environment (build 17.0.11+9-Ubuntu-1)
OpenJDK 64-Bit Server VM (build 17.0.11+9-Ubuntu-1, mixed mode, sharing)
ubuntu@ip-172-31-23-210:~$
```

i-0e84565cd3964ba37 (Project1-prod)

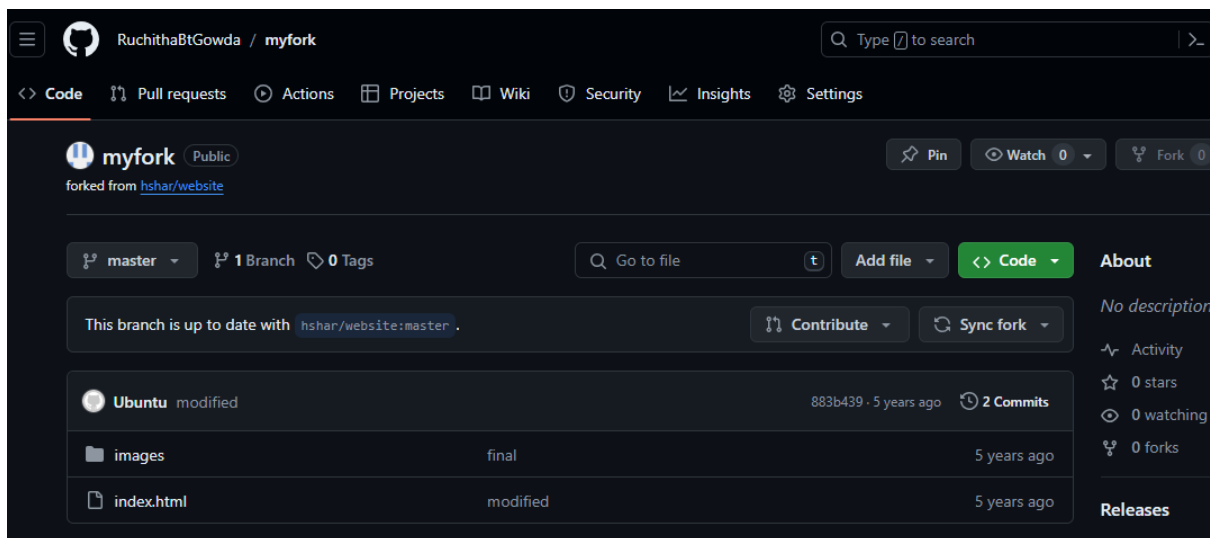
Go to the git hub location → <https://github.com/hshar/website.git> and create a new fork



Give the repository name → myfork



New copy is created



As the Jenkins is installed in the master node, copy the IP address of master node followed by port number 8080, Jenkins will be opened.

Unlock Jenkins

To ensure Jenkins is securely set up by the administrator, a password has been written in 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

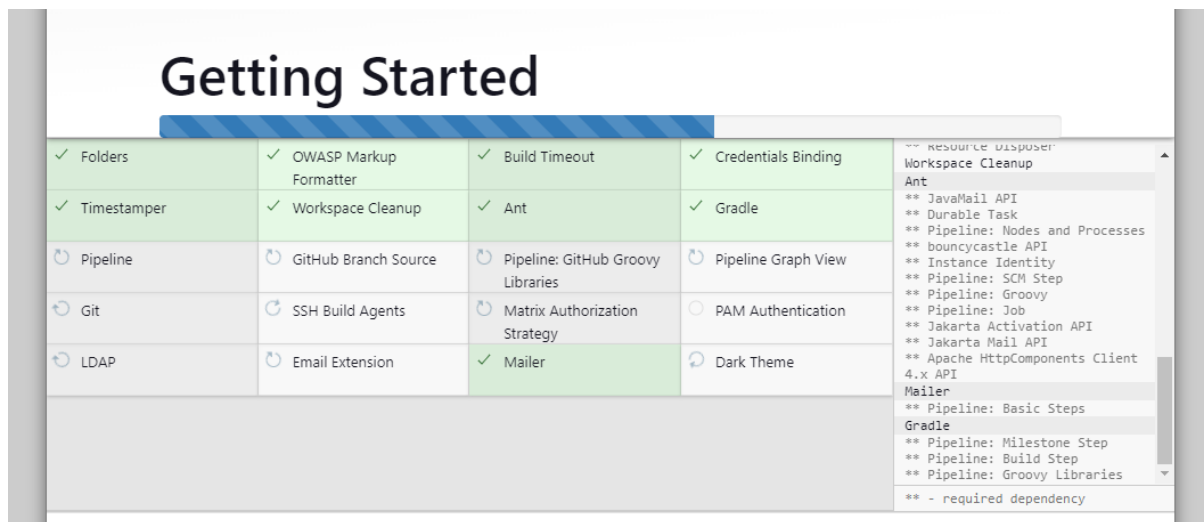
Go to location given and with the help of the password login into the Jenkins

```
ubuntu@ip-172-31-23-82:~$ sudo cat /var/lib/jenkins/secrets/initialAdminPassword
94268b8442c3457e9e9eab0f45d630c1
ubuntu@ip-172-31-23-82:~$
```

i-0c9933c7e2298e88f (Project1-master)

PublicIPs: 13.250.96.171 PrivateIPs: 172.31.23.82

Go to the installation of available plugins and it get started installing.



Give the necessary username, password, email address

Getting Started

Ruchitha Bt

Password

.....

Confirm password

.....

Full name

Ruchitha Bt Gowda

E-mail address

ruchitharuthu123@gmail.com

Jenkins URL

Instance Configuration

Jenkins URL:

http://13.250.96.171:8080/

The Jenkins URL is used to provide the root URL for absolute links to various Jenkins resources. That means this value is required for proper operation of many Jenkins features including email notifications, PR status updates, and the `BUILD_URL` environment variable provided to build steps.

The proposed default value shown is **not saved yet** and is generated from the current request, if possible. The best practice is to set this value to the URL that users are expected to use. This will avoid confusion when sharing or viewing links.

Setup is completed

Jenkins is ready!

Your Jenkins setup is complete.

Start using Jenkins

Install the plugin – ssh agent

Dashboard > Manage Jenkins > Plugins

Plugins

Updates

Available plugins

Installed plugins

Advanced settings

Download progress

ssh agent

Install Name ↓



SSH Agent 367.vf9076cd4ee21













This plugin allows you to provide SSH credentials to builds via a ssh-agent in Jenkins.

Install is success

Download progress

Preparation

- Checking internet connectivity
- Checking update center connectivity
- Success

Ionicons API	 Success
Folders	 Success
OWASP Markup Formatter	 Success
ASM API	 Success
JSON Path API	 Success
Structs	 Success
Pipeline: Step API	 Success
Token Macro	 Success
Build Timeout	 Success
Credentials	 Success
Plain Credentials	 Success
Variant	 Success

→ [Go back to the top page](#)
(you can start using the installed plugins right away)

Go back to the top page and setup an agent

Create a job

Set up a distributed build

Set up an agent

Configure a cloud

Create a nodes for test and prod

Dashboard > Nodes > New node

New node

Node name

test

Type



Permanent Agent

Adds a plain, permanent agent to Jenkins. This is called "permanent" because Jenkins doesn't provide higher level of integration with these agents, such as dynamic provisioning. Select this type if no other agent types apply — for example such as when you are adding a physical computer, virtual machines managed outside Jenkins, etc.

Create

Remote root directory ?

/home/ubuntu/jenkins/

Labels ?

Usage ?

Use this node as much as possible

Launch method ?

Launch agents via SSH

Host ?

172.31.30.253

Credentials ?

Credentials ?

- none -

+ Add ▲



Jenkins

credentials can

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 ?

Description ?

Jenkins Credentials Provider: Jenkins

Username

ubuntu

☐

Treat username as secret ?

Private Key

☒

Enter directly

Key

