

## Assignment - 4

|                 |                  |
|-----------------|------------------|
| Assignment Date | 24 October 2022  |
| Student Name    | Senthil vel      |
| TeamID          | PNT2022TMID50619 |
| Maximum Marks   | 2 Marks          |

Question 1:

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

03:57:32

CLOSE SESSION

Instances

+ ADD NEW INSTANCE

192.168.0.8  
node1

cddvksm0\_cddvkvm0qau000a07j5g

IP  
192.168.0.8

OPEN PORT

Memory  
1.24% (49.52MiB / 3.906GiB)

CPU  
0.31%

SSH  
ssh ip172-18-0-22-cddvksm0qau000a07j50@direct.labs.pla

DELETE

EDITOR

```
#####
# WARNING!!!!
# This is a sandbox environment. Using personal credentials
# is HIGHLY! discouraged. Any consequences of doing so are
# completely the user's responsibilities.
#
# The PWD team.
#####
[node1] (local) root@192.168.0.8 ~
$ docker pull hello-world
Using default tag: latest
latest: Pulling from library/hello-world
2db29710123e: Pull complete
Digest: sha256:e18f0a77aefabe047a671ab3ec3eed05414477c951ab1a6f352a06974245fe7
Status: Downloaded newer image for hello-world:latest
docker.io/library/hello-world:latest
[node1] (local) root@192.168.0.8 ~
$ docker run hello-world
```

Activate Windows  
Go to Settings to activate Windows.

03:57:05

CLOSE SESSION

Instances

+ ADD NEW INSTANCE

192.168.0.8  
node1

cddvkms0\_cddvkvm0qau000a07j5g

IP  
192.168.0.8

OPEN PORT

Memory  
1.26% (50.45MiB / 3.906GiB)

CPU  
0.39%

SSH  
ssh ip172-18-0-22-cddvkms0qau000a07j50@direct.labs.pla

DELETE

EDITOR

2. The Docker daemon pulled the "hello-world" image from the Docker Hub. (amd64)

3. The Docker daemon created a new container from that image which runs the executable that produces the output you are currently reading.

4. The Docker daemon streamed that output to the Docker client, which sent it to your terminal.

To try something more ambitious, you can run an Ubuntu container with:

```
$ docker run -it ubuntu bash
```

Share images, automate workflows, and more with a free Docker ID:  
<https://hub.docker.com/>

For more examples and ideas, visit:  
<https://docs.docker.com/get-started/>

```
[node1] (local) root@192.168.0.8 ~  
$
```

Activate Windows  
Go to Settings to activate Windows.

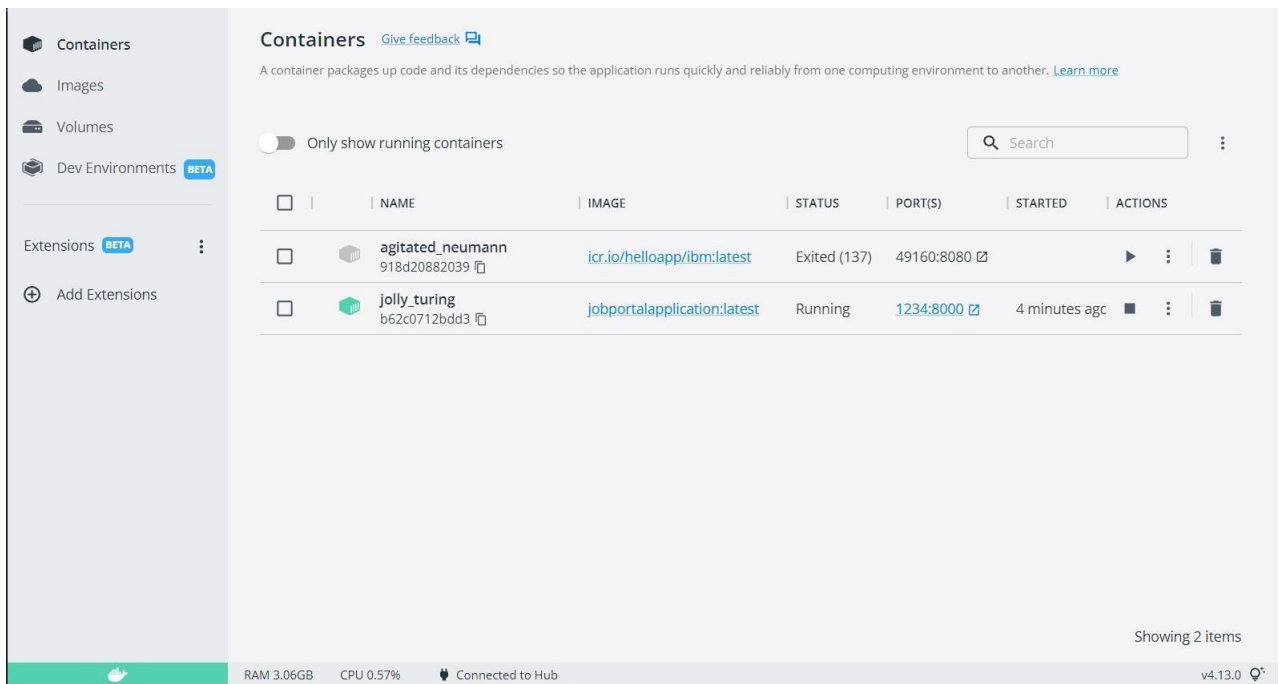
## Question 2:

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

## DOCKERFILE:

```
1 FROM python:3.8-buster
2
3 WORKDIR /app
4
5 COPY requirements.txt /app/
6
7 RUN pip install -r requirements.txt
8
9 COPY . /app/
10
11 RUN cp .env.dev.sample .env
12
13 EXPOSE 8000
14
15 RUN chmod +x entrypoint.sh
16
17 CMD ["sh", "entrypoint.sh"]
```

## DEPLOYMENT OF JOBPORTAL APPLICATION:

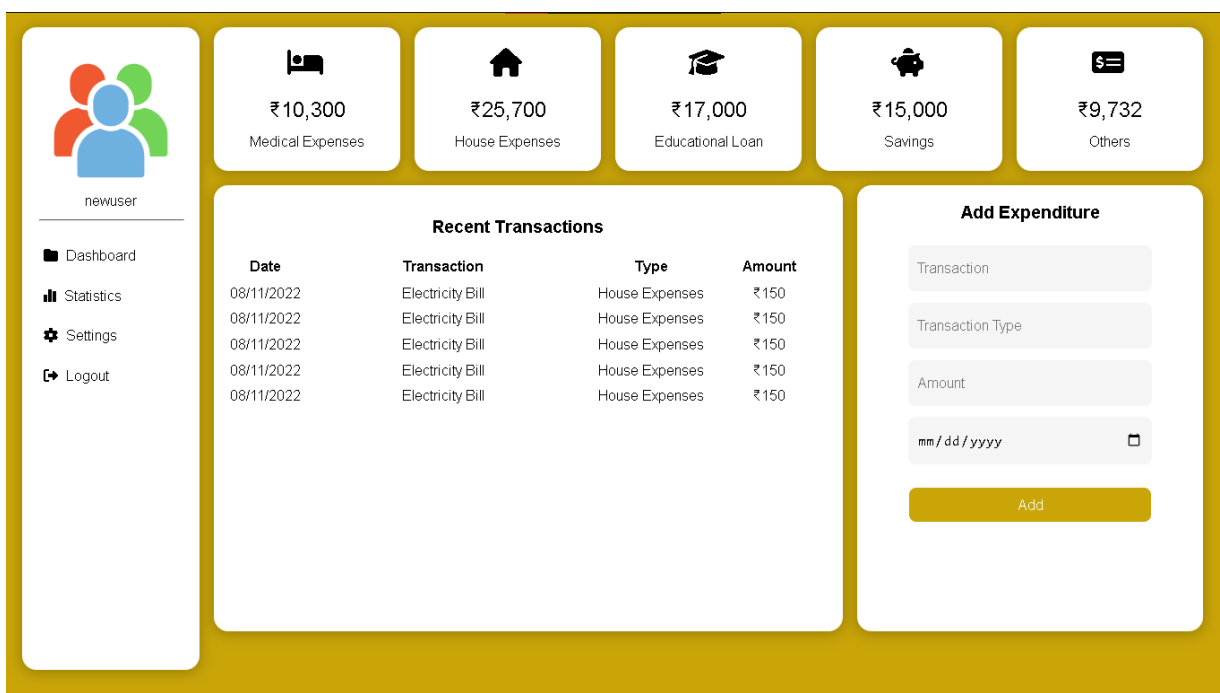


The screenshot shows the Docker Desktop interface. On the left is a sidebar with navigation options: Containers, Images, Volumes, Dev Environments (marked BETA), Extensions (marked BETA), and Add Extensions. The main area is titled 'Containers' and includes a toggle for 'Only show running containers' and a search bar. Below this is a table of containers:

|                          | NAME                             | IMAGE                       | STATUS       | PORT(S)    | STARTED       | ACTIONS |
|--------------------------|----------------------------------|-----------------------------|--------------|------------|---------------|---------|
| <input type="checkbox"/> | agitated_neumann<br>918d20882039 | icr.io/helloapp/ibm:latest  | Exited (137) | 49160:8080 |               |         |
