Kubernetes on Docker Desktop

Set up Docker Desktop

* Download Docker
* Download kubectl

Add kubectl to file PATH

Go to settings -> Kubernetes -> enable Kubernetes -> restart docker desktop

A screenshot of a computer

Description automatically generated  
Kubernetes running

Enable Kubernetes Dashboard UI: kubectl apply -f <https://raw.githubusercontent.com/kubernetes/dashboard/v2.7.0/aio/deploy/recommended.yaml>

Accessing the Dashboard UI:

1. Create a sample user:

* Make a “My Dashboard” folder
* Cd ~/My Dashboard
* cd. > dashboard-adminuser.yaml
* Edit the dashboard-adminuser.yaml file:

“  
apiVersion: v1

kind: ServiceAccount

metadata:

name: admin-user

namespace: kubernetes-dashboard  
“

* kubectl apply -f dashboard-adminuser.yaml  
  
* Create a token for the User: kubectl -n kubernetes-dashboard create token admin-user  
  A black screen with white text

  Description automatically generated
* Copy the token: eyJhbGciOiJSUzI1NiIsImtpZCI6ImJpZXFRekpJOFZhMHlIRmlVZFhvTzBxODZpYVRENEswVS00dWYzVzFnSTQifQ.eyJhdWQiOlsiaHR0cHM6Ly9rdWJlcm5ldGVzLmRlZmF1bHQuc3ZjLmNsdXN0ZXIubG9jYWwiXSwiZXhwIjoxNzEwOTMzNDM4LCJpYXQiOjE3MTA5Mjk4MzgsImlzcyI6Imh0dHBzOi8va3ViZXJuZXRlcy5kZWZhdWx0LnN2Yy5jbHVzdGVyLmxvY2FsIiwia3ViZXJuZXRlcy5pbyI6eyJuYW1lc3BhY2UiOiJrdWJlcm5ldGVzLWRhc2hib2FyZCIsInNlcnZpY2VhY2NvdW50Ijp7Im5hbWUiOiJhZG1pbi11c2VyIiwidWlkIjoiOWI3MjJmOGQtNTdkYS00MWJiLWFkODEtMWVlNjI2NDFlMDY0In19LCJuYmYiOjE3MTA5Mjk4MzgsInN1YiI6InN5c3RlbTpzZXJ2aWNlYWNjb3VudDprdWJlcm5ldGVzLWRhc2hib2FyZDphZG1pbi11c2VyIn0.PZVyMmxLriTLzJDuVe1ZvHk1pRQuqEnYE9tZUrpAfVVLfIT9gukiWaHFrB742TRxh5\_vmseEWRJcI4BzUVOKc2wabDpmimBB5g63\_6DEg\_hL4xB5qNkeae0ZmJVjC0HG8BsouLushGoRc3PwwbcCF2ZnFCpFOdPAdOkJQkyT\_Q86Y3DiasC9BbUL5NMnEPNEREVpcQAmG\_Syrw8tYoD00jiYFzsGMaJMxyks-3TCkVwyqv\_DkwDagGyf3KmHJENYgfJZ4pzdyzXu8a7vsiIJsLSMTUHPupsLXUnfd58fylJI61UoFqBDT4sinr3LfFTkVuCIWDuU-hNgZ9dFAMTcBw
* Proxy: kubectl proxy  
  
* Go to http://localhost:8001/api/v1/namespaces/kubernetes-dashboard/services/https:kubernetes-dashboard:/proxy/  
  A screenshot of a computer

  Description automatically generated  
  A screenshot of a computer

  Description automatically generated

Part 2: Run Pods on Docker

Questions:

Q1: The smallest unit you can create in Kubernetes object model is: Pod

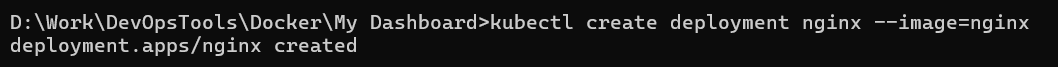
Q2: A Pod can only have one container in it: False: A pod can have multiple containers in them

Q3: What is the right approach to scale an application: Deploy additional pods

* Run : kubectl run nginx –image=nginx

A screenshot of a computer screen

Description automatically generated

* Create deployment using imperative command: kubectl create deployment nginx --image=nginx  
  
* View pods

