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	Date: 7/2/2022	Lab No: 2

1.a

```

Command Prompt
Microsoft Windows [Version 10.0.22621.1194]
(c) Microsoft Corporation. All rights reserved.

C:\Users\adith>docker run hello-world

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/

```

2.a

```

Command Prompt
C:\Users\adith\Documents\PES-Assignments\6th Sem\CC\Lab 2\task2>docker build -t dockerfile .
[+] Building 2.2s (10/10) FINISHED
=> [internal] load build definition from Dockerfile                                0.0s
=> => transferring dockerfile: 31B                                                0.0s
=> [internal] load .dockerignore                                                  0.0s
=> => transferring context: 2B                                                    0.0s
=> [internal] load metadata for docker.io/library/ubuntu:18.04                  1.7s
=> [internal] load build context                                                  0.0s
=> => transferring context: 159B                                                 0.0s
=> [1/5] FROM docker.io/library/ubuntu:18.04@sha256:a3765b4d74747b5e9bdd03205b3fbc4fa19a02781c185f97f24c8f4f84ed 0.0s
=> CACHED [2/5] RUN apt-get update                                                0.0s
=> CACHED [3/5] RUN apt-get install gcc -y                                       0.0s
=> [4/5] COPY program.c program.c                                                0.0s
=> [5/5] RUN gcc program.c                                                       0.3s
=> exporting to image                                                            0.1s
=> => exporting layers                                                            0.0s
=> => writing image sha256:4adbec989f5d108bdd42d1890acd46b3746e8ca8664f0d2a87cbe5521a126be9 0.0s
=> => naming to docker.io/library/dockerfile                                    0.0s

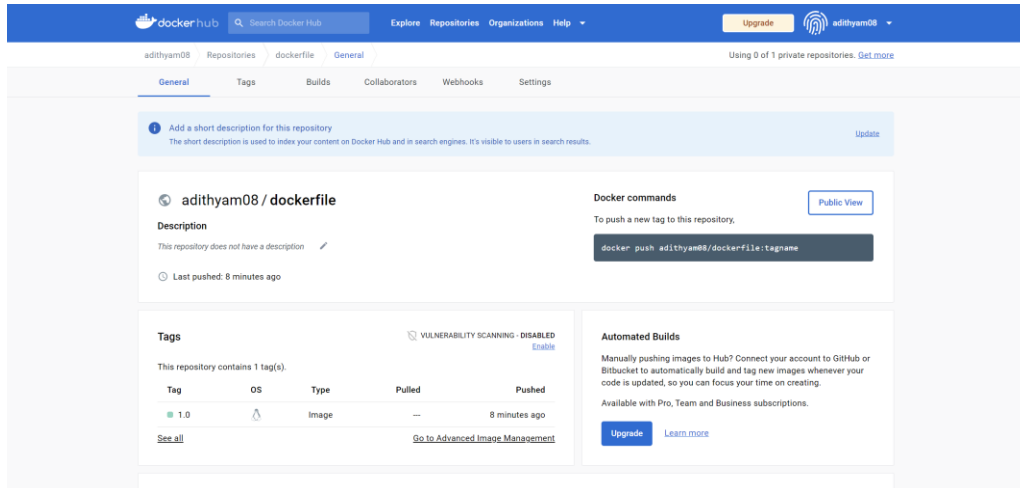
Use 'docker scan' to run Snyk tests against images to find vulnerabilities and learn how to fix them

C:\Users\adith\Documents\PES-Assignments\6th Sem\CC\Lab 2\task2>docker run dockerfile
Running this inside a container !
My SRN is PES1UG20CS621

C:\Users\adith\Documents\PES-Assignments\6th Sem\CC\Lab 2\task2>
C:\Users\adith\Documents\PES-Assignments\6th Sem\CC\Lab 2\task2>
C:\Users\adith\Documents\PES-Assignments\6th Sem\CC\Lab 2\task2>
C:\Users\adith\Documents\PES-Assignments\6th Sem\CC\Lab 2\task2>

