

Assignment -4

Assignment Date	19 September 2022
Team Roll Number	PNT2022TMID11973
Maximum Marks	2 Marks

Question-1:

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

The image shows two screenshots of the Docker Playground interface, illustrating the steps to pull and run a Docker image.

Top Screenshot: The interface shows a session titled "cdr3lgv9_cdr3lj791rrg00aceg6g" with IP 192.168.0.13. The terminal displays the command to pull the image:

```
$ docker pull sandeepdoodigani/plasmaapplication
Using default tag: latest
latest: Pulling from sandeepdoodigani/plasmaapplication
ff3a5c916c92: Pull complete
44014a6ad6bc: Pull complete
9e372a7142ef: Pull complete
3ab6d28ced3c: Pull complete
27f34cba021a: Pull complete
a5b11f98dd3c: Pull complete
ed6e998eca84: Pull complete
979f0e8bca01: Pull complete
6e44f675ee9d: Pull complete
Digest: sha256:193e1d9a311aa6dcef22c816f731546658398ac500f559c02b23ac6c3489aec7
Status: Downloaded newer image for sandeepdoodigani/plasmaapplication:latest
docker.io/sandeepdoodigani/plasmaapplication:latest
[node1] (local) root@192.168.0.13 ~
$ docker run -p 8080:8080 sandeepdoodigani/plasmaapplication
Unable to find image 'sandeepdoodigani/plasmaapplication:latest' locally
docker: Error response from daemon: pull access denied for sandeepdoodigani/plasmaapplication, repository does not exist or may require 'docker login': denied: requested access to the resource is denied.
See 'docker run --help'.
[node1] (local) root@192.168.0.13 ~
$
```

Bottom Screenshot: The terminal shows the command to run the image, which fails with an error. The user then lists the images and runs the command again, which succeeds:

```
$ docker images
REPOSITORY          TAG         IMAGE ID      CREATED       SIZE
sandeepdoodigani/plasmaapplication  latest     6b9dc3d4cb6e  18 months ago  105MB
[node1] (local) root@192.168.0.13 ~
$ docker run -p 8080:8080 sandeepdoodigani/plasmaapplication
* Serving Flask app 'app' (lazy loading)
* Environment: production
WARNING: This is a development server. Do not use it in a production deployment.
Use a production WSGI server instead.
* Debug mode: off
* Running on all addresses.
WARNING: This is a development server. Do not use it in a production deployment.
* Running on http://172.17.0.2:8080/ (Press CTRL+C to quit)
```



```
Command Prompt

C:\Users\sivan>ibmcloud
NAME:
  ibmcloud - A command line tool to interact with IBM Cloud
  Find more information at: https://ibm.biz/cli-docs

USAGE:
  [environment variables] ibmcloud [global options] command [arguments...] [command options]

VERSION:
  2.12.1+b848ba1-2022-10-31T15:08:10+00:00

COMMANDS:
  account      Manage accounts, users, orgs and spaces
  api          Set or view target API endpoint
  billing      Retrieve usage and billing information
  catalog      Manage catalog
  cf           Run Cloud Foundry CLI with IBM Cloud CLI context
  config       Write default values to the config
  dev         Create, develop, deploy, and monitor applications
  enterprise   Manage enterprise, account groups and accounts.
  iam         Manage identities and access to resources
  login       Log user in
  logout      Log user out
  plugin      Manage plug-ins and plug-in repositories
  regions     List all the regions
  resource    Manage resource groups and resources
  resources   List all resources
  sl          Manage Classic Infrastructure services
  target      Set or view the targeted region, account, resource group, org or space
  update      Update CLI to the latest version
  version     Print the version
  help, h     Show help

Enter 'ibmcloud help [command]' for more information about a command.

ENVIRONMENT VARIABLES:
  IBM_CLOUD_COLOR=false          Do not colorize output
  IBM_CLOUD_VERSION_CHECK=false  Do not check latest version for update
  IBM_CLOUD_HTTP_TIMEOUT=5       A time limit for HTTP requests
  IBM_CLOUD_API_KEY=api_key_value API Key used for login
  IBM_CLOUD_CR_VPC_URL=url_value The custom server URL to use when obtaining an instance identity token and IAM token as a VPC VSI compute resource. This value will replace the default server endpoint of the VPC VSI instance identity token service.
  IBM_CLOUD_CR_VSI_INSTANCE_ID= Compute resource token used for login. Can either be a token string or a path to a @file.
  IBM_CLOUD_CR_PROFILE=profile_value The name, ID, or CRN of the linked trusted IAM profile to be used when obtaining the IAM access token. If authenticating as a VPC VSI compute resource, only specifying a trusted profile CRN or ID is supported.
  IBM_CLOUD_TRACE=true          Print API request diagnostics to stdout
  IBM_CLOUD_TRACE_PATH=to/trace.log Append API request diagnostics to a log file
  IBM_CLOUD_HOME=to/dir        Path to config directory
```

```
Command Prompt

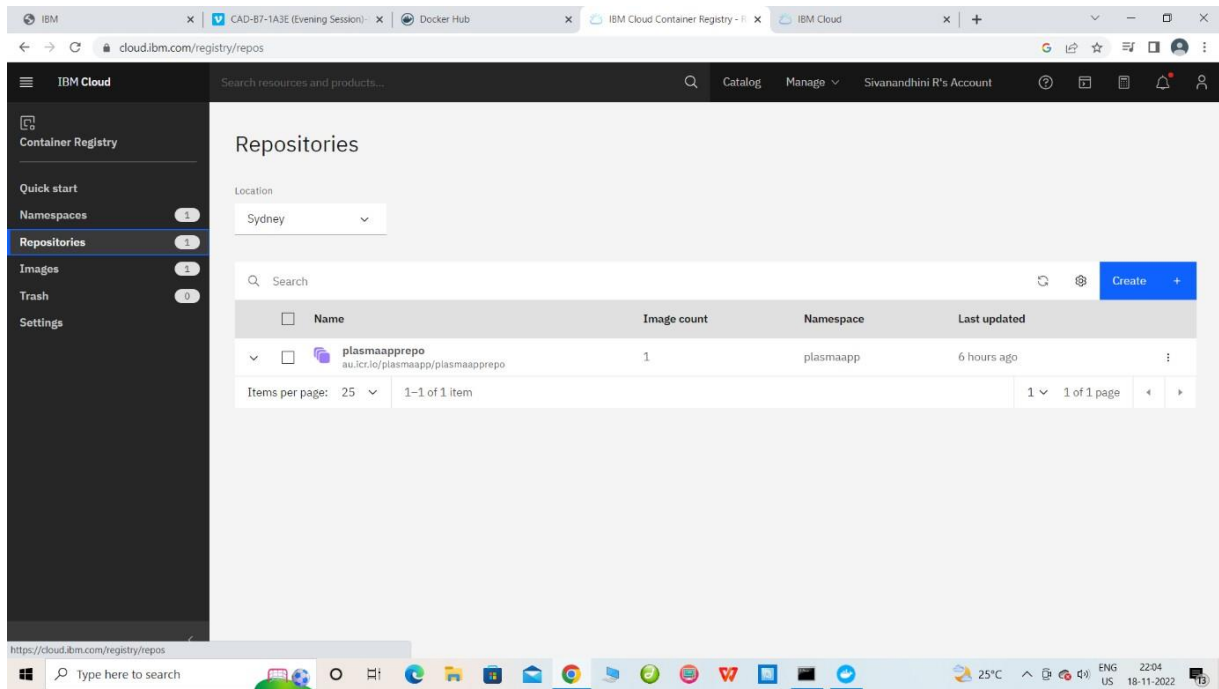
Microsoft Windows [Version 10.0.19043.2251]
(c) Microsoft Corporation. All rights reserved.

C:\Users\sivan>docker login
Authenticating with existing credentials...
Login Succeeded

C:\Users\sivan>docker tag plasmaapplication sivanandhinar/plasmaapplication

C:\Users\sivan>docker push sivanandhinar/plasmaapplication
Using default tag: latest
The push refers to repository [docker.io/sivanandhinar/plasmaapplication]
9ea2d558f0bf: Pushed
09bbab59e936: Pushed
e2dbab9b25b7: Pushed
087bea834bf9: Pushed
e88936f8625a: Pushed
09bec1da78e1: Pushed
ba2e08bc19f6: Mounted from library/python
8ba9f69be8ba: Mounted from library/python
3e607d59ef9f: Mounted from library/python
1e18e7e1fcc2: Mounted from library/python
c3a0d593ed24: Mounted from library/python
2a504e63be4: Mounted from library/python
8bf42b8de72: Mounted from library/python
31892cc314cb: Mounted from library/python
11936051f93b: Mounted from library/python
latest: digest: sha256:deb054fad0776688bf39751bb520fa3d45cfb073eddb0a34a520c0b7b17e192 size: 3470

C:\Users\sivan>
```



