

Assignment -4

Docker And Kubernetes

Assignment Date	21 October 2022
Student Name	Mr. S. Ramesh Kannan
Student Roll Number	911719104054
Maximum Marks	2 Marks

Question-1:

1. Pull an image from docker hub and run it in docker Playground

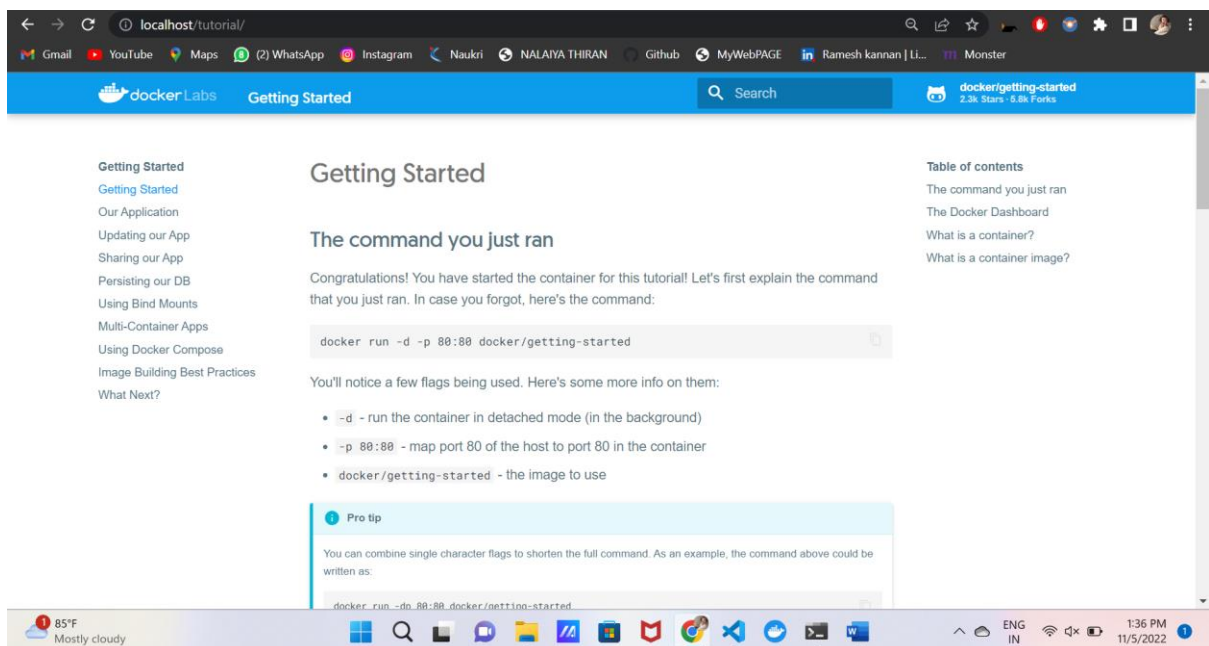
Output :