```

2.b



3.a

```
Command Prompt - docker r x + v
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
2023/02/08 06:14:32 [notice] 1#1: using the "epoll" event method
2023/02/08 06:14:32 [notice] 1#1: nginx/1.23.3
2023/02/08 06:14:32 [notice] 1#1: built by gcc 10.2.1 20210110 (Debian 10.2.1-6)
2023/02/08 06:14:32 [notice] 1#1: OS: Linux 5.10.16.3-microsoft-standard-WSL2
2023/02/08 06:14:32 [notice] 1#1: getrlimit(RLIMIT_NOFILE): 1048576:1048576
2023/02/08 06:14:32 [notice] 1#1: start worker processes
2023/02/08 06:14:32 [notice] 1#1: start worker process 29
2023/02/08 06:14:32 [notice] 1#1: start worker process 30
2023/02/08 06:14:32 [notice] 1#1: start worker process 31
2023/02/08 06:14:32 [notice] 1#1: start worker process 32
2023/02/08 06:14:32 [notice] 1#1: start worker process 33
2023/02/08 06:14:32 [notice] 1#1: start worker process 34
2023/02/08 06:14:32 [notice] 1#1: start worker process 35
2023/02/08 06:14:32 [notice] 1#1: start worker process 36
2023/02/08 06:14:32 [notice] 1#1: start worker process 37
2023/02/08 06:14:32 [notice] 1#1: start worker process 38
2023/02/08 06:14:32 [notice] 1#1: start worker process 39
2023/02/08 06:14:32 [notice] 1#1: start worker process 40
2023/02/08 06:14:32 [notice] 1#1: start worker process 41
2023/02/08 06:14:32 [notice] 1#1: start worker process 42
2023/02/08 06:14:32 [notice] 1#1: start worker process 43
2023/02/08 06:14:32 [notice] 1#1: start worker process 44
172.17.0.1 - - [08/Feb/2023:06:14:36 +0000] "GET /my.html HTTP/1.1" 200 114 "-" "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/109.0.0.0 Safari/537.36" "-"
```

3.b



My SRN is PESIUG20CS621

I am running a nginx container!

3.c

```

Command Prompt
Use 'docker scan' to run Snyk tests against images to find vulnerabilities and learn how to fix them

C:\Users\adith\Documents\PES-Assignments\6th Sem\CC\Lab 2\task3>docker run dockerfile
/bin/sh: 1: ["python",: not found

C:\Users\adith\Documents\PES-Assignments\6th Sem\CC\Lab 2\task3>docker build -t dockerfile .
[+] Building 0.1s (9/9) FINISHED
=> [internal] load build definition from Dockerfile                                0.0s
=> => transferring dockerfile: 148B                                              0.0s
=> [internal] load .dockerignore                                                  0.0s
=> => transferring context: 2B                                                  0.0s
=> [internal] load metadata for docker.io/library/python:latest                 0.0s
=> [1/4] FROM docker.io/library/python                                          0.0s
=> [internal] load build context                                                0.0s
=> => transferring context: 31B                                                 0.0s
=> CACHED [2/4] RUN apt-get update                                              0.0s
=> CACHED [3/4] RUN pip install pymongo                                         0.0s
=> CACHED [4/4] COPY sample.py sample.py                                       0.0s
=> exporting to image                                                           0.0s
=> => exporting layers                                                         0.0s
=> => writing image sha256:f32154cc702c79703cded749c9e7e1bd45d824df3ceae13600bdaf8c58e36a2f 0.0s
=> => naming to docker.io/library/dockerfile                                   0.0s

Use 'docker scan' to run Snyk tests against images to find vulnerabilities and learn how to fix them

C:\Users\adith\Documents\PES-Assignments\6th Sem\CC\Lab 2\task3>docker run dockerfile
Inserted into the MongoDB database!
Fetched from MongoDB: {'_id': ObjectId('63e35945c1e30757a8a23ad2'), 'Name': 'Adithya M', 'SRN': 'PES1UG20CS621'}

C:\Users\adith\Documents\PES-Assignments\6th Sem\CC\Lab 2\task3>

```

3.d

```

Command Prompt
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS        PORTS
b7bbaec16758  mongo:latest  "docker-entrypoint.s..." 18 seconds ago Up 16 seconds 0.0.0.0:27017->2
7017/tcp      mongod
33d9c163a55b  dockerfile    "python sample.py"        3 minutes ago  Exited (0) 3 minutes ago
zen_ride
d57d8d9ad9aa  36e08f99f387  "/bin/sh -c '['pytho..." 3 minutes ago  Exited (127) 3 minutes ago
pensive_agnesi
b1d974a15229  mongo         "docker-entrypoint.s..." 6 minutes ago  Exited (0) About a minute ago
upbeat_nobel
f438f5277a3a  74904debd6a3  "/docker-entrypoint...." 2 hours ago   Exited (0) 2 hours ago
suspicious_poincare
ee40d1f2eadf  74904debd6a3  "/docker-entrypoint...." 2 hours ago   Exited (0) 2 hours ago
pedantic_clarke
10c250b9910c  2f1afc6da404  "/docker-entrypoint...." 2 hours ago   Exited (0) 2 hours ago
compassionate_sanderson
6f67903eb9ac  4adbec989f5d  "./a.out"                 2 hours ago   Exited (0) 2 hours ago
boring_ganguly
8db533e7ce0f  62dea2ad4310  "./a.out"                 2 hours ago   Exited (0) 2 hours ago
happy_goldwasser
5b87373236ae  62dea2ad4310  "./a.out"                 3 hours ago   Exited (0) 3 hours ago
goofy_jennings
01031dd1a082  hello-world    "/hello"                  24 hours ago  Exited (0) 24 hours ago
sharp_khayyam

C:\Users\adith\Documents\PES-Assignments\6th Sem\CC\Lab 2\task3>

