## Assignment - 4
## Docker and Kubernetes

| Date | 5 November 2022 |
|---|---|
| Name | Divya Bharathi.J |
| Team Id | PNT2022TMID50246 |
| Maximum Marks | 2 Marks |

**Question-1:**

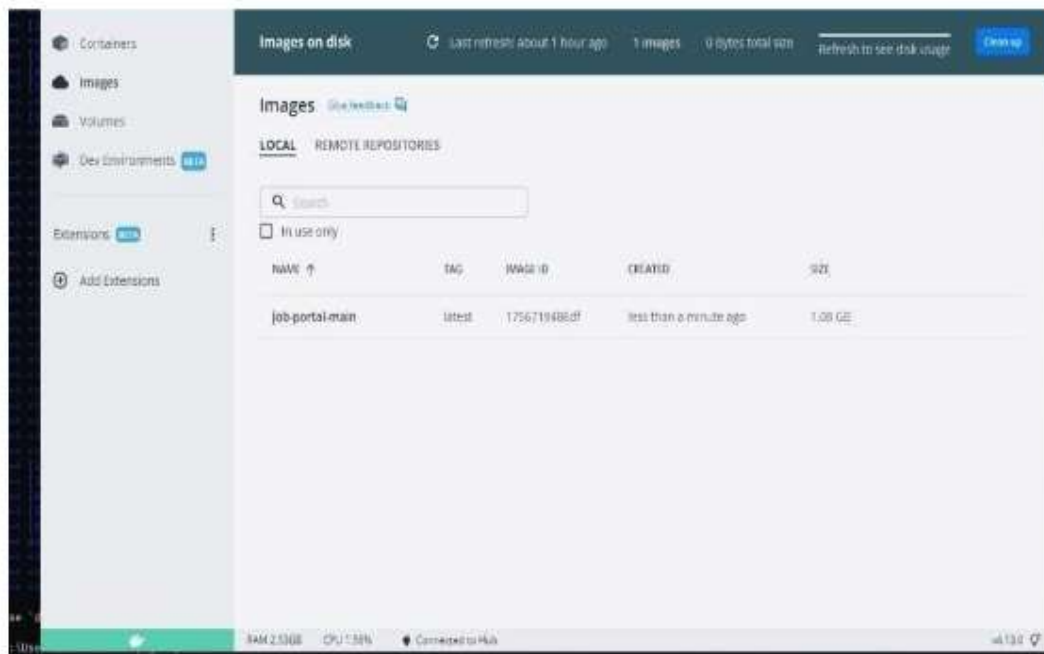**1. Pull an Image from docker hub and run it in docker playground.**

Solution:

docker run --rm -p 8787:8787 rocker/verse docker
pull rocker/verse
docker login --username=nishanthc --email=ssnehasri178@gmail.com
WARNING: login credentials saved in
/home/nishanthc/.docker/config.jsonLogin Succeeded

REPOSITORY        TAG     IMAGE ID      CREATED      SIZE
verse_gapminder_gsl   latest    023ab91c6291   3 minutes ago 1.975 GB
verse_gapminder    latest     bb38976d03cf 13 minutes ago 1.955 GB
rocker/verse latest   0168d115f220 3 days ago 1.954 GB
docker     tag      bb38976d03cf
nishanthc
/verse_gapminder:firsttry    docker
push nishanthc
/verse_gapminder

Saving and loading images
docker save verse_gapminder
docker save verse_gapminder > verse_gapminder.tar docker
load --input verse_gapminder.tar
docker load --input verse_gapminder.tar

## uifd/ui-for-docker ☆

By uifd • Updated a years ago

A web interface for Docker, formerly known as DockerUI. Deprecated, use Portainer for new features.

Other    Image

**Overview**    Tags

### UI For Docker

This logo is deprecated. Development continues at portainer/portainer.

chat    on gitter

UI For Docker is a web interface for the Docker Remote API. The goal is to provide a pure client side implementation up it is

**Docker Pull Command**

docker pull uifd/ui-for-docker    📋

**Question-2:**

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

SOLUTION:

**QUESTION-3:**

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

Solution:

```
    <html>
  <body>
      Hello, IBM Cloud World!
  </body> </html>---
applications:
- buildpack: https://github.com/cloudfoundry/staticfile-buildpack.git
  host: simple-website-${random} name: simple-website-${random}
  memory: 64M
  stack: cflinuxfs2
```

## DEPLOY

INPUT    JOBS    ENVIRONMENT PROPERTIES

DELETE

ADD JOB

Rolling De...

### Rolling Deploy

REMOVE

Deploy configuration

**Deployer type**

Cloud Foundry

**IBM Cloud region**

US South – https://api.ng.bluemix.net

**Organization**

bluemix_devops@ibm.com

**Space**

demo

**Application name**

simple-website-ae7f5ff6

```
1   {
2       "ServiceId": "com.ibm.cloudoe.orion.client.deploy",
3       "Params": {
4           "Target": {
5               "Url": "https://api.ng.bluemix.net",
6               "Org": "bluemix_devops@ibm.com",
7               "Space": "demo"
8           },
9           "Name": "simple-website-ae7f5ff6",
10          "Instrumentation": {}
11      },
12      "Path": "manifest.yml",
13      "Type": "Cloud Foundry"
14  }
```

## Hello, IBM Cloud World!

**QUESTION-4:**

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.

Solution:

ibmcloud target -g <resource_group_name>ibmcloud cr nishanthc-add <your_nishanthc>ibmcloudresource service-instance-create example-postgresql databases-for-postgresql standard us- southibmcloud ks cluster-service-bind mycluster default example-postgresqlgit clone -b node git@github.com:IBM-Cloud/clouddatabases-helloworld-kubernetes-examples.gitspec:

   replicas: 3name: cloudpostgres-nodejs-app image:

 "registry.<region>.bluemix.net/<namespace>/icdpg" # Edit me

  imagePullPolicy: Alwaysibmcloud cr regionYou are targeting region 'us-south', the registry is 'registry.ng.bluemix.net'.ibmcloud cr build -t registry.ng.bluemix.net/<namespace>/icdpg .ibmcloud cr images env:

     - name: BINDING valueFrom:

```yaml
        secretKeyRef: name:

          <postgres-secret-name> # Edit me key:

          binding

apiVersion: v1 kind:

Service

metadata: name:

cloudpostgres-service labels:

run: clouddb-demo spec:

  type: NodePort

  selector: run:

    clouddb-demo

  ports:

  -  protocol:  TCP

    port:      8080

    nodePort:

    30081    kubectl

    apply          -f

    clouddb-deploy

    ment.yml

    deployment.ap

    ps/icdpostgres-

    app      created

    service/cloudpo

    stgres-service

    created
```

kubectl get pods -o wideibmcloud ks workers <your_cluster_name>

# Hello World!

Thanks for creating an IBM Cloud Databases for PostgreSQL database.

## Add a word to the database

The word `hello` is defined as `a greeting` [ Add ]

## Database output

```
The word bye is defined as a goodbye
The word bye is defined as a farewell
The word hello is defined as a greeting
The word hello is defined as a greeting
The word hello bob is defined as a greeting
The word hello bob is defined as a greeting
```