

CLOUD COMPUTING LAB

DOCKER

NAME : Trisha Jain
SRN : PES1UG19CS542
SECTION : I

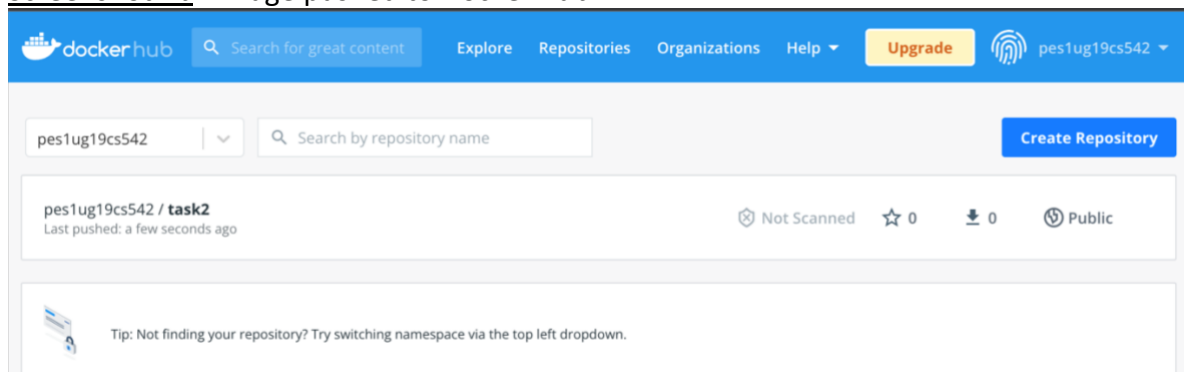
Screenshot 1 : Running docker hello-world

```
[node1] (local) root@192.168.0.28 ~  
$ docker run hello-world  
Unable to find image 'hello-world:latest' locally  
latest: Pulling from library/hello-world  
2db29710123e: Pull complete  
Digest: sha256:97a379f4f88575512824f3b352bc03cd75e239179eea0fecc38e597b2209f49a  
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)
```

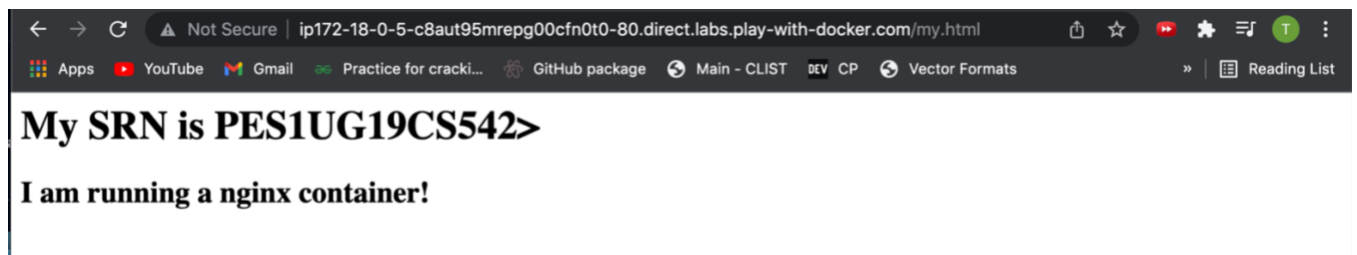
Screenshot 2a : C Program successfully run inside the container

```
[node1] (local) root@192.168.0.13 ~  
$ docker run task2  
Running this inside a container !  
My SRN is PES1UG19CS542
```

Screenshot 2b : Image pushed to Docker hub



Screenshot 3a : Sample.html showing the web page on the browser



Screenshot 3b : Docker containing nginx

```
t.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.sh
/docker-entrypoint.sh: Launching /docker-entrypoint.d/30-tune-worker-processes.sh
/docker-entrypoint.sh: Configuration complete; ready for start up
2022/02/23 09:06:56 [notice] 1#1: using the "epoll" event method
2022/02/23 09:06:56 [notice] 1#1: nginx/1.21.6
2022/02/23 09:06:56 [notice] 1#1: built by gcc 10.2.1 20210110 (Debian 10.2.1-6)
2022/02/23 09:06:56 [notice] 1#1: OS: Linux 4.4.0-210-generic
2022/02/23 09:06:56 [notice] 1#1: getrlimit(RLIMIT_NOFILE): 1048576:1048576
2022/02/23 09:06:56 [notice] 1#1: start worker processes
2022/02/23 09:06:56 [notice] 1#1: start worker process 32
2022/02/23 09:06:56 [notice] 1#1: start worker process 33
2022/02/23 09:06:56 [notice] 1#1: start worker process 34
2022/02/23 09:06:56 [notice] 1#1: start worker process 35
2022/02/23 09:06:56 [notice] 1#1: start worker process 36
2022/02/23 09:06:56 [notice] 1#1: start worker process 37
2022/02/23 09:06:56 [notice] 1#1: start worker process 38
2022/02/23 09:06:56 [notice] 1#1: start worker process 39
```

Screenshot 3c : Python application successfully running and reading from Mongo database

```
[node1] (local) root@192.168.0.13 ~
$ docker run task3b
Inserted into the MongoDB database!
Fetched from MongoDB: {'_id': ObjectId('6216023e299e2533c7268e00'), 'Name': 'Trisha Jain', 'SRN': 'PES1UG19CS542'}
```

