

## Assignment -4

Student Name	Robin J
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Maximum Marks	2 Marks

### Question-1:

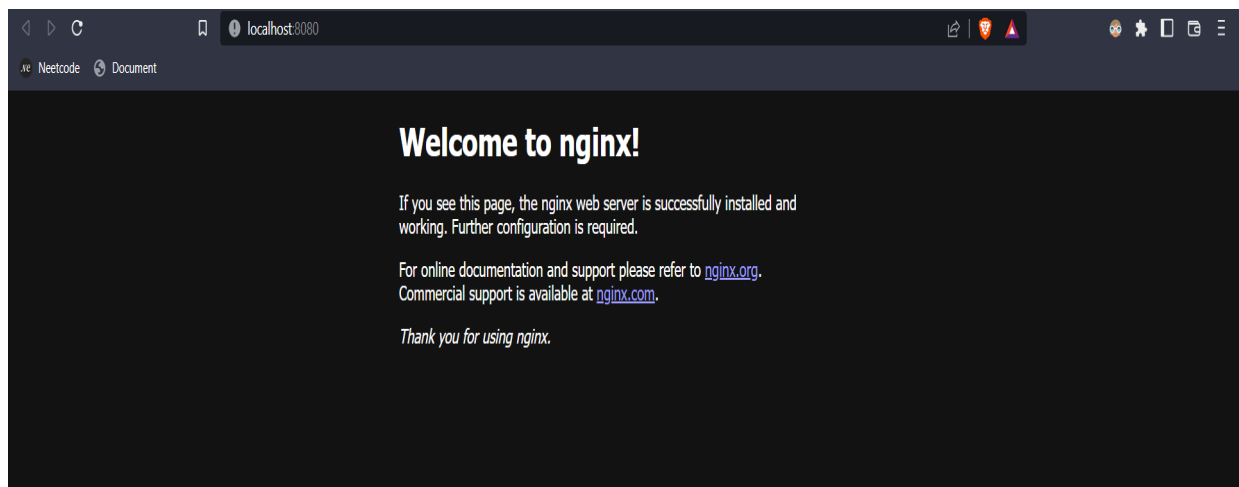
Pull an image from the docker hub and run it in the docker playground

```
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

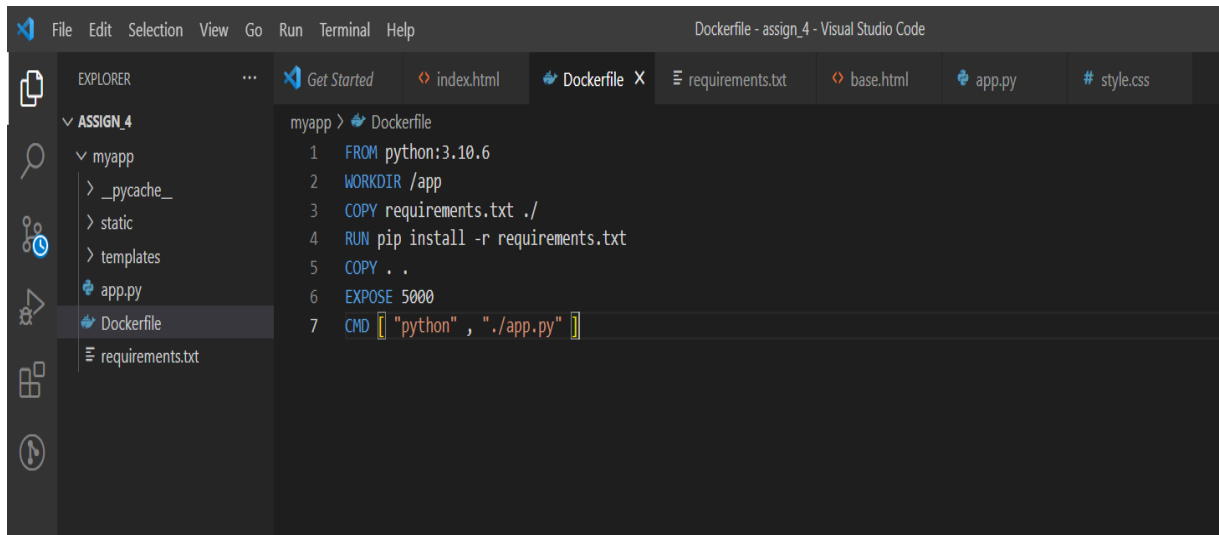
C:\Users\Sathasivam>docker pull nginx:alpine
alpine: Pulling from library/nginx
ca7dd9ec2225: Already exists
76a48b0f5898: Pull complete
2f12a0e7c01d: Pull complete
