Assignment -4

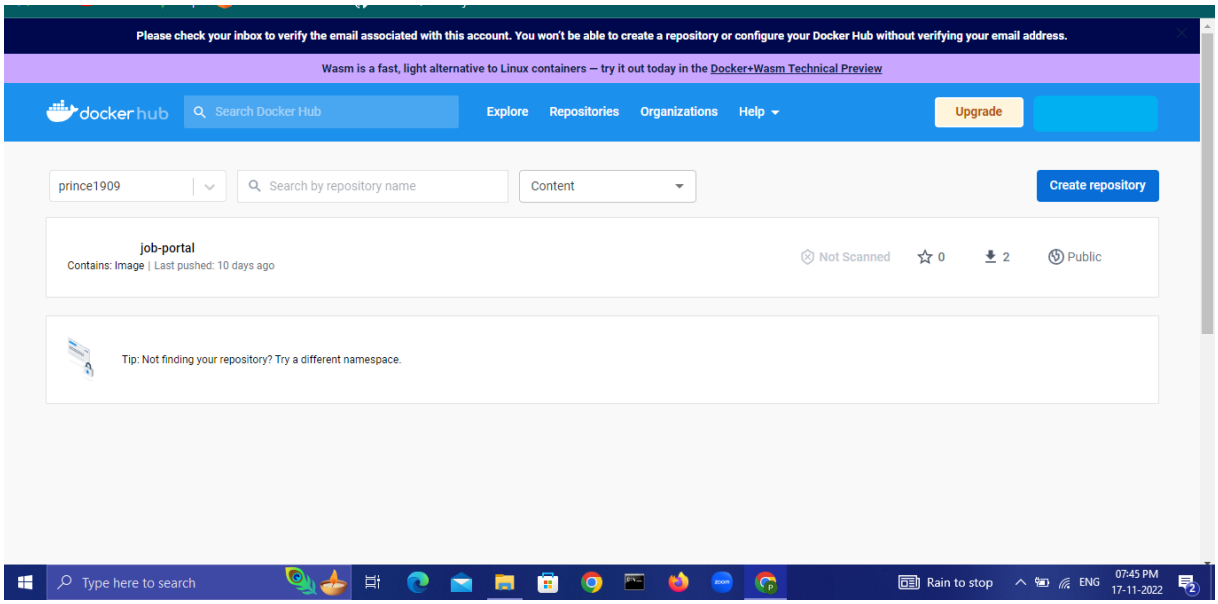
Kubernetes / Docker

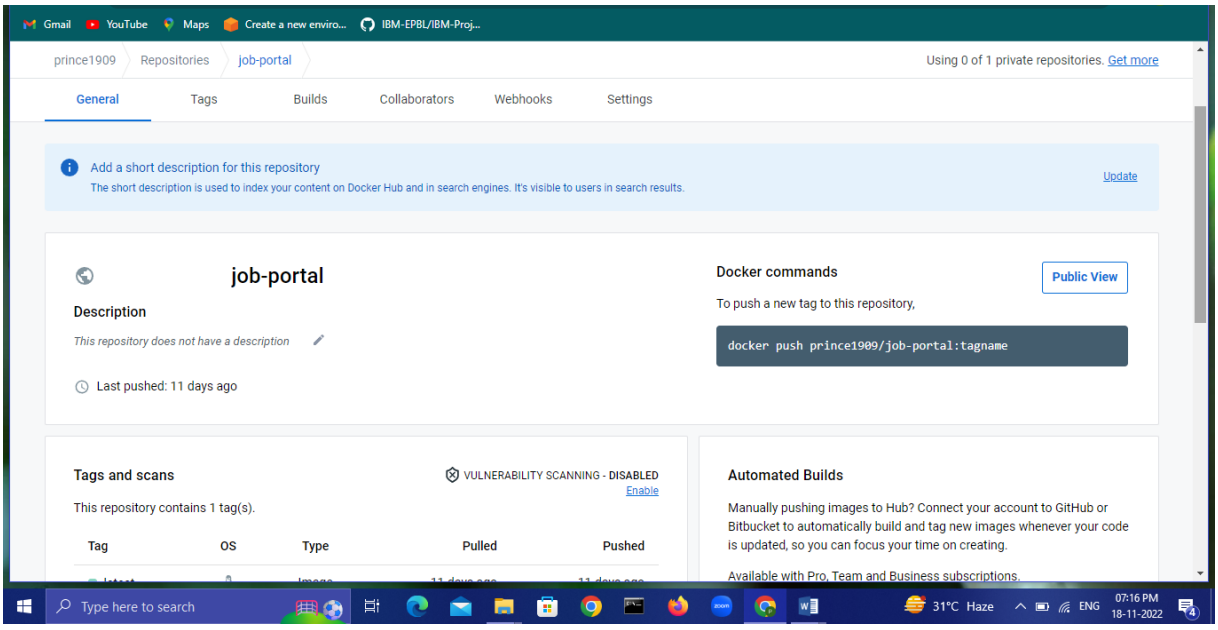
Assignment Date	30 October 2022
Student Name	Mr. Siva Subramanian S
Student Roll Number	61771921045
Maximum Marks	2 Marks

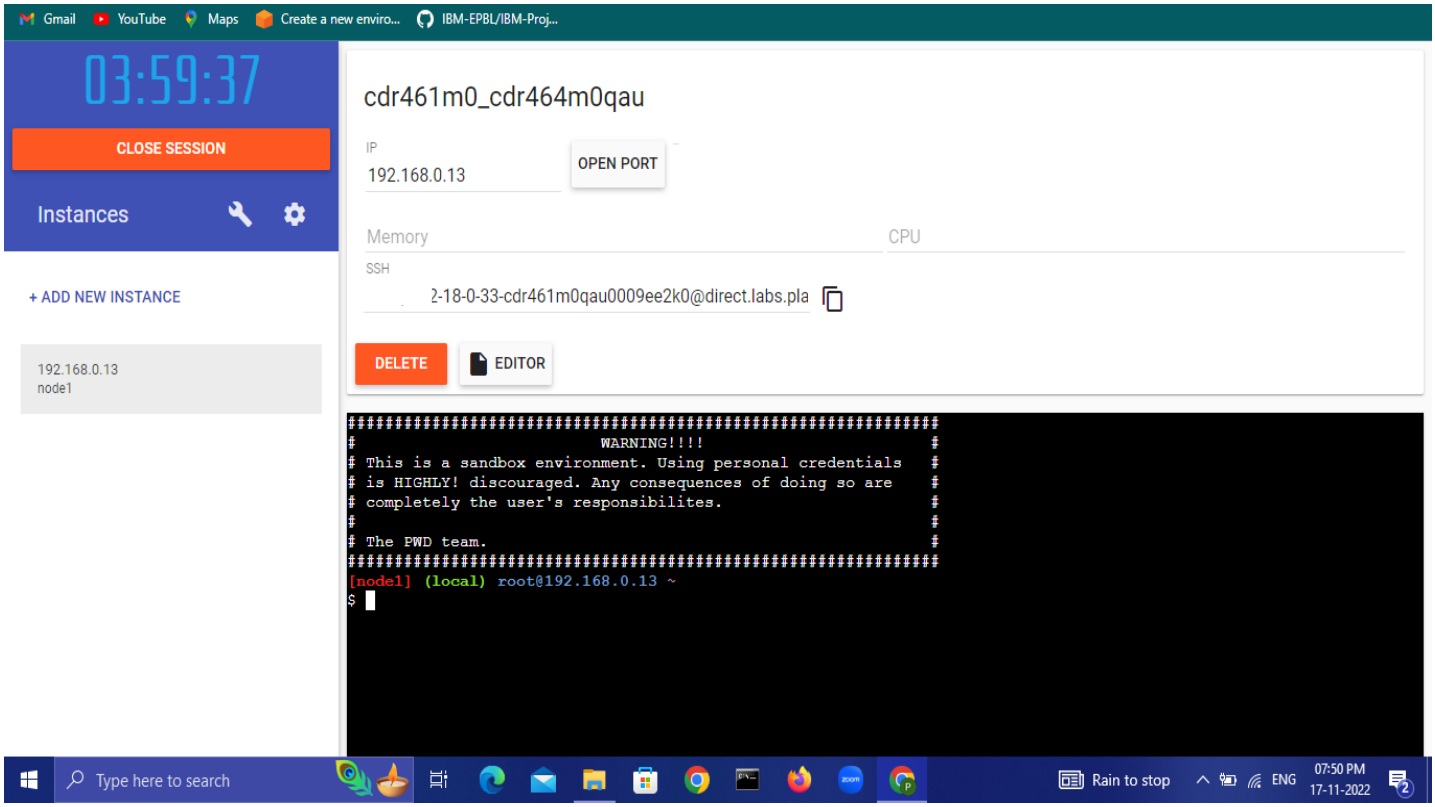
Question-1:

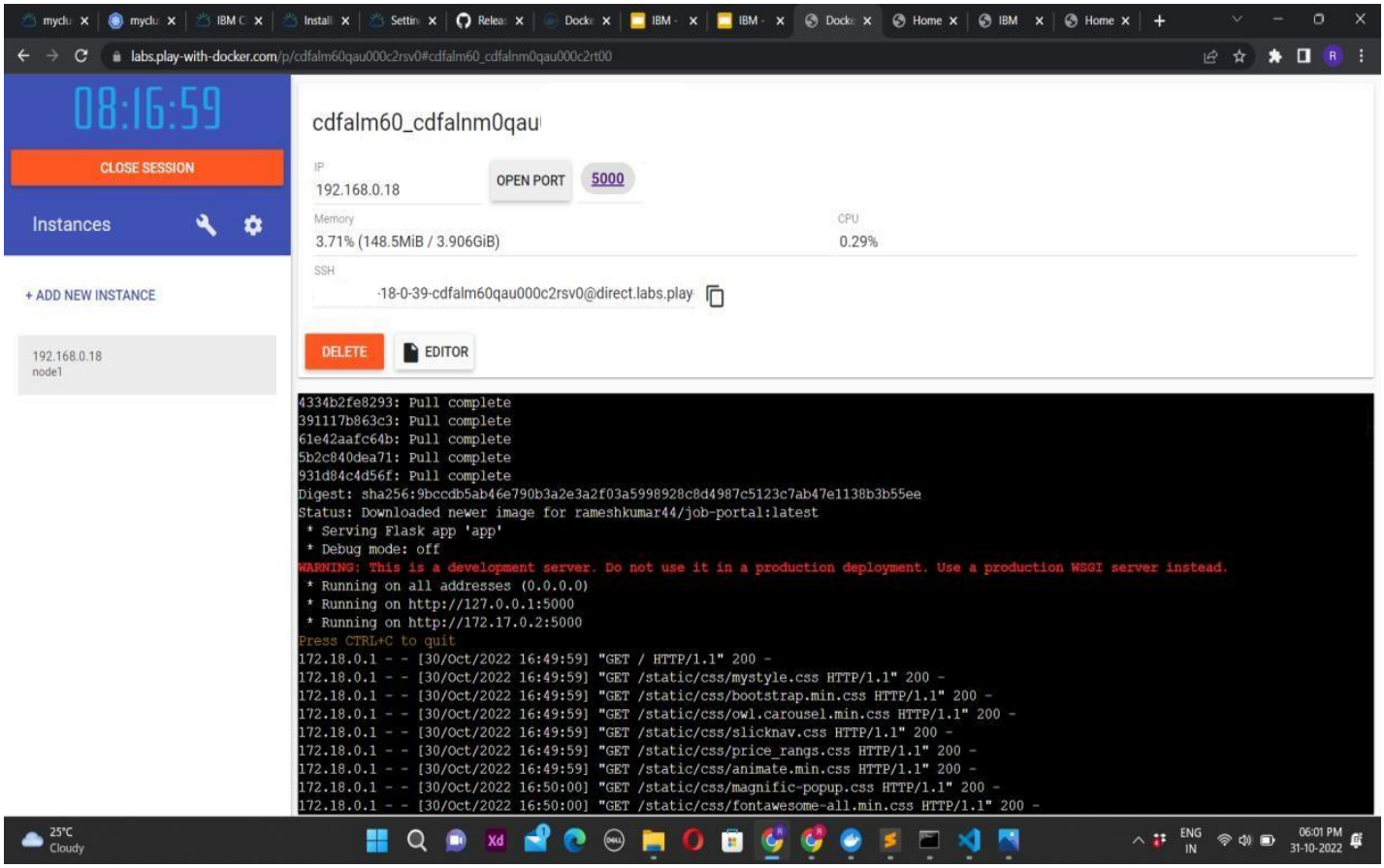
1. Pull an Image from docker hub and run it in docker playground.
2. Create a docker file for the job portal / flask application and deploy it in Docker desktop application.
3. Create a IBM container registry and push docker image of flask application or job portal app.
4. Create a Kubernetes cluster in IBM cloud and deploy flask application image or job portal image and also expose the same app to run in nodeport.

Step 1: Pull an Image from docker hub and run it in docker playground.

