

Lab – 3
Name – Reetika
student Id – 101496084

#command demo screenshots

```
reetika@DESKTOP-17FQPRN:~$ kubectl apply -f replicaset.yaml
replicaset.apps/nginx created
reetika@DESKTOP-17FQPRN:~$ kubectl get pods
NAME          READY   STATUS             RESTARTS   AGE
nginx-29zt5    0/1     ContainerCreating   0           22s
nginx-m756p    0/1     ContainerCreating   0           22s
nginx-z4chs    0/1     ContainerCreating   0           22s
reetika@DESKTOP-17FQPRN:~$ kubectl delete pod nginx-29zt5
pod "nginx-29zt5" deleted
reetika@DESKTOP-17FQPRN:~$ kubectl get pods
NAME          READY   STATUS    RESTARTS   AGE
nginx-2p426    1/1     Running   0           12s
nginx-m756p    1/1     Running   0          117s
nginx-z4chs    1/1     Running   0          117s
reetika@DESKTOP-17FQPRN:~$ kubectl get replicaset
NAME          DESIRED   CURRENT   READY   AGE
nginx          3          3          3       2m4s
```

```
reetika@DESKTOP-17FQPRN:~$ kubectl apply -f deployment.yaml
deployment.apps/nginx-deployment created
reetika@DESKTOP-17FQPRN:~$ kubectl get deployments
NAME          READY   UP-TO-DATE   AVAILABLE   AGE
nginx-deployment 3/3      3             3           4m59s
reetika@DESKTOP-17FQPRN:~$ kubectl rollout status deployment nginx
Error from server (NotFound): deployments.apps "nginx" not found
reetika@DESKTOP-17FQPRN:~$ kubectl rollout status deployment nginx-deployment
deployment "nginx-deployment" successfully rolled out
```

```
reetika@DESKTOP-17FQPRN:~$ kubectl apply -f statefulsets-nginx.yaml
error: the path "statefulsets-nginx.yaml" does not exist
reetika@DESKTOP-17FQPRN:~$ kubectl apply -f statefulsets.yaml
service/nginx created
deployment.apps/web created
statefulset.apps/web created
reetika@DESKTOP-17FQPRN:~$ kubectl get statefulsets
NAME          READY   AGE
web            0/3     7s
reetika@DESKTOP-17FQPRN:~$ kubectl apply -f daemonSet.yaml
daemonset.apps/nginx created
reetika@DESKTOP-17FQPRN:~$ kubectl get daemonSet
NAME          DESIRED   CURRENT   READY   UP-TO-DATE   AVAILABLE   NODE SELECTOR   AGE
nginx          1          1          1          1             1           <none>          16s
reetika@DESKTOP-17FQPRN:~$
```

```
reetika@DESKTOP-17FQPRN:~$ kubectl apply -f deployment-resource-limit.yaml
deployment.apps/nginx-deployment configured
reetika@DESKTOP-17FQPRN:~$ kubectl get deployments
NAME          READY   UP-TO-DATE   AVAILABLE   AGE
nginx-deployment 3/3      3             3           20h
web            3/3      3             3           20h
reetika@DESKTOP-17FQPRN:~$ kubectl apply -f deployment-heathcheck.yaml
deployment.apps/nginx-deployment configured
reetika@DESKTOP-17FQPRN:~$ kubectl get deployments
NAME          READY   UP-TO-DATE   AVAILABLE   AGE
nginx-deployment 3/3      1             3           20h
web            3/3      3             3           20h
reetika@DESKTOP-17FQPRN:~$
```

Kubernetes app demo

```
reetika@DESKTOP-17FQPRN:~$ cd /mnt/d/kubernetes-demo/kubernetes
reetika@DESKTOP-17FQPRN:/mnt/d/kubernetes-demo/kubernetes$ kubectl apply -f secrets/mongodb-secret.yml
secret/mongodb-secret created
reetika@DESKTOP-17FQPRN:/mnt/d/kubernetes-demo/kubernetes$ kubectl apply -f stateful-sets/mongodb-stateful-set.yml
statefulset.apps/mongodb-stateful-set created
reetika@DESKTOP-17FQPRN:/mnt/d/kubernetes-demo/kubernetes$ kubectl apply -f services/mongodb-service.yml
service/mongodb-service created
reetika@DESKTOP-17FQPRN:/mnt/d/kubernetes-demo/kubernetes$ kubectl apply -f deployments/note-server-depl.yml
deployment.apps/note-server-deployment created
reetika@DESKTOP-17FQPRN:/mnt/d/kubernetes-demo/kubernetes$ kubectl apply -f services/note-server-service.yml
service/note-server-service created
reetika@DESKTOP-17FQPRN:/mnt/d/kubernetes-demo/kubernetes$ kubectl apply -f deployments/note-depl.yml
deployment.apps/note-deployment created
reetika@DESKTOP-17FQPRN:/mnt/d/kubernetes-demo/kubernetes$ kubectl apply -f services/note-service.yml
service/note-service created

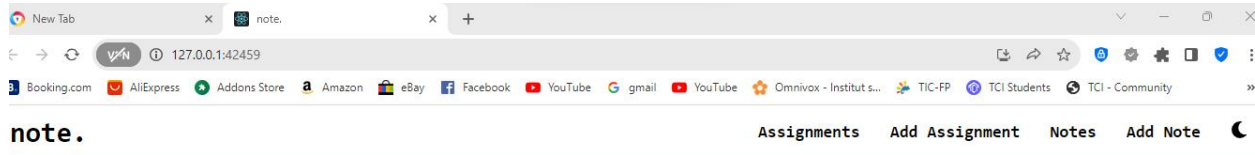
reetika@DESKTOP-17FQPRN:/mnt/d/kubernetes-demo/kubernetes$ kubectl apply -f services/note-service.yml
service/note-service unchanged
reetika@DESKTOP-17FQPRN:/mnt/d/kubernetes-demo/kubernetes$ minikube service note-service
```

NAMESPACE	NAME	TARGET PORT	URL
default	note-service	3000	http://192.168.49.2:31749

🌟 Starting tunnel for service note-service.

