ASSIGNMENT – 4

DOCKER AND KUBERNETES

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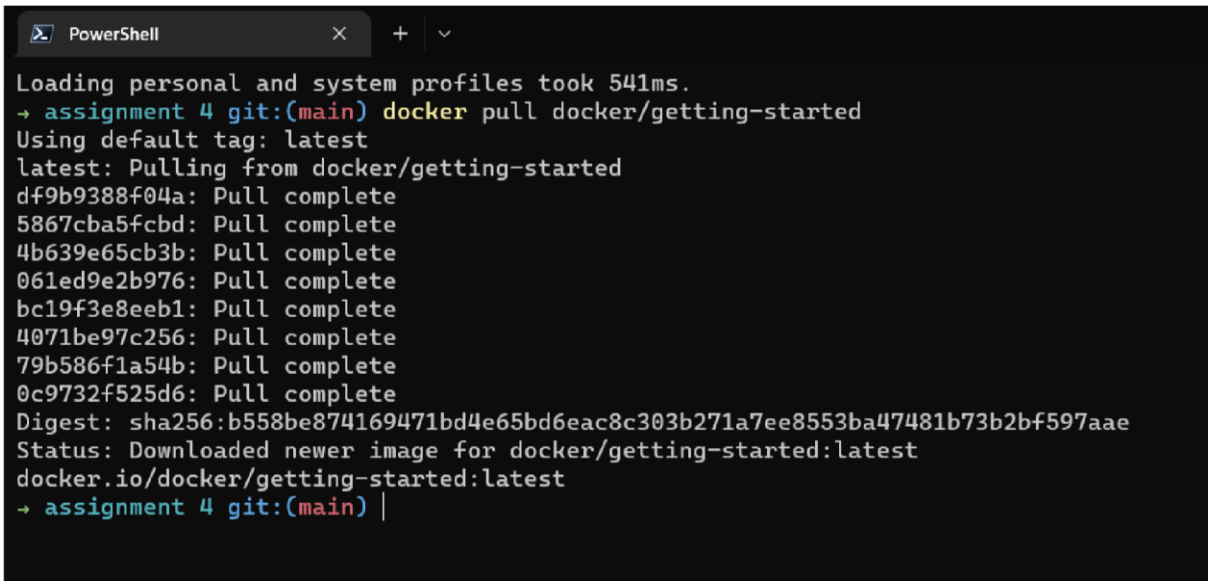
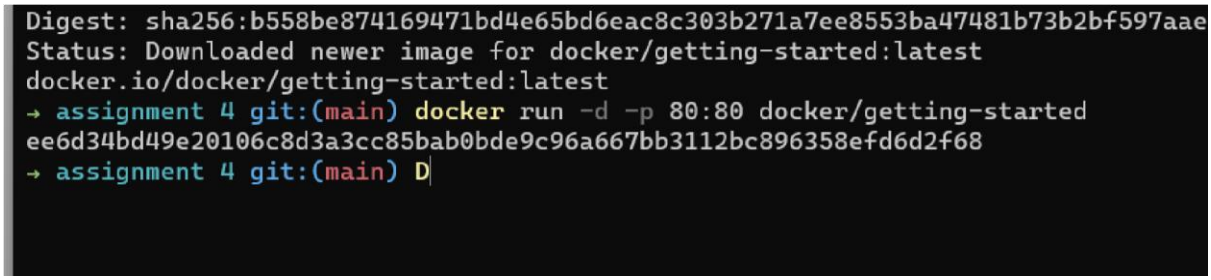
Maximum Marks	2 marks