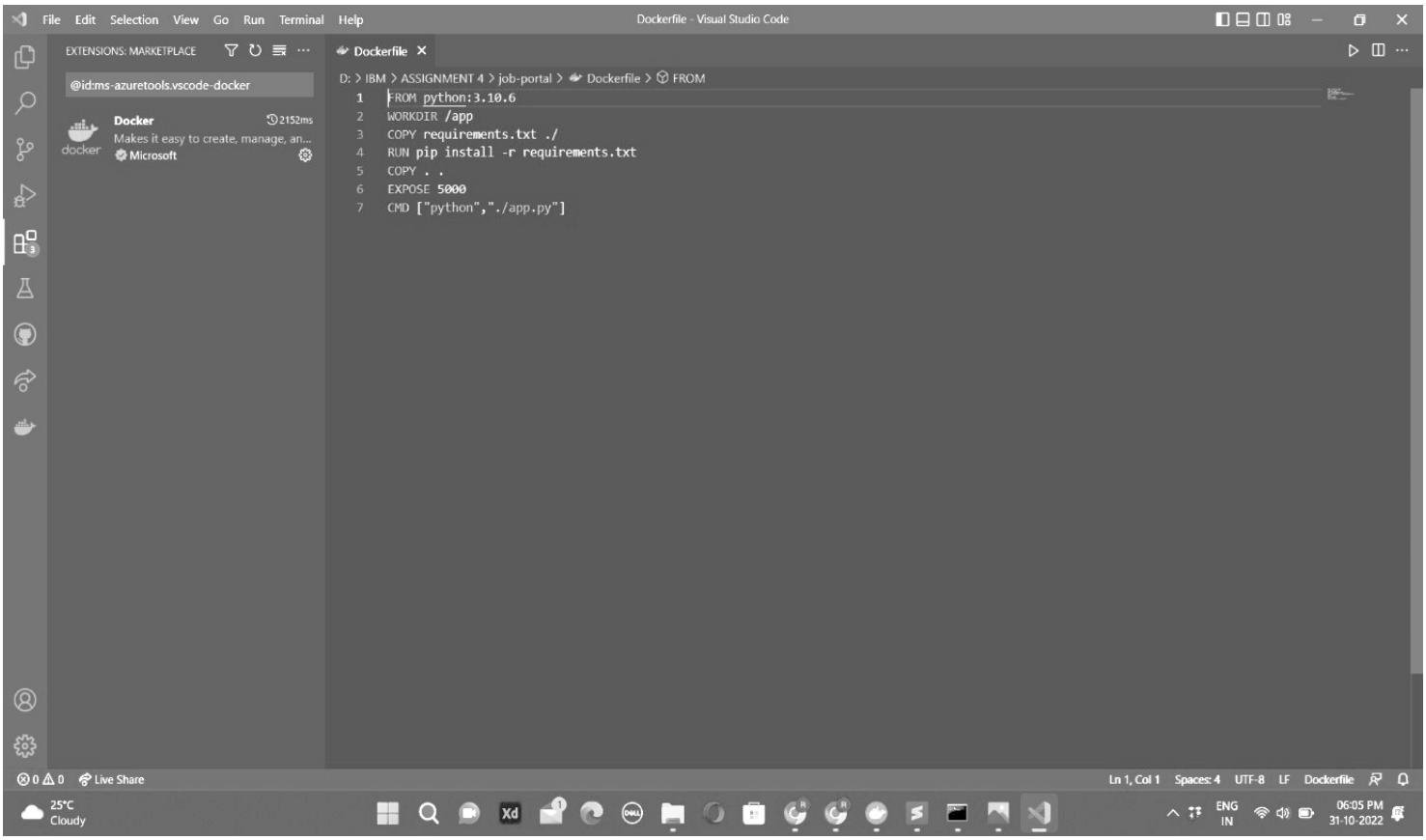


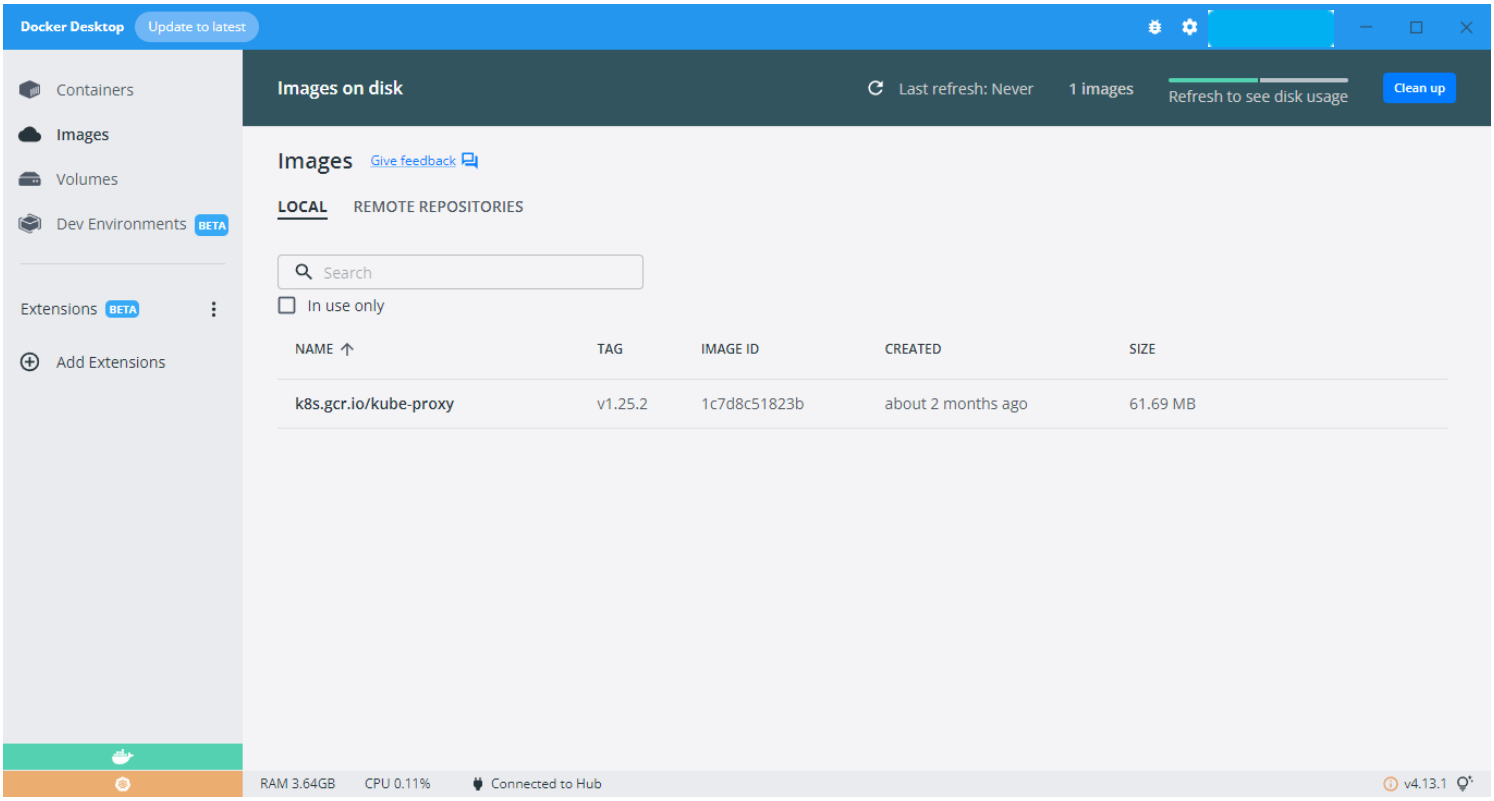


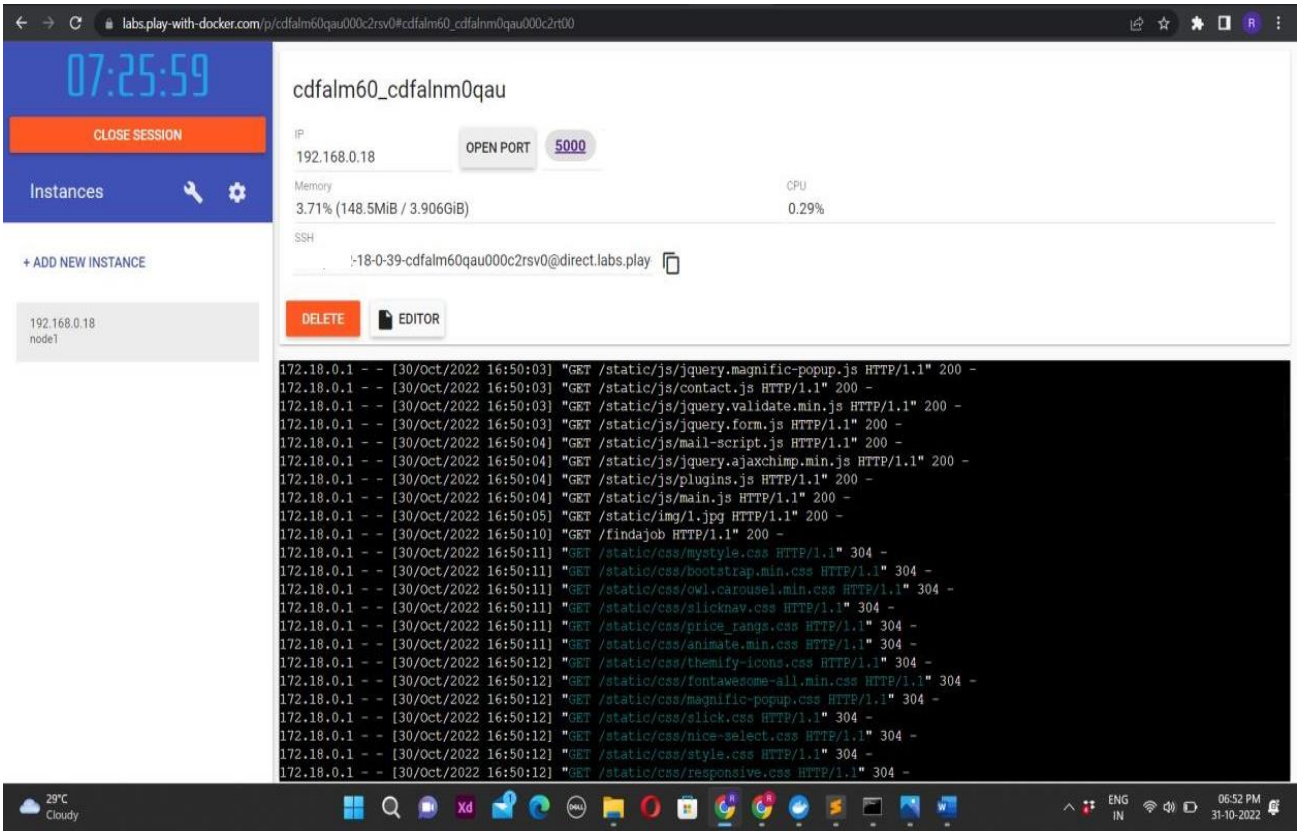

Gmail
YouTube
Maps
Create a new enviro...
IBM-EPBL/IBM-Proj...
03:59:37
CLOSE SESSION
Instances
+ ADD NEW INSTANCE
192.168.0.13
node1
cdr461m0_cdr464m0qau
IP
192.168.0.13
OPEN PORT
Memory
CPU
SSH
2-18-0-33-cdr461m0qau0009ee2k0@direct.labs.pla
DELETE
EDITOR
WARNING!!!!
This is a sandbox environment. Using personal credentials is HIGHLY! discouraged. Any consequences of doing so are completely the user's responsibilites.
The PWD team.
[node1] (local) root@192.168.0.13 ~
$
Type here to search
Rain to stop
ENG
07:50 PM
17-11-2022


labs.play-with-docker.com/p/cdfalm60qau000c2rsv0#cdfalm60_cdfalnm0qau000c2rt00
08:16:59
CLOSE SESSION
Instances
+ ADD NEW INSTANCE
192.168.0.18
node1
cdfalm60_cdfalnm0qau
IP
192.168.0.18
OPEN PORT
5000
Memory
3.71% (148.5MiB / 3.906GiB)
CPU
0.29%
SSH
18-0-39-cdfalm60qau000c2rsv0@direct.labs.play
DELETE
EDITOR
4334b2fe8293: Pull complete
391117b863c3: Pull complete
61e42aafc64b: Pull complete
5b2c840dea71: Pull complete
931d84c4d56f: Pull complete