```
-----BEGIN RSA PRIVATE KEY-----  
MIIEogIBAAKCAQEAgIwYZRQ3Wk118XwC/7+t0aTVKGVeg/EJm59YqY+100p5CPS  
ITk1vD5Xwu8Kv7nn7n01snVz2Gt2rT0dCMEsnuEXge6gFCqv71sJ1/05Iva1woJT
```

Cancel

Add

Credentials ?

ubuntu

+ Add ▾

Host Key Verification Strategy ?

Non verifying Verification Strategy

Advanced ▾







- ☐ Environment variables
- ☐ Tool Locations

Save

Nodes

+ New Node

Configure Monitors

S	Name 1	Architecture	Clock Difference	Free Disk Space	Free Swap Space	Free Temp Space	Response Time
	Built-In Node	Linux (amd64)	In sync	2.91 GiB	 0 B	2.91 GiB	0ms 
	test	Linux (amd64)	In sync	3.85 GiB	 0 B	3.85 GiB	32ms 
Data obtained		99 ms	97 ms	96 ms	95 ms	95 ms	93 ms

Icon: S M L

Legend

For prod

+ New Node

Configure Monitors

Free Swap Space

Free Temp Space

Response Time

New node

Node name

Type

☐ Permanent Agent

Adds a plain, permanent agent to Jenkins. This is called "permanent" because Jenkins doesn't provide higher level of integration with these agents, such as dynamic provisioning. Select this type if no other agent types apply — for example such as when you are adding a physical computer, virtual machines managed outside Jenkins, etc.

☒ Copy Existing Node

Create

Launch method ?










Launch agents via SSH

Host ?

Credentials ?

☐ Tool Locations

Save

S	Name	Architecture	Clock Difference	Free Disk Space	Free Swap Space	Free Temp Space	Response Time
	Built-In Node	Linux (amd64)	In sync	2.91 GiB	 0 B	2.91 GiB	0ms 
	prod	Linux (amd64)	In sync	3.85 GiB	 0 B	3.85 GiB	34ms 
	test	Linux (amd64)	In sync	3.85 GiB	 0 B	3.85 GiB	5ms 
Data obtained		3 sec	3 sec	3 sec	2.9 sec	3 sec	3 sec

Go to dashboard and create a new job

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

Start building your software project

[Create a job](#)

Enter an item name

sample-job

» Required field



Freestyle project

Classic, general-purpose job type that checks out from up to one SCM, archiving artifacts and sending email notifications.



Pipeline

Orchestrates long-running activities that can span multiple build agents and/or organizing complex activities that do not easily fit in free-style jobs.



Multi-configuration project

Suitable for projects that need a large number of different configurations, builds, etc.

OK

As this public repo no need of giving credentials

☒ Git ?

Repositories ?

Repository URL ?

`https://github.com/RuchithaBtGowda/myfork.git`

Credentials ?

- none -

+ Add ▾

Branches to build ?

Branch Specifier (blank for 'any') ?

`*/master`

Add Branch

Build Triggers

- ☐ Trigger builds remotely (e.g., from scripts) ?
- ☐ Build after other projects are built ?
- ☐ Build periodically ?
- ☒ GitHub hook trigger for GITScm polling ?
- ☐ Poll SCM ?

Build Environment

- ☐ Delete workspace before build starts

Save

Apply

Add webhook

The screenshot shows the GitHub 'Webhooks' settings page. On the left is a sidebar with a menu: 'General' (selected), 'Access' (with sub-items 'Collaborators' and 'Moderation options'), 'Code and automation' (with sub-items 'Branches', 'Tags', 'Rules', 'Actions', and 'Webhooks' which is highlighted with a blue bar), and 'Webhooks' (with a sub-item 'Add webhook'). The main content area is titled 'Webhooks' and contains the text: 'Webhooks allow external services to be notified when certain events happen. When the specified events happen, we'll send a POST request to each of the URLs you provide. Learn more in our [Webhooks Guide](#).' There is an 'Add webhook' button in the top right corner of the main content area.

Webhooks / Add Webhook

We'll send a POST request to the URL below with details of any subscribed events. You can choose the format you'd like to receive (JSON, `x-www-form-urlencoded`, etc). More information can be found in our [documentation](#).

Payload URL *

Content type

Secret

☒ **Active**
We will deliver event details when this hook is triggered.

Add webhook

Webhooks

Add webhook

Webhooks allow external services to be notified when certain events happen. When the specified events happen, we'll send a POST request to each of the URLs you provide. Learn more in our [Webhooks Guide](#).

✓	http://13.250.96.171:8080/github-w... (push)	Edit	Delete
---	--	-------------	---------------

Build the job

sample-job > #1 > Console Output

Output

as plain text

Id Information

Build #1

Started by user [Ruchitha Bt Gowda](#)
Running as SYSTEM
Building on the built-in node in workspace /var/lib/jenkins/workspace/sample-job
The recommended git tool is: NONE
No credentials specified
Cloning the remote Git repository
Cloning repository <https://github.com/RuchithaBtGowda/myfork.git>
> git init /var/lib/jenkins/workspace/sample-job # timeout=10
Fetching upstream changes from <https://github.com/RuchithaBtGowda/myfork.git>
> git --version # timeout=10
> git --version # 'git version 2.43.0'

Check in master

```
ubuntu@ip-172-31-23-82:~$ cd /var/lib/jenkins/workspace/sample-job
ubuntu@ip-172-31-23-82:/var/lib/jenkins/workspace/sample-job$ ls
images  index.html
ubuntu@ip-172-31-23-82:/var/lib/jenkins/workspace/sample-job$
```

i-0c9933c7e2298e88f (Project1-master)

Create another job for test-test-job

Dashboard > test-job > Configuration

But as per question it should build in prod

☒ Restrict where this project can be run ?

Label Expression ?

prod

Label prod matches 1 node. Permissions or other restrictions provided by plugins may further reduce the number of nodes available.

Advanced ▾

☐ None

☒ Git ?



 Repositories ?

 Repository URL ?

 Please enter Git repository.

You can see it is building remotely on prod

test-job > #2 > Console Output

 **Console Output**


5

Output

as plain text

Id Information

Build #2'

