**PROJECT SUBMISSION**

**GitHub Url:**

[**https://github.com/GABRIELPRITHVIPAWAR/Makerble.git**](https://github.com/GABRIELPRITHVIPAWAR/Makerble.git)

**Deployed site url:**

[**http://** **15.206.212.126:3000/**](http://13.201.100.57:3000/)

**Sample application Git link:**

**https://github.com/GABRIELPRITHVIPAWAR/multicontainer-app-K8S.git**

**Dockerfile for Node.js application:**

FROM node:latest

WORKDIR /app

COPY package\*.json ./

RUN npm install

COPY . .

EXPOSE 3000

CMD ["npm", "start"]

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**Jenkins File:**

pipeline {

    agent any

    environment {

        registry = "gabrielprithivipawar/app"

        DOCKER\_REGISTRY\_CREDS = 'dock'

    }

    stages {

        stage('Cloning Git') {

            steps {

                checkout([$class: 'GitSCM', branches: [[name: 'master']], doGenerateSubmoduleConfigurations: false, extensions: [], submoduleCfg: [], userRemoteConfigs: [[credentialsId: 'git', url: 'https://github.com/GABRIELPRITHVIPAWAR/multicontainer-app-K8S.git']]])

            }

        }

        stage('Building image') {

            steps {

                script {

                    dockerImage = docker.build registry

                }

            }

        }

        stage('Deploy to Docker Hub') {

            steps {

                withCredentials([usernamePassword(credentialsId: "${DOCKER\_REGISTRY\_CREDS}", passwordVariable: 'DOCKER\_PASSWORD', usernameVariable: 'DOCKER\_USERNAME')]) {

                    sh "echo \$DOCKER\_PASSWORD | docker login -u \$DOCKER\_USERNAME --password-stdin docker.io"

                    sh "docker push ${registry}"

                }

            }

        }

        stage('K8S Deploy') {

            steps {

                sh 'kubectl apply -f k8s'

            }

        }

    }

}

**Pushed docker image:**

**Docker hub:**

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**Kubernetes Setup:**

**Installation of Kubernetes:**

sudo apt-get update && sudo apt-get install -y apt-transport-https  
curl -s https://packages.cloud.google.com/apt/doc/apt-key.gpg | sudo apt-key add -  
echo "deb https://apt.kubernetes.io/ kubernetes-xenial main" | sudo tee /etc/apt/sources.list.d/kubernetes.list  
sudo apt-get update  
sudo apt-get install -y kubectl

curl -LO https://storage.googleapis.com/minikube/releases/latest/minikube-linux-amd64  
sudo install minikube-linux-amd64 /usr/local/bin/minikube

minikube version

minikube start

**PostgreSQL:**

**Run command :**

1. Kubectl create secret generic pgpassword —from-literal PGPASSWORD=12345test

2.kubectl apply -f <https://raw.githubusercontent.com/kubernetes/ingress-nginx/controller-v0.46.0/deploy/static/provider/cloud/deploy.yaml>

3. kubectl apply -f k8s

**Deployed site:**

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