

ASSIGNMENT – 4

DOCKER AND KUBERNETES

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Maximum Marks	2 marks

Question-1: pull an image from docker hub and run it in docker playground.

1) pull an image form docker hub

```
PowerShell
Loading personal and system profiles took 541ms.
+ assignment 4 git:(main) 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
+ assignment 4 git:(main) |
```

2)run it in docker playground

```
Digest: sha256:b558be874169471bd4e65bd6eac8c303b271a7ee8553ba47481b73b2bf597aae
Status: Downloaded newer image for docker/getting-started:latest
docker.io/docker/getting-started:latest
+ assignment 4 git:(main) docker run -d -p 80:80 docker/getting-started
ee6d34bd49e20106c8d3a3cc85bab0bde9c96a667bb3112bc896358efd6d2f68
+ assignment 4 git:(main) D|
```



```
PowerShell
> sha256:fa9c7528c685216129e8e67b4362a7782e7b1daa585ab83546a41588838657d6 10.88MB / 10.88MB 23.4s
> sha256:945efdfb7e4aac9a8422bd8c62d88c35a693a8979a248d29677c643e6aa91852 2.35kB / 2.35kB 0.0s
> sha256:8d1f943eaaaf3b3ce85df5c8936e79388368048b788176bf9c5680f37ac134ca 2.22kB / 2.22kB 0.0s
> sha256:1671565cc8df8c365c9b661d3fbc164e73d8f1b0438c6179588428f99a9da2e 55.81MB / 55.81MB 70.5s
> sha256:53ad872f9cd16fc8eb93b182b28e758e11acc8ef68babe6bf1843c88de1981a 54.58MB / 54.58MB 70.8s
> sha256:d6b981117533b718374f1781ef393bd2af6413c7988c653be8e2a158e6408a 196.79MB / 196.79MB 188.9s
> extracting sha256:1671565cc8df8c365c9b661d3fbc164e73d8f1b0438c6179588428f99a9da2e 2.3s
> sha256:d8492d56ded5476fe7c382256eb4dc64f495ae8fb8dd28aa18dbcb7581e24a6c 6.29MB / 6.29MB 81.7s
> extracting sha256:3e94813e55e7a4ef17f421376f57fb95c7e1706931f8704aa99268968d81f6e4 0.2s
> extracting sha256:fa9c7528c685216129e8e67b4362a7782e7b1daa585ab83546a41588838657d6 0.3s
> extracting sha256:53ad872f9cd16fc8eb93b182b28e758e11acc8ef68babe6bf1843c88de1981a 3.0s
> sha256:c71afc637d59adc44c5fd3c348584df82b35bbb284f9857ea22c6ac8a1d285a3 20.02MB / 20.02MB 186.1s
> sha256:864a18b3c78453e08cb5fcd12fbace1c87948f6365f8fa35e84a285413da48b 2348 / 2348 82.1s
> sha256:4334b2fe8293d19ddc1c3559893aae88f21681a7c85a11c6da6c8dc48fb6ed3c 3.04MB / 3.04MB 86.6s
> extracting sha256:d8b981117533b718374f1781ef393bd2af6413c7988c653be8e2a158e6408a 7.4s
> extracting sha256:d8892d56ded5476fe7c382256eb4dc64f495ae8fb8dd28aa18dbcb7581e24a6c 0.3s
> extracting sha256:c71afc637d59adc44c5fd3c348584df82b35bbb284f9857ea22c6ac8a1d285a3 0.8s
> extracting sha256:864a18b3c78453e08cb5fcd12fbace1c87948f6365f8fa35e84a285413da48b 0.0s
> extracting sha256:4334b2fe8293d19ddc1c3559893aae88f21681a7c85a11c6da6c8dc48fb6ed3c 0.3s
> [2/5] WORKDIR /app 1.1s
> [3/5] COPY requirements.txt ./ 0.0s
> [4/5] RUN pip install -r requirements.txt 4.9s
> [5/5] COPY . . 0.1s
> exporting to image 0.2s
> exporting layers 0.2s
> writing image sha256:9ca8223d2f49cc126af77c5b826856fccf1f44be846e67fa97b58be5718931e 0.0s
> naming to docker.io/library/flaskapp 0.0s

Use 'docker scan' to run Snyk tests against images to find vulnerabilities and learn how to fix them
+ flaskapp git:(main) |
```