| <input type="checkbox"/> | jolly_turing<br>b62c0712bdd3     | jobportalapplication:latest | Running      | 1234:8000  | 4 minutes ago |         |

At the bottom right of the main area, it says 'Showing 2 items'. The bottom status bar shows system information: RAM 3.06GB, CPU 0.57%, Connected to Hub, and version v4.13.0.

## OUTPUT:



The screenshot displays a financial dashboard with a yellow and white color scheme. On the left is a sidebar with a user profile 'newuser' and navigation links: Dashboard, Statistics, Settings, and Logout. The main content area features five expense category cards at the top:

- Medical Expenses: ₹10,300
- House Expenses: ₹25,700
- Educational Loan: ₹17,000
- Savings: ₹15,000
- Others: ₹9,732

Below these cards are two panels. The 'Recent Transactions' panel contains a table:

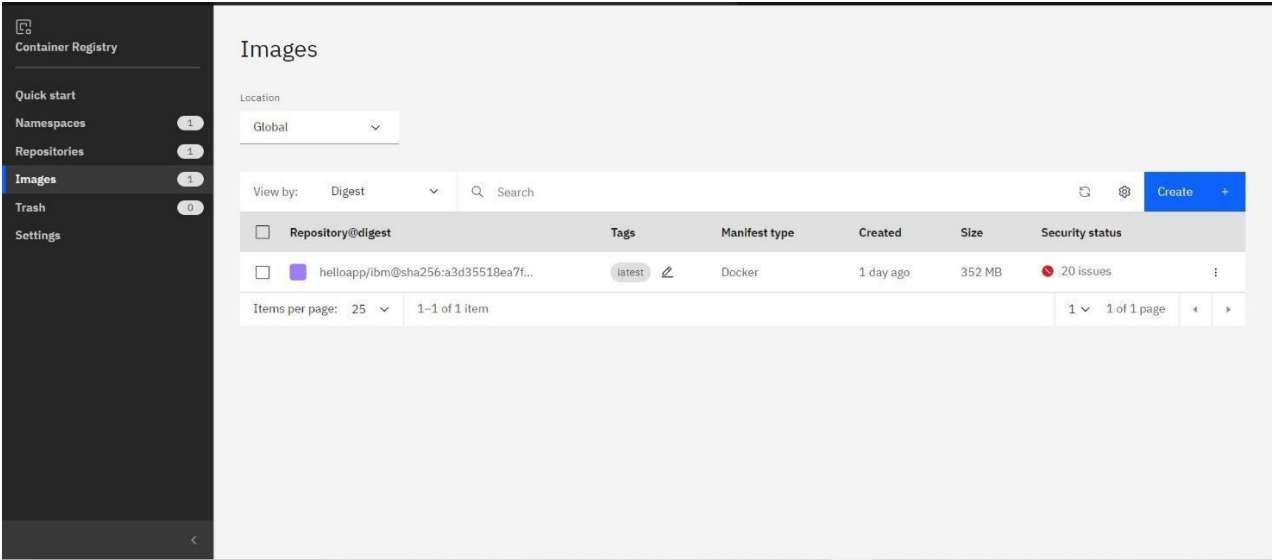
| Date       | Transaction      | Type           | Amount |
|------------|------------------|----------------|--------|
| 08/11/2022 | Electricity Bill | House Expenses | ₹150   |
| 08/11/2022 | Electricity Bill | House Expenses | ₹150   |
| 08/11/2022 | Electricity Bill | House Expenses | ₹150   |
| 08/11/2022 | Electricity Bill | House Expenses | ₹150   |
| 08/11/2022 | Electricity Bill | House Expenses | ₹150   |