```

Started by user Ruchitha Bt Gowda
Running as SYSTEM
Building remotely on prod in workspace /home/ubuntu/jenkins/workspace/test-job
The recommended git tool is: NONE
No credentials specified
> git rev-parse --resolve-git-dir /home/ubuntu/jenkins/workspace/test-job/.git # timeout:
Fetching changes from the remote Git repository
> git config remote.origin.url https://github.com/RuchithaBtGowda/myfork.git # timeout=1
  
```

Go to prod server and check it

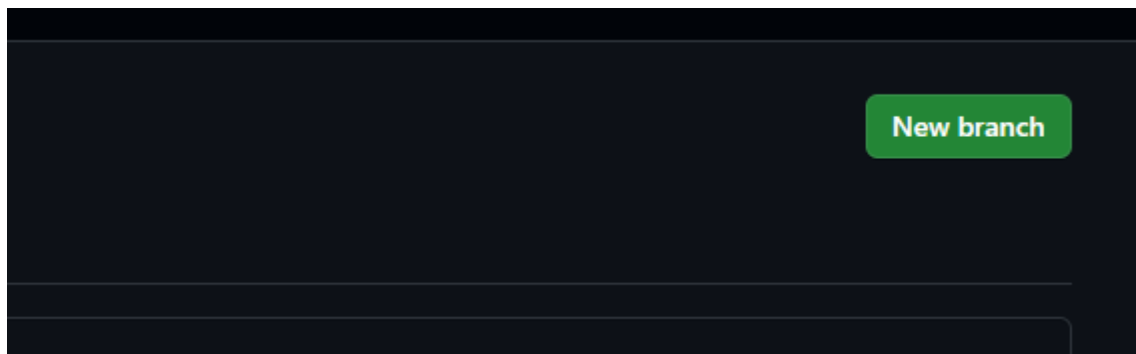
```

ubuntu@ip-172-31-23-210:~$ cd /home/ubuntu/jenkins/workspace/test-job
ubuntu@ip-172-31-23-210:~/jenkins/workspace/test-job$ ls
images  index.html
  
```

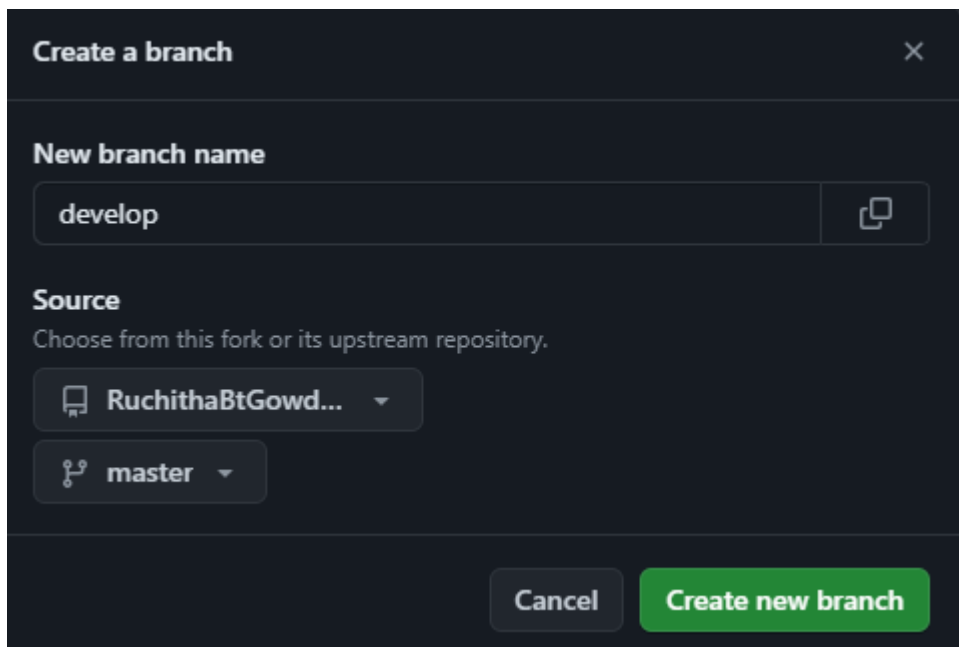
As of now two jobs are created where the commit is made to master branch

S	W	Name ↓	Last Success	Last Failure	Las
✓	☀	sample-job	1 day 18 hr #1	N/A	4.5
✓	☀	test-job	3 min 43 sec #4	N/A	0.8

Now to create the prod job we need develop branch → go to new branch



Give the name → create new branch



Give here test node

☐ Throttle builds ?

☐ Execute concurrent builds if necessary ?

☒ Restrict where this project can be run ?

Label Expression ?

test

Label test matches 1 node. Permissions or other restrictions:

Advanced ▾

Branch to build is develop

Branches to build ?

Branch Specifier (blank for 'any') ?

*/develop

Add Branch

Repository browser ?

(Auto)

Run the job, you can see prod job is building remotely on test server

✓ Console Output