Screenshot 3d : MongoDB being run withing the network

```
[node1] (local) root@192.168.0.13 ~
$ docker run -dp 27017:27017 --network=my-bridge-network --name=mongodb mongo:latest
237d82272a57ab175d890f2f6b63bc31bb4566029417d62cff22885c72d0eb72
```

Screenshot 3e : Python file being run within the network and successfully writing and reading from MongoDB

```

[mon1] (local) root@192.168.0.13 ~
$ docker run --network=my-bridge-network task3c
Inserted into the MongoDB database!
Fetched from MongoDB: {'_id': ObjectId('621604b24bd73ef46cc3f694'), 'Name': 'Trisha Jain', 'SRN': 'PES1UG19CS542'}
[mon1] (local) root@192.168.0.13 ~

```

Screenshot 4a : Python-MongoDB application running as a docker-compose application

```

:20345, "ctx":"LogicalSessionCacheRefresh","msg":"Index build: done building","attr":{"buildUUID":null,"namespace":"config.system.sessions","index":"lsidTTLIndex","commitTimestamp":null}}
mongodb_1 | {"t":{"$date":"2022-02-23T10:05:51.314+00:00"},"s":"I", "c":"INDEX", "id":20345, "ctx":"conn3","msg":"Index build: done building","attr":{"buildUUID":null,"namespace":"sample_db.sample_collection","index":"_id_","commitTimestamp":null}}
pycode_1 | Inserted into the MongoDB database!
pycode_1 | Fetched from MongoDB: {'_id': ObjectId('621606ffb6d735023f568ea4'), 'Name': 'Trisha Jain', 'SRN': 'PES1UG19CS542'}
mongodb_1 | {"t":{"$date":"2022-02-23T10:05:51.800+00:00"},"s":"I", "c":"-", "id":20883, "ctx":"conn1","msg":"Interrupted operation as its client disconnected","attr":{"opId":13}}
mongodb_1 | {"t":{"$date":"2022-02-23T10:05:51.801+00:00"},"s":"I", "c":"NETWORK", "id":22944, "ctx":"conn1","msg":"Connection ended","attr":{"remote":"172.20.0.3:57940","uuid":"189b5f77-6809-4e21-81db-ed9b273ea269","connectionId":1,"connectionCount":2}}
mongodb_1 | {"t":{"$date":"2022-02-23T10:05:51.811+00:00"},"s":"I", "c":"NETWORK", "id":22944, "ctx":"conn3","msg":"Connection ended","attr":{"remote":"172.20.0.3:57944","uuid":"59a1f0db-3b1f-4434-8540-4d9403aae92f","connectionId":3,"connectionCount":1}}
mongodb_1 | {"t":{"$date":"2022-02-23T10:05:51.812+00:00"},"s":"I", "c":"NETWORK", "id":22944, "ctx":"conn2","msg":"Connection ended","attr":{"remote":"172.20.0.3:57942","uuid":"1ff76647-d5c8-4636-8687-f2aea2a6f7f9","connectionId":2,"connectionCount":0}}
root_pycode_1 exited with code 0

```

Screenshot 4b : 3 python application writes and reads after scaling the application

```

:51800, "ctx":"conn8","msg":"client metadata","attr":{"remote":"172.20.0.5:41864","client":"conn8","doc":{"driver":{"name":"PyMongo","version":"4.0.1"},"os":{"type":"Linux","name":"Linux","architecture":"x86_64","version":"4.4.0-210-generic"},"platform":"CPython 3.10.2.final.0"}}}
pycode_3 | Inserted into the MongoDB database!
pycode_3 | Fetched from MongoDB: {'_id': ObjectId('621606ffb6d735023f568ea4'), 'Name': 'Trisha Jain', 'SRN': 'PES1UG19CS542'}
root_pycode_1 exited with code 0
mongodb_1 | {"t":{"$date":"2022-02-23T10:07:39.824+00:00"},"s":"I", "c":"-", "id":20883, "ctx":"conn4","msg":"Interrupted operation as its client disconnected","attr":{"opId":29}}
mongodb_1 | {"t":{"$date":"2022-02-23T10:07:39.825+00:00"},"s":"I", "c":"NETWORK", "id":22944, "ctx":"conn4","msg":"Connection ended","attr":{"remote":"172.20.0.4:57716","uuid":"0579893e-d19f-4615-bc1f-357a2c2bee4e","connectionId":4,"connectionCount":5}}
mongodb_1 | {"t":{"$date":"2022-02-23T10:07:39.835+00:00"},"s":"I", "c":"NETWORK", "id":22944, "ctx":"conn5","msg":"Connection ended","attr":{"remote":"172.20.0.4:57718","uuid":"285cbaf8-bba1-4802-a4aa-a3fc83961810","connectionId":5,"connectionCount":4}}
mongodb_1 | {"t":{"$date":"2022-02-23T10:07:39.835+00:00"},"s":"I", "c":"NETWORK", "id":22944, "ctx":"conn6","msg":"Connection ended","attr":{"remote":"172.20.0.4:57720","uuid":"b5832b5f-17ff-45a5-9a6e-ec3b3a0f32db","connectionId":6,"connectionCount":3}}
mongodb_1 | {"t":{"$date":"2022-02-23T10:07:39.862+00:00"},"s":"I", "c":"-", "id":20883, "ctx":"conn7","msg":"Interrupted operation as its client disconnected","attr":{"opId":36}}

```