# Lab:03 Imperative Commands in Kubernetes

# Task:1 create a namespace, a deployment and a service

# Execute Below commands in a Sequence

# kubectl create ns tester kubectl run webserver --image=nginx -n tester kubectl expose deployments webserver --port 8080 --type LoadBalancer -n tester

# Explanation:

* run: Create a new Deployment object to run Containers in one or more Pods.
* expose: Create a new Service object to load balance traffic across Pods.

# Task: 2 set labels on a deployment, scale pods in deployment, set environment variable

# Execute below commands

# kubectl label deployment webapp app=frontend kubectl scale --replicas 3 deployment webapp kubectl set env deployment/webapp WHOAMI="HAL 9000"

# Explanation:

* scale: Horizontally scale a controller to add or remove Pods by updating the replica count of the controller.
* annotate: Add or remove an annotation from an object.
* label: Add or remove a label from an object.
* set <field>: Set an aspect of an object.

# Task:3 Edit any object in-place using kubectl edit.

# Execute below commands to edit manifest in editor

# kubectl edit deployment/nginx-deployment kubectl edit svc/nginx-service *# Edit the service*

**Use below command to patch** nginx-deployment object to update the replicas field from 4.

kubectl patch deployment nginx-deployment -p'{"spec":{"replicas":4}}'

# Explanation:

# Using patch, objects field can be updated on the fly without having to open up in editor. patch also allows for more complex updates with various merging and patching strategies.

# Task:4 View Objects

Use following command to view objects

# kubectl get deployments # or deploy for shortform kubectl get replicasets # gets replica set kubectl get pods # gets pods

# kubectl get deployment webapp -o yaml

# kubectl describe deployment webapp

# kubectl logs deployment/webapp --since 5m > /tmp/logs.txt

# Explanation:

* get: Prints basic information about matching objects. Use get -h to see a list of options.
* describe: Prints aggregated detailed information about matching objects.
* logs: Prints the stdout and stderr for a container running in a Pod.

# Task:5 Delete Objects

kubectl delete deployment/nginx

Explanation:

* delete command can be used to delete an object from a cluster