Digest: sha256:9bccdb5ab46e790b3a2e3a2f03a5998928c8d4987c5123c7ab47e1138b3b55ee
Status: Downloaded newer image for rameshkumar44/job-portal:latest
* Serving Flask app 'app'
* Debug mode: off
WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.
* Running on all addresses (0.0.0.0)
* Running on http://127.0.0.1:5000
* Running on http://172.17.0.2:5000
Press CTRL+C to quit
172.18.0.1 - - [30/Oct/2022 16:49:59] "GET / HTTP/1.1" 200 -
172.18.0.1 - - [30/Oct/2022 16:49:59] "GET /static/css/mystyle.css HTTP/1.1" 200 -
172.18.0.1 - - [30/Oct/2022 16:49:59] "GET /static/css/bootstrap.min.css HTTP/1.1" 200 -
172.18.0.1 - - [30/Oct/2022 16:49:59] "GET /static/css/owl.carousel.min.css HTTP/1.1" 200 -
172.18.0.1 - - [30/Oct/2022 16:49:59] "GET /static/css/slicknav.css HTTP/1.1" 200 -
172.18.0.1 - - [30/Oct/2022 16:49:59] "GET /static/css/price_rangs.css HTTP/1.1" 200 -
172.18.0.1 - - [30/Oct/2022 16:49:59] "GET /static/css/animate.min.css HTTP/1.1" 200 -
172.18.0.1 - - [30/Oct/2022 16:50:00] "GET /static/css/magnific-popup.css HTTP/1.1" 200 -
172.18.0.1 - - [30/Oct/2022 16:50:00] "GET /static/css/fontawesome-all.min.css HTTP/1.1" 200 -
25°C
Cloudy
ENG
IN
06:01 PM
31-10-2022