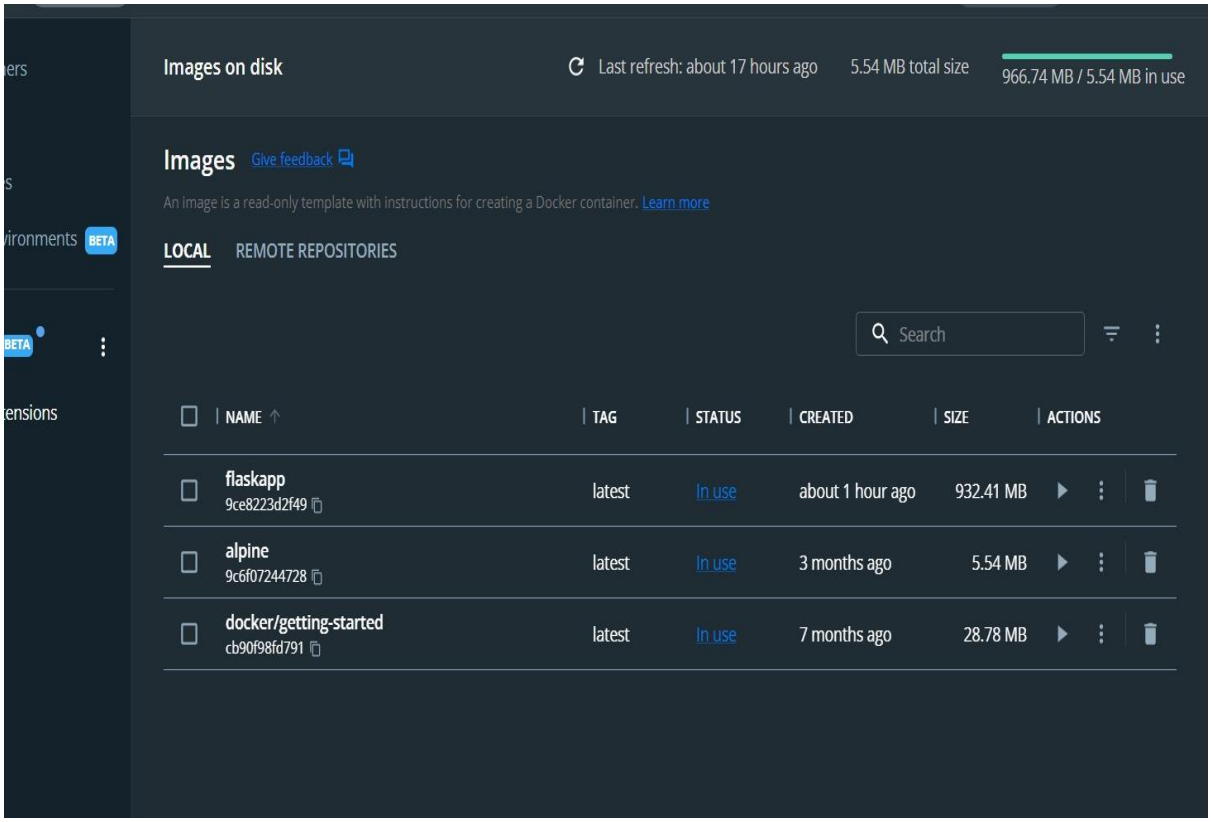
Question-1: pull an image from docker hub and run it in docker playground.

