Cloud Computing Lab Report Week-5

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Sem: 6 Section: D
Roll No.: 6

1a.


```
root@ip-172-31-79-24: /home/ubuntu
 OS/Arch:            linux/amd64
 Experimental:       false
containerd:
 Version:            1.4.3
 GitCommit:          269548fa27e0089a8b8278fc4fc781d7f65a939b
runc:
 Version:            1.0.0-rc92
 GitCommit:          ff819c7e9184c13b7c2607fe6c30ae19403a7aff
docker-init:
 Version:            0.19.0
 GitCommit:          de40ad0
If you would like to use Docker as a non-root user, you should now consider
adding your user to the "docker" group with something like:

  sudo usermod -aG docker your-user

Remember that you will have to log out and back in for this to take effect!

WARNING: Adding a user to the "docker" group will grant the ability to run
         containers which can be used to obtain root privileges on the
         docker host.
         Refer to https://docs.docker.com/engine/security/security/#docker-daemo
n-attack-surface
         for more information.
ubuntu@ip-172-31-79-24:~$ docker run hello-world
docker: Got permission denied while trying to connect to the Docker daemon socke
t at unix:///var/run/docker.sock: Post http://%2Fvar%2Frun%2Fdocker.sock/v1.24/c
ontainers/create: dial unix /var/run/docker.sock: connect: permission denied.
See 'docker run --help'
ubuntu@ip-172-31-79-24:~$ sudo -s
root@ip-172-31-79-24:/home/ubuntu# docker run hello-world
Unable to find image 'hello-world:latest' locally
latest: Pulling from library/hello-world
0e03bdcc26d7: Pull complete
Digest: sha256:95ddb6c31407e84e91a986b004aee40975cb0bda14b5949f6faac5d2deadb4b9
Status: Downloaded newer image for hello-world:latest

Hello from Docker!
This message shows that your installation appears to be working correctly.

To generate this message, Docker took the following steps:
 1. The Docker client contacted the Docker daemon.
 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/

root@ip-172-31-79-24:/home/ubuntu# 
```
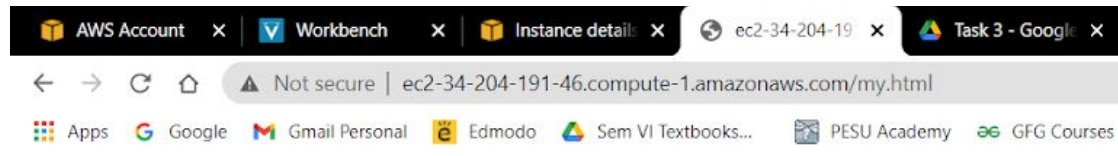
2a.

```
root@ip-172-31-79-24:/home/ubuntu/task2# docker images
REPOSITORY      TAG        IMAGE ID        CREATED          SIZE
task2           latest     c6c9affce3ea    38 seconds ago   210MB
python          latest     619f31abac4b    13 hours ago     885MB
nginx           latest     35c43ace9216    2 days ago       133MB
mongo           latest     b8264a857eba    3 days ago       449MB
ubuntu          latest     f63181f19b2f    4 weeks ago      72.9MB
ubuntu          18.04      c090eaba6b94    4 weeks ago      63.3MB
hello-world     latest     bf756fb1ae65    13 months ago    13.3kB
root@ip-172-31-79-24:/home/ubuntu/task2# docker run task2
Running this inside a container !
My SRN is PES1201800102
root@ip-172-31-79-24:/home/ubuntu/task2#
```

3a.

AWS Account   Workbench   Instance details   ec2-34-204-19   Task 3 - Google

Not secure | ec2-34-204-191-46.compute-1.amazonaws.com/my.html

Apps   G Google   M Gmail Personal   Edmodo   Sem VI Textbooks...   PESU Academy   GFG Courses

My SRN is PES1201800102

I am running a nginx container!