Question-4:

Create a Kubernetes cluster in IBM cloud and deploy hello world image or job portal image and also expose the same app to run in node port.

```

Command Prompt
Login Succeeded

C:\Users\sivan>cd C:\Users\sivan\Downloads\POA
C:\Users\sivan\Downloads\POA>kubectl apply -f deployment.yaml
deployment.apps/flask-node-deployment created
C:\Users\sivan\Downloads\POA>kubectl apply -f service.yaml
service/flask-node-deployment created
C:\Users\sivan\Downloads\POA>kubectl get pods
NAME                                READY   STATUS    RESTARTS   AGE
flask-node-deployment-7f988f84fd-dckn7 0/1     ErrImagePull 0           74s
C:\Users\sivan\Downloads\POA>ibmcloud plugin install kubernetes-service
looking up 'kubernetes-service' from repository 'IBM Cloud'...
Plug-in 'container-service[kubernetes-service/ks] 1.0.459' found in repository 'IBM Cloud'
Attempting to download the binary file...
26.86 MiB / 26.86 MiB [=====] 100.00% 37s
28168192 bytes downloaded
Installing binary...
Plug-in 'container-service 1.0.459' was successfully installed into C:\Users\sivan\bluemix\plugins\container-service. Use 'ibmcloud plugin show container-service' to show its details.
C:\Users\sivan\Downloads\POA>kubectl get service
NAME                                TYPE        CLUSTER-IP   EXTERNAL-IP   PORT(S)    AGE
flask-node-deployment               ClusterIP   10.102.34.236 <none>        5000/TCP    3m47s
kubernetes                           ClusterIP   10.96.0.1    <none>        443/TCP    13m
C:\Users\sivan\Downloads\POA>

```

820419104068@smartinternz.com

.....

Login