

# ASSIGNMENT 4

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

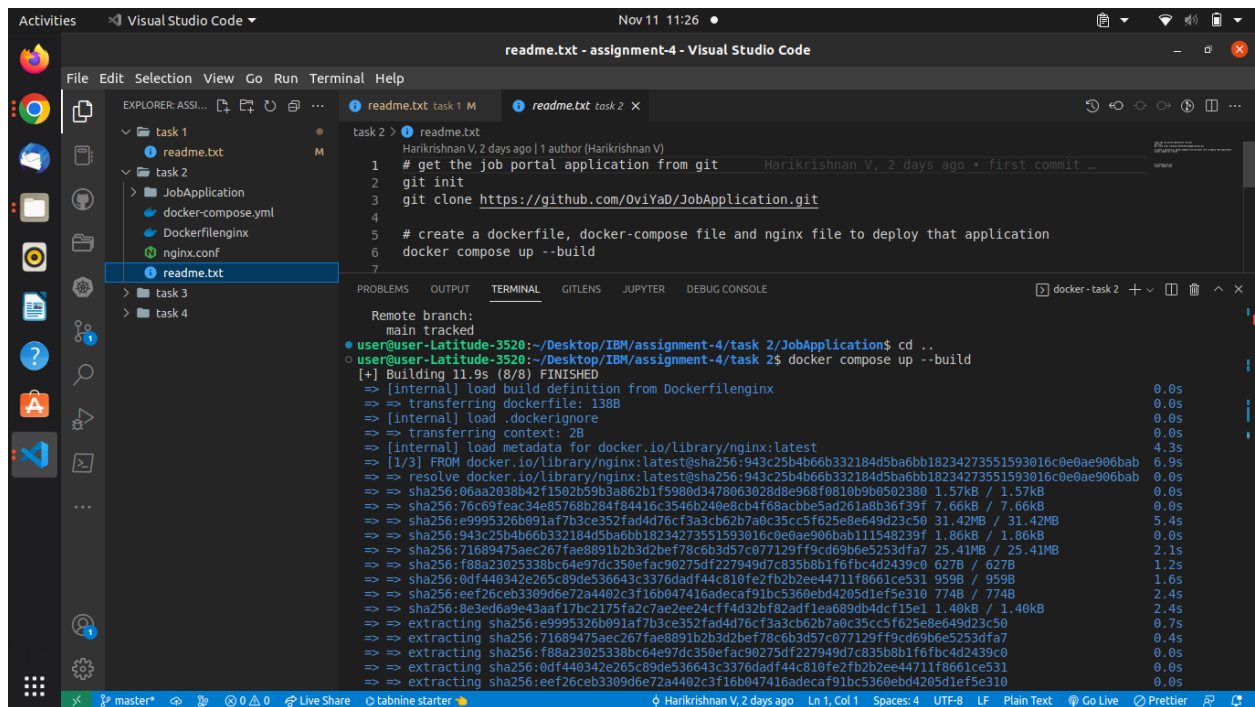
The screenshot shows the Docker Playground interface for instance `cdmtu463_cdmtu8u3tccg009qe5fg`. The instance is running on IP `192.168.0.28` with 28.97% memory and 0.19% CPU usage. The terminal shows the following commands and output:

```
[node1] (local) root@192.168.0.28 ~
$ docker run -it --name "my-docker-container" node bash
Unable to find image 'node:latest' locally
latest: Pulling from library/node
17c9e6141fdb: Pull complete
de4a4c6caea8: Pull complete
4edced8587e0: Pull complete
a7969cffbf46: Pull complete
74fbfde6af91: Pull complete
babbacfd2d498: Pull complete
bd2943500448: Pull complete
98eaae01c196: Pull complete
61339482de65: Pull complete
Digest: sha256:6da4e30e3952e460fe4ad256e46a8b79acce46dd596bbe4ef882d5ec0d1ef6cb
Status: Downloaded newer image for node:latest
root@cab4c48a9779:/#
```

