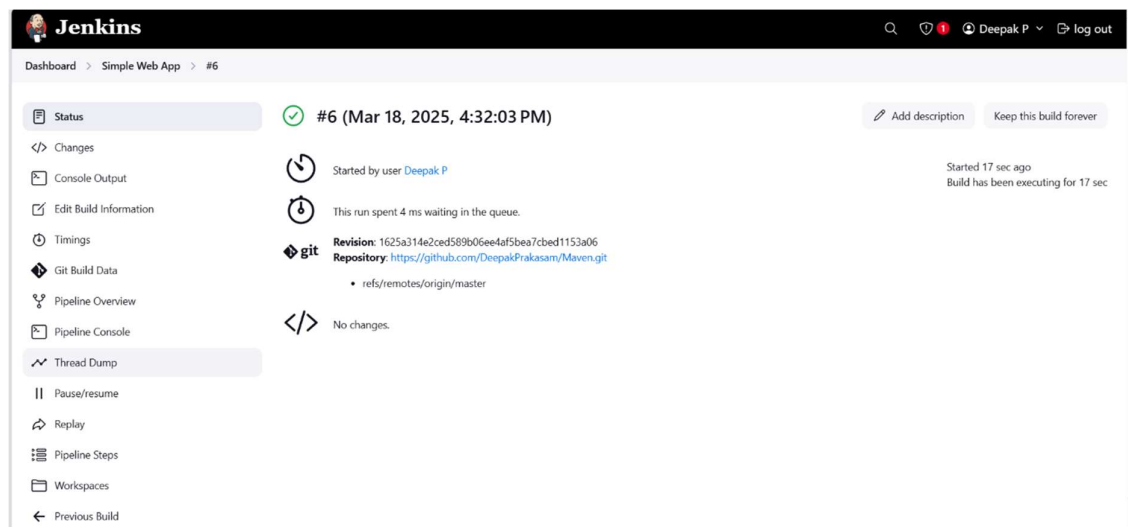


## Day-02 Task: Jenkins & Docker Compose

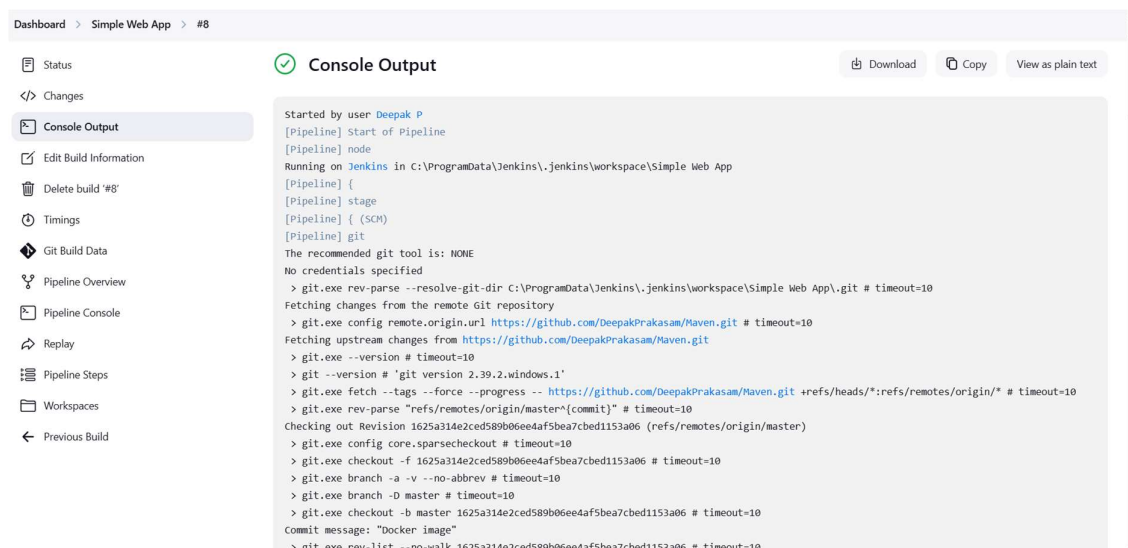
- Installed Maven
- Installed Jenkins
- Set up Master-Slave configuration in Jenkins
- Created Free Style and Pipeline jobs in Jenkins
- Worked with Docker Compose

## Simple Web App Pipeline Script Output



The screenshot shows the Jenkins web interface for a pipeline named 'Simple Web App' with build #6. The build is successful, indicated by a green checkmark and the status '#6 (Mar 18, 2025, 4:32:03 PM)'. The left sidebar contains navigation links: Status, Changes, Console Output, Edit Build Information, Timings, Git Build Data, Pipeline Overview, Pipeline Console, Thread Dump, Pause/resume, Replay, Pipeline Steps, Workspaces, and Previous Build. The main area displays build details: 'Started by user Deepak P', 'This run spent 4 ms waiting in the queue.', 'Revision: 1625a314e2ced589b06ee4af5bea7cbcd1153a06', 'Repository: https://github.com/DeepakPrakasam/Maven.git', and 'refs/remotes/origin/master'. It also shows 'No changes' for the code diff.

## Jenkins console output



The screenshot shows the Jenkins web interface for a pipeline named 'Simple Web App' with build #8. The build is successful, indicated by a green checkmark and the status 'Console Output'. The left sidebar contains navigation links: Status, Changes, Console Output, Edit Build Information, Delete build '#8', Timings, Git Build Data, Pipeline Overview, Pipeline Console, Replay, Pipeline Steps, Workspaces, and Previous Build. The main area displays the console output for the pipeline, which includes the following text:

```
Started by user Deepak P
[Pipeline] start of Pipeline
[Pipeline] node
Running on Jenkins in C:\ProgramData\Jenkins\jenkins\workspace\Simple Web App
[Pipeline] {
[Pipeline] stage
[Pipeline] { (SCM)
[Pipeline] git
The recommended git tool is: NONE
No credentials specified
> git.exe rev-parse --resolve-git-dir C:\ProgramData\Jenkins\jenkins\workspace\Simple Web App\.git # timeout=10
Fetching changes from the remote Git repository
> git.exe config remote.origin.url https://github.com/DeepakPrakasam/Maven.git # timeout=10
Fetching upstream changes from https://github.com/DeepakPrakasam/Maven.git
> git.exe --version # timeout=10
> git --version # 'git version 2.39.2.windows.1'
> git.exe fetch --tags --force --progress -- https://github.com/DeepakPrakasam/Maven.git +refs/heads/*:refs/remotes/origin/* # timeout=10
> git.exe rev-parse "refs/remotes/origin/master^{commit}" # timeout=10
Checking out Revision 1625a314e2ced589b06ee4af5bea7cbcd1153a06 (refs/remotes/origin/master)
> git.exe config core.sparsecheckout # timeout=10
> git.exe checkout -f 1625a314e2ced589b06ee4af5bea7cbcd1153a06 # timeout=10
> git.exe branch -a -v --no-abbrev # timeout=10
> git.exe branch -D master # timeout=10
> git.exe checkout -b master 1625a314e2ced589b06ee4af5bea7cbcd1153a06 # timeout=10
Commit message: "Docker image"
> git.exe rev-list --no-walk 1625a314e2ced589b06ee4af5bea7cbcd1153a06 # timeout=10
```

## ***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*

*kubectrl get pod*

### *# Get deployments*

*kubectrl get deploy*

### *# Get replicas*

*kubectrl get replica*

*# Get detailed pod information*

*kubectrl 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'
            }
        }
    }
}
}
}
}
}

```