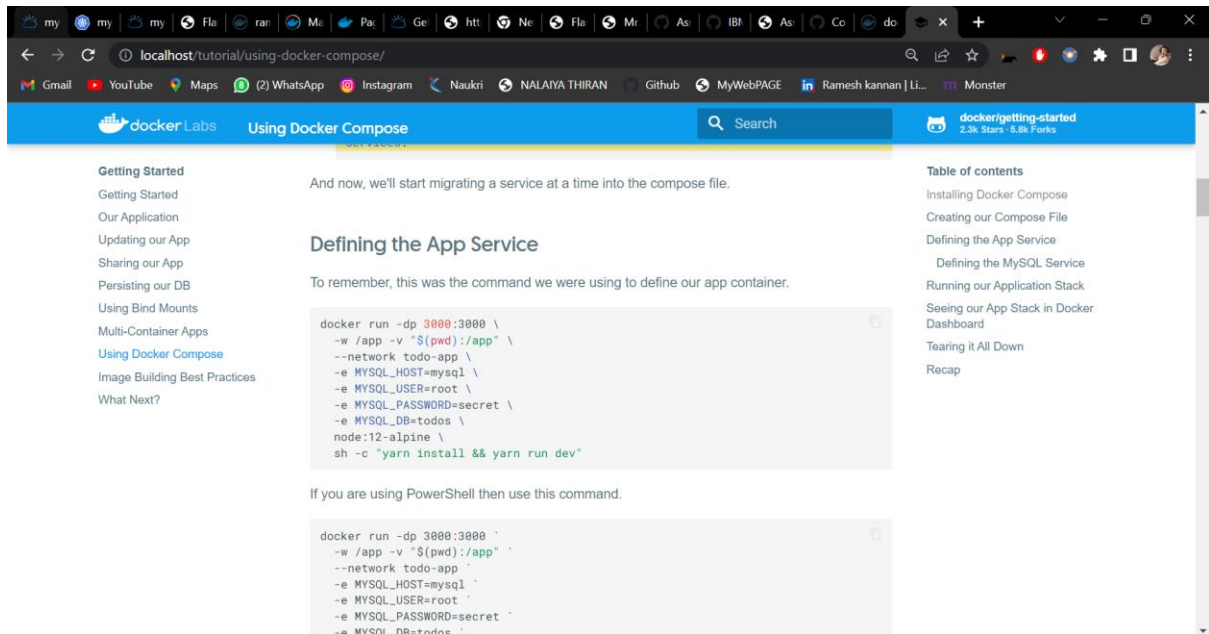
```
Command Prompt
C:\Users\rames>docker push rameshkannan0078/flask-app:tagname
The push refers to repository [docker.io/rameshkannan0078/flask-app]
4f9a7e20117c: Pushed
4d0924153ac2: Pushed
5f70bf18a086: Pushed
2fd777cc51ef: Pushed
3cd5b87f7a47: Pushed
7db5fd674176: Pushed
3d1475f3fac3: Pushed
6666686122fd: Pushed
994393dc58e7: Pushed
tagname: digest: sha256:78243223bfe4e09a6e70bc28bb93c7a2b0c34c0dc6058a9a40bela94044e7e3 size: 2201

C:\Users\rames>docker pull docker/getting-started
Using default tag: latest
latest: Pulling from docker/getting-started
df9b9388f04a: Pull complete