The screenshot shows the Docker Playground interface for instance `cdmtu463_cdmtu8u3tccg009qe5fg`. The instance is running on IP `192.168.0.28` with 28.64% memory and 0.12% CPU usage. The terminal shows the following commands and output:

```
a7969cffbf46: Pull complete
74fbfde6af91: Pull complete
babbacfd2d498: Pull complete
bd2943500448: Pull complete
98eaae01c196: Pull complete
61339482de65: Pull complete
Digest: sha256:6da4e30e3952e460fe4ad256e46a8b79acce46dd596bbe4ef882d5ec0d1ef6cb
Status: Downloaded newer image for node:latest
root@cab4c48a9779:/# exit
exit
[node1] (local) root@192.168.0.28 ~
$ docker ps -a
CONTAINER ID   IMAGE      COMMAND                  CREATED         STATUS              PORTS          NAMES
cab4c48a9779   node      "docker-entrypoint.s..." 54 seconds ago  Exited (0) 20 seconds ago           my-docker-container
[node1] (local) root@192.168.0.28 ~
$
```

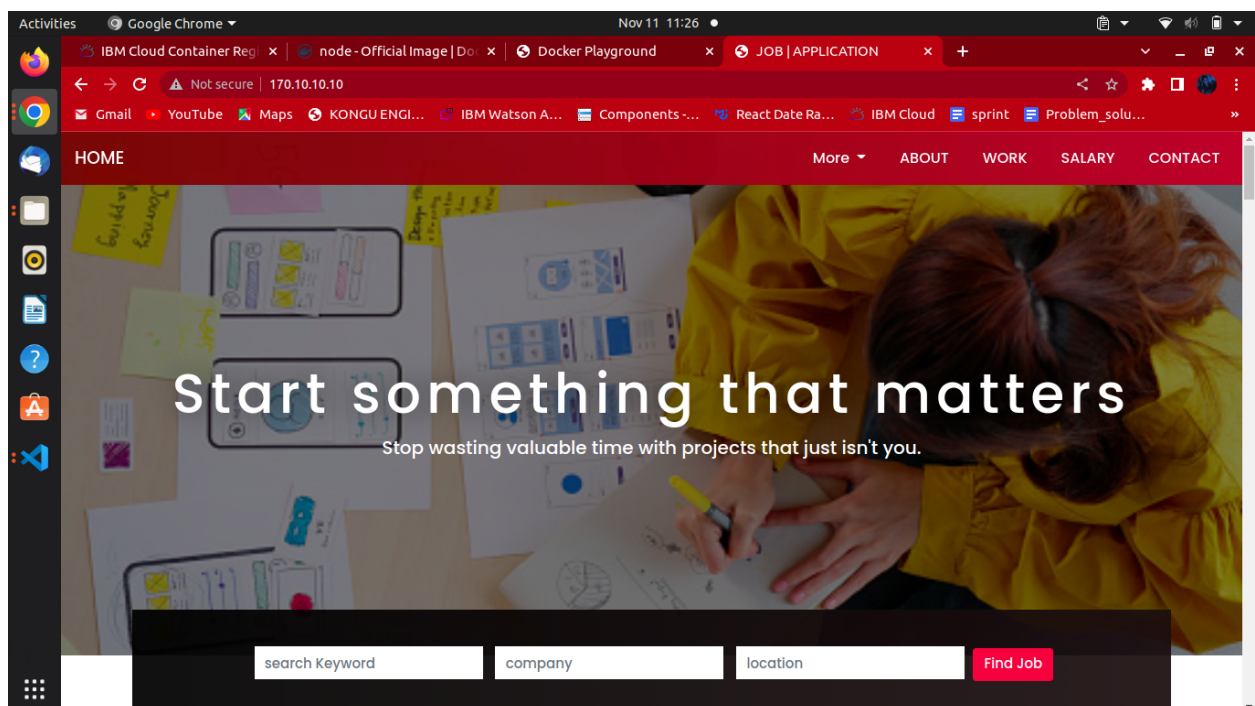
## 2. Create a docker file for the jobportal application and deploy it in Docker desktop application.