1a7b9b9bbef6: Pull complete
b704883c57af: Pull complete
4342b1ab302e: Pull complete
Digest: sha256:455c39afebd4d98ef26dd70284aa86e6810b0485af5f4f222b19b89758cabf1e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

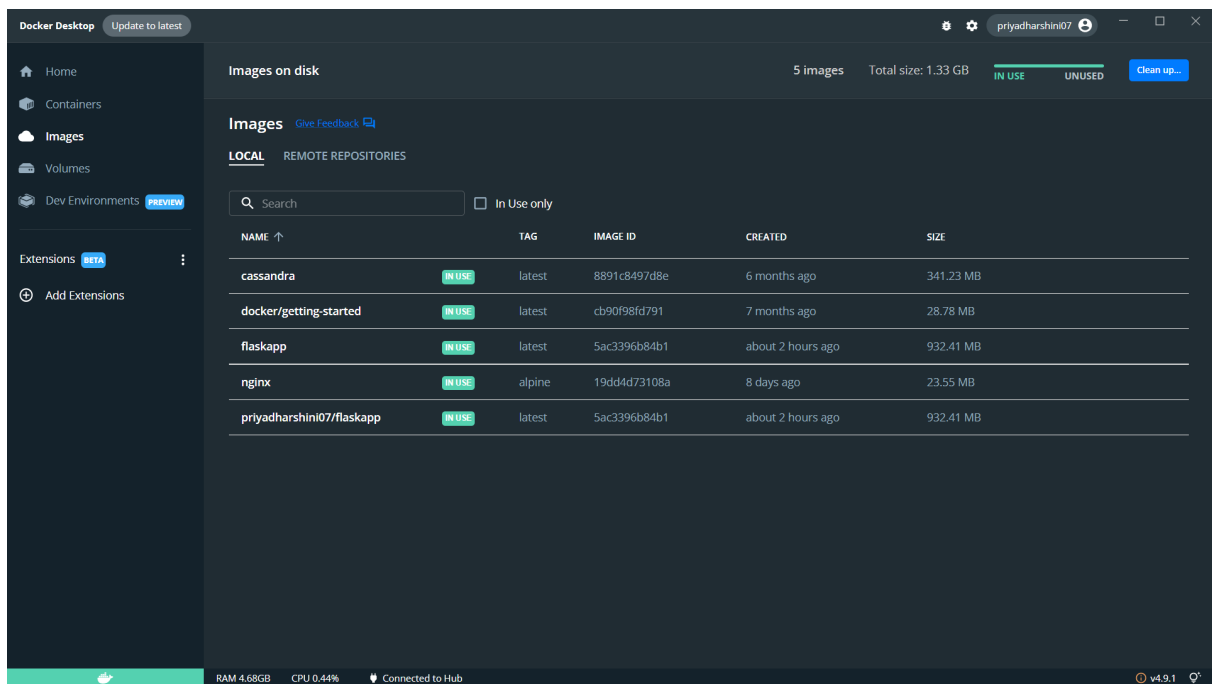
Create a docker file for the helloworld or job portal application and deploy it in docker desktop



The screenshot shows the Visual Studio Code editor with a Dockerfile open. The Dockerfile contains the following instructions:

```
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"]
```

The Explorer sidebar on the left shows the project structure for 'ASSIGN\_4', including a 'myapp' directory with files like 'app.py', 'Dockerfile', and 'requirements.txt'.



Question 3:

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

```

C:\Users\Sathasivam>ibmcloud cr namespace-add ibm_assign
No resource group is targeted. Therefore, the default resource group for the account ('Default') is targeted.

Adding namespace 'ibm_assign' in resource group 'Default' for account Priyadharshini S's Account in registry jp.icr.io...

Successfully added namespace 'ibm_assign'

C:\Users\Sathasivam>ibmcloud cr namespace-list -v
Listing namespaces for account 'Priyadharshini S's Account' in registry 'jp.icr.io'...

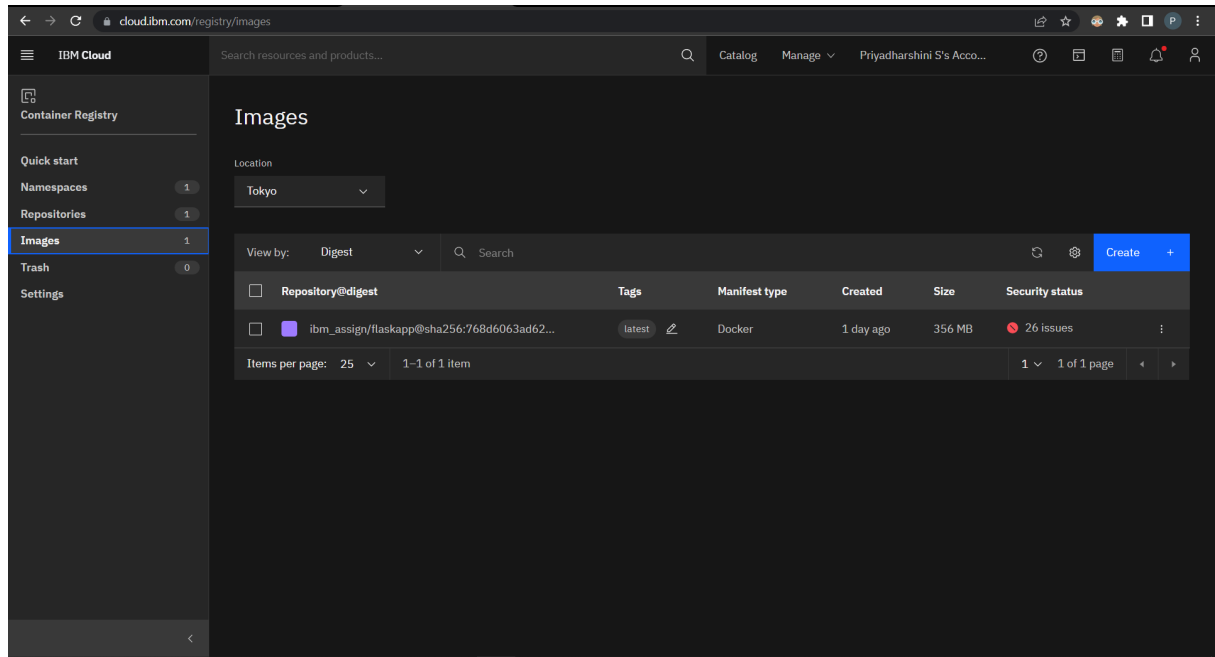
Namespace   Resource Group   Created
ibm_assign   Default          52 seconds ago

