Summary

- The namespace is a way of organizing clusters in Kubernetes
- Kubernetes has given us by default namespace called 'namespace'
  - How to see namespace in the cluster

```
C:\Users\Vimal Daga>kubectl get ns
NAME              STATUS   AGE
default           Active   49d
kube-node-lease   Active   49d
kube-public       Active   49d
kube-system       Active   49d
```

  - Creating a new namespace

```
C:\Users\Vimal Daga>kubectl create ns  teama
namespace/teama created

C:\Users\Vimal Daga>kubectl get ns
NAME              STATUS   AGE
default           Active   49d
kube-node-lease   Active   49d
kube-public       Active   49d
kube-system       Active   49d
teama             Active   6s
```

  - Manifest file for launching pod in a particular namespace

```
apiVersion: v1
kind: Pod
metadata:
  name: "mypod"
  namespace: teama
  labels:
    dc: IN

spec:
  containers:
  - name: "myc2"
    image: "httpd"
```

  - Launching pod in a particular namespace

```
C:\Users\Vimal Daga\Documents\Container2021-ws>kubectl get pods -n teama
NAME    READY   STATUS    RESTARTS   AGE
mypod   1/1     Running   0          25s
```

- There are two ways of authentication
    - Password-based:- Manually enter username & password
    - Key-based authentication:- In this program/tool/app for authentication
- Different names of keys are private key, access, tokens, certificate, cookies
- Whenever we run the kubectl command internally authentication happens again & again
- The context contains the username & IP address of the cluster
- Kubectl view config command tells us which cluster is connected, what username we are using for authentication & what key we are using

```
C:\Users\Vimal Daga\Documents\Container2021-ws>kubectl  config  view
```

```
      name: cluster_info
    server: https://192.168.59.104:8443
  name: minikube
- cluster:
    certificate-authority-data: DATA+OMITTED
    server: https://myaksclust-kubernetesgrp-536a92-166fd8a6.hcp.eastus.azmk8s.io:443
  name: myAKSCluster
contexts:
- context:
    cluster: api-ap45-prod-nextcle-com:6443
    user: linuxworld-jaipur-in/api-ap45-prod-nextcle-com:6443
  name: /api-ap45-prod-nextcle-com:6443/linuxworld-jaipur-in
- context:
    cluster: arn:aws:eks:ap-south-1:417149810339:cluster/lwcluster
    user: arn:aws:eks:ap-south-1:417149810339:cluster/lwcluster
  name: arn:aws:eks:ap-south-1:417149810339:cluster/lwcluster
- context:
    cluster: arn:aws:eks:ap-southeast-1:417149810339:cluster/basic-cluster-2
```