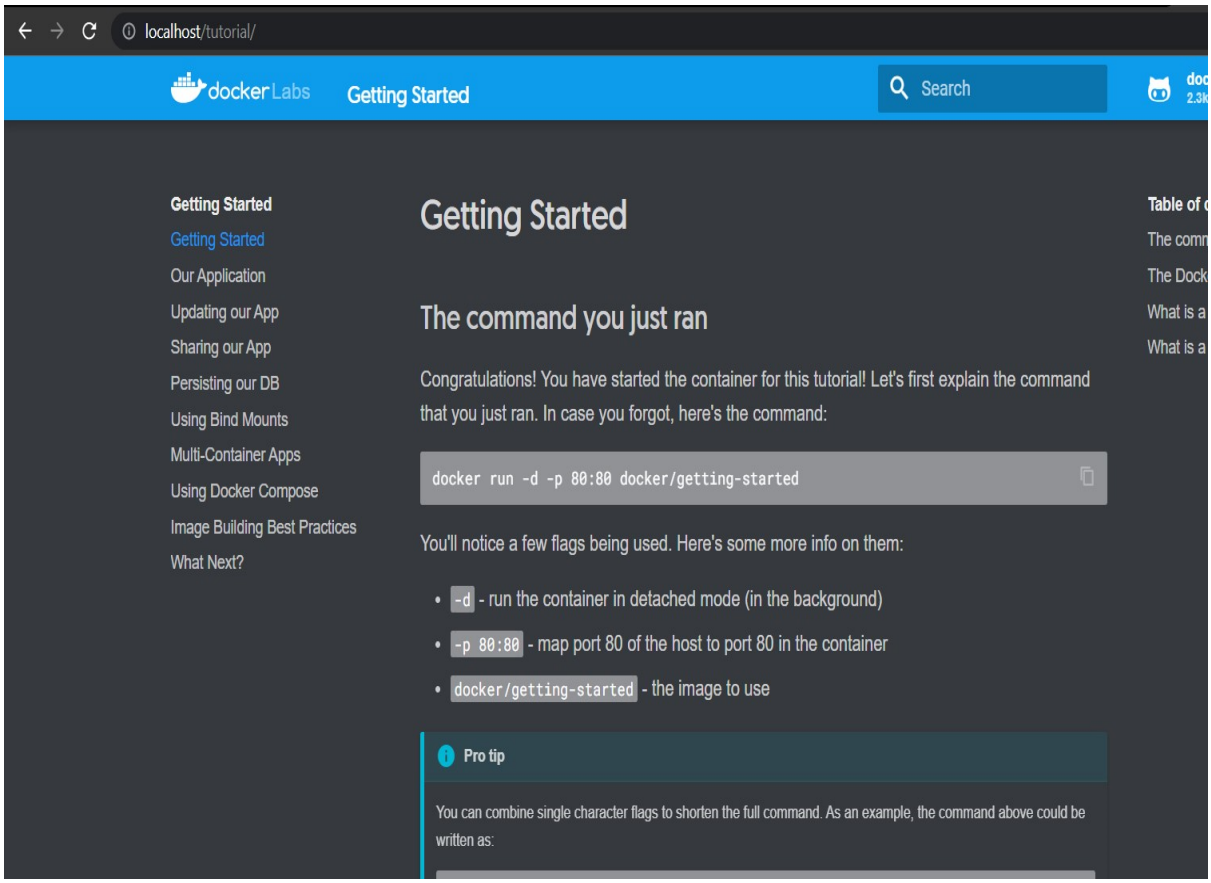
1) pull an image form docker hub



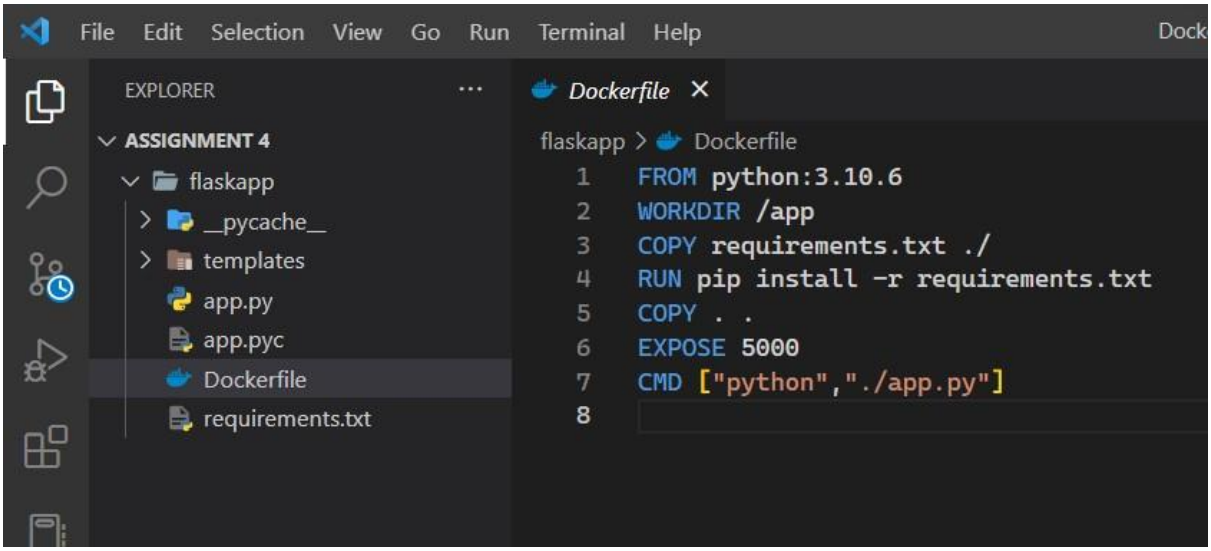
2)runt it in docker playground




Images on disk
Last refresh: about 17 hours ago
5.54 MB total size
966.74 MB / 5.54 MB in use
Images
Give feedback
An image is a read-only template with instructions for creating a Docker container. Learn more
LOCAL
REMOTE REPOSITORIES
Search
NAME
TAG
STATUS
CREATED
SIZE
ACTIONS
flaskapp
9ce8223d2f49
latest
In use
about 1 hour ago
932.41 MB
alpine
9c6f07244728
latest
In use
3 months ago
5.54 MB
docker/getting-started
cb90f98fd791
latest
In use
7 months ago
28.78 MB

