

Assignment -4

Student Name	Nishanth S
Student Roll Number	737819CSR124
Maximum Marks	2 Marks

Question-1:

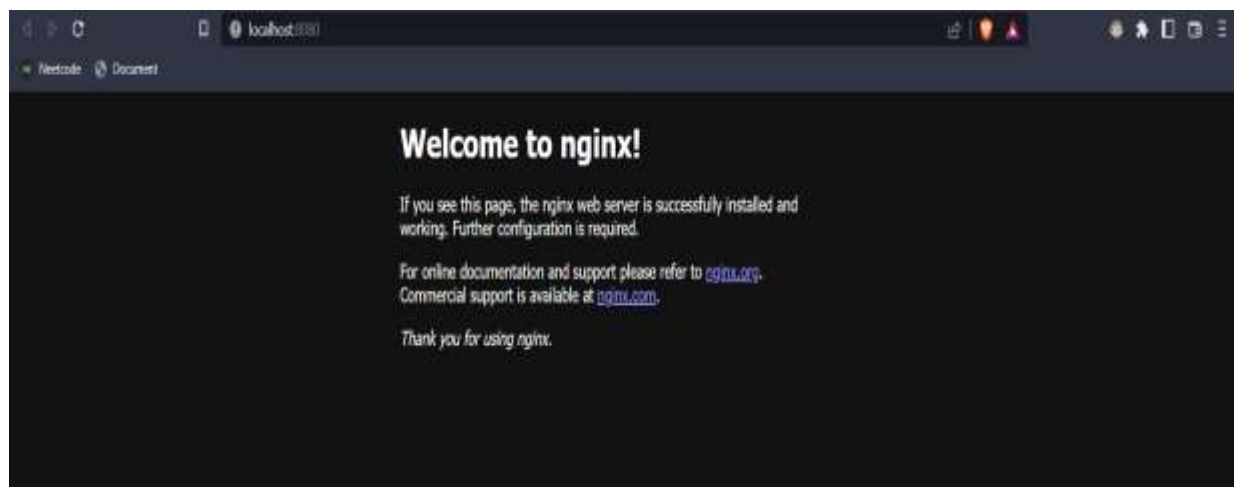
Pull an image from the docker hub and run it in the docker playground

```
Command Prompt
Microsoft Windows [Version 10.0.19044.1526]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Sathasivam>docker images
REPOSITORY          TAG                 IMAGE ID            CREATED             SIZE
flaskapp             latest             5ac3396b84b1       2 hours ago        932MB
priyadharshini07/flaskapp latest             5ac3396b84b1       2 hours ago        932MB
cassandra            latest             8891c8497d8e       5 months ago       341MB
docker/getting-started latest             cb90f98fd791       7 months ago       28.8MB

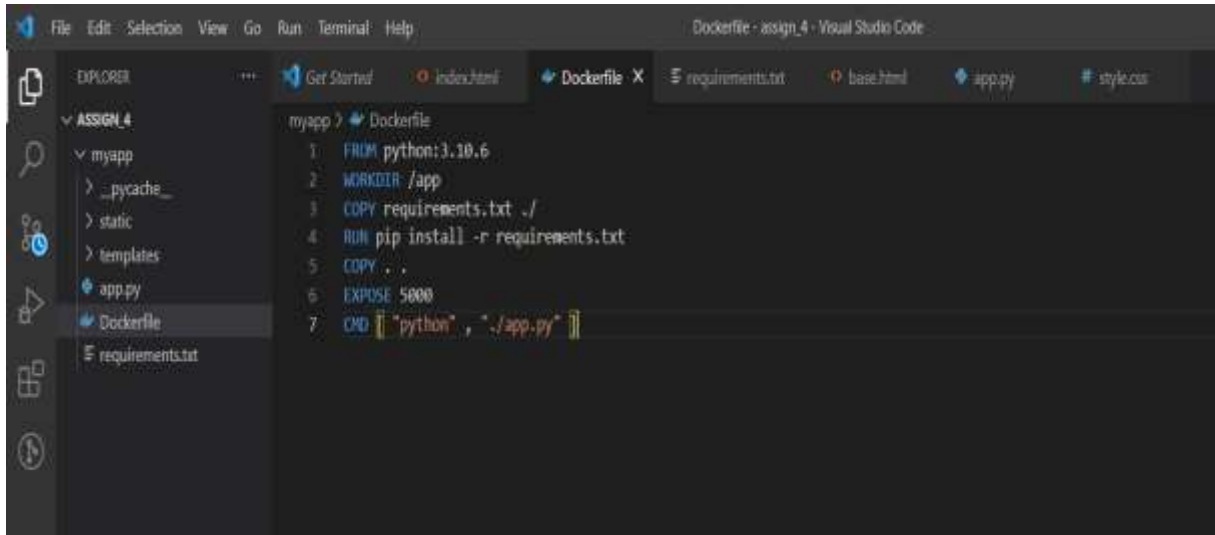
C:\Users\Sathasivam>docker pull nginx:alpine
alpine: Pulling from library/nginx
ca7dd9ec2225: Already exists
76a48b0f5898: Pull complete
2f12a0e7c01d: Pull complete
1a7b9b9bbef6: Pull complete
b704883c57af: Pull complete
4342b1ab302e: Pull complete
Digest: sha256:455c39afebd4d98ef26dd70284aa86e6810b0485af5f4f222b19b89758cabf1e
Status: Downloaded newer image for nginx:alpine
docker.io/library/nginx:alpine

C:\Users\Sathasivam>docker run --name nginx-run -d -p 8080:80 nginx:alpine
0105579d2f43e44a3d4cbb7cd8062f9c13b6790c7a66bdfefef9bce0ecf1629f
```