```
Started by user Ruchitha Bt Gowda
Running as SYSTEM
Building remotely on test in workspace /home/ubuntu/jenkins/workspace/prod-job
The recommended git tool is: NONE
No credentials specified
Cloning the remote Git repository
Cloning repository https://github.com/RuchithaBtGowda/myfork.git
> git init /home/ubuntu/jenkins/workspace/prod-job # timeout=10
Fetching upstream changes from https://github.com/RuchithaBtGowda/myfork.git
> git --version # timeout=10
> git --version # 'git version 2.43.0'
```

Go to test server and check the location files

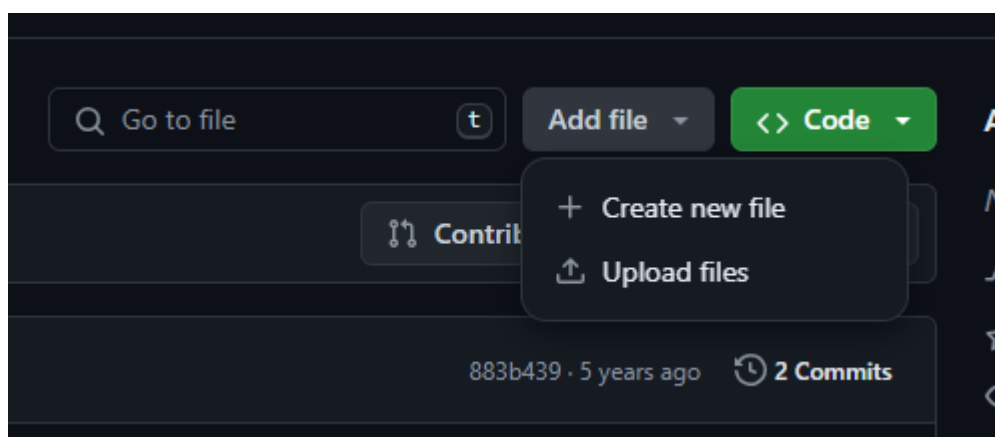
```
ubuntu@ip-172-31-30-253:~$ cd /home/ubuntu/jenkins/workspace/prod-job
ubuntu@ip-172-31-30-253:~/jenkins/workspace/prod-job$ ls
images  index.html
ubuntu@ip-172-31-30-253:~/jenkins/workspace/prod-job$
```

i-093b896d0fb164098 (Project1-test)

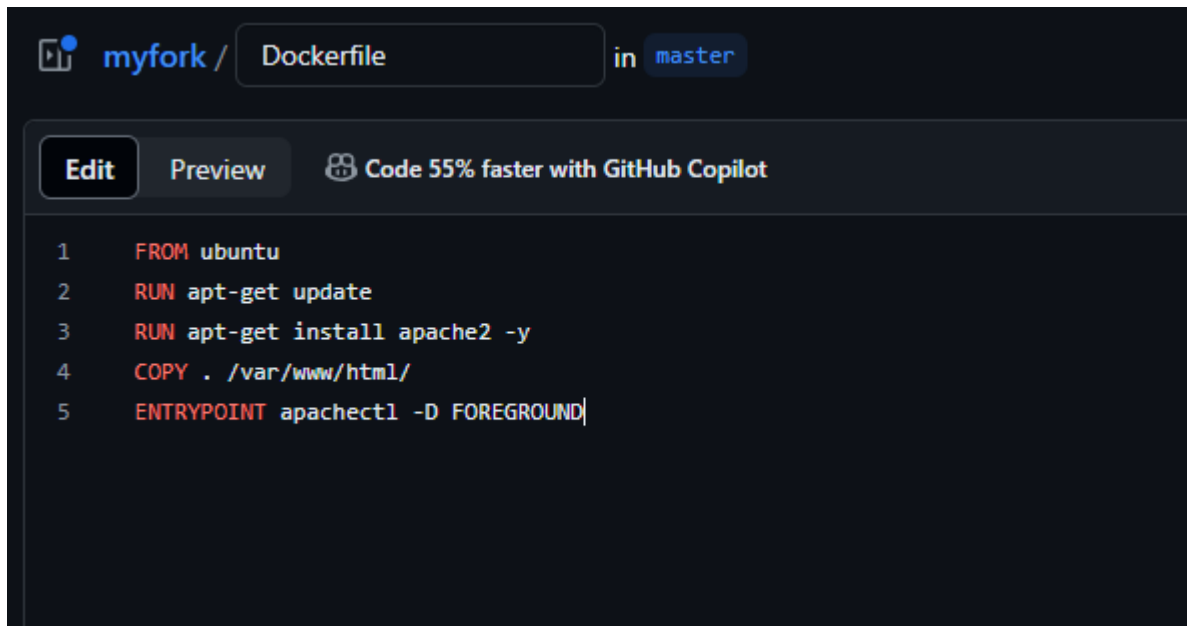
Now till 3rd task completed

Create docker file

In master branch



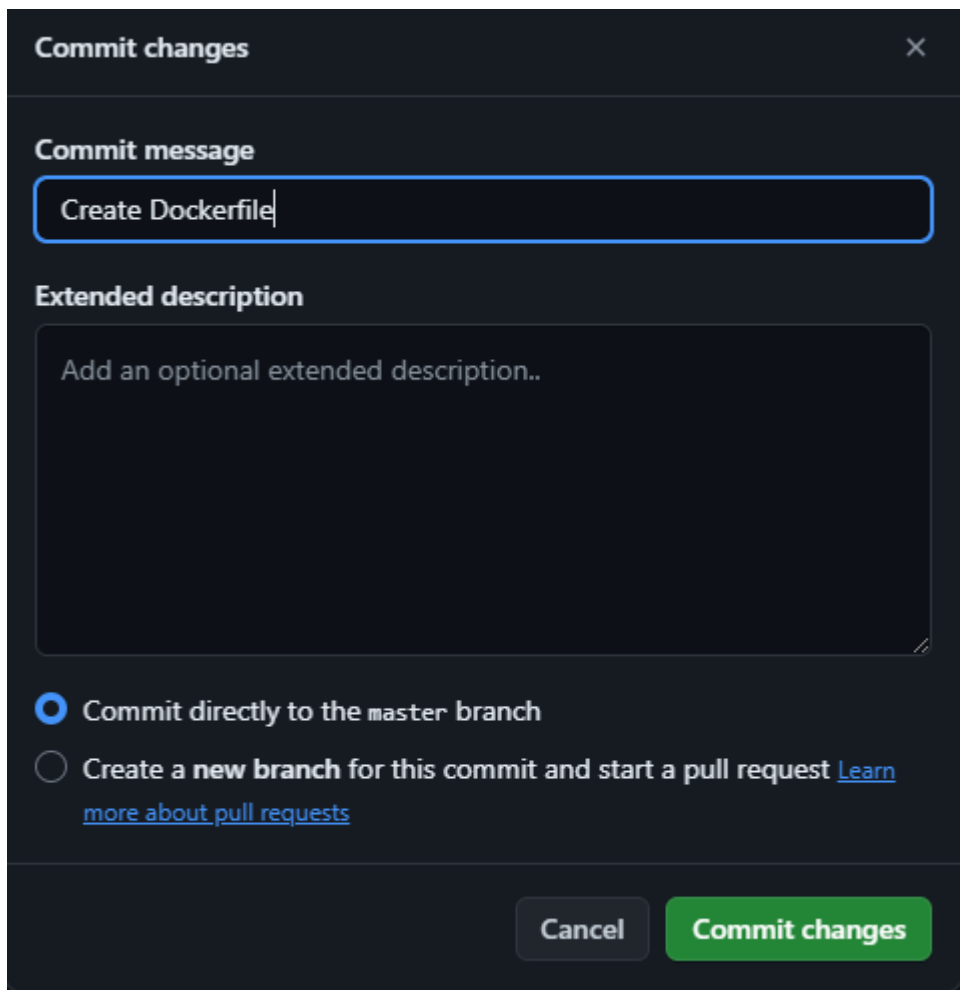
Write a Docker file which installs apache2 which is already present on Ubuntu



The screenshot shows a code editor interface for a file named 'Dockerfile' in the 'master' branch. The editor has tabs for 'Edit' and 'Preview', and a notification for 'Code 55% faster with GitHub Copilot'. The Dockerfile content is as follows:

```
1 FROM ubuntu
2 RUN apt-get update
3 RUN apt-get install apache2 -y
4 COPY . /var/www/html/
5 ENTRYPOINT apachectl -D FOREGROUND
```

Commit the changes



The screenshot shows a 'Commit changes' dialog box with a close button (X) in the top right corner. It contains the following fields and options:

- Commit message:** A text input field containing 'Create Dockerfile'.
- Extended description:** A text area with the placeholder text 'Add an optional extended description..'
- Commit options:** Two radio buttons are present:
 - ☒ Commit directly to the master branch
 - ☐ Create a new branch for this commit and start a pull request [Learn more about pull requests](#)
- Buttons:** At the bottom, there are two buttons: 'Cancel' and 'Commit changes'.

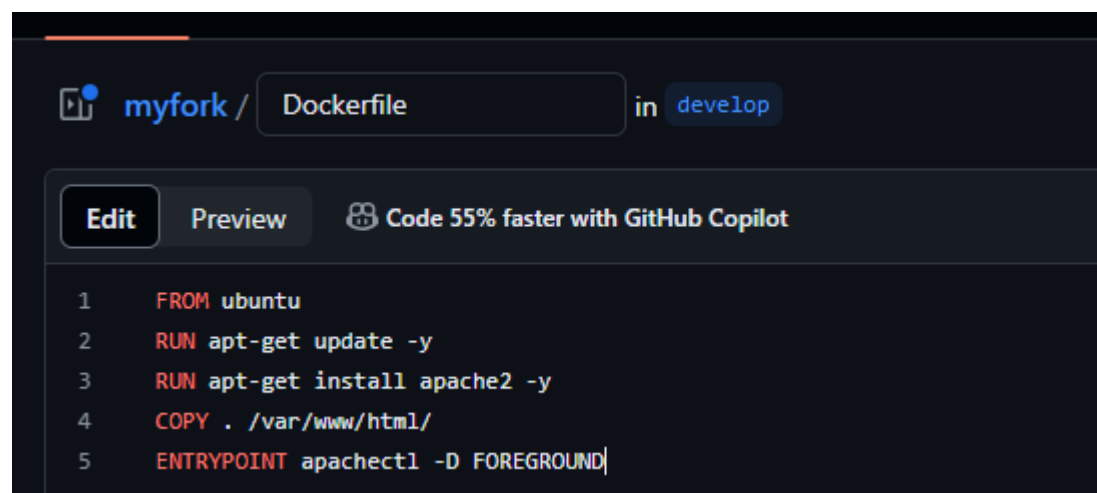
Go to prod server and check

```
Last login: Sat Jun 22 12:04:05 2024 from 3.0.5.35
ubuntu@ip-172-31-23-210:~$ cd /home/ubuntu/jenkins/workspace/test-job
ubuntu@ip-172-31-23-210:~/jenkins/workspace/test-job$ ls
Dockerfile  images  index.html
ubuntu@ip-172-31-23-210:~/jenkins/workspace/test-job$
```

i-0e84565cd3964ba37 (Project1-prod)

PublicIPs: 54.255.144.252 PrivateIPs: 172.31.23.210

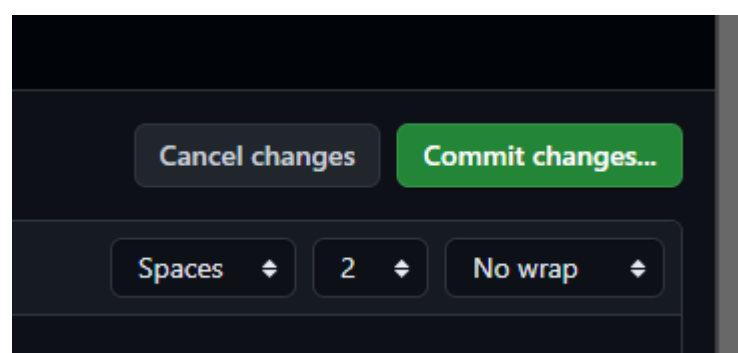
Similarly create docker file on develop branch



The screenshot shows a code editor interface for a file named 'Dockerfile' in the 'develop' branch. The editor has tabs for 'Edit' and 'Preview', and a notification that says 'Code 55% faster with GitHub Copilot'. The Dockerfile content is as follows:

```
1 FROM ubuntu
2 RUN apt-get update -y
3 RUN apt-get install apache2 -y
4 COPY . /var/www/html/
5 ENTRYPOINT apache2ctl -D FOREGROUND
```

Commit the changes



Check in the test server

```
ubuntu@ip-172-31-30-253:~$ cd /home/ubuntu/jenkins/workspace/prod-job
ubuntu@ip-172-31-30-253:~/jenkins/workspace/prod-job$ ls
Dockerfile  images  index.html
ubuntu@ip-172-31-30-253:~/jenkins/workspace/prod-job$
```

i-093b896d0fb164098 (Project1-test)

PublicIPs: 54.255.89.166 PrivateIPs: 172.31.30.253

Now creating docker image

Dashboard > All > prod-job > Configuration

Configure

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

- ☐ Inspect build log for permission and security
- ☐ SSH Agent
- ☐ Terminate a build if it's stuck
- ☐ With Ant ?

Build Steps

- Execute shell** ?

Command

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

```
sudo docker build . -t image1
sudo docker run -itd -p 81:80 image1
```

Run the prod job.

```
done.
Removing intermediate container fd3e12701599
--> 2c941af9bc8d
Step 4/5 : COPY . /var/www/html/
--> c96bf5a2533a
Step 5/5 : ENTRYPOINT apachectl -D FOREGROUND
--> Running in 34459871ac34
Removing intermediate container 34459871ac34
--> c4c1fa8505db
Successfully built c4c1fa8505db
Successfully tagged image1:latest
+ sudo docker run -itd -p 81:80 image1
f8ce18dc21056587639c7578a02d6312dac6ac9ddc3552109d17a0725aeb!
Finished: SUCCESS
```

Check in test server

\$ sudo docker images