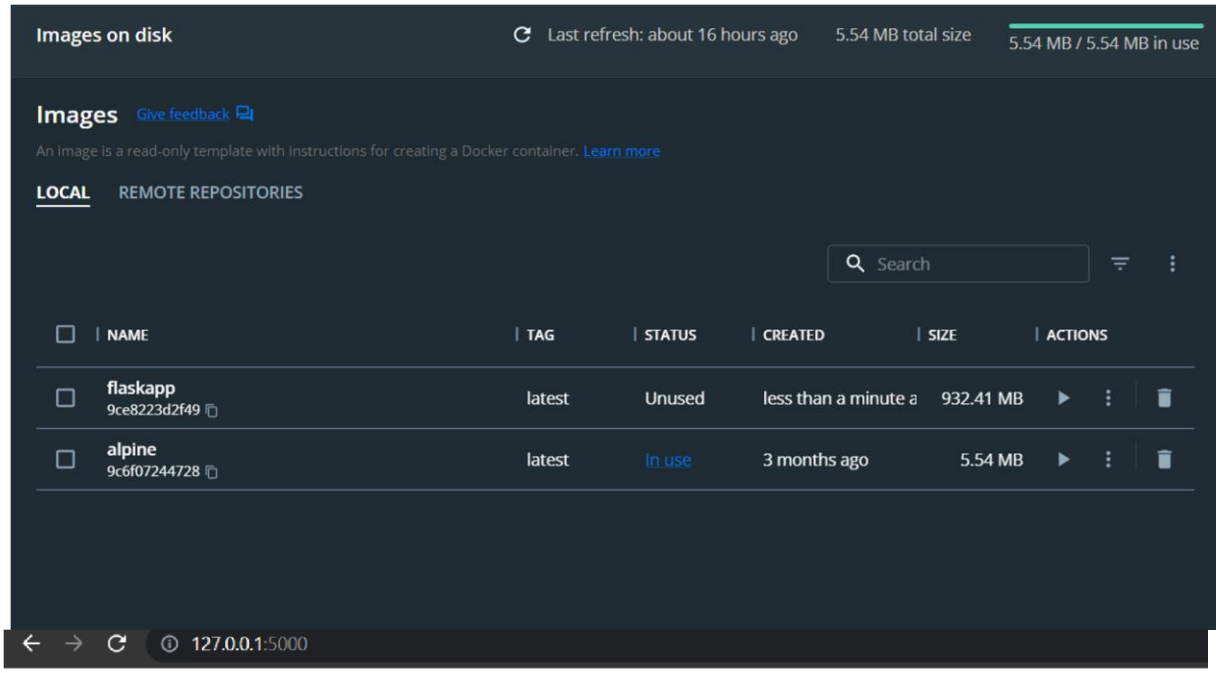

localhost/tutorial/
dockerLabs
Getting Started
Search
Getting Started
Getting Started
Our Application
Updating our App
Sharing our App
Persisting our DB
Using Bind Mounts
Multi-Container Apps
Using Docker Compose
Image Building Best Practices
What Next?
Getting Started
The command you just ran
Congratulations! You have started the container for this tutorial! Let's first explain the command that you just ran. In case you forgot, here's the command:
docker run -d -p 80:80 docker/getting-started
You'll notice a few flags being used. Here's some more info on them:
-d - run the container in detached mode (in the background)
-p 80:80 - map port 80 of the host to port 80 in the container
docker/getting-started - the image to use
Pro tip
You can combine single character flags to shorten the full command. As an example, the command above could be written as:

Question-2: Create a docker file for the job portal application and deploy it in docker application. 1)Creating a docker file for the job portal application




```
unable to prepare context: path "flaskapp" not found
→ flaskapp git:(main) x flask --debug
Usage: flask [OPTIONS] COMMAND [ARGS]...
Try 'flask --help' for help.

Error: Missing command.
→ flaskapp git:(main) x flask --debug run
 * Debug mode: on
WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.
 * Running on http://127.0.0.1:5000
Press CTRL+C to quit
 * Restarting with stat
 * Debugger is active!
 * Debugger PIN: 160-502-960
127.0.0.1 - - [05/Nov/2022 10:54:17] "GET / HTTP/1.1" 200 -
127.0.0.1 - - [05/Nov/2022 10:54:18] "GET /favicon.ico HTTP/1.1" 404 -
127.0.0.1 - - [05/Nov/2022 10:54:20] "GET / HTTP/1.1" 200 -
127.0.0.1 - - [05/Nov/2022 10:54:23] "GET /create/ HTTP/1.1" 200 -
127.0.0.1 - - [05/Nov/2022 10:54:26] "GET /create/ HTTP/1.1" 200 -
```