The screenshot shows the Visual Studio Code interface with the 'README.txt' file open. The file contains instructions for setting up the job portal application. The terminal output shows the execution of the 'docker compose up --build' command, which successfully builds the application and its dependencies.

```
task 2 > README.txt
1 # get the job portal application from git
2 git init
3 git clone https://github.com/OviYaD/JobApplication.git
4
5 # create a dockerfile, docker-compose file and nginx file to deploy that application
6 docker compose up --build
7

Remote branch:
main tracked
* user@user-Latitude-3520:~/Desktop/IBM/assignment-4/task 2/JobApplication$ cd ..
user@user-Latitude-3520:~/Desktop/IBM/assignment-4/task 2$ docker compose up --build
[+] Building 11.9s (8/8) FINISHED
=> [internal] load build definition from Dockerfilenginx
=> transferring dockerfile: 138B
=> [internal] load .dockerignore
=> transferring context: 28
=> [internal] load metadata for docker.io/library/nginx:latest
=> [1/3] FROM docker.io/library/nginx:latest:sha256:943c25b4b66b332184d5ba6bb18234273551593016c0e0ae906bab
=> resolve docker.io/library/nginx:latest:sha256:943c25b4b66b332184d5ba6bb18234273551593016c0e0ae906bab
=> sha256:06aa293bb42f1502b59b3a862b1f5908d3478063028d8e968f0810b9b0502380 1.57kB / 1.57kB
=> sha256:76c69feac34e85768b284f84416c3546b240e8cb4f68acbbe5ad261a8b36f39f 7.66kB / 7.66kB
=> sha256:e9995326b091af7b3ce352fad4d76cf3a3cb62b7a0c35cc5f625e8e649d23c50 31.42MB / 31.42MB
=> sha256:943c25b4b66b332184d5ba6bb18234273551593016c0e0ae906bab111548239f 1.86kB / 1.86kB
=> sha256:71689475aec267fae8891b2b3d2bef78c6b3d57c077129ff9cd69b6e5253dfa7 25.41MB / 25.41MB
=> sha256:f88a23025338bc64e97dc350efac90275df227949d7c835b8b1f6fbc4d2439c0 627B / 627B
=> sha256:0df440342e265c89de536643c3376dadf44c810fe2fb2bee44711f8661ce531 959B / 959B
=> sha256:eef26ceb3309d6e72a4402c3f16b047416adecaf91bc5360ebd4205d1ef5e310 774B / 774B
=> sha256:8e3ed6a9e43aaf17bc2175fa2c7ae2ee24cfff4d32bf82adflea689db4dcf15e1 1.40kB / 1.40kB
=> extracting sha256:e9995326b091af7b3ce352fad4d76cf3a3cb62b7a0c35cc5f625e8e649d23c50
=> extracting sha256:71689475aec267fae8891b2b3d2bef78c6b3d57c077129ff9cd69b6e5253dfa7
=> extracting sha256:f88a23025338bc64e97dc350efac90275df227949d7c835b8b1f6fbc4d2439c0
=> extracting sha256:0df440342e265c89de536643c3376dadf44c810fe2fb2bee44711f8661ce531
=> extracting sha256:eef26ceb3309d6e72a4402c3f16b047416adecaf91bc5360ebd4205d1ef5e310
```