3b.

```
root@ip-172-31-79-24: /home/ubuntu/task3
---> 04bda08466b2
Step 6/6 : CMD ["./a.out"]
 ---> Running in d2ef5a5b889e
Removing intermediate container d2ef5a5b889e
 ---> c6c9affce3ea
Successfully built c6c9affce3ea
Successfully tagged task2:latest
root@ip-172-31-79-24:/home/ubuntu/task2# docker images
REPOSITORY      TAG       IMAGE ID       CREATED        SIZE
task2           latest    c6c9affce3ea   38 seconds ago  210MB
python          latest    619f31abac4b   13 hours ago    885MB
nginx           latest    35c43ace9216   2 days ago      133MB
mongo           latest    b8264a857eba   3 days ago      449MB
ubuntu          latest    f63181f19b2f   4 weeks ago     72.9MB
ubuntu          18.04     c090eaba6b94   4 weeks ago     63.3MB
hello-world     latest    bf756fb1ae65   13 months ago   13.3kB
root@ip-172-31-79-24:/home/ubuntu/task2# docker run task2
Running this inside a container !
My SRN is PES1201800102
root@ip-172-31-79-24:/home/ubuntu/task2# cd..
cd..: command not found
root@ip-172-31-79-24:/home/ubuntu/task2# cd..
cd..: command not found
root@ip-172-31-79-24:/home/ubuntu/task2# cd
root@ip-172-31-79-24:~# sudo -s
root@ip-172-31-79-24:~# cd /home
root@ip-172-31-79-24:/home# cd /ubuntu
bash: cd: /ubuntu: No such file or directory
root@ip-172-31-79-24:/home# cd ubuntu
root@ip-172-31-79-24:/home/ubuntu# mkdir task3
root@ip-172-31-79-24:/home/ubuntu# cd task3
root@ip-172-31-79-24:/home/ubuntu/task3# nano my.html
root@ip-172-31-79-24:/home/ubuntu/task3# ls
my.html
root@ip-172-31-79-24:/home/ubuntu/task3# nano Dockerfile
root@ip-172-31-79-24:/home/ubuntu/task3# docker build -t taskc .
Sending build context to Docker daemon  3.072kB
Step 1/2 : FROM nginx
 ---> 35c43ace9216
Step 2/2 : COPY my.html /usr/share/nginx/html
 ---> e21cd9e0599d
Successfully built e21cd9e0599d
Successfully tagged taskc:latest
root@ip-172-31-79-24:/home/ubuntu/task3# docker run -p 80:80 taskc
/docker-entrypoint.sh: /docker-entrypoint.d/ is not empty, will attempt to perfo
rm configuration
/docker-entrypoint.sh: Looking for shell scripts in /docker-entrypoint.d/
/docker-entrypoint.sh: Launching /docker-entrypoint.d/10-listen-on-ipv6-by-defau
lt.sh
10-listen-on-ipv6-by-default.sh: info: Getting the checksum of /etc/nginx/conf.d
/default.conf
10-listen-on-ipv6-by-default.sh: info: Enabled listen on IPv6 in /etc/nginx/conf
.d/default.conf
/docker-entrypoint.sh: Launching /docker-entrypoint.d/20-envsubst-on-templates.s
h
/docker-entrypoint.sh: Launching /docker-entrypoint.d/30-tune-worker-processes.s
h
/docker-entrypoint.sh: Configuration complete; ready for start up
```

3c.

root@ip-172-31-79-24: /home/ubuntu/task3

```
root@ip-172-31-79-24:/home/ubuntu/task3# docker ps
CONTAINER ID   IMAGE   COMMAND              CREATED        STATUS         PORTS                      NAMES
acdbd02e53fe   mongo   "docker-entrypoint.s…"  10 minutes ago  Up 10 minutes  0.0.0.0:27017->27017/tcp   hopeful_chatelet
root@ip-172-31-79-24:/home/ubuntu/task3# docker run taskc2
Inserted into the MongoDB database!
Fecthed from MongoDB:  {'_id': ObjectId('6030aa3f8e2d6d1f9a27f8ae'), 'Name:': 'Vishruth', 'SRN': 'PES1201800102'}
root@ip-172-31-79-24:/home/ubuntu/task3# |
```

3d.

root@ip-172-31-79-24: /home/ubuntu/task3

```
root@ip-172-31-79-24:/home/ubuntu/task3# docker run -dp 27017:27017 --network=my-bridge-network --name=mongodb mongo:latest
1c796fc37fc0a64c41e8c54863fd952168206fdf818ebe9a7fce61de2b59b716
root@ip-172-31-79-24:/home/ubuntu/task3# docker ps
CONTAINER ID   IMAGE         COMMAND              CREATED         STATUS        PORTS                      NAMES
1c796fc37fc0   mongo:latest  "docker-entrypoint.s…"  10 seconds ago   Up 9 seconds  0.0.0.0:27017->27017/tcp   mongodb
root@ip-172-31-79-24:/home/ubuntu/task3#
```

3e.

root@ip-172-31-79-24: /home/ubuntu/task3

```
root@ip-172-31-79-24:/home/ubuntu/task3# docker run --network=my-bridge-network taskc2
Inserted into the MongoDB database!
Fecthed from MongoDB:  {'_id': ObjectId('6030acdac4f2dfe99499cb9b'), 'Name:': 'Vishruth', 'SRN': 'PES1201800102'}
root@ip-172-31-79-24:/home/ubuntu/task3#
```

4a.

4b.

root@ip-172-31-79-24: /home/ubuntu/task4

ame":"PyMongo","version":"3.11.3"},"os":{"type":"Linux","name":"Linux","architecture":"x86_64","version":"5.4.0-1037-aws"},"platform":"CPython 3.9.2.final.0"}}}
mongodb_1 | {"t":{"$date":"2021-02-20T06:41:46.790+00:00"},"s":"I", "c":"NETWORK", "id":22943, "ctx":"listener","msg":"Connection accepted","attr":{"remote":"172.19.0.3:41126","connectionId":3,"connectionC
ount":3}}
mongodb_1 | {"t":{"$date":"2021-02-20T06:41:46.790+00:00"},"s":"I", "c":"NETWORK", "id":51800, "ctx":"conn3","msg":"client metadata","attr":{"remote":"172.19.0.3:41126","client":"conn3","doc":{"driver":{"n
ame":"PyMongo","version":"3.11.3"},"os":{"type":"Linux","name":"Linux","architecture":"x86_64","version":"5.4.0-1037-aws"},"platform":"CPython 3.9.2.final.0"}}}
pycode_1 | Inserted into the MongoDB database!
pycode_1 | Fecthed from MongoDB: {'_id': ObjectId('6030aeecfe1ed807bfb961bb'), 'Name':' 'Vishruth', 'SRN': 'PES1201800102'}
mongodb_1 | {"t":{"$date":"2021-02-20T06:41:46.815+00:00"},"s":"I", "c":"NETWORK", "id":22943, "ctx":"listener","msg":"Connection accepted","attr":{"remote":"172.19.0.4:35498","connectionId":4,"connectionC
ount":4}}
mongodb_1 | {"t":{"$date":"2021-02-20T06:41:46.815+00:00"},"s":"I", "c":"NETWORK", "id":51800, "ctx":"conn4","msg":"client metadata","attr":{"remote":"172.19.0.4:35498","client":"conn4","doc":{"driver":{"n
ame":"PyMongo","version":"3.11.3"},"os":{"type":"Linux","name":"Linux","architecture":"x86_64","version":"5.4.0-1037-aws"},"platform":"CPython 3.9.2.final.0"}}}
mongodb_1 | {"t":{"$date":"2021-02-20T06:41:46.817+00:00"},"s":"I", "c":"NETWORK", "id":22943, "ctx":"listener","msg":"Connection accepted","attr":{"remote":"172.19.0.4:35500","connectionId":5,"connectionC
ount":5}}
mongodb_1 | {"t":{"$date":"2021-02-20T06:41:46.817+00:00"},"s":"I", "c":"NETWORK", "id":22943, "ctx":"listener","msg":"Connection accepted","attr":{"remote":"172.19.0.4:35502","connectionId":6,"connectionC
ount":6}}
mongodb_1 | {"t":{"$date":"2021-02-20T06:41:46.817+00:00"},"s":"I", "c":"NETWORK", "id":51800, "ctx":"conn6","msg":"client metadata","attr":{"remote":"172.19.0.4:35502","client":"conn6","doc":{"driver":{"n
ame":"PyMongo","version":"3.11.3"},"os":{"type":"Linux","name":"Linux","architecture":"x86_64","version":"5.4.0-1037-aws"},"platform":"CPython 3.9.2.final.0"}}}
mongodb_1 | {"t":{"$date":"2021-02-20T06:41:46.818+00:00"},"s":"I", "c":"NETWORK", "id":51800, "ctx":"conn5","msg":"client metadata","attr":{"remote":"172.19.0.4:35500","client":"conn5","doc":{"driver":{"n
ame":"PyMongo","version":"3.11.3"},"os":{"type":"Linux","name":"Linux","architecture":"x86_64","version":"5.4.0-1037-aws"},"platform":"CPython 3.9.2.final.0"}}}
pycode_3 | Inserted into the MongoDB database!
pycode_3 | Fecthed from MongoDB: {'_id': ObjectId('6030aeecfe1ed807bfb961bb'), 'Name':' 'Vishruth', 'SRN': 'PES1201800102'}
mongodb_1 | {"t":{"$date":"2021-02-20T06:41:46.820+00:00"},"s":"I", "c":"NETWORK", "id":22944, "ctx":"conn6","msg":"Connection ended","attr":{"remote":"172.19.0.4:35502","connectionId":6,"connectionCount":
5}}
mongodb_1 | {"t":{"$date":"2021-02-20T06:41:46.846+00:00"},"s":"I", "c":"NETWORK", "id":22943, "ctx":"listener","msg":"Connection accepted","attr":{"remote":"172.19.0.5:37840","connectionId":7,"connectionC
ount":6}}
mongodb_1 | {"t":{"$date":"2021-02-20T06:41:46.847+00:00"},"s":"I", "c":"NETWORK", "id":51800, "ctx":"conn7","msg":"client metadata","attr":{"remote":"172.19.0.5:37840","client":"conn7","doc":{"driver":{"n
ame":"PyMongo","version":"3.11.3"},"os":{"type":"Linux","name":"Linux","architecture":"x86_64","version":"5.4.0-1037-aws"},"platform":"CPython 3.9.2.final.0"}}}
mongodb_1 | {"t":{"$date":"2021-02-20T06:41:46.848+00:00"},"s":"I", "c":"NETWORK", "id":22943, "ctx":"listener","msg":"Connection accepted","attr":{"remote":"172.19.0.5:37842","connectionId":8,"connectionC
ount":7}}
mongodb_1 | {"t":{"$date":"2021-02-20T06:41:46.848+00:00"},"s":"I", "c":"NETWORK", "id":51800, "ctx":"conn8","msg":"client metadata","attr":{"remote":"172.19.0.5:37842","client":"conn8","doc":{"driver":{"n
ame":"PyMongo","version":"3.11.3"},"os":{"type":"Linux","name":"Linux","architecture":"x86_64","version":"5.4.0-1037-aws"},"platform":"CPython 3.9.2.final.0"}}}
pycode_2 | Inserted into the MongoDB database!
pycode_2 | Fecthed from MongoDB: {'_id': ObjectId('6030aeecfe1ed807bfb961bb'), 'Name':' 'Vishruth', 'SRN': 'PES1201800102'}
mongodb_1 | {"t":{"$date":"2021-02-20T06:41:46.851+00:00"},"s":"I", "c":"NETWORK", "id":22943, "ctx":"listener","msg":"Connection accepted","attr":{"remote":"172.19.0.5:37844","connectionId":9,"connectionC
ount":8}}
mongodb_1 | {"t":{"$date":"2021-02-20T06:41:46.851+00:00"},"s":"I", "c":"NETWORK", "id":51800, "ctx":"conn9","msg":"client metadata","attr":{"remote":"172.19.0.5:37844","client":"conn9","doc":{"driver":{"n
ame":"PyMongo","version":"3.11.3"},"os":{"type":"Linux","name":"Linux","architecture":"x86_64","version":"5.4.0-1037-aws"},"platform":"CPython 3.9.2.final.0"}}}
mongodb_1 | {"t":{"$date":"2021-02-20T06:41:47.289+00:00"},"s":"I", "c":"-", "id":20883, "ctx":"conn1","msg":"Interrupted operation as its client disconnected","attr":{"opId":17}}
mongodb_1 | {"t":{"$date":"2021-02-20T06:41:47.290+00:00"},"s":"I", "c":"NETWORK", "id":22944, "ctx":"conn1","msg":"Connection ended","attr":{"remote":"172.19.0.3:41122","connectionId":1,"connectionCount":
7}}
mongodb_1 | {"t":{"$date":"2021-02-20T06:41:47.295+00:00"},"s":"I", "c":"NETWORK", "id":22944, "ctx":"conn2","msg":"Connection ended","attr":{"remote":"172.19.0.3:41124","connectionId":2,"connectionCount":
6}}
mongodb_1 | {"t":{"$date":"2021-02-20T06:41:47.296+00:00"},"s":"I", "c":"NETWORK", "id":22944, "ctx":"conn3","msg":"Connection ended","attr":{"remote":"172.19.0.3:41126","connectionId":3,"connectionCount":
5}}
mongodb_1 | {"t":{"$date":"2021-02-20T06:41:47.317+00:00"},"s":"I", "c":"NETWORK", "id":22944, "ctx":"conn5","msg":"Connection ended","attr":{"remote":"172.19.0.4:35500","connectionId":5,"connectionCount":
4}}
mongodb_1 | {"t":{"$date":"2021-02-20T06:41:47.317+00:00"},"s":"I", "c":"NETWORK", "id":22944, "ctx":"conn4","msg":"Connection ended","attr":{"remote":"172.19.0.4:35498","connectionId":4,"connectionCount":
3}}
mongodb_1 | {"t":{"$date":"2021-02-20T06:41:47.355+00:00"},"s":"I", "c":"-", "id":20883, "ctx":"conn7","msg":"Interrupted operation as its client disconnected","attr":{"opId":30}}
mongodb_1 | {"t":{"$date":"2021-02-20T06:41:47.355+00:00"},"s":"I", "c":"NETWORK", "id":22944, "ctx":"conn8","msg":"Connection ended","attr":{"remote":"172.19.0.5:37842","connectionId":8,"connectionCount":
2}}
mongodb_1 | {"t":{"$date":"2021-02-20T06:41:47.355+00:00"},"s":"I", "c":"NETWORK", "id":22944, "ctx":"conn7","msg":"Connection ended","attr":{"remote":"172.19.0.5:37840","connectionId":7,"connectionCount":
1}}
mongodb_1 | {"t":{"$date":"2021-02-20T06:41:47.355+00:00"},"s":"I", "c":"NETWORK", "id":22944, "ctx":"conn9","msg":"Connection ended","attr":{"remote":"172.19.0.5:37844","connectionId":9,"connectionCount":
0}}
task4_pycode_1 exited with code 0
task4_pycode_3 exited with code 0
task4_pycode_2 exited with code 0

5a.

```
root@ip-172-31-79-24: /home/PES1201800102

root@427ac9e038e6:/# cd home/ubuntu/
root@427ac9e038e6:/home/ubuntu# ls
Dockerfile  details.txt  sample.py
root@427ac9e038e6:/home/ubuntu# python sample.py
line 1: My name is Vishruth
line 2: My SRN is PES1201800102
line 3: I am from D section
line 4: I am in my 6th semester
root@427ac9e038e6:/home/ubuntu#
```