```

3.e

```
Command Prompt
C:\Users\adith\Documents\PES-Assignments\6th Sem\CC\Lab 2\task3>

C:\Users\adith\Documents\PES-Assignments\6th Sem\CC\Lab 2\task3>docker build -t dockerfile .
[+] Building 0.2s (9/9) FINISHED
=> [internal] load build definition from Dockerfile                                0.0s
=> => transferring dockerfile: 31B                                                0.0s
=> [internal] load .dockerignore                                                  0.0s
=> => transferring context: 2B                                                    0.0s
=> [internal] load metadata for docker.io/library/python:latest                 0.0s
=> [1/4] FROM docker.io/library/python                                          0.0s
=> [internal] load build context                                                0.0s
=> => transferring context: 445B                                                 0.0s
=> CACHED [2/4] RUN apt-get update                                              0.0s
=> CACHED [3/4] RUN pip install pymongo                                         0.0s
=> [4/4] COPY sample.py sample.py                                              0.0s
=> exporting to image                                                           0.1s
=> => exporting layers                                                            0.0s
=> => writing image sha256:e252541b70673bfff5ac1a8b7138f14591a21fc5c6dc263511ccbccb2601dfdd 0.0s
=> => naming to docker.io/library/dockerfile                                    0.0s

Use 'docker scan' to run Snyk tests against images to find vulnerabilities and learn how to fix them

C:\Users\adith\Documents\PES-Assignments\6th Sem\CC\Lab 2\task3>docker run --network=my-bridge-network dockerfile
Inserted into the MongoDB database!
Fetched from MongoDB: {'_id': ObjectId('63e35aae751b5eab7b93505'), 'Name': 'Adithya M', 'SRN': 'PES1UG20CS621'}
```

4.a

```
Command Prompt - docker-c
ndard-WSL2}", "platform": "CPython 3.11.1.final.0"]}]
task41-mongodb-1 | {"t":{"$date":"2023-02-08T08:50:54.134+00:00"},"s":"I", "c":"NETWORK", "id":22943, "ctx":
"listener", "msg":"Connection accepted", "attr":{"remote":"172.20.0.2:57370", "uuid":"398b395e-a314-4da7-b355-4c7d9c2ed
071", "connectionId":2, "connectionCount":2}}
task41-mongodb-1 | {"t":{"$date":"2023-02-08T08:50:54.134+00:00"},"s":"I", "c":"NETWORK", "id":22943, "ctx":
"listener", "msg":"Connection accepted", "attr":{"remote":"172.20.0.2:57372", "uuid":"9f99b0d6-0a72-45d8-bd4f-75e431656
d29", "connectionId":3, "connectionCount":3}}
task41-mongodb-1 | {"t":{"$date":"2023-02-08T08:50:54.134+00:00"},"s":"I", "c":"NETWORK", "id":51800, "ctx":
"conn2", "msg":"client metadata", "attr":{"remote":"172.20.0.2:57370", "client":"conn2", "doc":{"driver":{"name":"PyMong
o", "version":"4.3.3", "os":{"type":"Linux", "name":"Linux", "architecture":"x86_64", "version":"5.10.16.3-microsoft-sta
ndard-WSL2"}, "platform":"CPython 3.11.1.final.0"]}}}
task41-mongodb-1 | {"t":{"$date":"2023-02-08T08:50:54.134+00:00"},"s":"I", "c":"NETWORK", "id":51800, "ctx":
"conn3", "msg":"client metadata", "attr":{"remote":"172.20.0.2:57372", "client":"conn3", "doc":{"driver":{"name":"PyMong
o", "version":"4.3.3", "os":{"type":"Linux", "name":"Linux", "architecture":"x86_64", "version":"5.10.16.3-microsoft-sta
ndard-WSL2"}, "platform":"CPython 3.11.1.final.0"]}}}
task41-python_app-1 | Document inserted successfully
task41-python_app-1 | Fetched from MongoDB: None
task41-mongodb-1 | {"t":{"$date":"2023-02-08T08:50:54.635+00:00"},"s":"I", "c":"-", "id":20883, "ctx":
"conn1", "msg":"Interrupted operation as its client disconnected", "attr":{"opId":18}}
task41-mongodb-1 | {"t":{"$date":"2023-02-08T08:50:54.635+00:00"},"s":"I", "c":"NETWORK", "id":22944, "ctx":
"conn1", "msg":"Connection ended", "attr":{"remote":"172.20.0.2:57368", "uuid":"84e5cd77-66ae-4bb5-b70c-b77cfbdc82d3", "
connectionId":1, "connectionCount":2}}
task41-mongodb-1 | {"t":{"$date":"2023-02-08T08:50:54.640+00:00"},"s":"I", "c":"NETWORK", "id":22944, "ctx":
"conn2", "msg":"Connection ended", "attr":{"remote":"172.20.0.2:57370", "uuid":"398b395e-a314-4da7-b355-4c7d9c2ed071", "
connectionId":2, "connectionCount":1}}
task41-mongodb-1 | {"t":{"$date":"2023-02-08T08:50:54.640+00:00"},"s":"I", "c":"NETWORK", "id":22944, "ctx":
"conn3", "msg":"Connection ended", "attr":{"remote":"172.20.0.2:57372", "uuid":"9f99b0d6-0a72-45d8-bd4f-75e431656d29", "
connectionId":3, "connectionCount":0}}
task41-python_app-1 exited with code 0
```