5867cba5fcbd: Pull complete
4b639e65cb3b: Pull complete
061ed9e2b976: Pull complete
bc19f3e8eeb1: Pull complete
4071be97c256: Pull complete
79b586f1a54b: Pull complete
0c9732f525d6: Pull complete
Digest: sha256:b558be874169471bd4e65bd6eac8c303b271a7ee8553ba47481b73b2bf597aae
Status: Downloaded newer image for docker/getting-started:latest
docker.io/docker/getting-started:latest

C:\Users\rames>docker run -d -p 80:80 docker/getting-started
c1dedf7e0cbb5753def463a579e370b6db85fd525eb60fea7f9579a24871c01

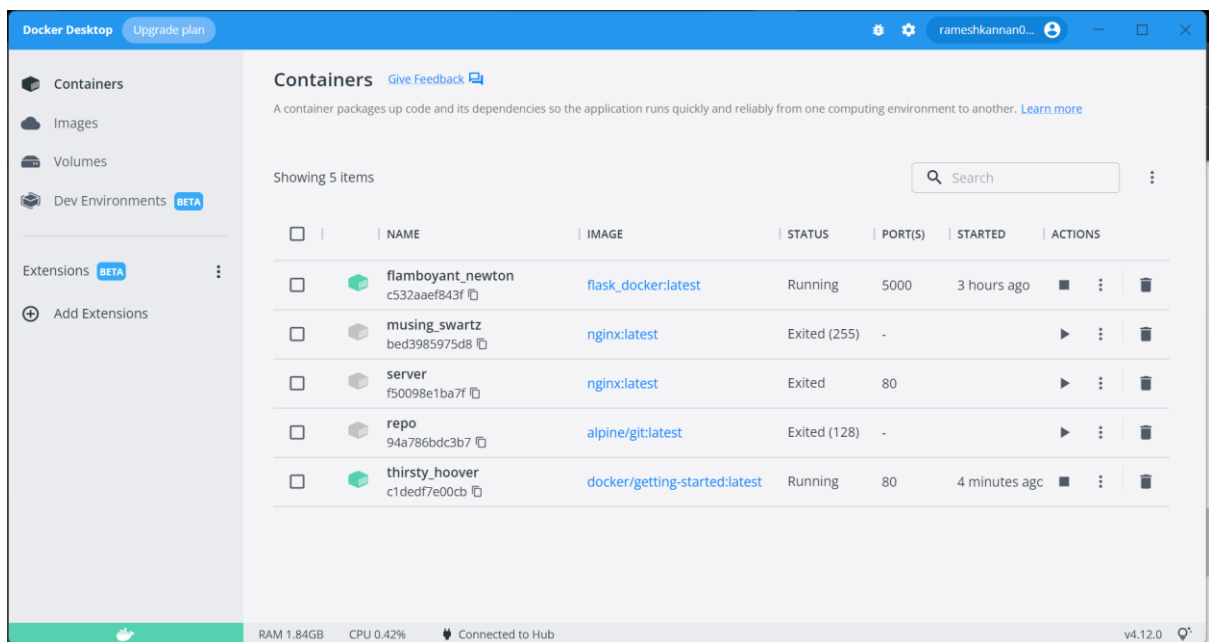
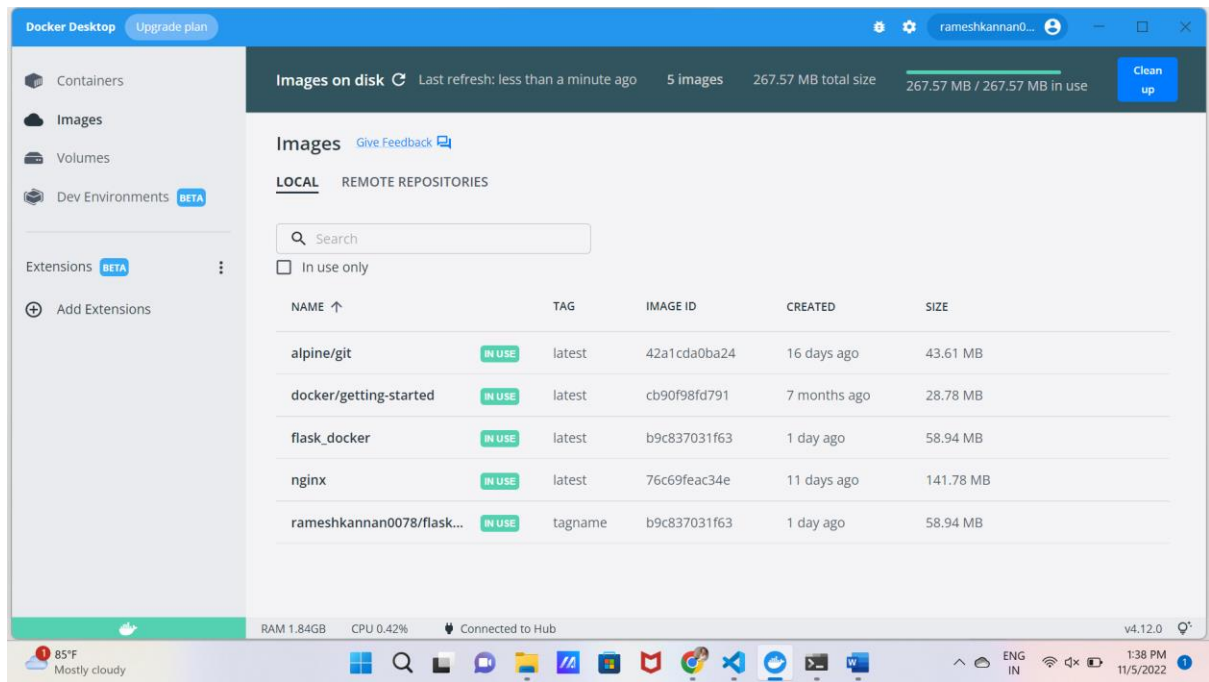
C:\Users\rames>
```