2)deploy in in docker applicatio

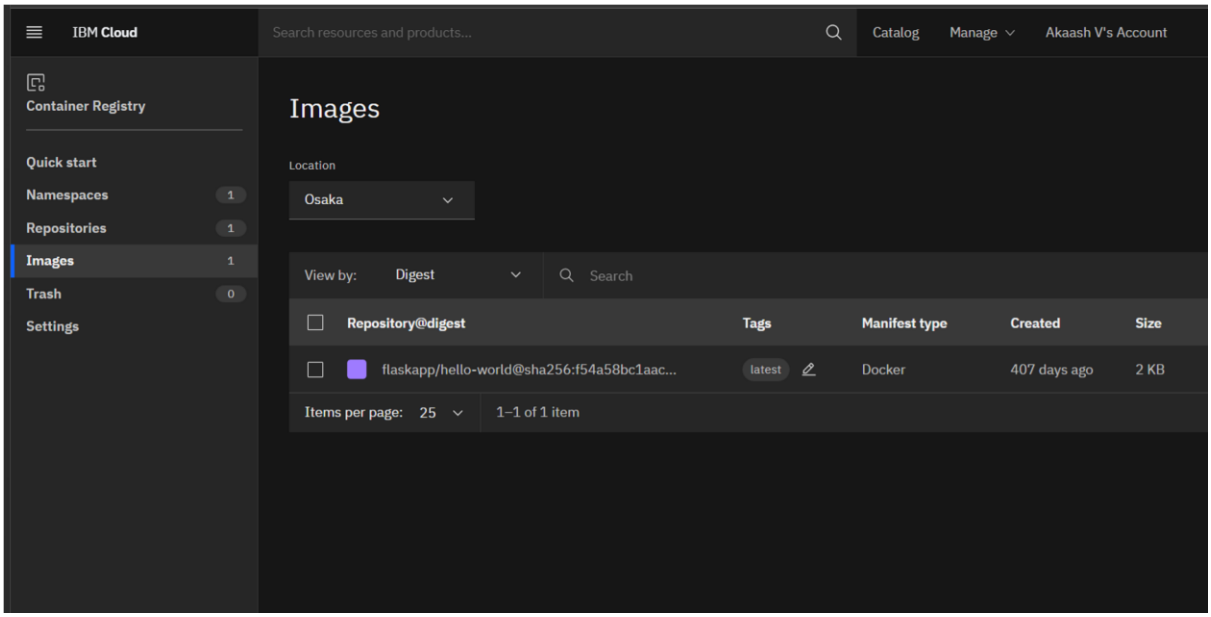


Question-3:Create a IBM container registry and deploy hello world app or jobportalapp 1)