```
ubuntu@ip-172-31-30-253:~/jenkins/workspace/prod-job$ sudo docker images
REPOSITORY    TAG       IMAGE ID       CREATED        SIZE
image1        latest   c4c1fa8505db   About a minute ago  222MB
ubuntu        latest   35a88802559d   2 weeks ago    78.1MB
ubuntu@ip-172-31-30-253:~/jenkins/workspace/prod-job$
```

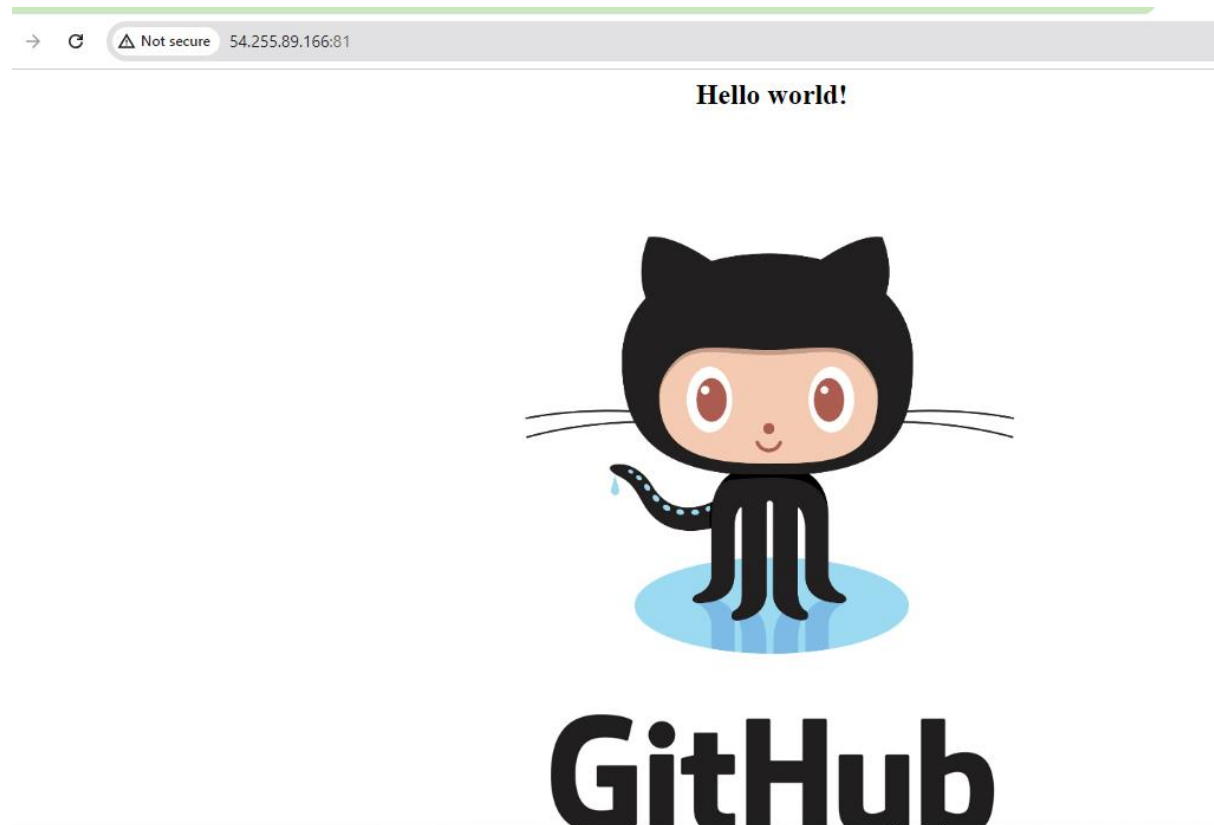
i-093b896d0fb164098 (Project1-test)

\$ sudo docker ps

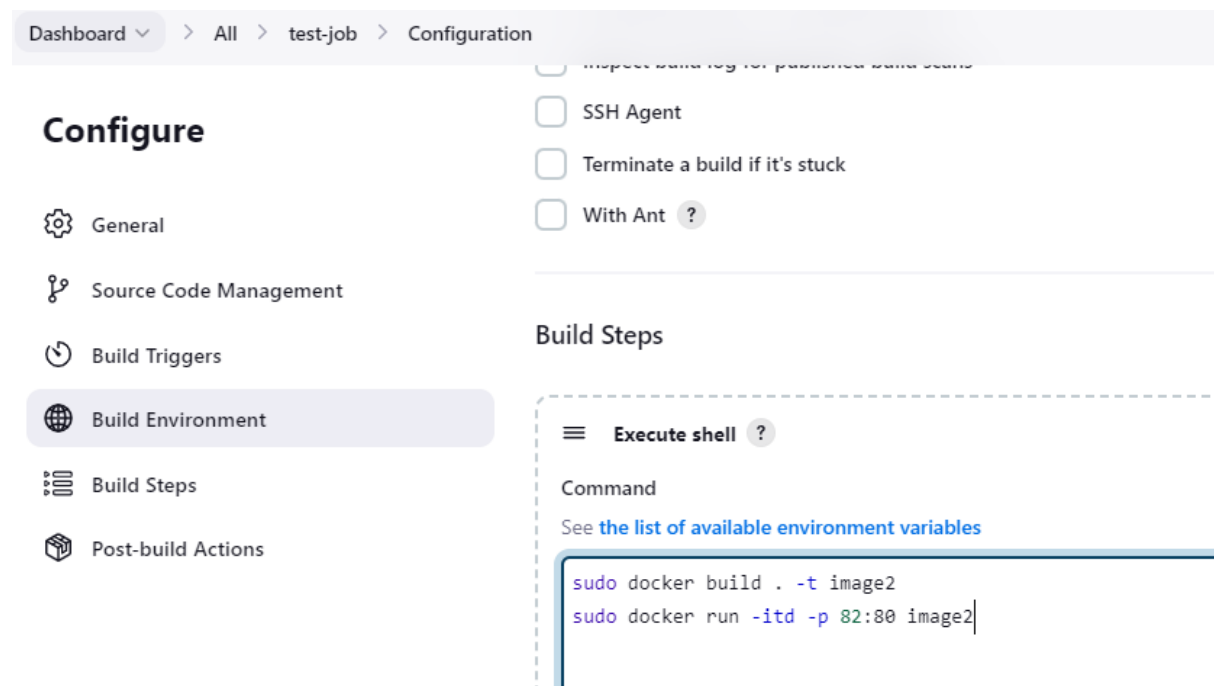
```
ubuntu@ip-172-31-30-253:~/jenkins/workspace/prod-job$ sudo docker ps
CONTAINER ID   IMAGE     COMMAND                  CREATED        STATUS        PORTS
f8ce18dc2105   image1    "/bin/sh -c 'apachec..." 2 minutes ago  Up 2 minutes  0.0.0.0:81->80/tcp, :::81->80/tcp
ubuntu@ip-172-31-30-253:~/jenkins/workspace/prod-job$
```

i-093b896d0fb164098 (Project1-test)

Public IP of test server with the given port



Similarly create a docker image in test job



Build the job, if you create webhooks it automatically builds

