

# Cloud computing lab week 5 : Docker

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Section : G

## Task-1

```
Last login: Thu Feb 18 16:05:37 2021 from 49.37.172.22
ubuntu@ip-172-31-73-230:~$ 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/

ubuntu@ip-172-31-73-230:~$ |
```

## Task-2

```
Successfully built 11b94a9cd88c
Successfully tagged my_first_image:latest
ubuntu@ip-172-31-73-230:~/C$ docker images
REPOSITORY          TAG             IMAGE ID        CREATED         SIZE
my_first_image      latest         11b94a9cd88c   22 seconds ago  210MB
ubuntu              18.04         c090eaba6b94   4 weeks ago    63.3MB
hello-world         latest        bf756fb1ae65   13 months ago  13.3kB
ubuntu@ip-172-31-73-230:~/C$ docker run my_first_image
Running this inside a container !
My SRN is PES1201800177
ubuntu@ip-172-31-73-230:~/C$ |
```

### Task-3



**My SRN is PES1201800177>**

**I am running a nginx container!**

```
ubuntu@ip-172-31-73-230:~/html$ docker run -p 80:80 my_first_image
/docker-entrypoint.sh: /docker-entrypoint.d/ is not empty, will attempt to perform configuration
/docker-entrypoint.sh: Looking for shell scripts in /docker-entrypoint.d/
/docker-entrypoint.sh: Launching /docker-entrypoint.d/10-listen-on-ipv6-by-default.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
49.37.172.22 - - [18/Feb/2021:17:20:45 +0000] "GET /my.html HTTP/1.1" 200 111 "-"
"Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome
```

```
ubuntu@ip-172-31-73-230:~/mongo$ docker run task2
Inserted into the MongoDB database!
Fetched from MongoDB: {'_id': ObjectId('602ea75eacfb8f555c14ae79'), 'Name': '<YOUR NAME HERE>', 'SRN': '<YOUR SRN HERE>'}
ubuntu@ip-172-31-73-230:~/mongo$
```

```
ubuntu@ip-172-31-73-230:~/mongo$ docker run -dp 27017:27017 --name mongodb --network=my-bridge-network mongo
2088f9b346a8a65a5bf7dbc58fe826d764ee75be399d1cf53ac3a535816160de
```

```
ubuntu@ip-172-31-73-230:~/mongo$ docker ps
```

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS	PORTS	NAMES
2088f9b346a8	mongo	"docker-entrypoint.s..."	9 seconds ago	Up 8 seconds	0.0.0.0:27017->27017/tcp	mongodb

```
ubuntu@ip-172-31-73-230:~/mongo$ docker run --network=my-bridge-network task2
Inserted into the MongoDB database!
Fetched from MongoDB: {'_id': ObjectId('602ea936264d6c68a2e84bfb'), 'Name': '<YOUR NAME HERE>', 'SRN': '<YOUR SRN HERE>'}
```

