

Assignment 1

1. Install minikube on your local machine and run the few commands of kubectl.
2. Try to give alias to kubectl as "k".
3. Try out "kubectl get pods" and "kubectl get nodes" and check what are the information that console is giving back.
4. Optional - Try to create EKS configuration.(Note that this will cause you cost. Also remember to delete all services which you created for EKS)\

Steps to install minikube and run a few commands:

1. To install minikube use the following command:

winget install minikube

```
jainil@LAPTOP-3C70KJHN ~ % main
> winget install minikube
Found Kubernetes - Minikube - A Local Kubernetes Development Environment [Kubernetes.minikube] Version 1.32.0
This application is licensed to you by its owner.
Microsoft is not responsible for, nor does it grant any licenses to, third-party packages.
Successfully verified installer hash
Starting package install...
Successfully installed
jainil@LAPTOP-3C70KJHN ~ % main
```

2. Commands:

- a. minikube start:

```
jainil@LAPTOP-3C70KJHN ~ % main
> minikube start
minikube v1.32.0 on Microsoft Windows 11 Home Single Language 10.0.22621.3155 Build 22621.3155
Using the docker driver based on existing profile
Starting control plane node minikube in cluster minikube
Pulling base image ...
Restarting existing docker container for "minikube" ...
Preparing Kubernetes v1.28.3 on Docker 24.0.7 ...
Configuring bridge CNI (Container Networking Interface) ...
Verifying Kubernetes components...
  * Using image gcr.io/k8s-minikube/storage-provisioner:v5
  * Enabled addons: storage-provisioner, default-storageclass
Done! kubectl is now configured to use "minikube" cluster and "default" namespace by default
jainil@LAPTOP-3C70KJHN ~ % main
```

- b. kubectl get nodes:

```
jainil@LAPTOP-3C70KJHN ~ % main
> kubectl get nodes
NAME          STATUS    ROLES          AGE      VERSION
minikube      Ready     control-plane   4m55s    v1.28.3
jainil@LAPTOP-3C70KJHN ~ % main
```

- c. kubectl get pods:

```
jainil@LAPTOP-3C70KJHN ~ |main
> kubectl get pods
No resources found in default namespace.
jainil@LAPTOP-3C70KJHN ~ |main
>
```

d. kubectl get services:

```
jainil@LAPTOP-3C70KJHN ~ |main
> kubectl get services
NAME          TYPE          CLUSTER-IP    EXTERNAL-IP    PORT(S)    AGE
kubernetes    ClusterIP     10.96.0.1     <none>         443/TCP    5m36s
jainil@LAPTOP-3C70KJHN ~ |main
>
```

Steps to give alias to kubectl as "k".

1. Run command: `function k { kubectl $args }` (Note: this will only work for one session)

```
jainil@LAPTOP-3C70KJHN ~ |main
> function k { kubectl $args }
jainil@LAPTOP-3C70KJHN ~ |main
>
```

2. To make this function available every time you start PowerShell:

Open powershell profile in notepad:

`notepad $PROFILE`

and then add:

`function k { kubectl $args }`

```
File Edit View

oh-my-posh init pwsh --config "$env:POSH_THEMES_PATH\paradox.omp.json" | Invoke-Expression
function k { kubectl $args }
|
```

3. Then run kubectl commands by using it alias k:

```
jainil@LAPTOP-3C70KJHN ~ }main
> k get nodes
NAME          STATUS    ROLES          AGE      VERSION
minikube      Ready    control-plane  8m17s    v1.28.3
jainil@LAPTOP-3C70KJHN ~ }main
> |
```

Trying out "kubectl get pods" and "kubectl get nodes" and check what are the information that console is giving back.:

1. kubectl get pods

```
jainil@LAPTOP-3C70KJHN ~ }main
> kubectl get pods
No resources found in default namespace.
jainil@LAPTOP-3C70KJHN ~ }main
> |
```

2. kubectl get nodes

```
jainil@LAPTOP-3C70KJHN ~ }main
> k get nodes
NAME          STATUS    ROLES          AGE      VERSION
minikube      Ready    control-plane  9m49s    v1.28.3
jainil@LAPTOP-3C70KJHN ~ }main
> |
```