create a IBM container registry

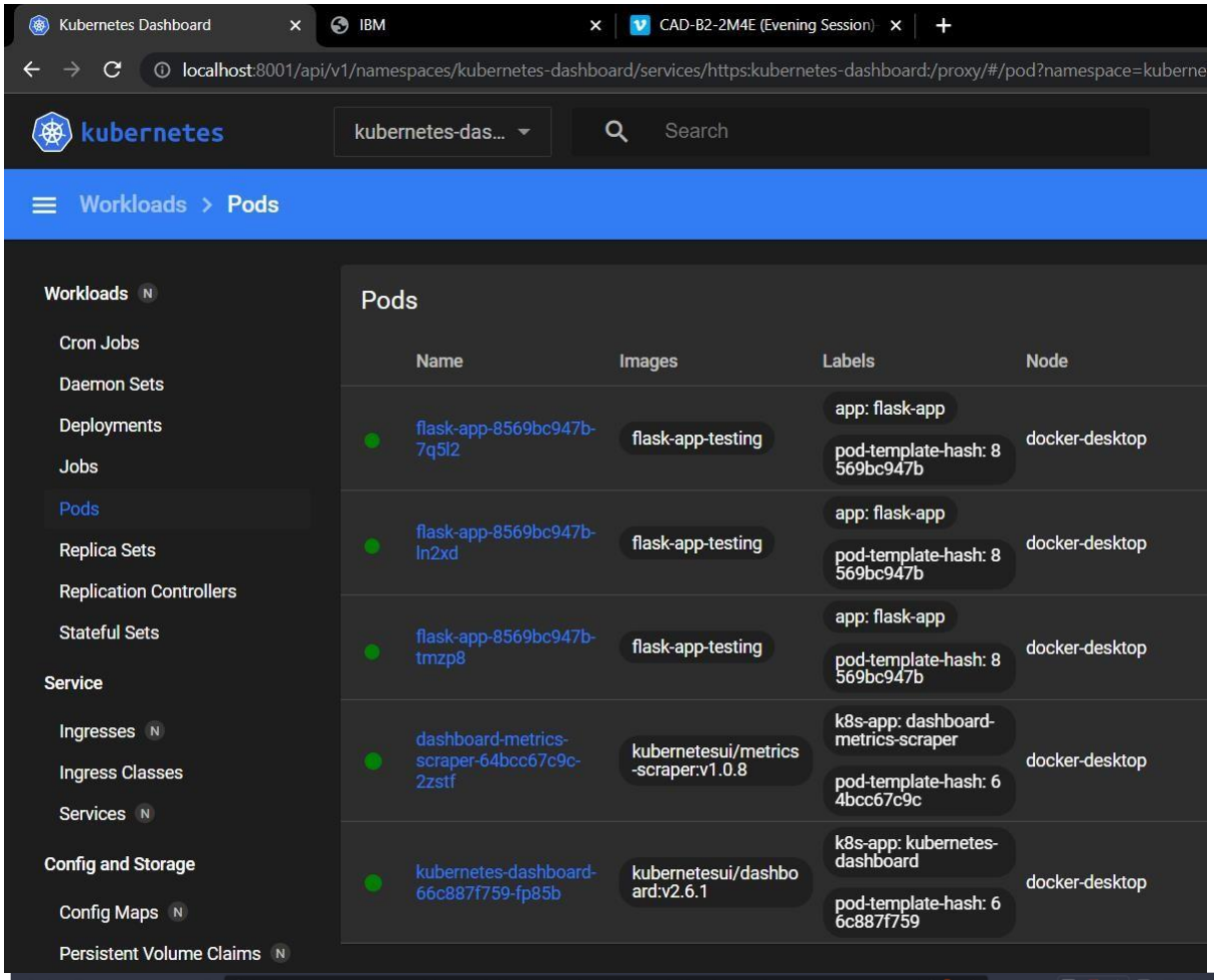
```
→ ~ git:(main) x ibmcloud
NAME:
  C:\Program Files\IBM\Cloud\bin\ibmcloud.exe - A command line tool to interact with IBM Cloud
  Find more information at: https://ibm.biz/cli-docs

USAGE:
  [environment variables] C:\Program Files\IBM\Cloud\bin\ibmcloud.exe [global options] command [arguments.
ptions]

VERSION:
  2.12.1+b8488a1-2022-10-31T15:08:10+00:00

COMMANDS:
  account      Manage accounts, users, orgs and spaces
  api          Set or view target API endpoint
  billing      Retrieve usage and billing information
  catalog      Manage catalog
  cf           Run Cloud Foundry CLI with IBM Cloud CLI context
  config       Write default values to the config
  cr           Manage IBM Cloud Container Registry content and configuration.
  dev          Create, develop, deploy, and monitor applications
  enterprise   Manage enterprise, account groups and accounts.
  iam          Manage identities and access to resources
  login        Log user in
  logout       Log user out
  plugin       Manage plug-ins and plug-in repositories
  regions      List all the regions
```