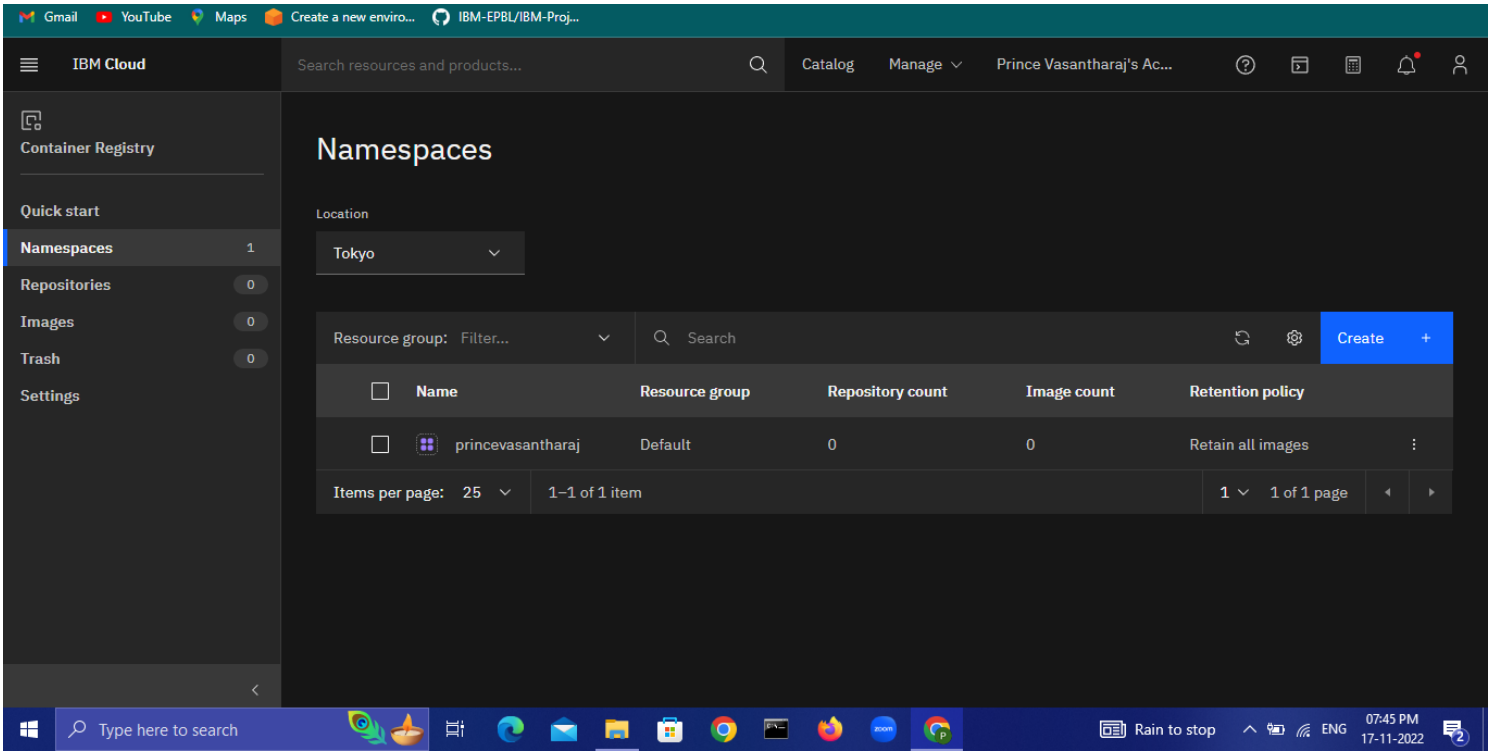
Step 2: Create a dockerfile for the job portal / flask application and deploy it in Docker desktop application.



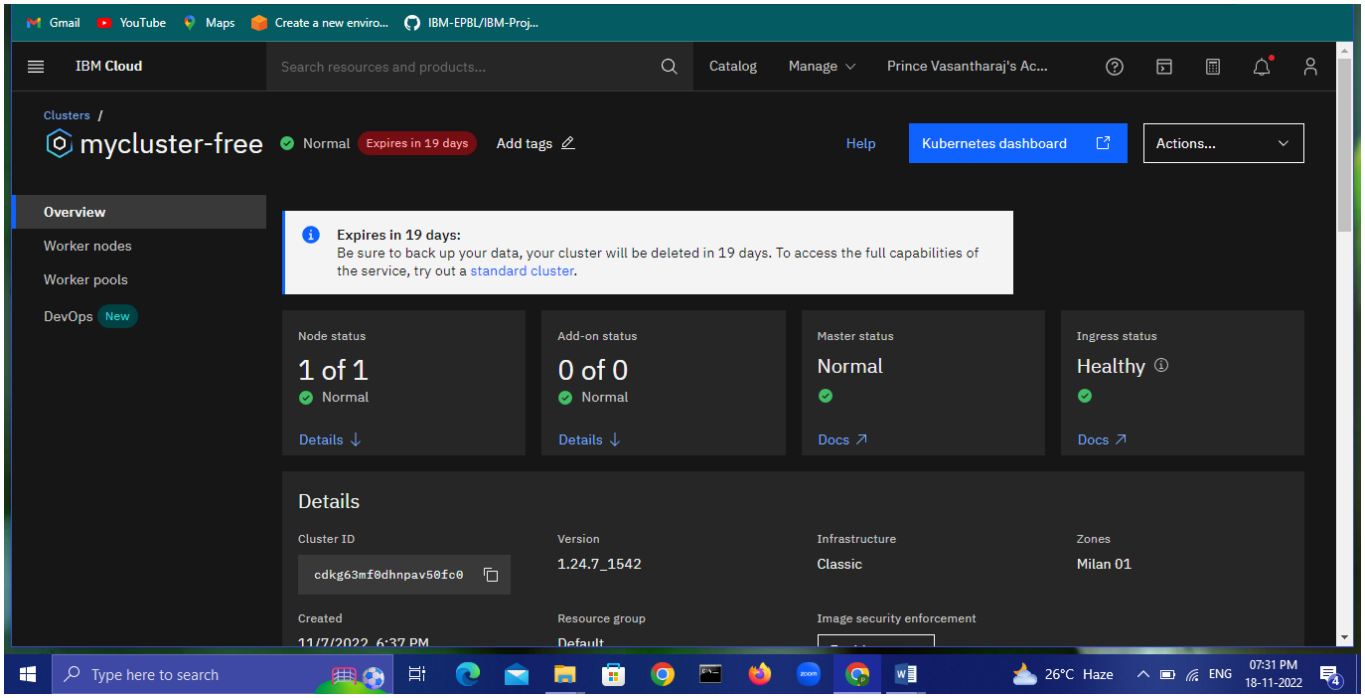


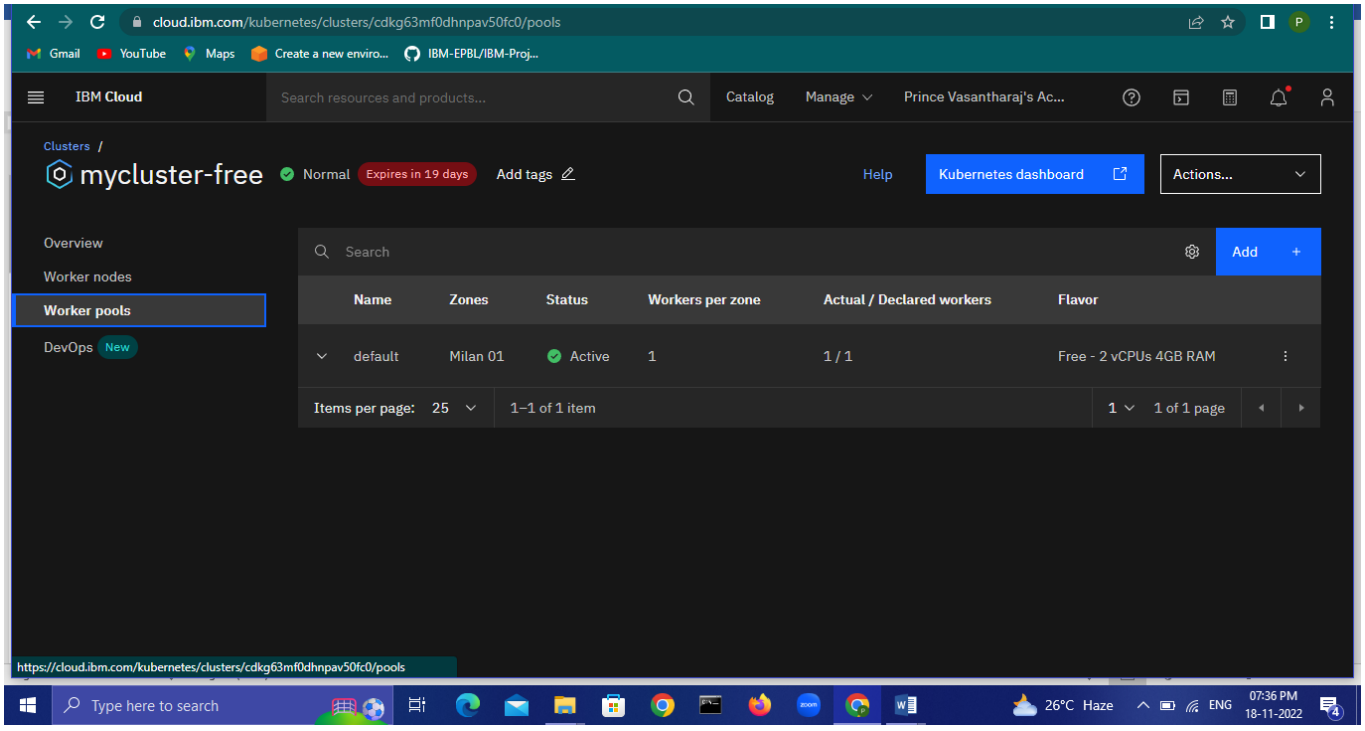


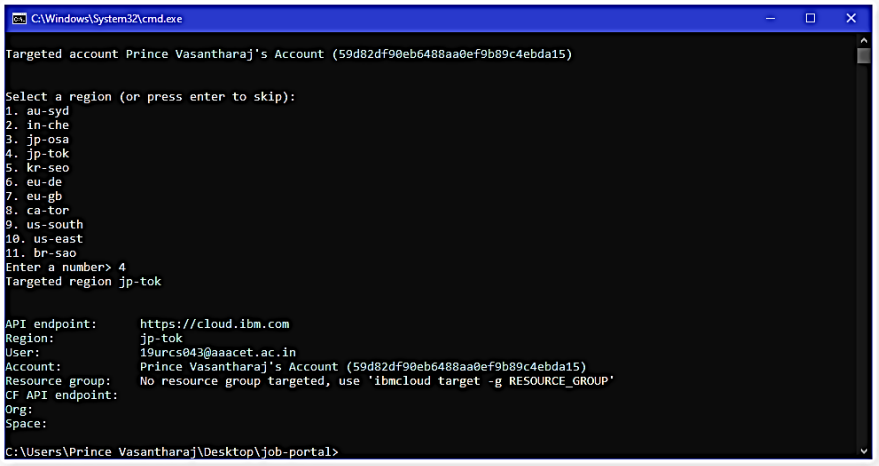
Step 3: Create a IBM container registry and push docker image of flask application or job portal app.



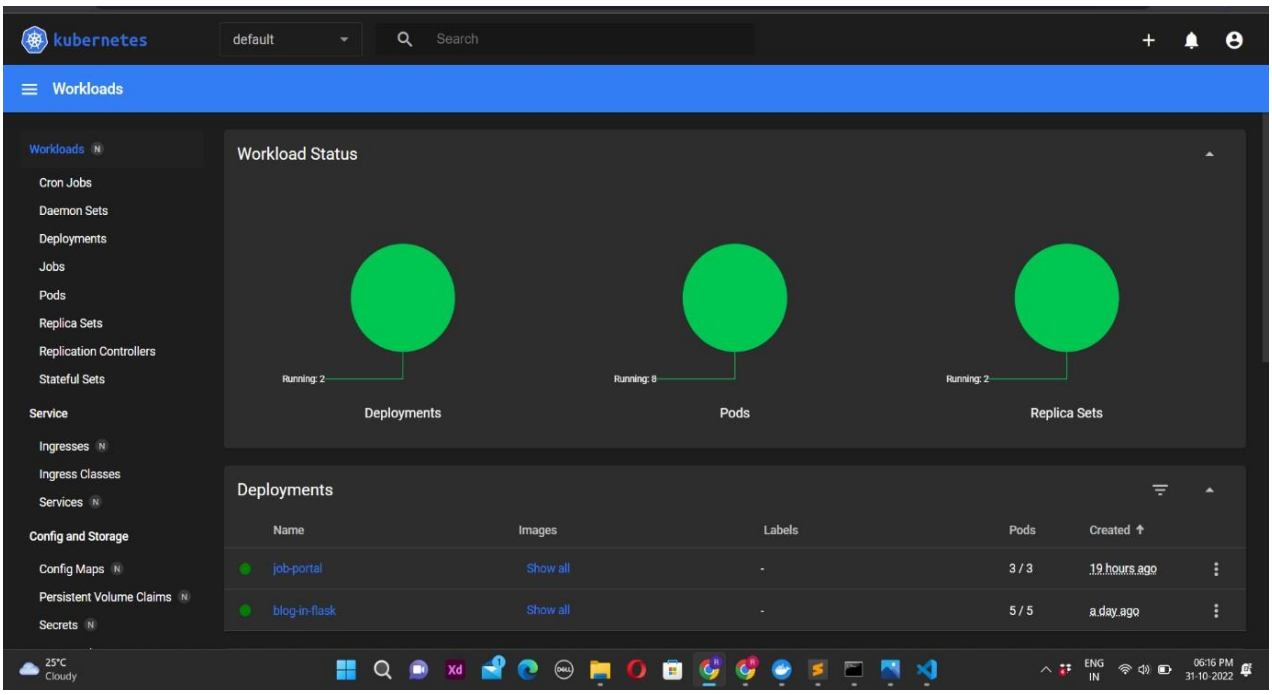
Step 4: Create a Kubernetes cluster in IBM cloud and deploy flask application image or job portal image and also expose the same app to run in Nodeport.