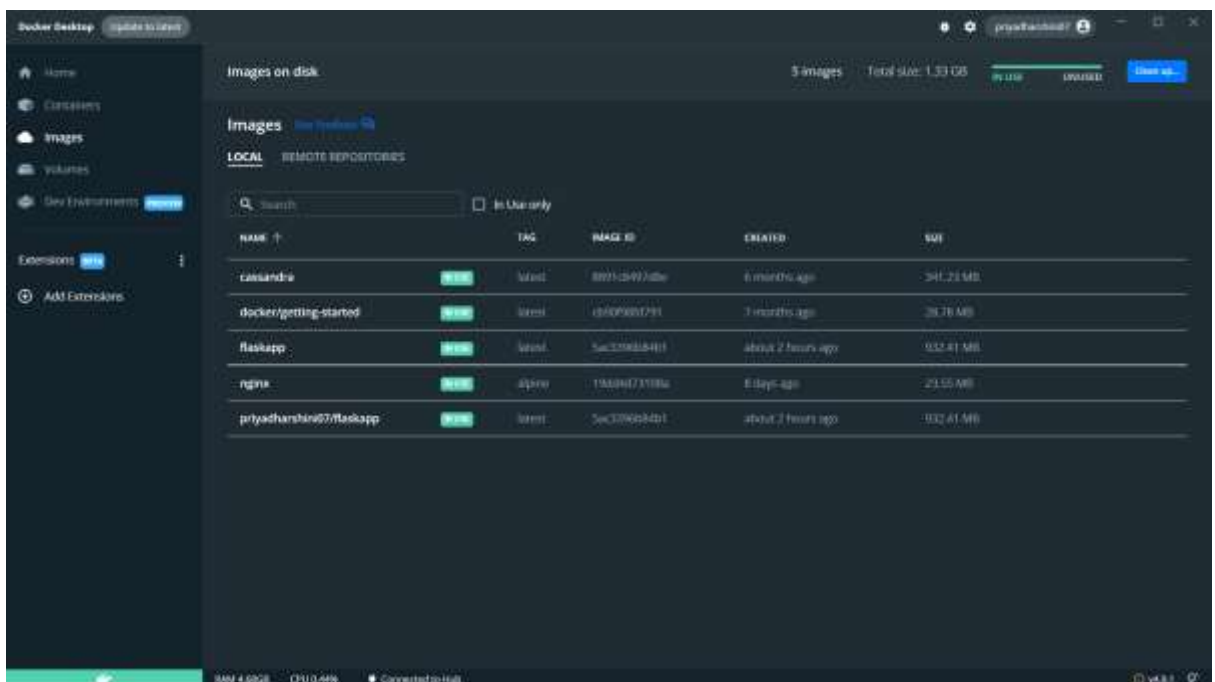
Question 2:

Create a docker file for the helloworld or job portal application and deploy it in docker desktop



The screenshot shows the Visual Studio Code editor with a Dockerfile open. The file explorer on the left shows a project named 'myapp' with files like 'app.py', 'Dockerfile', and 'requirements.txt'. The Dockerfile content is as follows:

```
myapp > Dockerfile
1 FROM python:3.10.6
2 WORKDIR /app
3 COPY requirements.txt ./
4 RUN pip install -r requirements.txt
5 COPY . .
6 EXPOSE 5000
7 CMD ["python", "./app.py"]
```



Question 3:

Create a IBM container registry and deploy helloworld app or jobportalapp.

```
C:\Users\Sathish>docker namespace add ibm_assign
Warning: namespace 'ibm_assign' is deprecated. The default namespace group for the account ('default') is deprecated.
Adding namespace 'ibm_assign' in resource group 'default' for account 'Priyadarshini S's Account' in registry 'jp.lcr.io'...
Successfully added namespace 'ibm_assign'

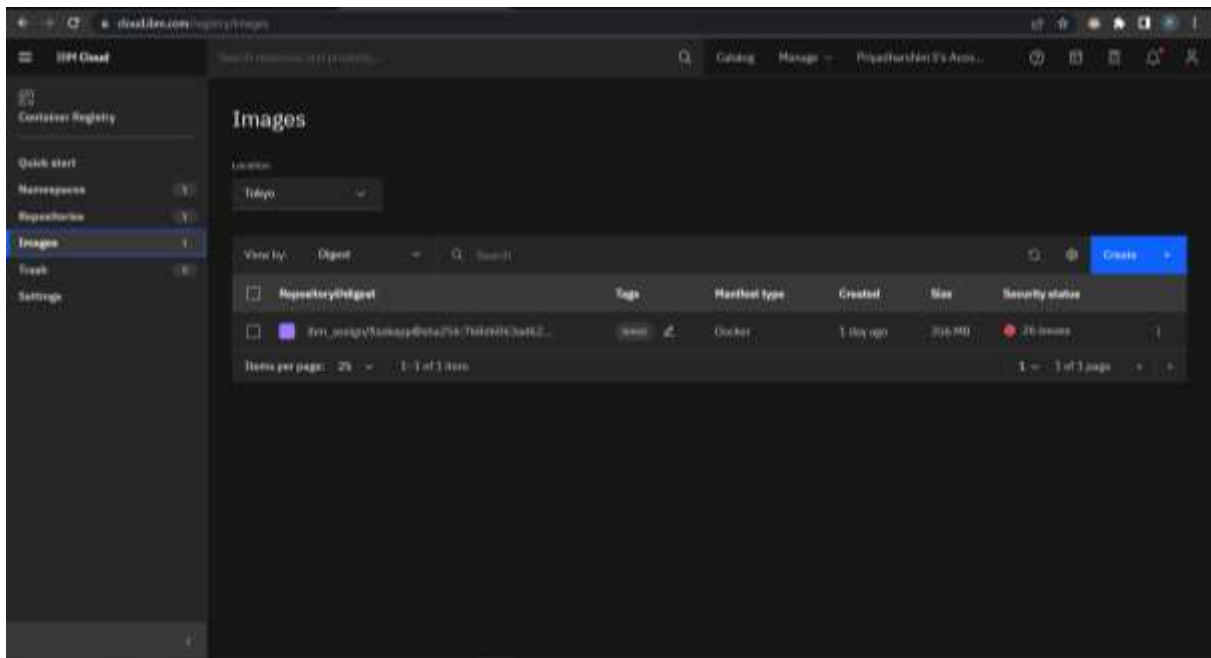
C:\Users\Sathish>docker namespace list --w
Listing namespaces for account 'Priyadarshini S's Account' in registry 'jp.lcr.io'...

namespace    Resource Group    Created
ibm_assign    Default           52 seconds ago

C:\Users\Sathish>docker tag flaskapp jp.lcr.io/ibm_assign/flaskapp:latest

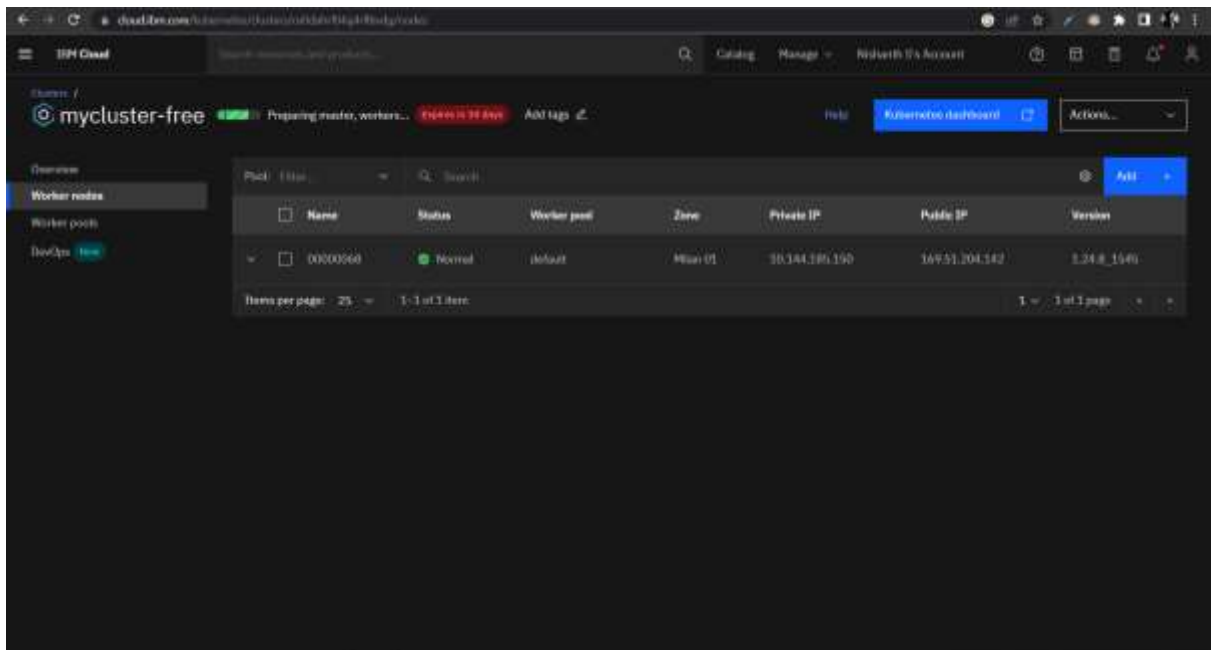
C:\Users\Sathish>docker images
REPOSITORY          TAG             IMAGE ID          CREATED           SIZE
flaskapp            latest          5ac3960844b1     29 hours ago     912MB
priyadarshini07/flaskapp    latest          5ac3960844b1     29 hours ago     912MB
jp.lcr.io/ibm_assign/flaskapp    latest          5ac3960844b1     29 hours ago     912MB
jp.lcr.io/ibm_assignment/flaskapp    latest          5ac3960844b1     29 hours ago     912MB
