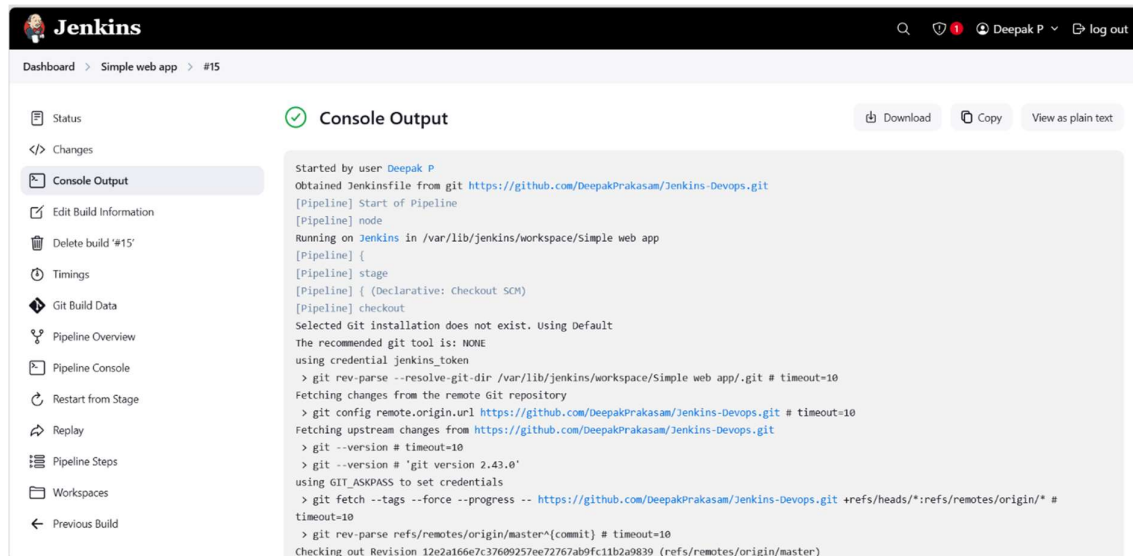


Day 3: Minikube

- Installed Minikube
- Practiced essential Minikube commands

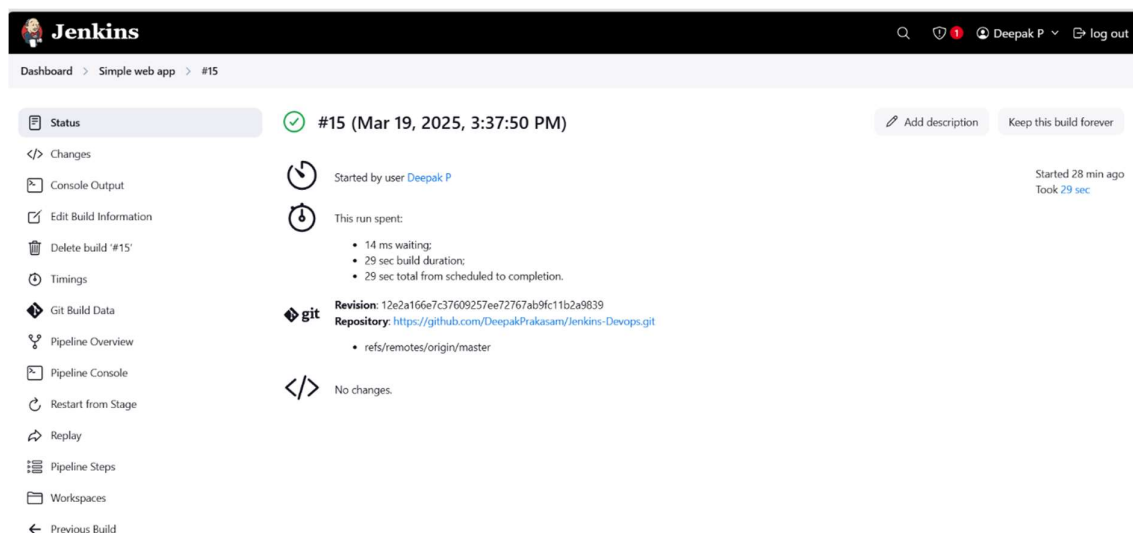
Console output:



The screenshot shows the Jenkins web interface for a build named '#15' of the 'Simple web app' project. The 'Console Output' tab is selected, displaying the following log:

```
Started by user Deepak P
Obtained Jenkinsfile from git https://github.com/DeepakPrakasam/Jenkins-Devops.git
[Pipeline] Start of Pipeline
[Pipeline] node
Running on Jenkins in /var/lib/jenkins/workspace/simple web app
[Pipeline] {
[Pipeline] stage
[Pipeline] { (Declarative: Checkout SCM)
[Pipeline] checkout
Selected Git installation does not exist. Using Default
The recommended git tool is: NONE
using credential jenkins_token
> git rev-parse --resolve-git-dir /var/lib/jenkins/workspace/Simple web app/.git # timeout=10
Fetching changes from the remote Git repository
> git config remote.origin.url https://github.com/DeepakPrakasam/Jenkins-Devops.git # timeout=10
Fetching upstream changes from https://github.com/DeepakPrakasam/Jenkins-Devops.git
> git --version # timeout=10
> git --version # 'git version 2.43.0'
using GIT_ASKPASS to set credentials
> git fetch --tags --force --progress -- https://github.com/DeepakPrakasam/Jenkins-Devops.git +refs/heads/*:refs/remotes/origin/* #
timeout=10
> git rev-parse refs/remotes/origin/master^{commit} # timeout=10
Checking out Revision 12e2a166e7c37609257ee72767ab9fc11b2a9839 (refs/remotes/origin/master)
```

Pipeline output:



The screenshot shows the Jenkins web interface for the same build '#15'. The 'Pipeline Overview' tab is selected, displaying the following information:

- Status:** #15 (Mar 19, 2025, 3:37:50 PM)
- Started by user:** Deepak P
- This run spent:**
 - 14 ms waiting
 - 29 sec build duration
 - 29 sec total from scheduled to completion.
- git:**
 - Revision:** 12e2a166e7c37609257ee72767ab9fc11b2a9839
 - Repository:** https://github.com/DeepakPrakasam/Jenkins-Devops.git
 - refs/remotes/origin/master
- Changes:** No changes.

Terminal output:

```
deepakp@Deepak:~/docker$ docker-compose ps
-----
Name                Command                                State      Ports
-----
docker_db_1         docker-entrypoint.sh mysqld           Exit 255    3306/tcp, 33060/tcp
docker_web_1        /docker-entrypoint.sh nginx ...      Exit 255    0.0.0.0:80->80/tcp, :::80->80/tcp
deepakp@Deepak:~/docker$ docker-compose up -d
Starting docker_web_1 ... done
Starting docker_db_1 ... done
deepakp@Deepak:~/docker$ docker-compose images
-----
Container    Repository    Tag      Image Id      Size
-----
docker_db_1   mysql         latest   fa262c3a6564  797 MB
docker_web_1  nginx         latest   53a18edff809  192 MB
deepakp@Deepak:~/docker$
```

Docker Commands:

Download Minikube

curl -LO

<https://github.com/kubernetes/minikube/releases/latest/download/minikube-linux-amd64>

Install Minikube

sudo install minikube-linux-amd64 /usr/local/bin/minikube && rm minikube-linux-amd64

Start Minikube

minikube start

Check Minikube status

minikube status

Get running pods

kubectl get pod

Get deployments

kubectl get deploy

Get replicas

kubectl get replica

Get detailed pod information

kubectl get pod -o wide

Docker Compose Commands:

Install Docker Compose

sudo apt install docker-compose -y

Download the latest version of Docker Compose

sudo curl -L

"https://github.com/docker/compose/releases/latest/download/docker-compose-\$(uname -s)-\$(uname -m)" -o /usr/local/bin/docker-compose

Make Docker Compose executable

sudo chmod +x /usr/local/bin/docker-compose

Check Docker Compose version

docker-compose --version

Example docker-compose.yml file:

version: '3'

services:

web:

image: nginx:latest

ports:

- "80:80"

db:

image: mysql:latest

environment:

- MYSQL_ROOT_PASSWORD=secret

Start services using Docker Compose

docker-compose up -d

Execute a shell inside the database container

docker exec -it david-db-1 /bin/bash

Access MySQL inside the container

mysql -u root -p

Kubernetes Commands:

Download kubectl

curl -LO https://dl.k8s.io/release/v1.32.0/bin/linux/amd64/kubectl

Install kubectl with correct permissions

sudo install -o root -g root -m 0755 kubectl /usr/local/bin/kubectl

Make kubectl executable

chmod +x kubectl

Create a local bin directory if it doesn't exist

mkdir -p ~/.local/bin

Move kubectl to the local bin directory

mv ./kubectl ~/.local/bin/kubectl

Verify kubectl installation

kubectl version --client

Jenkins Pipeline Script:

pipeline {

agent any

stages {

stage('SCM') {

steps {

git 'https://github.com/DeepakPrakasam/Maven.git'

}

}

```
stage('Build'){
    steps{
        bat 'mvn clean install'
    }
}
stage('Build Docker Image'){
    steps{
        script{
            bat 'docker build -t deepakp2003/simplewebapp .'
        }
    }
}
stage('Push Docker Image'){
    steps{
        script{
            withDockerRegistry(credentialsId: 'Dockercred', url:
'https://index.docker.io/v1/') {
                bat 'docker push deepakp2003/simplewebapp'
            }
        }
    }
}
}
```