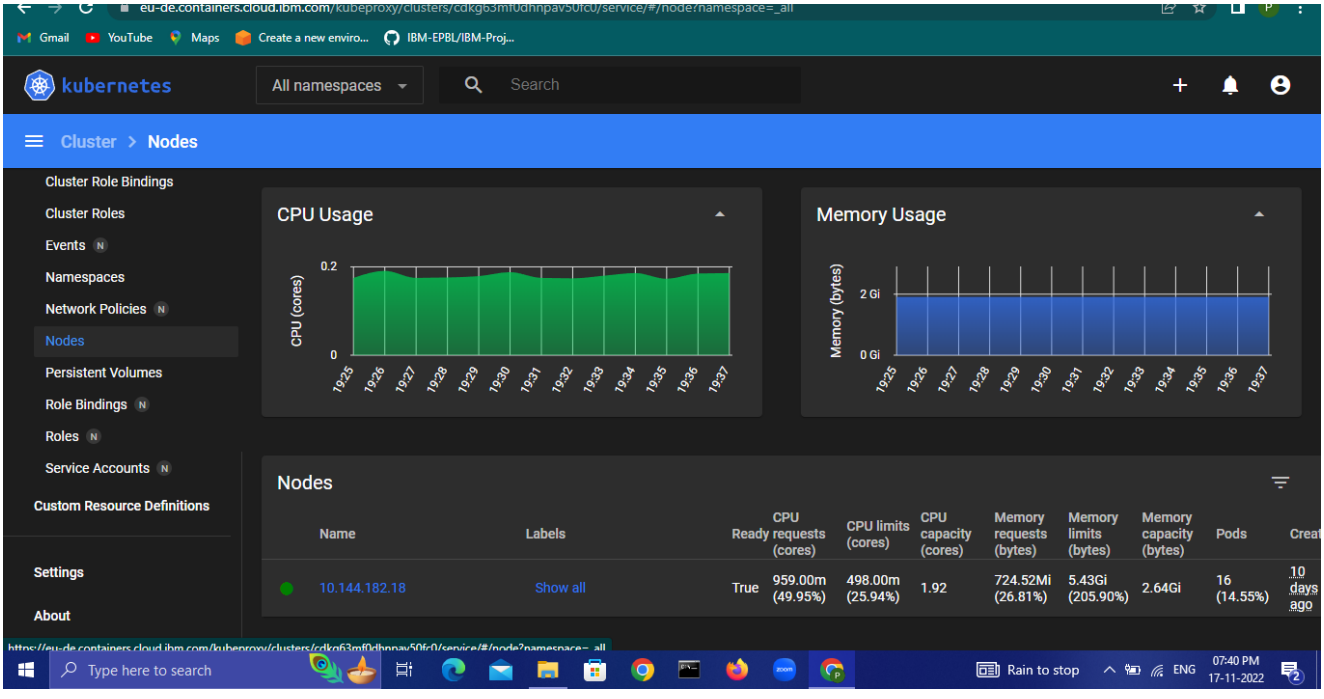


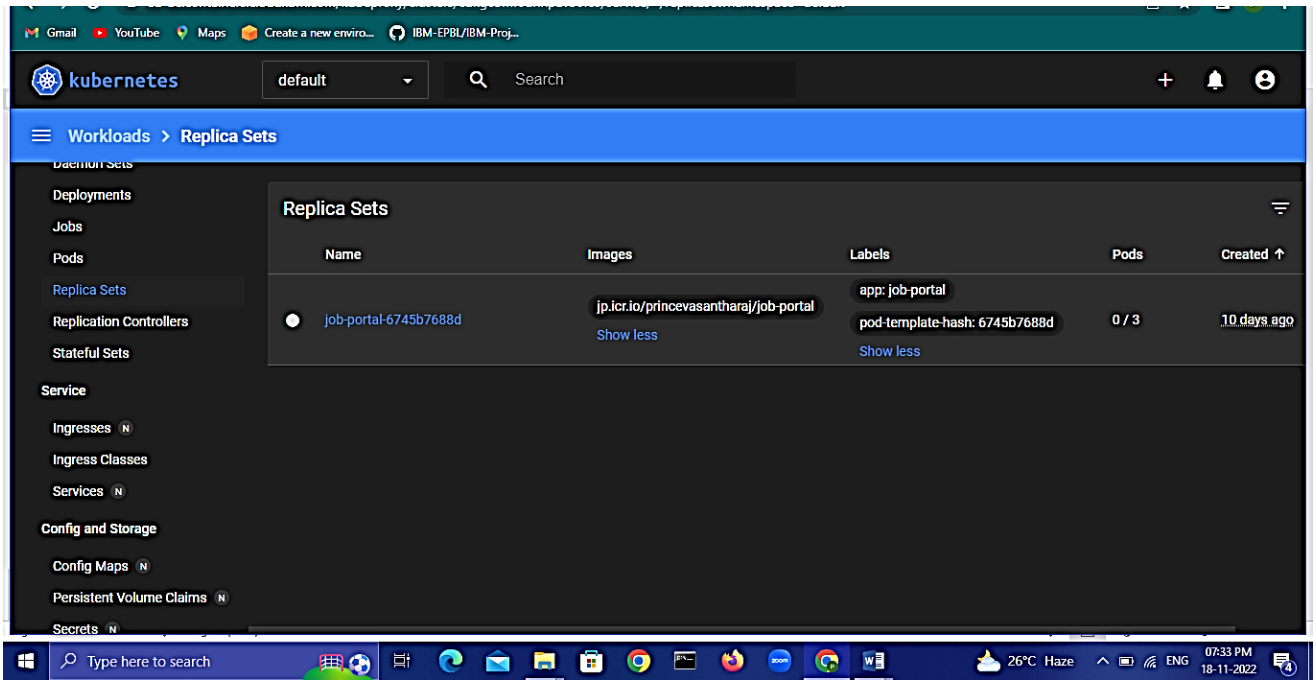


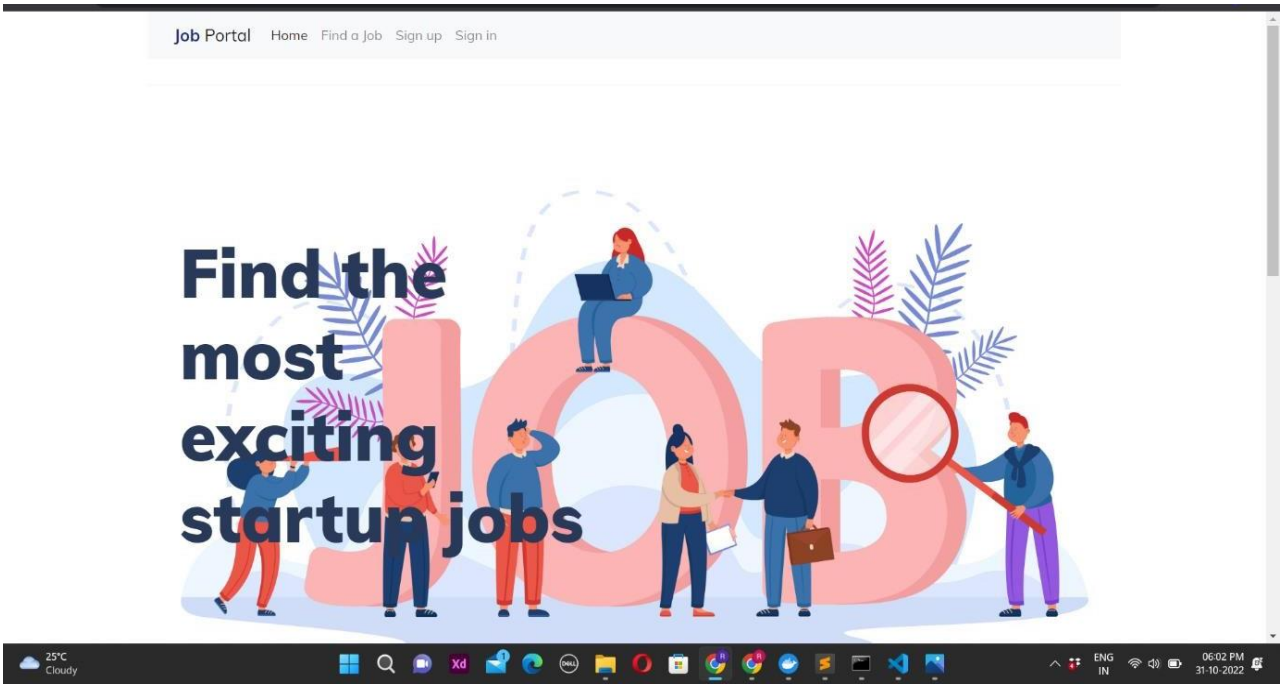

C:\Windows\System32\cmd.exe
Targeted account Prince Vasantharaj's Account (59d82df90eb6488aa0ef9b89c4ebda15)
Select a region (or press enter to skip):
1. au-syd
2. in-che
3. jp-osa
4. jp-tok
5. kr-seo
6. eu-de
7. eu-gb
8. ca-tor
9. us-south
10. us-east
11. br-sao
Enter a number> 4
Targeted region jp-tok
API endpoint: https://cloud.ibm.com
Region: jp-tok
User: 19urcs043@aaacet.ac.in
Account: Prince Vasantharaj's Account (59d82df90eb6488aa0ef9b89c4ebda15)
Resource group: No resource group targeted, use 'ibmcloud target -g RESOURCE_GROUP'
CF API endpoint:
Org:
Space:
C:\Users\Prince Vasantharaj\Desktop\job-portal>

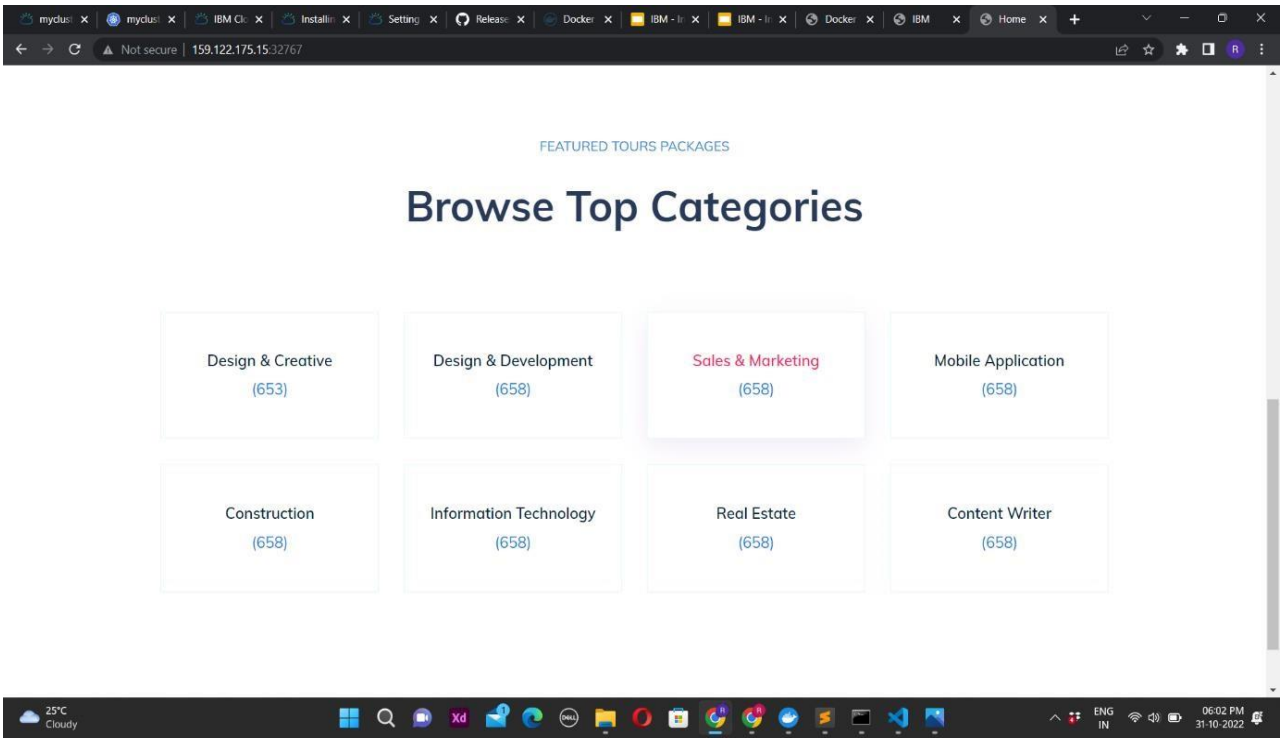
to search
28°C
ENG


kubernetes
default
Search
Workloads
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
Secrets
Workload Status
Running: 2
Deployments
Running: 8
Pods
Running: 2
Replica Sets
Deployments
Name
Images
Labels
Pods
Created
job-portal
Show all
3 / 3
19 hours ago
blog-in-flask
Show all
5 / 5
a day ago
25°C
Cloudy
ENG
IN
06:16 PM
31-10-2022


Gmail
YouTube
Maps
Create a new enviro...
IBM-EPBL/IBM-Proj...
kubernetes
All namespaces
Search
Cluster > Nodes
Cluster Role Bindings
Cluster Roles
Events
Namespaces
Network Policies
Nodes
Persistent Volumes
Role Bindings
Roles
Service Accounts
Custom Resource Definitions
