IBM Assignment 4 on Docker and Kubernetes

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

```
03:54:37
CLOSE SESSION
Instances
+ ADD NEW INSTANCE
192.168.0.18
node1
```

ce0940e3_ce095bu0qau000bmuc7g

IP
192.168.0.18   OPEN PORT   80

Memory
20.99% (839.5MiB / 3.906GiB)

CPU
0.73%

SSH
ssh ip172-18-0-92-ce0940e3tccg009ilh6g@direct.labs.play-with-do

DELETE   EDITOR

```
##########################################################
#                      WARNING!!!!                        #
# This is a sandbox environment. Using personal credentials #
# is HIGHLY! discouraged. Any consequences of doing so are #
# completely the user's responsibilites.                 #
#                                                         #
# The PWD team.                                           #
##########################################################
[node1] (local) root@192.168.0.18 ~
$ docker pull hello-world
Using default tag: latest
latest: Pulling from library/hello-world
2db29710123e: Pull complete
Digest: sha256:faa03e786c97f07ef34423fcccceeec2398ec8a5759259f94d99078f264e9d7af
Status: Downloaded newer image for hello-world:latest
docker.io/library/hello-world:latest
[node1] (local) root@192.168.0.18 ~
$ docker pull yeasy/simple-web
Using default tag: latest
latest: Pulling from yeasy/simple-web
f2b6b4884fc8: Pull complete
4fb899b4df21: Pull complete
74eaa8be7221: Pull complete
2d6e98fe4040: Pull complete
414666f7554d: Pull complete
bb0bcc8d7f6a: Pull complete
ace2d3087f57: Pull complete
da74659b9184: Pull complete
834d72880162: Pull complete
```

DELETE   EDITOR

```
##########################################################
#                      WARNING!!!!                        #
# This is a sandbox environment. Using personal credentials #
# is HIGHLY! discouraged. Any consequences of doing so are #
# completely the user's responsibilites.                 #
#                                                         #
# The PWD team.                                           #
##########################################################
[node1] (local) root@192.168.0.18 ~
$ docker pull hello-world
Using default tag: latest
latest: Pulling from library/hello-world
2db29710123e: Pull complete
Digest: sha256:faa03e786c97f07ef34423fcccceeec2398ec8a5759259f94d99078f264e9d7af
Status: Downloaded newer image for hello-world:latest
docker.io/library/hello-world:latest
[node1] (local) root@192.168.0.18 ~
$ docker pull yeasy/simple-web
Using default tag: latest
latest: Pulling from yeasy/simple-web
f2b6b4884fc8: Pull complete
4fb899b4df21: Pull complete
74eaa8be7221: Pull complete
2d6e98fe4040: Pull complete
414666f7554d: Pull complete
bb0bcc8d7f6a: Pull complete
ace2d3087f57: Pull complete
da74659b9184: Pull complete
834d72880162: Pull complete
f05b81527a11: Pull complete
779bb3fb81b2: Pull complete
Digest: sha256:356de309052fe233ba08eb4c9ad85ab89398f31555e8777326d57307ac913727
Status: Downloaded newer image for yeasy/simple-web:latest
docker.io/yeasy/simple-web:latest
[node1] (local) root@192.168.0.18 ~
$ docker run --rm -it -p 80:80 yeasy/simple-web:latest
Serving HTTP on 0.0.0.0 port 80 ...
```

Activities   Brave Web Browser (nightly)   Nov 25 15:35

Docker Playground   ip172-18-0-92-ce0940e3   +

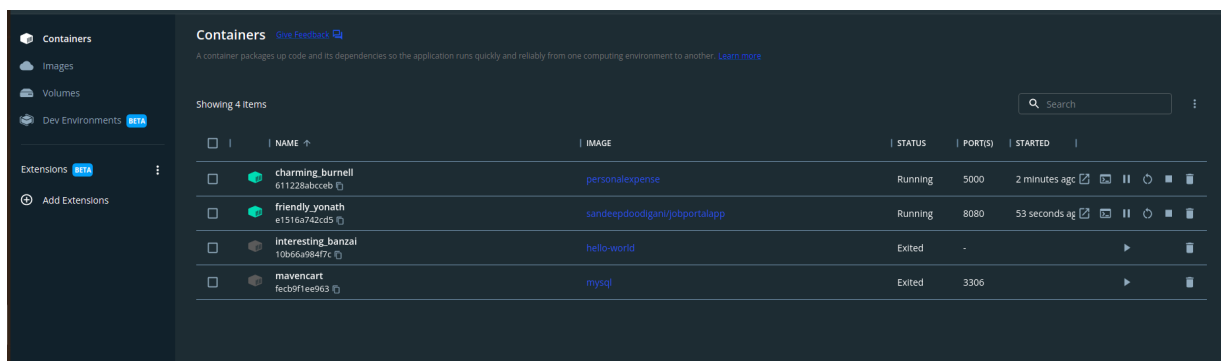Not secure | ip172-18-0-92-ce0940e3tccg009ilh6g-80.direct.labs.play-with-docker.com

Real Visit Results

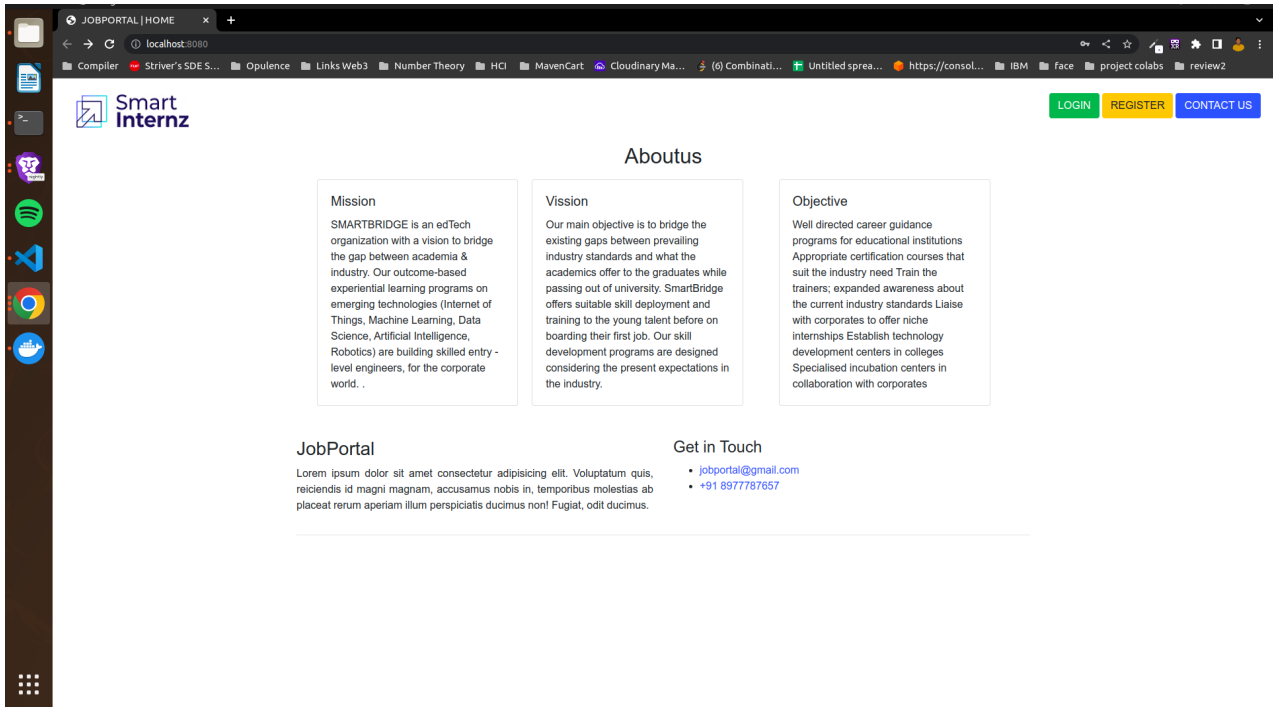#2022-11-25 10:04:58: 7 requests from <LOCAL: 172.18.0.1> to WebServer <172.17.0.2>

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

2019506045
Krishnan R

3.Create a IBM container registry and deploy helloworld app or sample app.
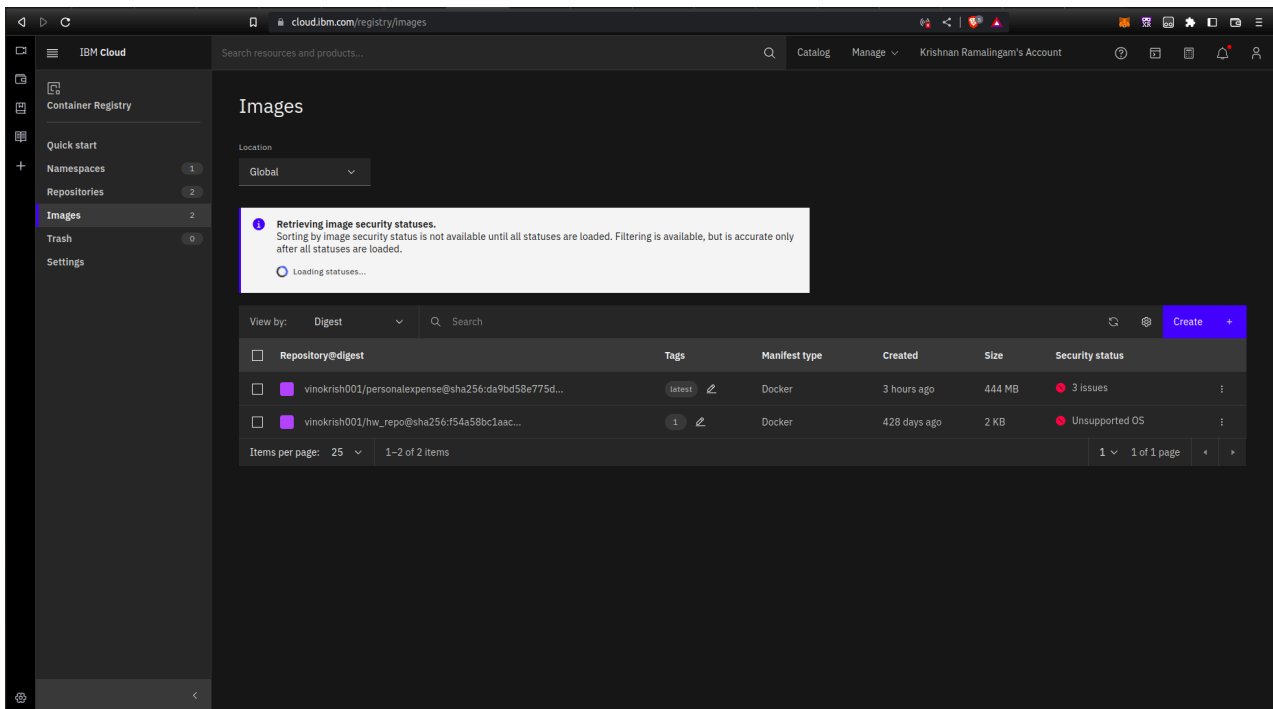
```
Run  Terminal  Help
PROBLEMS   DEBUG CONSOLE   OUTPUT   TERMINAL   JUPYTER   BABYLON.JS
● krishnan@krish:~/IBM-Project-1956-1658421467-1/PROJECT DEVELOPMENT PHASE/Sprint 4$ docker push icr.io/vinokrish001/hw repo:1
The push refers to repository [icr.io/vinokrish001/hw repo]
e07ee1baac5f: Pushed
1: digest: sha256:f54a58bc1aac5ea1a25d796ae155dc228b3f0e11d046ae276b39c4bf2f13d8c4 size: 525
● krishnan@krish:~/IBM-Project-1956-1658421467-1/PROJECT DEVELOPMENT PHASE/Sprint 4$ docker build --tag personal-expense .
[+] Building 244.2s (10/10) FINISHED
 => [internal] load build definition from Dockerfile
    0.0s
 => => transferring dockerfile: 38B
    0.0s
 => [internal] load .dockerignore
    0.0s
 => => transferring context: 2B
    0.0s
 => [internal] load metadata for docker.io/library/python:3.10
    2.8s
 => [1/5] FROM docker.io/library/python:3.10@sha256:daed8d46dfc607976178e2f2beb96f03f91240bcb553e0fffd8186b73929db9c
    0.0s
 => [internal] load build context
    0.0s
 => => transferring context: 5.75kB
    0.0s
 => CACHED [2/5] COPY ./requirements.txt /app/requirements.txt
    0.0s
 => CACHED [3/5] WORKDIR /app
    0.0s
 => [4/5] COPY . /app
    0.1s
 => [5/5] RUN pip install -r requirements.txt
    240.3s
 => exporting to image
    0.9s
 => => exporting layers
    0.9s
 => => writing image sha256:6f00bc3b9248e47c1268a499c53cf532662ece4b8fbc5e7da0facc7b9d087398
    0.0s
 => => naming to docker.io/library/personal-expense
    0.0s

 Use 'docker scan' to run Snyk tests against images to find vulnerabilities and learn how to fix them
● krishnan@krish:~/IBM-Project-1956-1658421467-1/PROJECT DEVELOPMENT PHASE/Sprint 4$ docker tag personal-expense  icr.io/vinokrish001/personalexpense
● krishnan@krish:~/IBM-Project-1956-1658421467-1/PROJECT DEVELOPMENT PHASE/Sprint 4$ docker push icr.io/vinokrish001/personalexpense
Using default tag: latest
The push refers to repository [icr.io/vinokrish001/personalexpense]
fd40d1c86918: Pushed
f08af40a69de: Pushed
5f70bf18a086: Pushed
0dd5db1ccd74: Pushed
5183217745a1: Pushed
905ede8abeca: Pushed
63ab2579942e: Pushed
e6e9854ca999: Pushed
397a239a053b: Pushed
89c3244a87b2: Pushed
80231db1194c: Pushed
```

4.Create a Kubernetes cluster in IBM cloud and deploy helloworld image or sample image and also expose the same app to run in nodeport.

2019506045

Krishnan R

2019506045
Krishnan R