CS3219 OTOT Task A2 Submission

Name: Pang Biao Yi
Student no: A0196626R

Links

GitHub link: https://github.com/schoolex/cs3219-otot-A/tree/main/OTOT-A2-A3

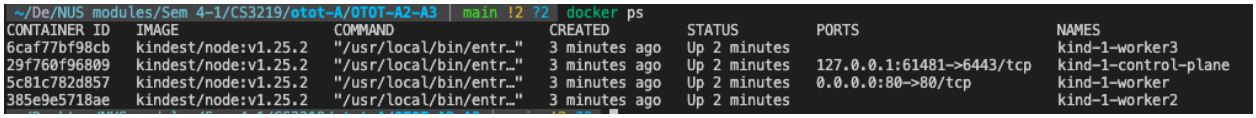
Task A2.1

To create the cluster

```
kind create cluster --name kind-1 --config k8s/kind/cluster-config.yaml
```

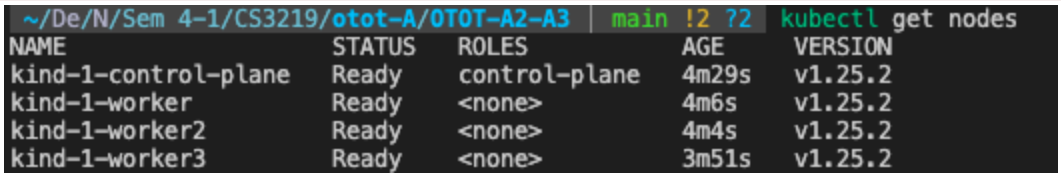
Verify that the cluster is running in docker

```
docker ps
```



Verify that the cluster is running via kubectl

```
kubectl get nodes
```



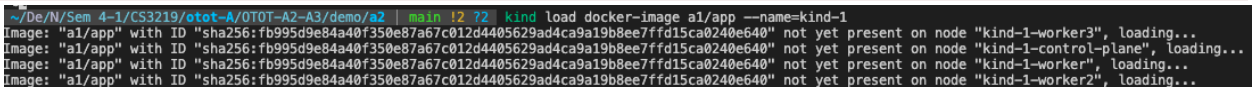
To get more info about the kube cluster

```
kubectl cluster-info
```

Task A2.2

First, load the docker image from task a1

```
kind load docker-image a1/app --name=kind-1
```



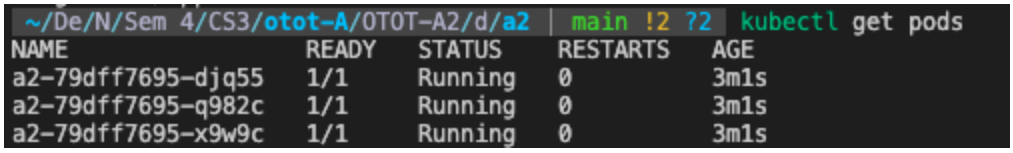
Cd into demo/a2

Create the deployment

```
kubectl apply -f deployment.yml
```

Verify that the pods are running

```
kubectl get pods
```

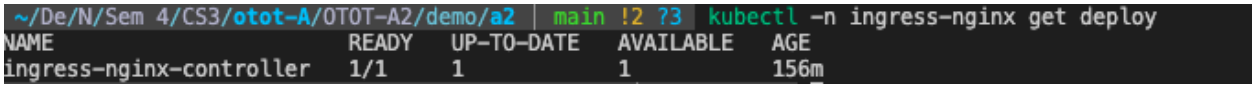


Create ingress-nginx controller

```
kubectl apply -f
https://raw.githubusercontent.com/kubernetes/ingress-nginx/main/deploy/static/provider/kind/deploy.yaml
```

Verify that ingress-nginx controller is created successfully

```
kubectl -n ingress-nginx get deploy
```



Create the service

```
kubectl apply -f service.yml
```

Verify that the service works

```
kubectl get svc
```

```
~/De/N/Sem 4/CS3/otot-A/OTOT-A2-A3/demo/a2 | main !2 ?2 kubectl get svc
NAME         TYPE        CLUSTER-IP     EXTERNAL-IP   PORT(S)    AGE
a2           ClusterIP   10.96.44.46    <none>        3000/TCP   10s
kubernetes   ClusterIP   10.96.0.1      <none>        443/TCP    16m
```

Create the ingress object

```
kubectl apply -f ingress.yml
```

Verify that the ingress works

```
kubectl get ingress
```

```
~/De/N/Sem 4/CS3/otot-A/OTOT-A2-A3/demo/a2 | main !2 ?2 kubectl get ingress
NAME   CLASS    HOSTS   ADDRESS   PORTS   AGE
a2     <none>   *                 80      19s
```

Access the A1 app at http://localhost/app/