## Task -4

```
mongod_1 | {"t":{"date":"2021-02-18T18:04:25.552+00:00"},"s":"I", "c":"NETWORK", "id":22943, "ctx":"listener", "msg":"Connection accepted", "attr":{"remote":"172.20.0.3:54684","connectionId":3,"connectionCount":3}}
mongod_1 | {"t":{"date":"2021-02-18T18:04:25.553+00:00"},"s":"I", "c":"NETWORK", "id":51800, "ctx":"conn2", "msg":"client metadata", "attr":{"remote":"172.20.0.3:54682","client":"conn2","doc":{"driver":{"name":"PyMongo","version":"3.11.3"},"os":{"type":"Linux","name":"Linux","architecture":"x86_64","version":"5.4.0-1037-aws"},"platform":"CPython 3.11.0"}}}}
mongod_1 | {"t":{"date":"2021-02-18T18:04:25.553+00:00"},"s":"I", "c":"NETWORK", "id":51800, "ctx":"conn3", "msg":"client metadata", "attr":{"remote":"172.20.0.3:54684","client":"conn3","doc":{"driver":{"name":"PyMongo","version":"3.11.3"},"os":{"type":"Linux","name":"Linux","architecture":"x86_64","version":"5.4.0-1037-aws"},"platform":"CPython 3.11.0"}}}}
mongod_1 | {"t":{"date":"2021-02-18T18:04:25.554+00:00"},"s":"I", "c":"STORAGE", "id":20320, "ctx":"conn2", "msg":"createCollection", "attr":{"namespace":"sample_db.sample_collection","uuidDisposition":"generated","uuid":{"uuid":"e3d2b1c7-10a5-45ed-a669-526af737f2c7"},"options":{}}}
mongod_1 | {"t":{"date":"2021-02-18T18:04:25.570+00:00"},"s":"I", "c":"INDEX", "id":20345, "ctx":"conn2", "msg":"Index build: done building", "attr":{"buildUUID":null,"namespace":"sample_db.sample_collection","index":"_id","commitTimestamp":{"timestamp":{"t":0,"i":0}}}}
pycode_1 | Inserted into the MongoDB database!
pycode_1 | Fetched from MongoDB: None
mongod_1 | {"t":{"date":"2021-02-18T18:04:26.054+00:00"},"s":"I", "c":"-", "id":20883, "ctx":"conn1", "msg":"Interrupted operation as its client disconnected", "attr":{"opId":20}}
mongod_1 | {"t":{"date":"2021-02-18T18:04:26.055+00:00"},"s":"I", "c":"NETWORK", "id":22944, "ctx":"conn1", "msg":"Connection ended", "attr":{"remote":"172.20.0.3:54680","connectionId":1,"connectionCount":2}}
mongod_1 | {"t":{"date":"2021-02-18T18:04:26.059+00:00"},"s":"I", "c":"NETWORK", "id":22944, "ctx":"conn2", "msg":"client metadata", "attr":{"remote":"172.20.0.3:54682","client":"conn2","doc":{"driver":{"name":"PyMongo","version":"3.11.3"},"os":{"type":"Linux","name":"Linux","architecture":"x86_64","version":"5.4.0-1037-aws"},"platform":"CPython 3.11.0"}}}}

{"doc":{"driver":{"name":"PyMongo","version":"3.11.3"},"os":{"type":"Linux","name":"Linux","architecture":"x86_64","version":"5.4.0-1037-aws"},"platform":"CPython 3.11.0"},"msg":"client metadata","attr":{"remote":"172.20.0.3:54682","client":"conn2","doc":{"driver":{"name":"PyMongo","version":"3.11.3"},"os":{"type":"Linux","name":"Linux","architecture":"x86_64","version":"5.4.0-1037-aws"},"platform":"CPython 3.11.0"}}}}
mongod_1 | {"t":{"date":"2021-02-18T18:06:32.364+00:00"},"s":"I", "c":"NETWORK", "id":51800, "ctx":"conn2","msg":"client metadata", "attr":{"remote":"172.20.0.3:54682","client":"conn2","doc":{"driver":{"name":"PyMongo","version":"3.11.3"},"os":{"type":"Linux","name":"Linux","architecture":"x86_64","version":"5.4.0-1037-aws"},"platform":"CPython 3.11.0"}}}}
pycode_1 | Inserted into the MongoDB database!
pycode_1 | Fetched from MongoDB: None
mongod_1 | {"t":{"date":"2021-02-18T18:06:32.515+00:00"},"s":"I", "c":"NETWORK", "id":22943, "ctx":"listener","msg":"Connection accepted", "attr":{"remote":"172.20.0.3:54684","connectionId":4,"connectionCount":4}}
mongod_1 | {"t":{"date":"2021-02-18T18:06:32.516+00:00"},"s":"I", "c":"NETWORK", "id":51800, "ctx":"conn4","msg":"client metadata", "attr":{"remote":"172.20.0.3:54682","client":"conn4","doc":{"driver":{"name":"PyMongo","version":"3.11.3"},"os":{"type":"Linux","name":"Linux","architecture":"x86_64","version":"5.4.0-1037-aws"},"platform":"CPython 3.11.0"}}}}