nginx              alpine         1966d673398a     9 days ago       21.5MB
cassandra          latest         8831c0d3f4ee     3 months ago     343MB
kicker/getting-started    latest         c8a0f9d1d291     7 months ago     28.8MB

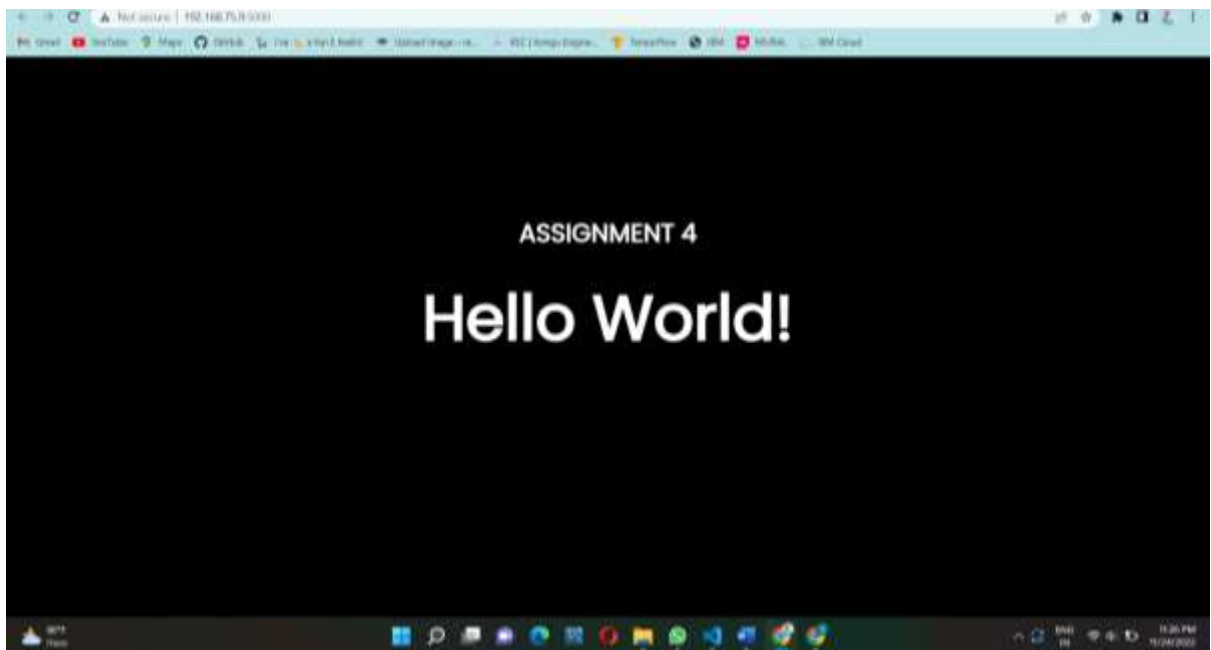
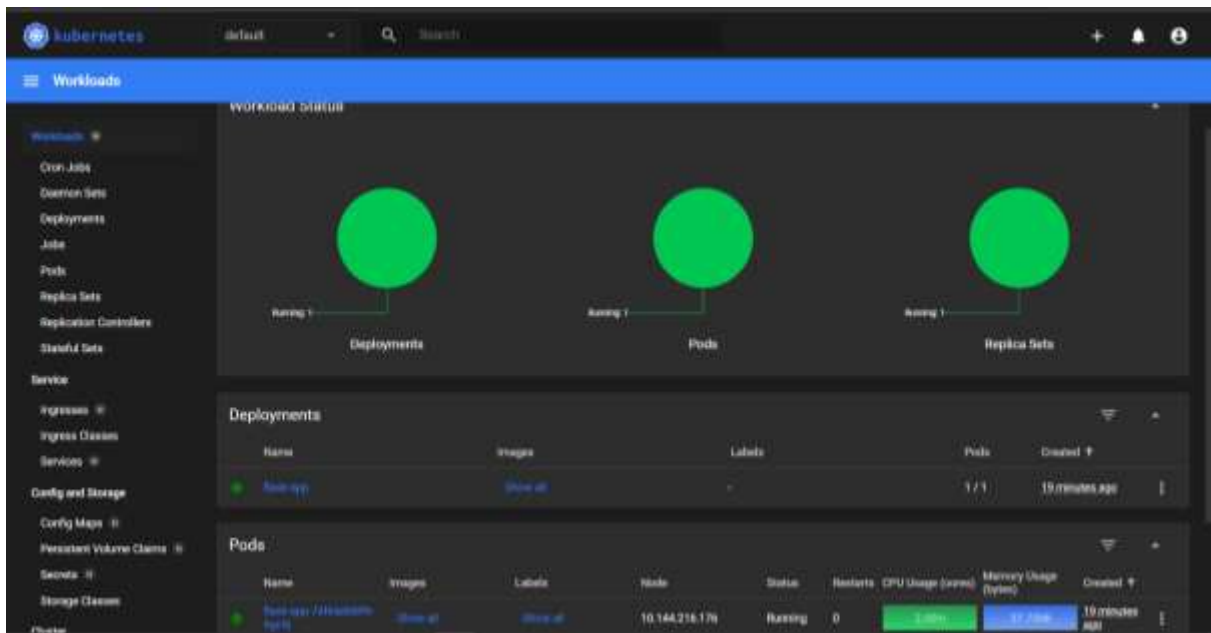
C:\Users\Sathish>docker push jp.lcr.io/ibm_assign/flaskapp
Using default tag: latest
The push refers to repository [jp.lcr.io/ibm_assign/flaskapp]
d49e78c9472: Pushed
992380526c3c: Pushed
584c1020f68b: Pushed
5a2a10e70b1f: Pushed
97c3d9d01a6: Pushed
1723180022a: Pushed
3d6b1152933: Pushed
100796cdf281: Pushed
584c5a6f48b: Pushed
8351338126f: Pushed
9ff4d4dc74c: Pushed
89d10f09a11: Pushed
935d310a438: Pushed
latest: digest: sha256:7682a61a8137660778fb57f6e1a32439837637d9c11b9b8461c9c5a21 size: 1051
```