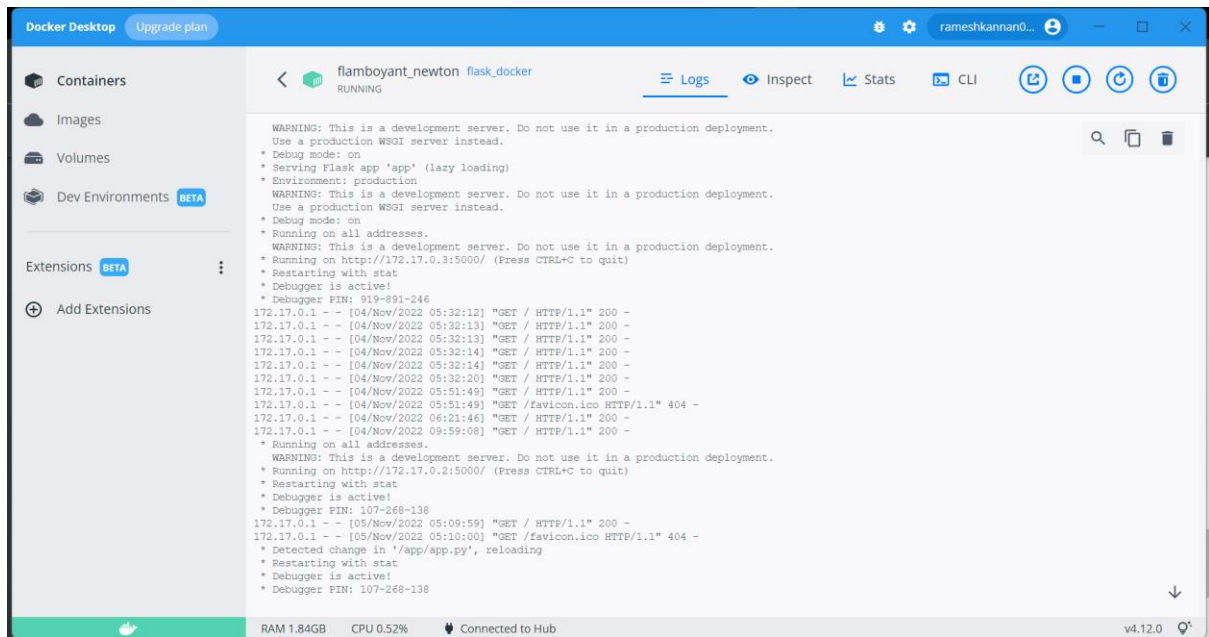




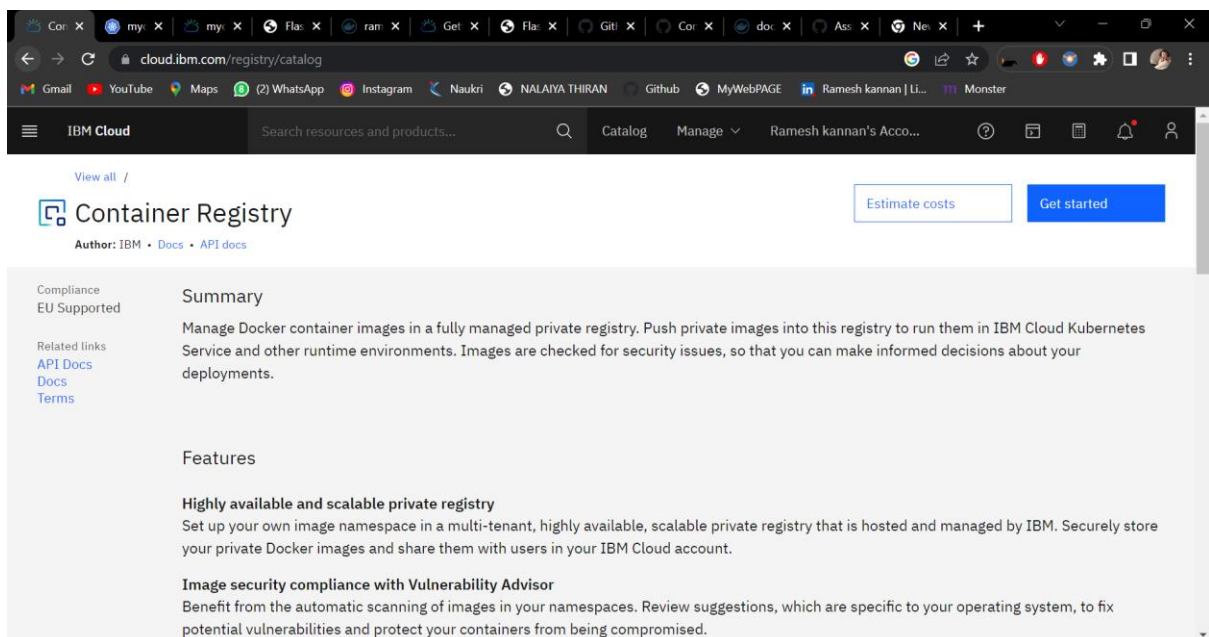
2.Create a docker file for the Hello world application and deploy it in Docker desktop application.