The 'Add Expenditure' panel on the right includes input fields for Transaction, Transaction Type, Amount, and a date picker (mm/dd/yyyy), followed by an 'Add' button.

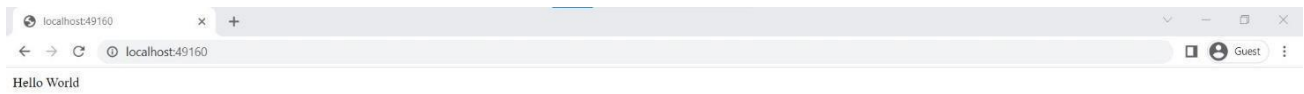
Question 3:

Create a IBM container registry and deploy helloworld app or jobportapp.

IBM CONTAINER REGISTRY DEPLOYMENT:



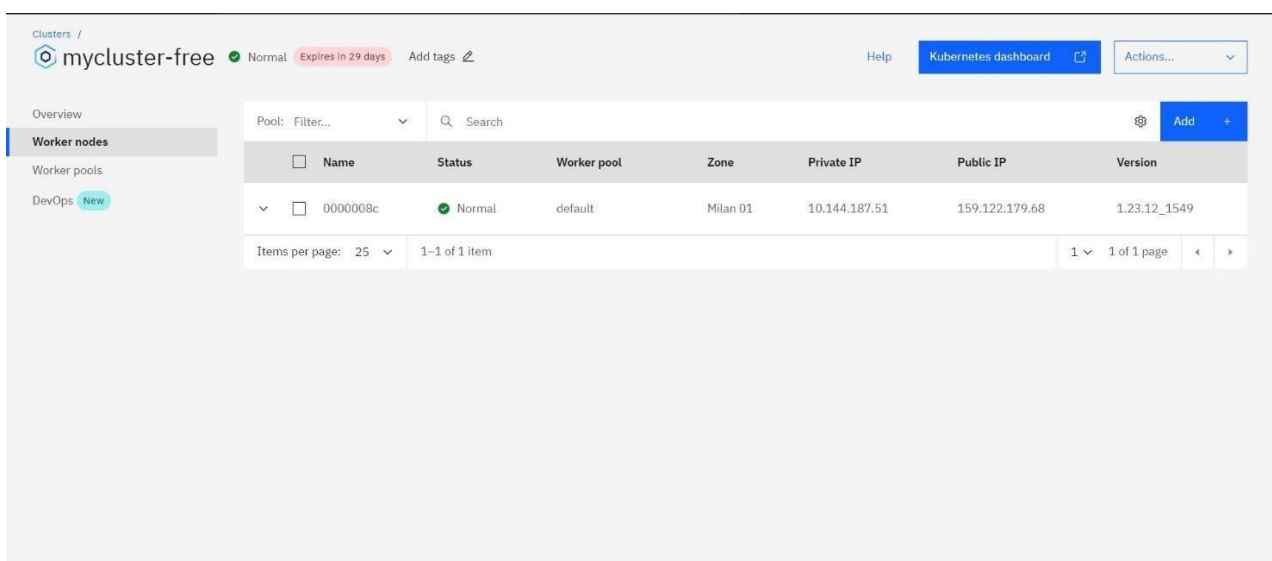
## OUTPUT:



## 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 nodeport.

Creating kubernetes cluster in IBM cloud and exposing nodeport:



Output:

