# DevOps Day-6

## Java application deployment in minikube

Kubectl pipeline code:

```
pipeline {
    agent any

    stages {
        stage('SCM') {
            steps {
                git branch: 'main', url: 'https://github.com/ragules/simple-web-app'
            }
        }
        stage('Build'){
            steps {
                bat 'mvn clean install'
            }
        }
        stage('build to images') {
            steps {
                script{
```

```
                bat "docker build -t ragul1177/webapplication ."
            }
        }
    }
    stage('docker push hub') {
        steps {
            script{
                withDockerRegistry(credentialsId: 'docker_crud', url:
'https://index.docker.io/v1/') {
  bat 'docker push ragul1177/webapplication'
}
            }
        }
    }
    // stage('test') {
    //     steps {
    //         withKubeConfig(caCertificate: '', clusterName: 'minikube',
contextName: 'minikube', credentialsId: 'minikube', namespace: '',
restrictKubeConfigAccess: false, serverUrl:
'https://192.168.39.226:8443')
    //         sh 'kubectl apply -f deploy.yml --validate=false'
    //     }}
  }
}
```

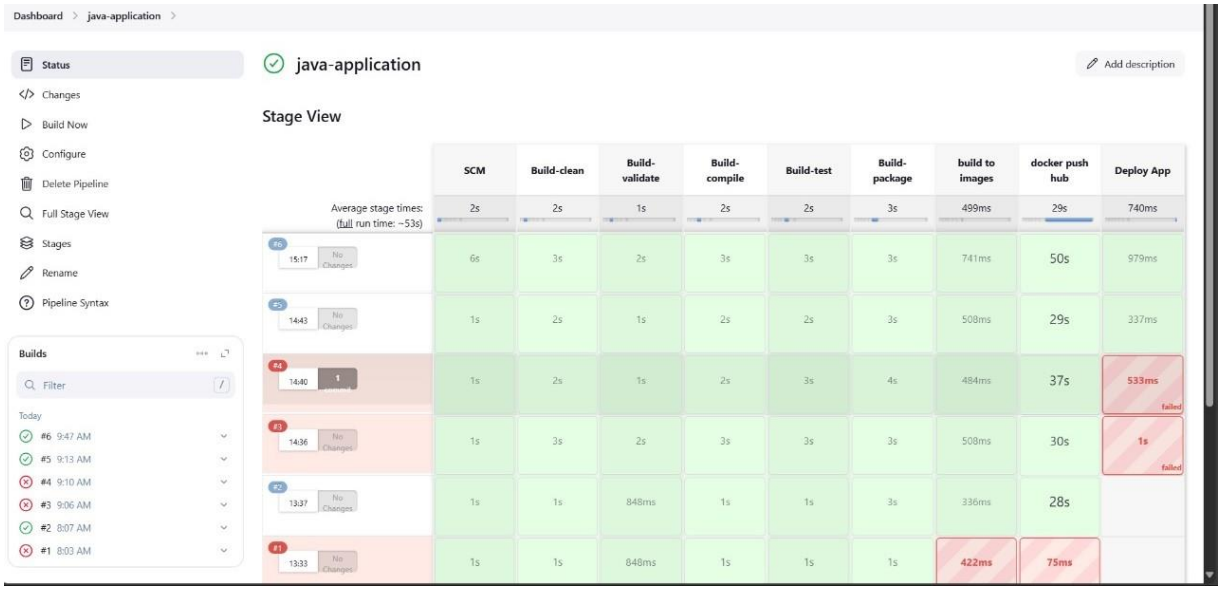
Deployment.yml:

```
apiVersion: apps/v1
kind: Deployment
metadata:
  name: my-deploy
  labels:
    name: my-deploy
spec:
  replicas: 1
  selector:
    matchLabels:
      apptype: web-backend
  strategy:
    type: RollingUpdate
  template:
    metadata:
      labels:
        apptype: web-backend
    spec:
      containers:
      - name: my-app
        image: praneshc/webapplication
        ports:
        - containerPort: 9000
```

---

```
apiVersion: v1
kind: Service
metadata:
  name: my-service
  labels:
    app: my-service
spec:
  type: NodePort
  ports:
    - port: 9000
      targetPort: 8080
      nodePort: 30002
  selector:
    apptype: web-backend
```

Output:




```
😄  minikube v1.35.0 on Ubuntu 24.04 (amd64)
✨  Using the docker driver based on existing profile
👍  Starting "minikube" primary control-plane node in "minikube" cluster
🚜  Pulling base image v0.0.46 ...
🔄  Restarting existing docker container for "minikube" ...
🐳  Preparing Kubernetes v1.32.0 on Docker 27.4.1 ...
🔎  Verifying Kubernetes components...
    ▪ Using image gcr.io/k8s-minikube/storage-provisioner:v5
🌟  Enabled addons: storage-provisioner, default-storageclass
🏄  Done! kubectl is now configured to use "minikube" cluster and "default" namespace by default
ragul@Admin: $ minikube service my-service
|-----------|------------|-------------|--------------------------|
| NAMESPACE |    NAME    | TARGET PORT |            URL           |
|-----------|------------|-------------|--------------------------|
| default   | my-service |        9000 | http://192.168.49.2:30002 |
|-----------|------------|-------------|--------------------------|
🏃  Starting tunnel for service my-service.
|-----------|------------|-------------|------------------------|
| NAMESPACE |    NAME    | TARGET PORT |          URL           |
|-----------|------------|-------------|------------------------|
| default   | my-service |             | http://127.0.0.1:42561 |
|-----------|------------|-------------|------------------------|
🎉  Opening service default/my-service in default browser...
👉  http://127.0.0.1:42561
❗  Because you are using a Docker driver on linux, the terminal needs to be open to run it.
^C✋  Stopping tunnel for service my-service.
ragul@Admin: $ curl  http://192.168.49.2:30002
<!doctype html><html lang="en"><head><title>HTTP Status 404 – Not Found</title><style type="text/css">body {font-family:Tahoma,Arial,sans-serif;} h1, h2, h3
, b {color:white;background-color:#525D76;} h1 {font-size:22px;} h2 {font-size:16px;} h3 {font-size:14px;} p {font-size:12px;} a {color:black;} .line {heigh
t:1px;background-color:#525D76;border:none;}</style></head><body><h1>HTTP Status 404 – Not Found</h1><hr class="line" /><p><b>Type</b> Status Report</p><p><
b>Description</b> The origin server did not find a current representation for the target resource or is not willing to disclose that one exists.</p><hr clas
s="line" /><h3>Apache Tomcat/9.0.102</h3></body></html>ragul@Admin: $ curl  http://192.168.49.2:30002/my-app
<!doctype html><html lang="en"><head><title>HTTP Status 404 – Not Found</title><style type="text/css">body {font-family:Tahoma,Arial,sans-serif;} h1, h2, h3
, b {color:white;background-color:#525D76;} h1 {font-size:22px;} h2 {font-size:16px;} h3 {font-size:14px;} p {font-size:12px;} a {color:black;} .line {heigh
t:1px;background-color:#525D76;border:none;}</style></head><body><h1>HTTP Status 404 – Not Found</h1><hr class="line" /><p><b>Type</b> Status Report</p><p><
b>Description</b> The origin server did not find a current representation for the target resource or is not willing to disclose that one exists.</p><hr clas
s="line" /><h3>Apache Tomcat/9.0.102</h3></body></html>ragul@Admin: $ curl  http://192.168.49.2:30002          kubectl get pod^C
ragul@Admin: $ ^C
ragul@Admin: $ curl  http://192.168.49.2:30002/maven-web-app/
<html>
```

```
ragul@Admin: $ curl  http://192.168.49.2:30002
<!doctype html><html lang="en"><head><title>HTTP Status 404 – Not Found</title><style type="text/css">body {font-family:Tahoma,Arial,sans-serif;} h1, h2, h3
, b {color:white;background-color:#525D76;} h1 {font-size:22px;} h2 {font-size:16px;} h3 {font-size:14px;} p {font-size:12px;} a {color:black;} .line {heigh
t:1px;background-color:#525D76;border:none;}</style></head><body><h1>HTTP Status 404 – Not Found</h1><hr class="line" /><p><b>Type</b> Status Report</p><p><
b>Description</b> The origin server did not find a current representation for the target resource or is not willing to disclose that one exists.</p><hr clas
s="line" /><h3>Apache Tomcat/9.0.102</h3></body></html>ragul@Admin: $ curl  http://192.168.49.2:30002/my-app
<!doctype html><html lang="en"><head><title>HTTP Status 404 – Not Found</title><style type="text/css">body {font-family:Tahoma,Arial,sans-serif;} h1, h2, h3
, b {color:white;background-color:#525D76;} h1 {font-size:22px;} h2 {font-size:16px;} h3 {font-size:14px;} p {font-size:12px;} a {color:black;} .line {heigh
t:1px;background-color:#525D76;border:none;}</style></head><body><h1>HTTP Status 404 – Not Found</h1><hr class="line" /><p><b>Type</b> Status Report</p><p><
b>Description</b> The origin server did not find a current representation for the target resource or is not willing to disclose that one exists.</p><hr clas
s="line" /><h3>Apache Tomcat/9.0.102</h3></body></html>ragul@Admin: $ curl  http://192.168.49.2:30002          kubectl get pod^C
ragul@Admin: $ ^C
ragul@Admin: $ curl  http://192.168.49.2:30002/maven-web-app/
<html>
<body>
<h2>Hello World!</h2>
</body>
</html>
ragul@Admin: $ kubectl port-forward svc/my-service 9010:9000
Forwarding from 127.0.0.1:9010 -> 8080
Forwarding from [::1]:9010 -> 8080
Handling connection for 9010
Handling connection for 9010
```


**Hello World!**