**Build Jenkins Pipeline using docker and Kubernetes**

1. Check the docker login

root@master:~# *docker login*

Login with your Docker ID to push and pull images from Docker Hub. If you don't have a Docker ID, head over to https://hub.docker.com to create one.

Username: amitow

Password:

1. Create a dockerfile : vi dockerfile

FROM python:3.9

WORKDIR /app

COPY requirements.txt requirements.txt

RUN pip install -r requirements.txt

COPY . .

CMD ["python", "app.py"]

1. Build the Docker image:

Use the Docker command-line tool to build the Docker image from the Dockerfile. Run the following command in the directory where the Dockerfile is located

*docker build -t my-image .*

1. Push the Docker image to a container registry:

Use a container registry like Docker Hub manage your Docker images. Run the following commands to tag and push the Docker image to the registry:

docker tag my-image my-registry/my-project/my-image:latest

docker push my-registry/my-project/my-image:latest

example:

docker tag my-image amitow/test/my-image:latest

docker push amitow/test/my-image:latest

1. Create a pipeline

pipeline {

agent any

stages {

stage('Checkout') {

steps {

checkout scm

}

}

stage('Build Docker Image') {

steps {

sh 'docker build -t my-test .'

}

}

stage('Push Docker Image') {

steps {

sh 'docker login -u amitow -p Mminani029'

sh 'docker tag my-test amitow/test/my-test:latest'

sh 'docker push amitow/test:my-test'

}

}

stage('Deploy to Kubernetes') {

steps {

sh 'kubectl apply -f deployment.yml'

sh 'kubectl apply -f service.yml'

}

}

}

}