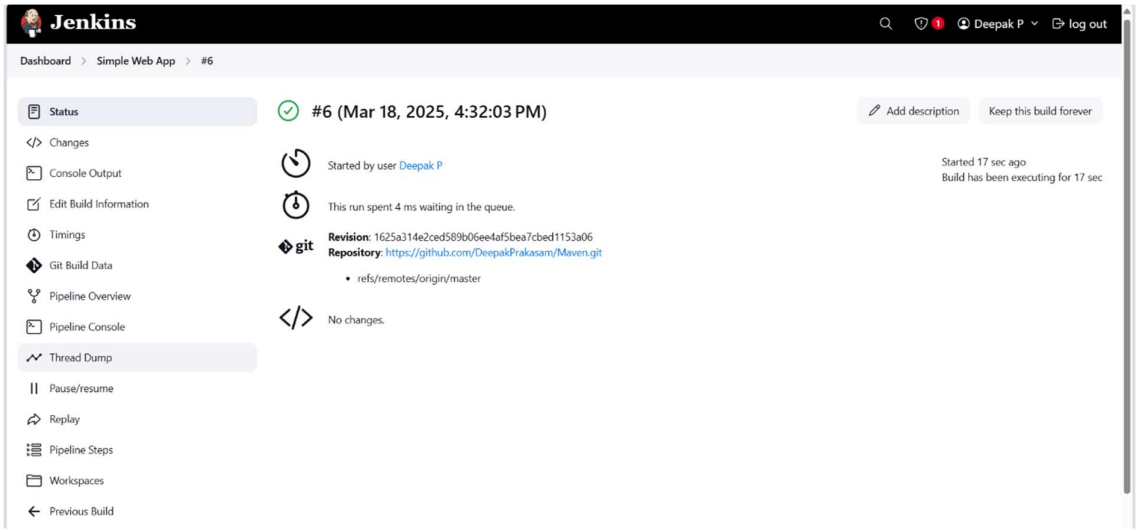
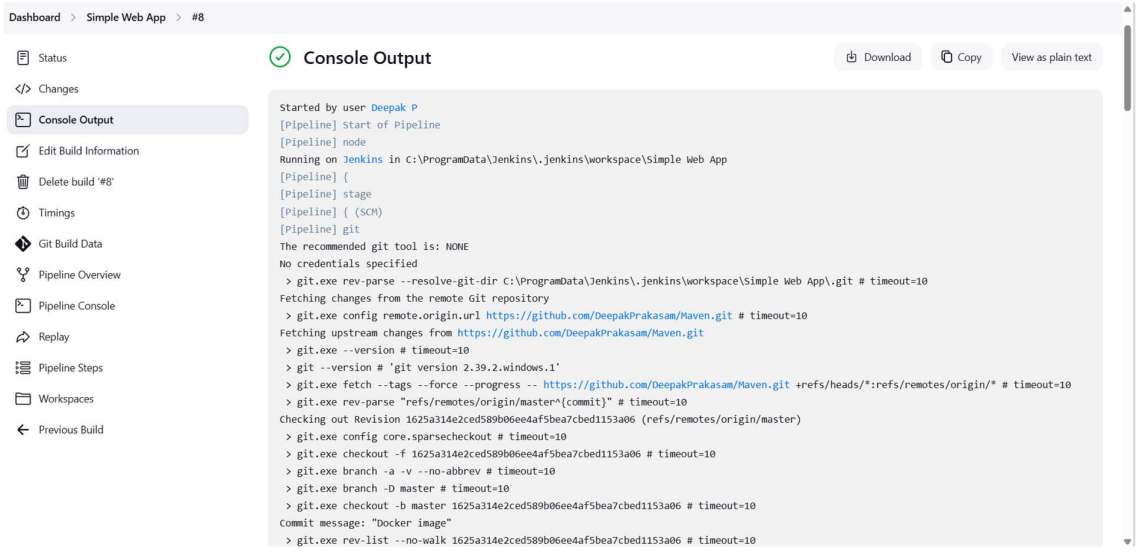
# *Day-02 Task: Jenkins & Docker Compose*

- *Installed Maven*
- *Installed Jenkins*
- *Set up Master-Slave configuration in Jenkins*
- *Created Free Style and Pipeline jobs in Jenkins*
- *Worked with Docker Compose*

## *Simple Web App Pipeline Script Output*




## *Jenkins console output*



***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
```

***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 to images'){
```

```
        steps{
            script{
                bat 'docker build -t deepakp2003/simplewebapp .'
            }
        }


    }
    stage('docker push hub'){
        steps{
            script{
                // This step should not normally be used in your script. Consult the inline help for details.
                withDockerRegistry(credentialsId: 'Dockercred', url: 'https://index.docker.io/v1/') {
                bat 'docker push deepakp2003/simplewebapp'
                }
            }
        }
    }
  }
}
```