mongod_1 | {"t":{"date":"2021-02-18T18:06:32.518+00:00"},"s":"I", "c":"NETWORK", "id":22943, "ctx":"listener","msg":"Connection accepted", "attr":{"remote":"172.20.0.3:54684","connectionId":5,"connectionCount":5}}
mongod_1 | {"t":{"date":"2021-02-18T18:06:32.518+00:00"},"s":"I", "c":"NETWORK", "id":51800, "ctx":"conn5","msg":"client metadata", "attr":{"remote":"172.20.0.3:54682","client":"conn5","doc":{"driver":{"name":"PyMongo","version":"3.11.3"},"os":{"type":"Linux","name":"Linux","architecture":"x86_64","version":"5.4.0-1037-aws"},"platform":"CPython 3.11.0"}}}}
pycode_2 | Inserted into the MongoDB database!
pycode_2 | Fetched from MongoDB: None
mongod_1 | {"t":{"date":"2021-02-18T18:06:32.568+00:00"},"s":"I", "c":"NETWORK", "id":22943, "ctx":"listener","msg":"Connection accepted", "attr":{"remote":"172.20.0.3:54684","connectionId":6,"connectionCount":6}}
mongod_1 | {"t":{"date":"2021-02-18T18:06:32.568+00:00"},"s":"I", "c":"NETWORK", "id":51800, "ctx":"conn6","msg":"client metadata", "attr":{"remote":"172.20.0.3:54682","client":"conn6","doc":{"driver":{"name":"PyMongo","version":"3.11.3"},"os":{"type":"Linux","name":"Linux","architecture":"x86_64","version":"5.4.0-1037-aws"},"platform":"CPython 3.11.0"}}}}
mongod_1 | {"t":{"date":"2021-02-18T18:06:32.570+00:00"},"s":"I", "c":"NETWORK", "id":22943, "ctx":"listener","msg":"Connection accepted", "attr":{"remote":"172.20.0.3:54684","connectionId":7,"connectionCount":7}}
mongod_1 | {"t":{"date":"2021-02-18T18:06:32.571+00:00"},"s":"I", "c":"NETWORK", "id":51800, "ctx":"conn7","msg":"client metadata", "attr":{"remote":"172.20.0.3:54682","client":"conn7","doc":{"driver":{"name":"PyMongo","version":"3.11.3"},"os":{"type":"Linux","name":"Linux","architecture":"x86_64","version":"5.4.0-1037-aws"},"platform":"CPython 3.11.0"}}}}
mongod_1 | {"t":{"date":"2021-02-18T18:06:32.571+00:00"},"s":"I", "c":"NETWORK", "id":22943, "ctx":"listener","msg":"Connection accepted", "attr":{"remote":"172.20.0.3:54684","connectionId":8,"connectionCount":8}}
mongod_1 | {"t":{"date":"2021-02-18T18:06:32.572+00:00"},"s":"I", "c":"NETWORK", "id":51800, "ctx":"conn8","msg":"client metadata", "attr":{"remote":"172.20.0.3:54682","client":"conn8","doc":{"driver":{"name":"PyMongo","version":"3.11.3"},"os":{"type":"Linux","name":"Linux","architecture":"x86_64","version":"5.4.0-1037-aws"},"platform":"CPython 3.11.0"}}}}
pycode_3 | Inserted into the MongoDB database!
pycode_3 | Fetched from MongoDB: None
mongod_1 | {"t":{"date":"2021-02-18T18:06:32.861+00:00"},"s":"I", "c":"-", "id":20883, "ctx":"conn1","msg":"Interrupted operation as its client disconnected", "attr":{"opId":20}}
mongod_1 | {"t":{"date":"2021-02-18T18:06:32.862+00:00"},"s":"I", "c":"NETWORK", "id":22944, "ctx":"conn1","msg":"Connection ended", "attr":{"remote":"172.20.0.3:54680","connectionId":1,"connectionCount":7}}
mongod_1 | {"t":{"date":"2021-02-18T18:06:32.869+00:00"},"s":"I", "c":"NETWORK", "id":22944, "ctx":"conn3","msg":"Connection ended", "attr":{"remote":"172.20.0.3:54680","connectionId":3,"connectionCount":6}}
mongod_1 | {"t":{"date":"2021-02-18T18:06:32.869+00:00"},"s":"I", "c":"NETWORK", "id":22944, "ctx":"conn2","msg":"Connection ended", "attr":{"remote":"172.20.0.3:54682","connectionId":2,"connectionCount":5}}
mongod_1 | {"t":{"date":"2021-02-18T18:06:33.018+00:00"},"s":"I", "c":"NETWORK", "id":22944, "ctx":"conn5","msg":"Connection ended", "attr":{"remote":"172.20.0.3:54682","connectionId":5,"connectionCount":4}}
mongod_1 | {"t":{"date":"2021-02-18T18:06:33.019+00:00"},"s":"I", "c":"NETWORK", "id":22944, "ctx":"conn4","msg":"Connection ended", "attr":{"remote":"172.20.0.3:54682","connectionId":4,"connectionCount":3}}
```