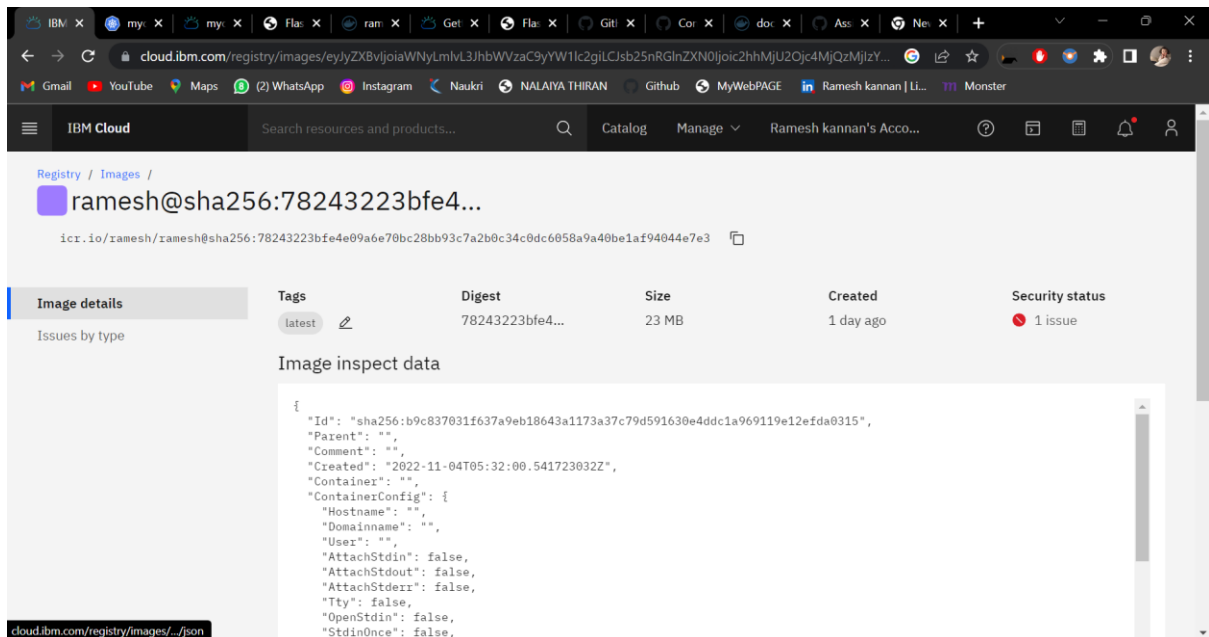
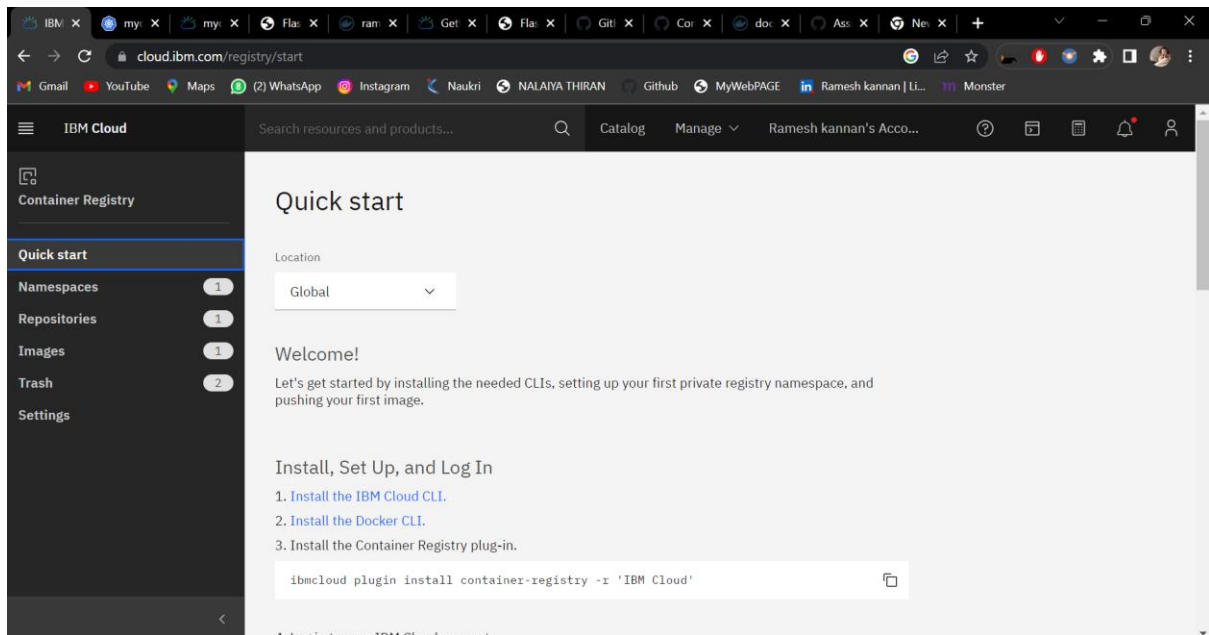
```
FROM python:3.8-alpine
LABEL maintainer="Kunal Malhotra, kunal.malhotra1@ibm.com"
RUN mkdir /app
WORKDIR /app
COPY . /app
RUN pip install -r requirements.txt
EXPOSE 5000
ENTRYPOINT [ "python" ]
CMD [ "app.py" ]
```





3.Create a IBM container registry and deploy helloworld app.





4. Create a Kubernetes cluster in IBM cloud and deploy helloworld image or also expose the same app to run in nodeport.

my: x my: x my: x Fla: x ram x Get x Fla: x Gitl x Cor x doc x Ass x Ne: x +

cloud.ibm.com/kubernetes/clusters/cdgev9bf0lsofq19r7t0/overview

IBM Cloud Search resources and products... Catalog Manage Ramesh kannan's Acco...

Clusters / mycluster-free Normal Expires in 26 days Add tags Help Kubernetes dashboard Actions...