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 nodeport.





```

C:\Users\Setharivam>kubectl describe deployments flask-app
Name:          flask-app
Namespace:     default
CreationTimestamp: Wed, 23 Nov 2022 00:59:59 +0530
Labels:        {}
Annotations:   deployment.kubernetes.io/revision: 1
Selector:      app=flask-app
Replicas:      1 desired | 1 updated | 1 total | 1 available | 0 unavailable
StrategyType:  RollingUpdate
MinReadySeconds: 0
RollingUpdateStrategy: 25% max unavailable, 25% max surge
Pod Template:
  Labels:  app=flask-app
  Containers:
    flask-app-container:
      Image:      jp.icr.io/ibm_assign/flaskapp:latest
      Port:      5000/TCP
      Host Port:  0/TCP
      Environment: <none>
      Mounts:      <none>
      Volumes:     <none>
  Conditions:
    Type           Status  Reason
    ----           -
    Available       True    MinimumReplicasAvailable
    Progressing     True    NewReplicaSetAvailable
  OldReplicaSets:  <none>
  NewReplicaSet:   flask-app-74f64d6899 (1/1 replicas created)
Events:
  Type    Reason             Age   From          Message
  ----    -
  Normal  ScalingReplicaSet  21m   deployment-controller  Scaled up replica set flask-app-74f64d6899 to 1

```