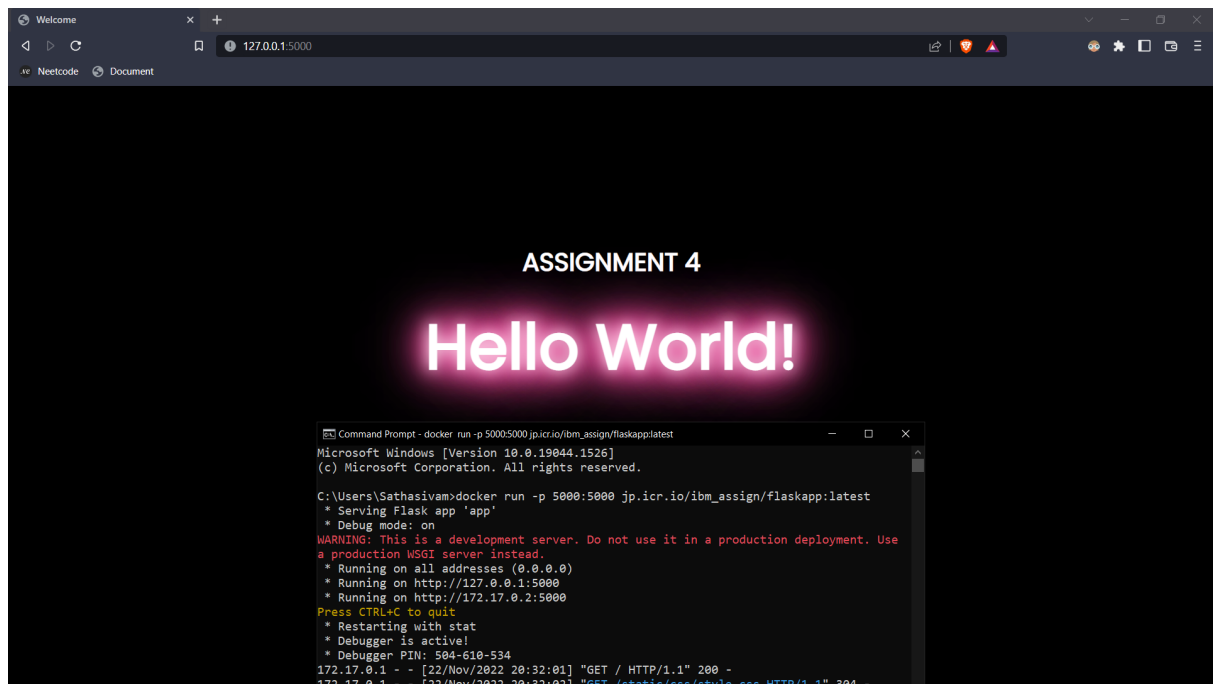
C:\Users\Sathasivam>docker tag flaskapp jp.icr.io/ibm_assign/flaskapp:latest

C:\Users\Sathasivam>docker images
REPOSITORY          TAG          IMAGE ID          CREATED          SIZE
flaskapp             latest       5ac3396b84b1     29 hours ago    932MB
priyadharshini07/flaskapp   latest       5ac3396b84b1     29 hours ago    932MB
jp.icr.io/ibm_assign/flaskapp   latest       5ac3396b84b1     29 hours ago    932MB
nginx               alpine       19dd4d73108a     9 days ago      23.5MB
cassandra            latest       8891c8497d8e     5 months ago    341MB
docker/getting-started   latest       cb90f98fd791     7 months ago    28.8MB

C:\Users\Sathasivam>docker push jp.icr.io/ibm_assign/flaskapp
Using default tag: latest
The push refers to repository [jp.icr.io/ibm_assign/flaskapp]
d4be76e3c4f2: Pushed
9b298652ec3c: Pushed
38abcb2bf660: Pushed
9e4ac0e7b95f: Pushed
bfc1de8136e: Pushed
1f123186824c: Pushed
8d6eb1152911: Pushed
100796cdf3b1: Pushed
54acb5a6fa0b: Pushed
8d51c618126f: Pushed
9ff6e4d46744: Pushed
a89d1d47b5a1: Pushed
655ed1b7a428: Pushed
latest: digest: sha256:768d6063ad627c60778fbf5ff90da387432e837361fd91313e9b8482c0c58a71 size: 3051