NAMESPACE	NAME	TARGET PORT	URL
default	note-service		http://127.0.0.1:42459

🖱️ Opening service default/note-service in default browser...
👉 http://127.0.0.1:42459
! Because you are using a Docker driver on linux, the terminal needs to be open to run it.



Important Assignments

```
reetika@DESKTOP-17FQPRN: ~$ cd /mnt/d/kubernetes-demo/kubernetes
reetika@DESKTOP-17FQPRN: /mnt/d/kubernetes-demo/kubernetes$ kubectl apply -f deployments/mongo-express-depl.yml
deployment.apps/mongo-express-deployment created
reetika@DESKTOP-17FQPRN: /mnt/d/kubernetes-demo/kubernetes$ kubectl apply -f services/mongo-express-service.yml
service/mongo-express-service created

reetika@DESKTOP-17FQPRN: /mnt/d/kubernetes-demo/kubernetes$ kubectl apply -f services/mongo-express-service.yml
service/mongo-express-service unchanged
reetika@DESKTOP-17FQPRN: /mnt/d/kubernetes-demo/kubernetes$ minikube service mongo-express-service
```

NAMESPACE	NAME	TARGET PORT	URL
default	mongo-express-service	8081	http://192.168.49.2:30095

🔗 Starting tunnel for service mongo-express-service.

NAMESPACE	NAME	TARGET PORT	URL
default	mongo-express-service		http://127.0.0.1:39231

🌐 Opening service default/mongo-express-service in default browser...
👉 http://127.0.0.1:39231
! Because you are using a Docker driver on linux, the terminal needs to be open to run it.

Home - Mongo Express

127.0.0.1:39231







Google Chrome isn't your default browser

Mongo Express Database

Mongo Express

Databases

Database Name + Create Database

 View	admin	 Del
 View	config	 Del
 View	local	 Del

Server Status

Hostname	mongodb-stateful-set-1	MongoDB Version	7.0.5
Uptime	221 seconds	Node Version	18.19.0
Server Time	Mon, 22 Jan 2024 00:17:45 GMT	V8 Version	10.2.154.26-node.28

```
reetika@DESKTOP-17FQPRN: ~ X reetika@DESKTOP-17FQPRN: X reetika@DESKTOP-17FQPRN: X
reetika@DESKTOP-17FQPRN:~$ kubectl get pods
NAME                                READY    STATUS    RESTARTS    AGE
mongo-express-deployment-b88f6d45f-hnvth  1/1      Running   0            6m33s
mongodb-stateful-set-0                  1/1      Running   0            10m
mongodb-stateful-set-1                  1/1      Running   0            9m43s
nginx-deployment-584fbb974d-4ktcp        1/1      Running   2 (11m ago)  2d
nginx-deployment-584fbb974d-dfr8p        1/1      Running   2 (11m ago)  2d
nginx-deployment-584fbb974d-lrlpf        1/1      Running   2 (11m ago)  2d
nginx-m5pzz                             1/1      Running   2 (11m ago)  2d21h
note-deployment-74cc946cd8-2t56b         1/1      Running   0            10m
note-deployment-74cc946cd8-fzrh8         1/1      Running   0            10m
note-server-deployment-6fb5fcb67f-txvrh  1/1      Running   0            10m
note-server-deployment-6fb5fcb67f-wnnb4  1/1      Running   0            10m
web-0                                     0/1      Pending   0            2d21h
web-db44c7d4f-4x6nf                     1/1      Running   2 (11m ago)  2d21h
web-db44c7d4f-csflf                     1/1      Running   2 (11m ago)  2d21h
web-db44c7d4f-hpqpw                     1/1      Running   2 (11m ago)  2d21h
reetika@DESKTOP-17FQPRN:~$ kubectl delete pod note-deployment-74cc946cd8-fzrh8
pod "note-deployment-74cc946cd8-fzrh8" deleted
reetika@DESKTOP-17FQPRN:~$ kubectl get pods
NAME                                READY    STATUS    RESTARTS    AGE
mongo-express-deployment-b88f6d45f-hnvth  1/1      Running   0            7m8s
mongodb-stateful-set-0                  1/1      Running   0            11m
mongodb-stateful-set-1                  1/1      Running   0            10m
nginx-deployment-584fbb974d-4ktcp        1/1      Running   2 (11m ago)  2d
nginx-deployment-584fbb974d-dfr8p        1/1      Running   2 (11m ago)  2d
nginx-deployment-584fbb974d-lrlpf        1/1      Running   2 (11m ago)  2d
nginx-m5pzz                             1/1      Running   2 (11m ago)  2d21h
note-deployment-74cc946cd8-25gfq         1/1      Running   0            4s
note-deployment-74cc946cd8-2t56b         1/1      Running   0            10m
note-server-deployment-6fb5fcb67f-txvrh  1/1      Running   0            10m
note-server-deployment-6fb5fcb67f-wnnb4  1/1      Running   0            10m
web-0                                     0/1      Pending   0            2d21h
web-db44c7d4f-4x6nf                     1/1      Running   2 (11m ago)  2d21h
web-db44c7d4f-csflf                     1/1      Running   2 (11m ago)  2d21h
web-db44c7d4f-hpqpw                     1/1      Running   2 (11m ago)  2d21h
reetika@DESKTOP-17FQPRN:~$
```