Overview Worker nodes Worker pools DevOps New

Expires in 26 days:
Be sure to back up your data, your cluster will be deleted in 26 days. To access the full capabilities of the service, try out a [standard cluster](#).

Node status: 1 of 1 Normal Details

Add-on status: 0 of 0 Normal Details

Master status: Normal Docs

Ingress status: Unknown Docs

Details

Cluster ID	Version	Infrastructure	Zones
cdgev9bf0lsofq19r7t0	1.24.7_1542	Classic	Milan 01

https://cloud.ibm.com/kubernetes/clusters/cdgev9bf0lsofq19r7t0/overview

my: x my: x my: x Fla: x ram x Get x Fla: x Gitl x Cor x doc x Ass x Ne: x +

cloud.ibm.com/kubernetes/clusters/cdgev9bf0lsofq19r7t0/nodes

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Clusters / mycluster-free Normal Expires in 26 days Add tags Help Kubernetes dashboard Actions...

Overview Worker nodes Worker pools DevOps New

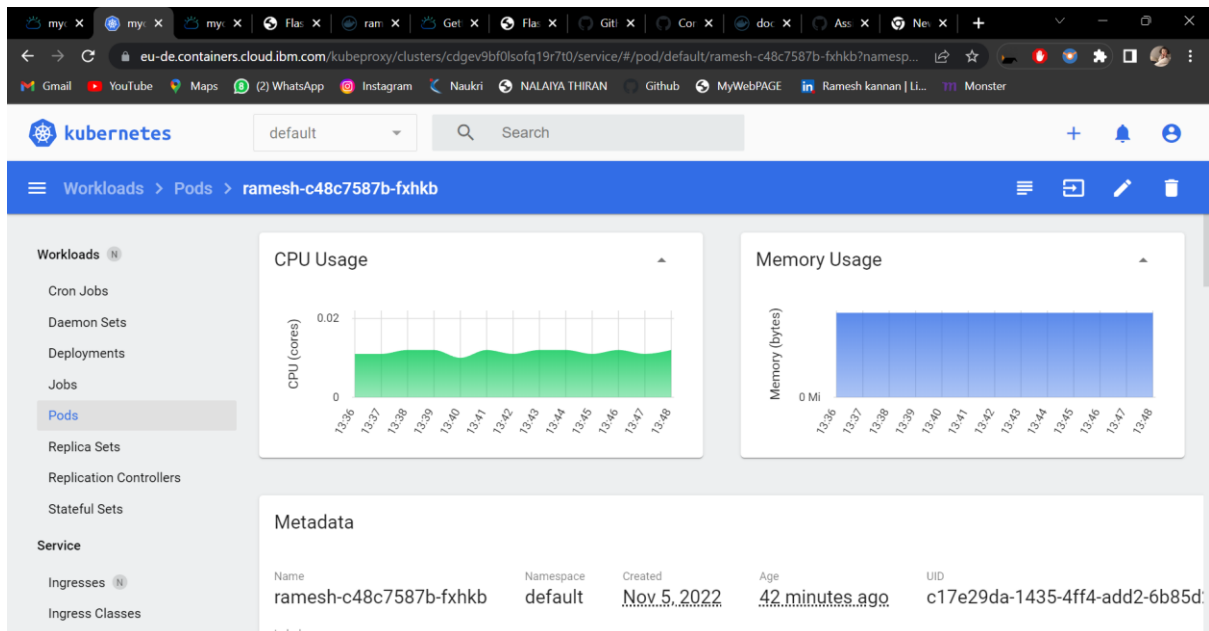
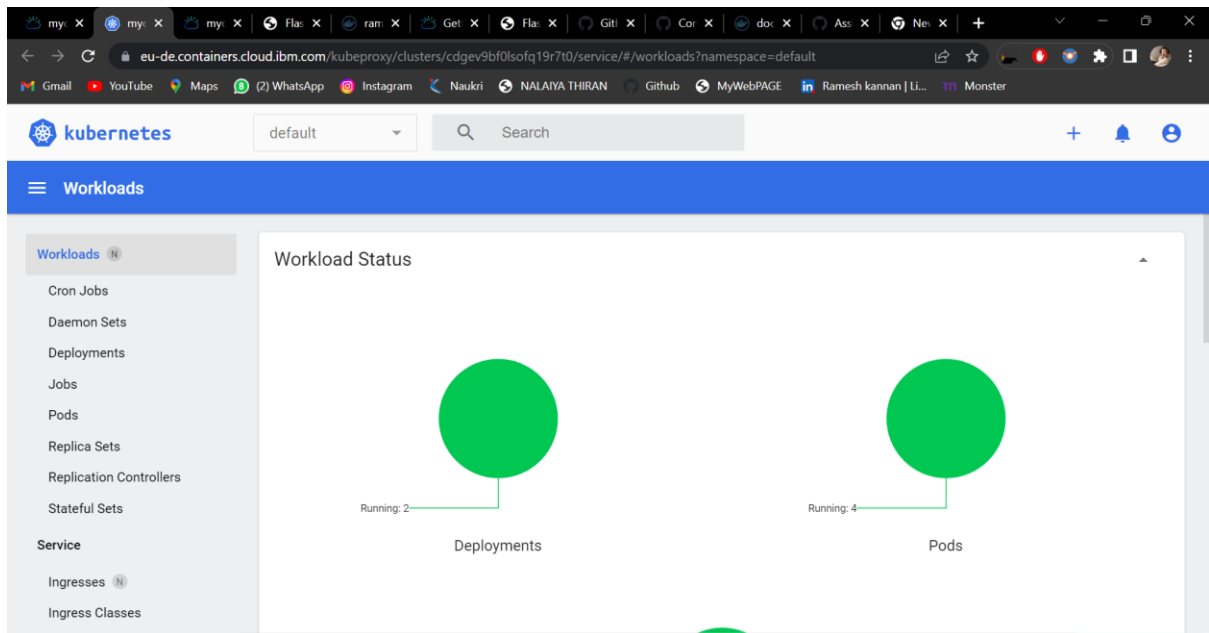
Pool: Filter... Search Add +

<input type="checkbox"/>	Name	Status	Worker pool	Zone	Private IP	Public IP	Version
<input type="checkbox"/>	0000002c	Normal	default	Milan 01	10.144.216.6	159.122.187.23	1.24.6_1541

ID: kube-cdgev9bf0lsofq19r7t0-myclusterfr-default-0000002c

Status	Flavor	Private VLAN	Public VLAN
--	Free - 2 vCPUs 4GB RAM	2218181	2218179

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eu-de.containers.cloud.ibm.com/kubeproxy/clusters/cdgev9bf0lsofq19r710/service/#/service?namespace=default

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kubernetes default Search +

Service > Services

Stateful Sets

Service

Ingresses (1)

Ingress Classes

Services (1)

Config and Storage

Config Maps (1)

Persistent Volume Claims (1)

Secrets (1)

Storage Classes

Cluster

Cluster Role Bindings

Cluster Roles

Name	Labels	Type	Cluster IP	Internal Endpoints	External Endpoints
ramesh	Show all	NodePort	172.21.200.43	ramesh:5000 TCP ramesh:30495 TCP	-
liberty	Show all	NodePort	172.21.183.27	liberty:9080 TCP liberty:31052 TCP	-
kubernetes	Show all	ClusterIP	172.21.0.1	kubernetes:443 TCP kubernetes:0 TCP	-

myclu: myclu: myclu: Fla: x ramesh Gettin: Flask f Github Conve: docker Assign: New T: New T: +

Not secure | 159.122.187.23:30495

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This is a Ramesh Kannan Studying Bachelor Of Computer Science and Engineering in MountZion College Of Engineering And Technology