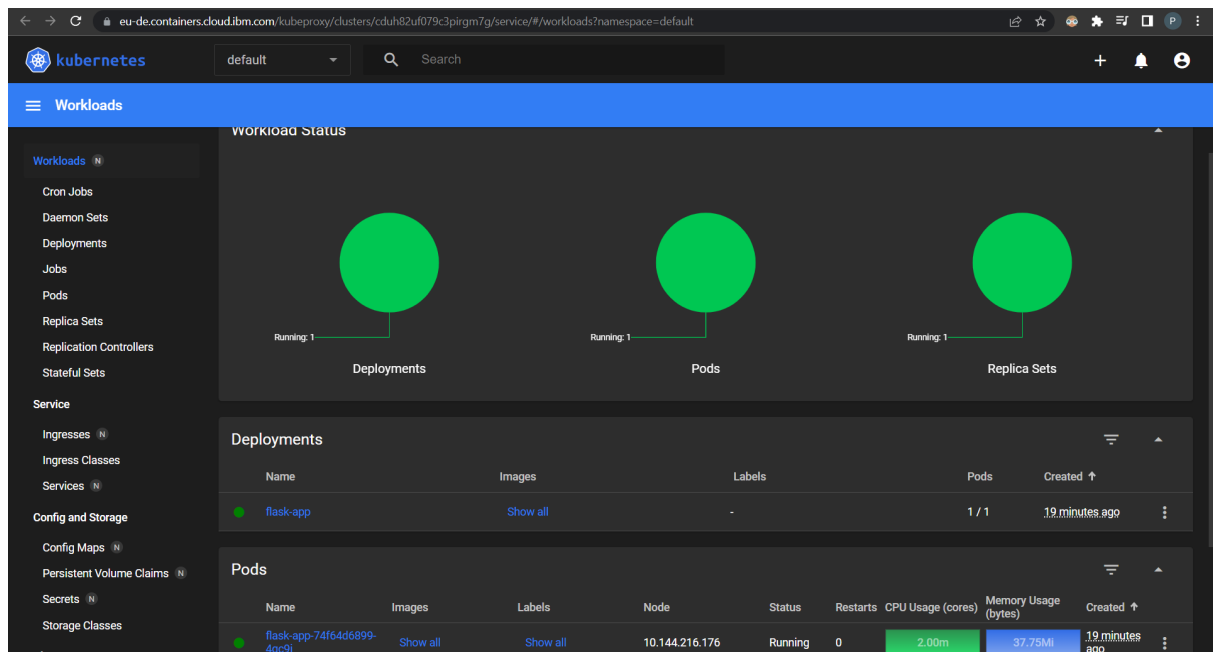
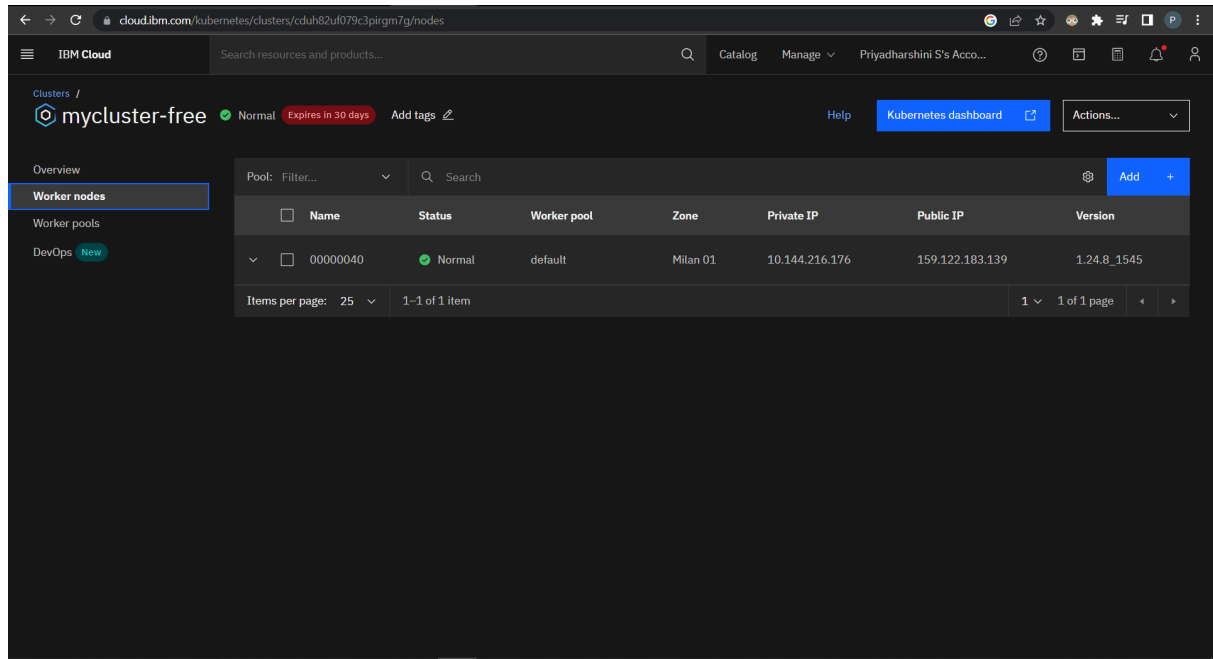
```





## 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.



```
Command Prompt
C:\Users\Sathasivam>kubectl describe deployments flask-app
Name: flask-app
Namespace: default
CreationTimestamp: Wed, 23 Nov 2022 00:59:59 +0530
Labels: <none>
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

C:\Users\Sathasivam>
```