4.b

```

Command Prompt - docker-c  +  v
"conn6", "msg": "client metadata", "attr": {"remote": "172.20.0.4:51792", "client": "conn6", "doc": {"driver": {"name": "PyMongo", "version": "4.3.3"}, "os": {"type": "Linux", "name": "Linux", "architecture": "x86_64", "version": "5.10.16.3-microsoft-standard-WSL2"}, "platform": "CPython 3.11.1.final.0"}}}
task41-python_app-2 | Document inserted successfully
task41-python_app-2 | Fetched from MongoDB: None
task41-mongodb-1 | {"t":{"date":"2023-02-08T08:59:38.186+00:00"},"s":"I", "c":"-", "id":20883, "ctx":
"conn1", "msg": "Interrupted operation as its client disconnected", "attr":{"opId":16}}
task41-mongodb-1 | {"t":{"date":"2023-02-08T08:59:38.187+00:00"},"s":"I", "c":"NETWORK", "id":22944, "ctx":
"conn1", "msg": "Connection ended", "attr":{"remote":"172.20.0.2:57402", "uuid":"fb75db4c-553c-46a3-9e47-e2af7b435552", "
connectionId":1, "connectionCount":5}}
task41-mongodb-1 | {"t":{"date":"2023-02-08T08:59:38.191+00:00"},"s":"I", "c":"NETWORK", "id":22944, "ctx":
"conn3", "msg": "Connection ended", "attr":{"remote":"172.20.0.2:57406", "uuid":"593c684c-8a4f-45d8-b28a-695955161c0b", "
connectionId":3, "connectionCount":4}}
task41-mongodb-1 | {"t":{"date":"2023-02-08T08:59:38.191+00:00"},"s":"I", "c":"NETWORK", "id":22944, "ctx":
"conn2", "msg": "Connection ended", "attr":{"remote":"172.20.0.2:57404", "uuid":"641fda7f-16ae-4a78-8c8c-62894ff65bad", "
connectionId":2, "connectionCount":3}}
task41-mongodb-1 | {"t":{"date":"2023-02-08T08:59:38.275+00:00"},"s":"I", "c":"-", "id":20883, "ctx":
"conn4", "msg": "Interrupted operation as its client disconnected", "attr":{"opId":23}}
task41-mongodb-1 | {"t":{"date":"2023-02-08T08:59:38.275+00:00"},"s":"I", "c":"NETWORK", "id":22944, "ctx":
"conn4", "msg": "Connection ended", "attr":{"remote":"172.20.0.4:51788", "uuid":"5955326a-d323-4f19-8790-ee805b23ca78", "
connectionId":4, "connectionCount":2}}
task41-mongodb-1 | {"t":{"date":"2023-02-08T08:59:38.280+00:00"},"s":"I", "c":"NETWORK", "id":22944, "ctx":
"conn6", "msg": "Connection ended", "attr":{"remote":"172.20.0.4:51792", "uuid":"d68bc6d9-5106-4c1d-a470-627e40e8a0d1", "
connectionId":6, "connectionCount":1}}
task41-mongodb-1 | {"t":{"date":"2023-02-08T08:59:38.280+00:00"},"s":"I", "c":"NETWORK", "id":22944, "ctx":
"conn5", "msg": "Connection ended", "attr":{"remote":"172.20.0.4:51790", "uuid":"b2e378bf-7e27-4323-8e11-021be41244d4", "
connectionId":5, "connectionCount":0}}
task41-python_app-1 exited with code 0
task41-python_app-2 exited with code 0
task41-mongodb-1 | {"t":{"date":"2023-02-08T08:59:39.228+00:00"},"s":"I", "c":"NETWORK", "id":22943, "ctx":

```