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

```
user@user-Latitude-3520:~$ ibmcloud login -a https://cloud.ibm.com
API endpoint: https://cloud.ibm.com

Email> oviiguna@gmail.com

Password>
Authenticating...
OK

Targeted account OVIYA D's Account (1137a472fb13494baac6abd075d06356)

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: oviiguna@gmail.com
Account: OVIYA D's Account (1137a472fb13494baac6abd075d06356)
Resource group: No resource group targeted, use 'ibmcloud target -g RESOURCE_GROUP'
CF API endpoint:
Org:
Space:
user@user-Latitude-3520:~$
```

```
user@user-Latitude-3520:~/Desktop/IBM/assignment-4/task 3$ ibmcloud cr namespace-add ibm_2022
No resource group is targeted. Therefore, the default resource group for the account ('Default') is targeted.

Adding namespace 'ibm_2022' in resource group 'Default' for account OVIYA D's Account in registry icr.io...

Successfully added namespace 'ibm_2022'

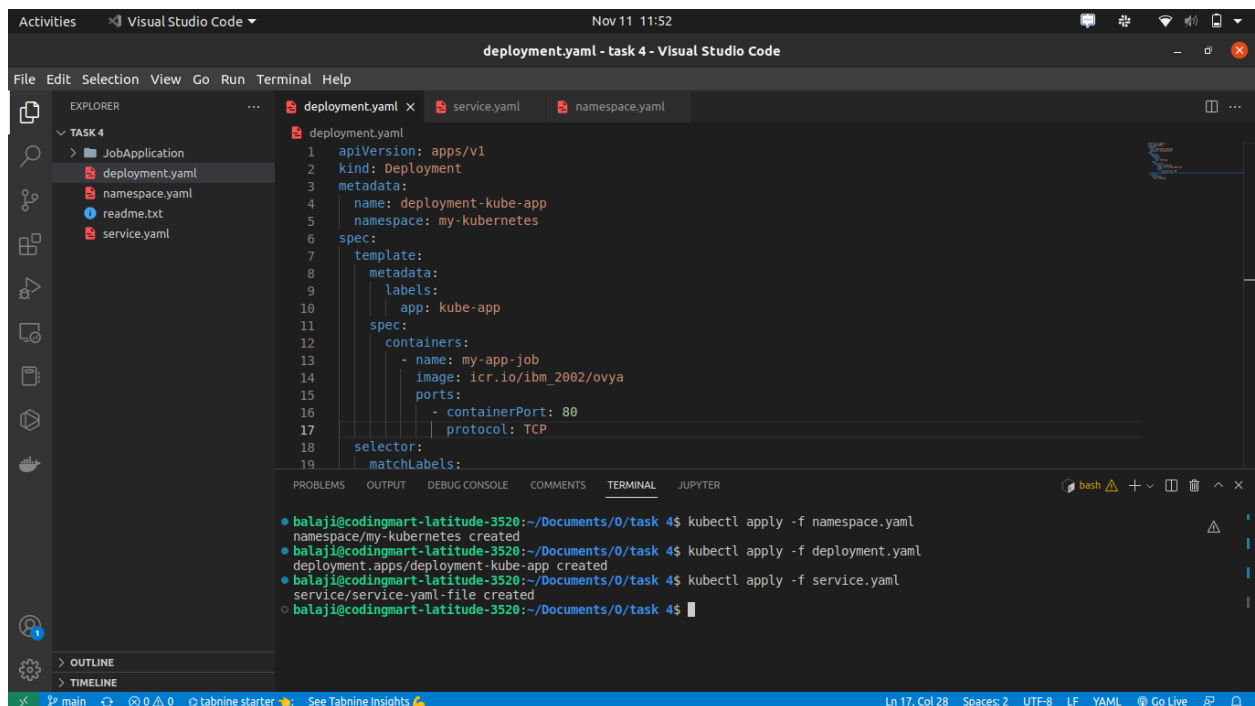
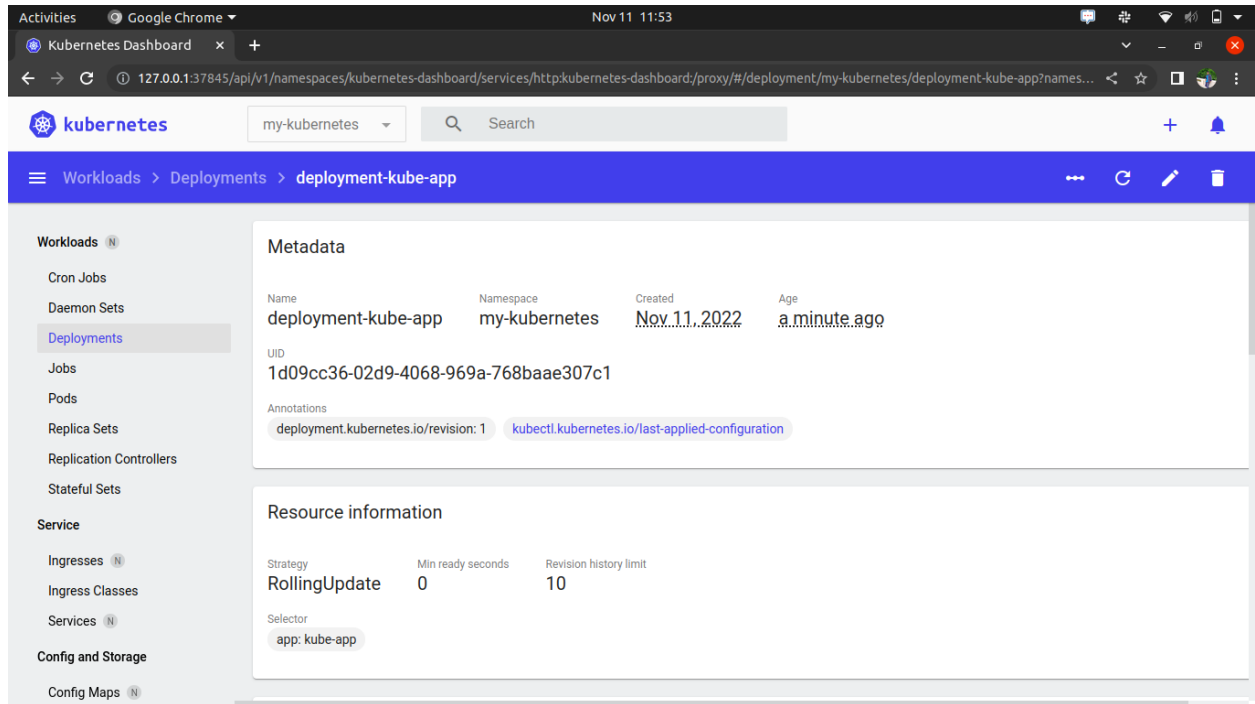
OK

user@user-Latitude-3520:~/Desktop/IBM/assignment-4/task 3$ docker build . --tag icr.io/ibm_2022/job_application
Sending build context to Docker daemon 14.82MB
Step 1/2 : FROM ubuntu:latest
--> a8780b506fa4
Step 2/2 : COPY ./JobApplication /JobApplication
--> b089ac55d409
Successfully built b089ac55d409
Successfully tagged icr.io/ibm_2022/job_application:latest

user@user-Latitude-3520:~/Desktop/IBM/assignment-4/task 3$ docker push icr.io/ibm_2022/job_application
Using default tag: latest
The push refers to repository [icr.io/ibm_2022/job_application]
d2e29492a61c: Pushed
f4a670ac65b6: Pushed
latest: digest: sha256:3a5cc79bd5c5580738b49f27d41b62e39ddd4893ecf00f9639f1238fe2e9a4ff size: 741

user@user-Latitude-3520:~/Desktop/IBM/assignment-4/task 3$ docker images
REPOSITORY          TAG             IMAGE ID        CREATED         SIZE
icr.io/ibm_2022/job_application  latest          b089ac55d409   47 seconds ago  92.6MB
task2-nginx-image    latest          cb9aad9080ca   2 days ago     994MB
ubuntu               latest          a8780b506fa4   8 days ago     77.8MB
hello-world          latest          feb5d9fea6a5   13 months ago  13.3kB
```

#### 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.



# IBM CLOUD CONTAINER REGISTRY

This screenshot shows the 'Namespaces' page in the IBM Cloud Container Registry. The left sidebar contains a navigation menu with 'Namespaces' selected. The main content area displays a table of namespaces. A search bar and a 'Create' button are at the top right. The table has columns for Name, Resource group, Repository count, Image count, and Retention policy. One namespace, 'ibm\_2022', is listed under the 'Default' resource group.

Namespaces

Location: Global

Resource group: Filter... Search Create +

<input type="checkbox"/>	Name	Resource group	Repository count	Image count	Retention policy
<input type="checkbox"/>	ibm_2022	Default	1	1	Retain all images

Items per page: 25 1-1 of 1 item 1 1 of 1 page

This screenshot shows the 'Repositories' page in the IBM Cloud Container Registry. The left sidebar has 'Repositories' selected. The main content area displays a table of repositories. A search bar and a 'Create' button are at the top right. The table has columns for Name, Image count, Namespace, and Last updated. One repository, 'job\_application', is listed under the 'ibm\_2022' namespace.

Repositories

Location: Global

Search Create +

<input type="checkbox"/>	Name	Image count	Namespace	Last updated
<input type="checkbox"/>	job_application icri.io/ibm_2022/job_application	1	ibm_2022	16 minutes ago

Items per page: 25 1-1 of 1 item 1 1 of 1 page