Images on disk Last refresh: about 16 hours ago 5.54 MB total size 5.54 MB / 5.54 MB in use

Images [Give feedback](#)

An image is a read-only template with instructions for creating a Docker container. [Learn more](#)

LOCAL REMOTE REPOSITORIES

<input type="checkbox"/>	NAME	TAG	STATUS	CREATED	SIZE	ACTIONS
<input type="checkbox"/>	flaskapp 9ca8223d2f49	latest	Unused	less than a minute a	932.41 MB	▶ ⋮ 🗑
<input type="checkbox"/>	alpine 9c6f07244728	latest	In use	3 months ago	5.54 MB	▶ ⋮ 🗑

Question-3: Create a IBM container registry and deploy hello world app or jobportalapp

1) create a IBM container registry

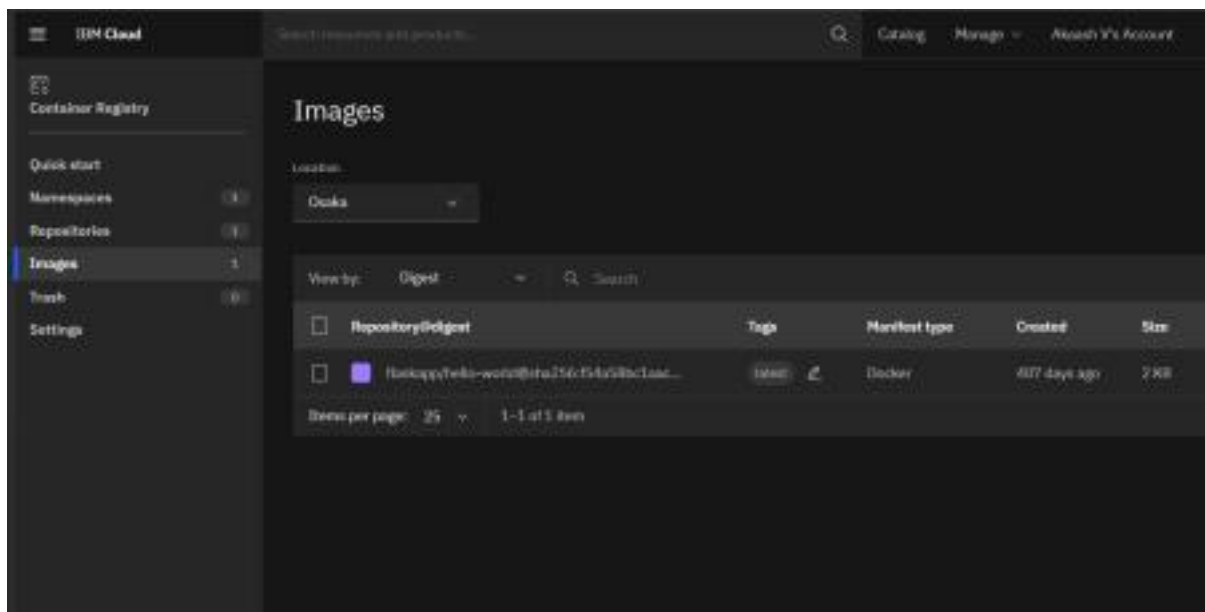
```
+ -- git:(main) x ibmcloud
NAME:
  C:\Program Files\IBM\Cloud\bin\ibmcloud.exe - A command line tool to interact with IBM Cloud
  Find more information at: https://ibm.biz/cli-docs

USAGE:
  [environment variables] C:\Program Files\IBM\Cloud\bin\ibmcloud.exe [global options] command [arguments.
  ptions]

VERSION:
  2.12.1+b8488a1-2022-10-31T15:08:10+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
  cr           Manage IBM Cloud Container Registry content and configuration.
  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
```

2) deploy hello world or jobportal



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 note port

1)Creating a Kubernetes cluster in IBM cloud