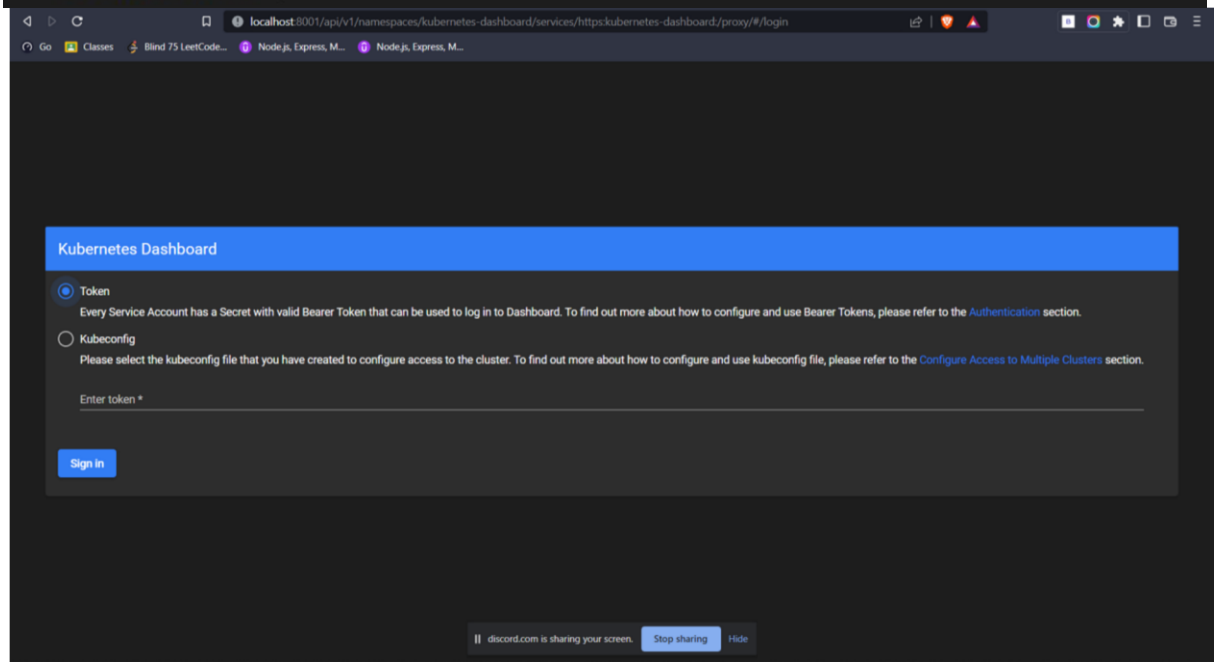
2)deploy hello world or jobportal



Question-4: Create a Kubernetes cluster in IBM cloud and deploy helloworld image or jobportal image and also expose the same app to run in note port

1)Creating a Kubernetes cluster in IBM cloud


Kubernetes Dashboard
IBM
CAD-B2-2M4E (Evening Session)
localhost:8001/api/v1/namespaces/kubernetes-dashboard/services/https:kubernetes-dashboard:/proxy/#/pod?namespace=kuberne
kubernetes
kubernetes-das...
Search
Workloads > Pods
Workloads
Cron Jobs
Daemon Sets
Deployments
Jobs
Pods
Replica Sets
Replication Controllers
Stateful Sets
Service
Ingresses
Ingress Classes
Services
Config and Storage
Config Maps
Persistent Volume Claims
Pods
Name
Images
Labels
Node
flask-app-8569bc947b-7q5l2
flask-app-testing
app: flask-app
pod-template-hash: 8569bc947b
docker-desktop
flask-app-8569bc947b-ln2xd
flask-app-testing
app: flask-app
pod-template-hash: 8569bc947b
docker-desktop
flask-app-8569bc947b-tmzp8
flask-app-testing
app: flask-app
pod-template-hash: 8569bc947b
docker-desktop
dashboard-metrics-scraper-64bcc67c9c-2zstf
kubernetesui/metrics-scraper:v1.0.8
k8s-app: dashboard-metrics-scraper
pod-template-hash: 64bcc67c9c
docker-desktop
kubernetes-dashboard-66c887f759-fp85b
kubernetesui/dashboard:v2.6.1
k8s-app: kubernetes-dashboard
pod-template-hash: 66c887f759
docker-desktop


localhost:8001/api/v1/namespaces/kubernetes-dashboard/services/https:kubernetes-dashboard:/proxy/#/login
Kubernetes Dashboard
Token
Every Service Account has a Secret with valid Bearer Token that can be used to log in to Dashboard. To find out more about how to configure and use Bearer Tokens, please refer to the Authentication section.
Kubeconfig
Please select the kubeconfig file that you have created to configure access to the cluster. To find out more about how to configure and use kubeconfig file, please refer to the Configure Access to Multiple Clusters section.
Enter token *
Sign in
discord.com is sharing your screen.
Stop sharing
Hide