```
---> d19771942bbb
Step 4/5 : COPY . /var/www/html/
---> 7d0a140bd4e9
Step 5/5 : ENTRYPOINT apachectl -D FOREGROUND
---> Running in 8b8c93d12346
Removing intermediate container 8b8c93d12346
---> 9dd883f0ebe7
Successfully built 9dd883f0ebe7
Successfully tagged image2:latest
+ sudo docker run -itd -p 82:80 image2
8cb09b231f56b8e15360df4e85903ca501cc1b7500176c9726981ae3b3792403
Finished: SUCCESS
```

Go to prod server and check the images

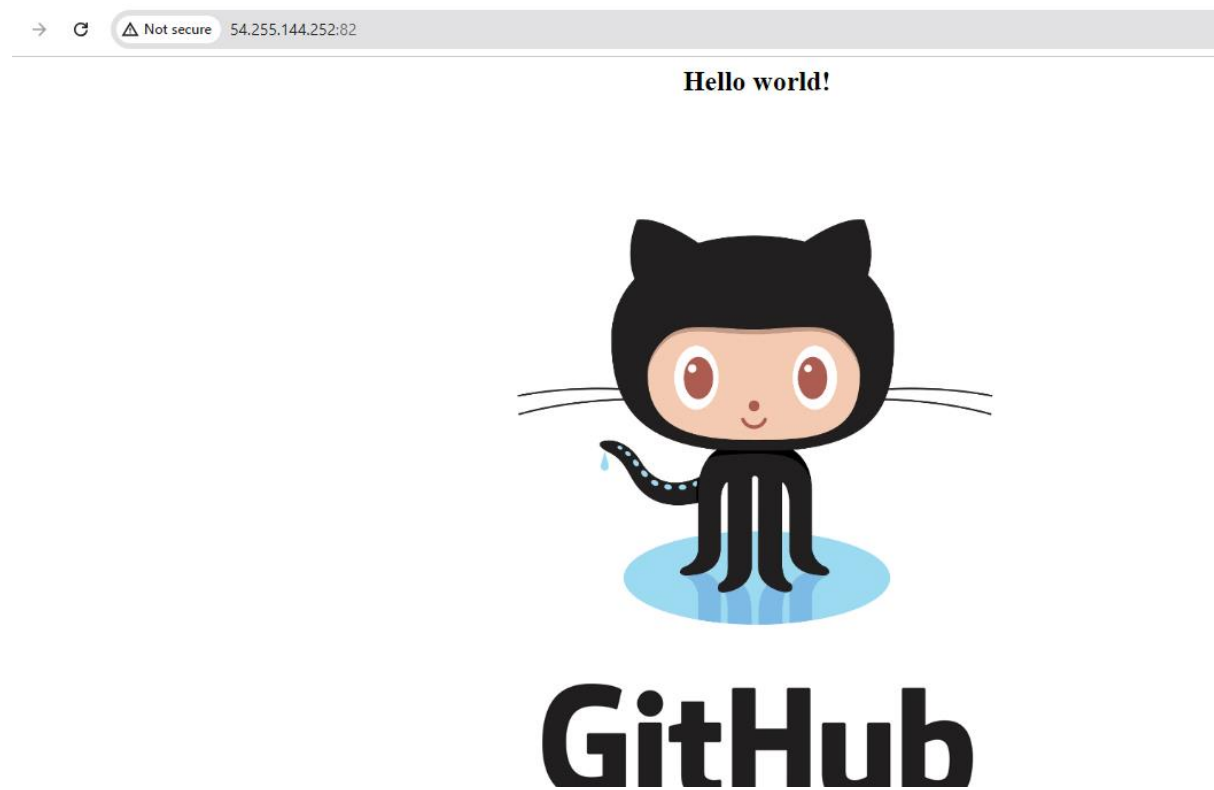
\$ sudo docker images

\$ sudo docker ps

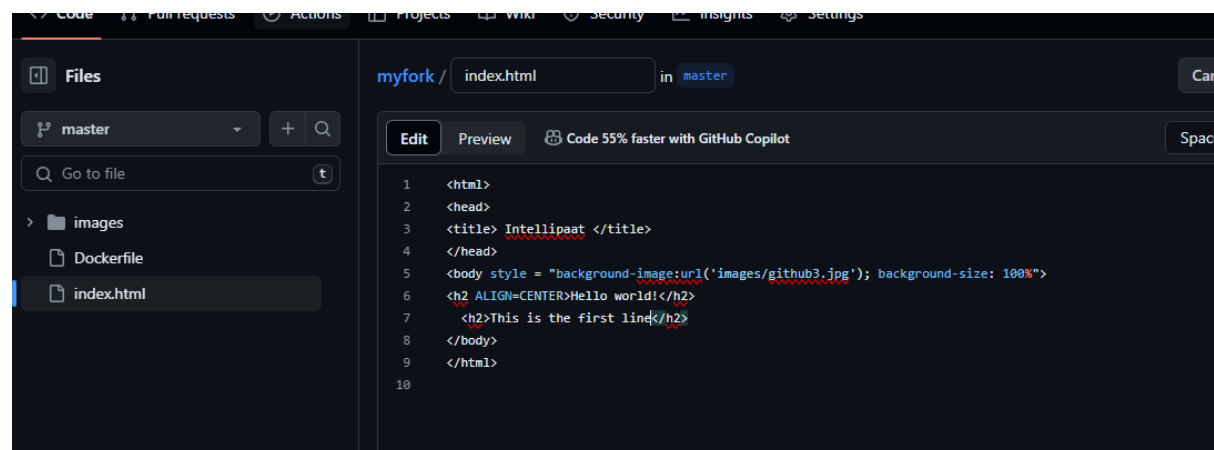
```
ubuntu@ip-172-31-23-210:~/jenkins/workspace/test-job$ sudo docker images
REPOSITORY    TAG       IMAGE ID       CREATED        SIZE
image2        latest   9dd883f0ebe7   8 minutes ago  222MB
ubuntu        latest   35a88802559d   2 weeks ago   78.1MB
ubuntu@ip-172-31-23-210:~/jenkins/workspace/test-job$ sudo docker ps
CONTAINER ID   IMAGE     COMMAND                  CREATED        STATUS
8cb09b231f56   image2    "/bin/sh -c 'apachec..."  8 minutes ago  Up 8 minutes
ubuntu@ip-172-31-23-210:~/jenkins/workspace/test-job$
```

i-0e84565cd3964ba37 (Project1-prod)

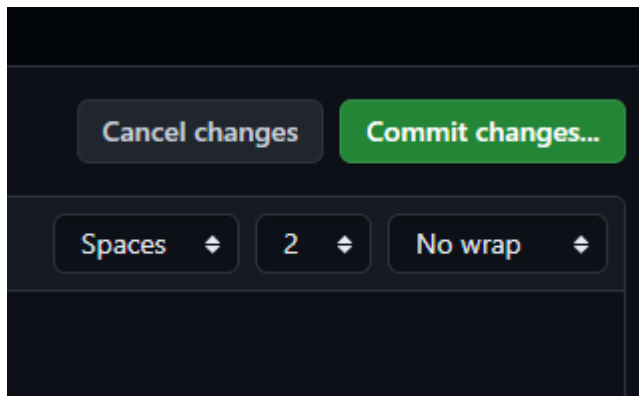
Public IP of prod ec2 with given port number



You can perform the html change add any line



Commit the changes



And check them

This is the first line

Hello world!



Do the changes in shell script if you are further doing the html changes..

Build Steps

≡ Execute shell ?

Command

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

```
sudo docker rm -f c1
sudo docker build . -t image2
sudo docker run -itd -p 83:80 --name=c1 image2
```




The screenshot shows a code editor with a dark theme. At the top, there are tabs for 'Edit' and 'Preview', and a status bar indicating 'Code 55% faster with GitHub Copilot'. The code is an HTML document with the following structure:

```
1 <html>
2 <head>
3 <title> Intellipaat </title>
4 </head>
5 <body style = "background-image:url('images/github3.jpg'); background-size: 100%">
6 <h2 ALIGN=CENTER>Hello world!</h2>
7 <h2>This is the second line</h2>
8 <h2>ALIGN=LEFT>Hi this is Ruchitha!</h2>
9 </body>
10 </html>
11
```



- Last build (#7), 2 min 27 sec ago
- Last stable build (#7), 2 min 27 s
- Last successful build (#7), 2 min
- Last completed build (#7), 2 min


Build History
trend ▾

✓
#8
✗

Jun 22, 2024, 2:44 PM

✓
#7

Jun 22, 2024, 2:39 PM

← → ↺ ⚠ Not secure 54.255.144.252:83

Hello world!

This is the second line

ALIGN=LEFT>Hi this is Ruchitha!



GitHub

Build steps

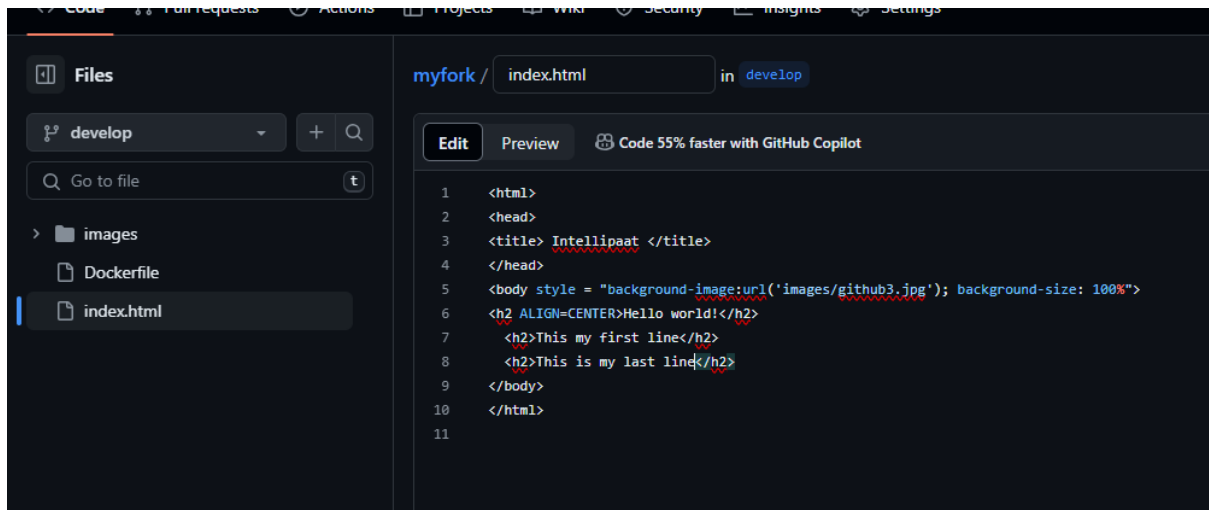
Execute shell ?

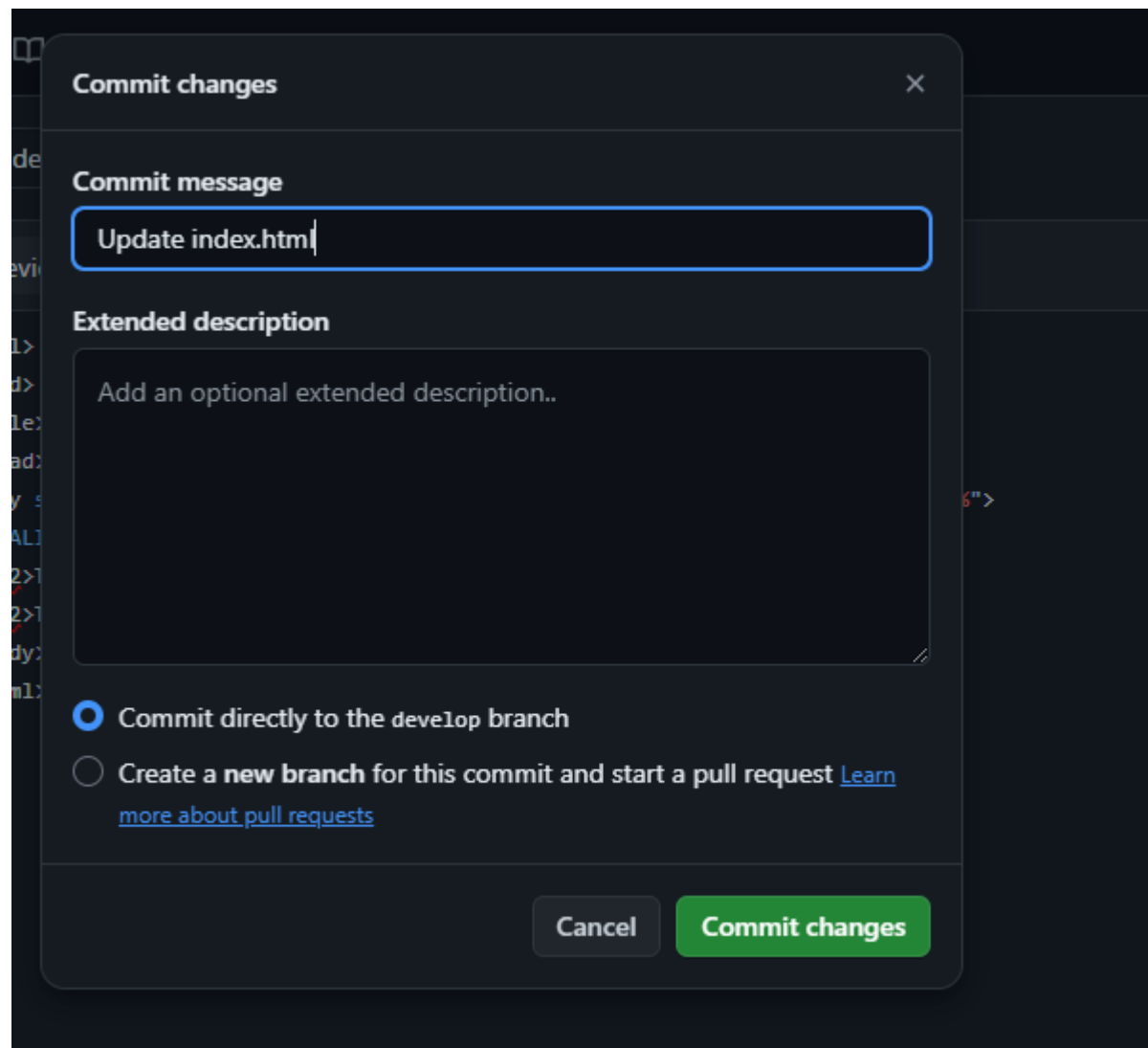
Command

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

```
#sudo docker rm -f Ruchitha
sudo docker build . -t image1
sudo docker run -itd -p 84:80 --name=Ruchitha image1
```

Advanced ▾





Hello world!

This my first line

This is my last line



GitHub

≡ Execute shell ?

Command

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

```
sudo docker rm -f Ruchitha
sudo docker build . -t image1
sudo docker run -itd -p 84:80 --name=Ruchitha image1
```

Advanced ▼

myfork / index.html in develop

Edit Preview Code 55% faster with GitHub Copilot

```
1 <html>
2 <head>
3 <title> Intellipaat </title>
4 </head>
5 <body style = "background-image:url('images/github3.jpg'); background-size: 100%">
6 <h2 ALIGN=CENTER>Hello world!</h2>
7 <h2>This my first line</h2>
8 <h2>This is my last line</h2>
9 <h2>Thankyou!</h2>
10 </body>
11 </html>
12
```

Commit changes

Commit message

Update index.html

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

GitHub Hook Log

• Last completed 1

Rename

Build History trend ▾

Filter...

✓ #5
| Jun 22, 2024, 2:58 PM

✓ #4
| Jun 22, 2024, 2:54 PM



← → ↻ ⚠ Not secure 54.255.89.166:84

Hello world!

This my first line

This is my last line

Thankyou!



GitHub