Settings
About
CPU Usage
CPU (cores)
0.2
0
Memory Usage
Memory (bytes)
2 Gi
0 Gi
Nodes
Name
Labels
CPU Ready requests (cores)
CPU limits (cores)
CPU capacity (cores)
Memory requests (bytes)
Memory limits (bytes)
Memory capacity (bytes)
Pods
10.144.182.18
Show all
True
959.00m (49.95%)
498.00m (25.94%)
1.92
724.52Mi (26.81%)
5.43Gi (205.90%)
2.64Gi
16 (14.55%)
10 days ago
Type here to search
Rain to stop
ENG
07:40 PM
17-11-2022


Gmail
YouTube
Maps
Create a new enviro...
IBM-EPBL/IBM-Proj...
kubernetes
default
Search
Workloads > Replica Sets
Deployments
Jobs
Pods
Replica Sets
Replication Controllers
Stateful Sets
Service
Ingresses
Ingress Classes
Services
Config and Storage
Config Maps
Persistent Volume Claims
Secrets
Replica Sets
Name
Images
Labels
Pods
Created
job-portal-6745b7688d
jp.icr.io/princevasantharaj/job-portal
Show less
app: job-portal
pod-template-hash: 6745b7688d
Show less
0 / 3
10 days ago
Type here to search
26°C Haze
ENG
07:33 PM
18-11-2022


Job Portal
Home
Find a Job
Sign up
Sign in
Find the most exciting startup jobs
JOB
25°C
Cloudy
ENG
IN
06:02 PM
31-10-2022


Not secure
159.122.175.15:32767
FEATURED TOURS PACKAGES
Browse Top Categories
Design & Creative
(653)
Design & Development
(658)
Sales & Marketing
(658)
Mobile Application
(658)
Construction
(658)
Information Technology
(658)
Real Estate
(658)
Content Writer
(658)
25°C
Cloudy
ENG
IN
06:02 PM
31-10-2022