

UE23CS351B - CLOUD COMPUTING

LAB - 3

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SRN : PES2UG23CS119

SECTION : B

SS1 :

```
pes2ug23cs119@pes2ug23cs119:~/PES2UG23CS119$ sudo 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/
pes2ug23cs119@pes2ug23cs119:~/PES2UG23CS119$
```

SS2 :

```
pes2ug23cs119@pes2ug23cs119:~/PES2UG23CS119$ sudo docker ps
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
pes2ug23cs119@pes2ug23cs119:~/PES2UG23CS119$ sudo docker ps -a
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
aaeae0756ae3 hello-world "/hello" 3 minutes ago Exited (0) 3 minutes ago reverent_albattani
f0a750036e55 hello-world "/hello" 3 minutes ago Exited (0) 3 minutes ago magical_nightingale
23296b7d8212 hello-world "/hello" 35 minutes ago Exited (0) 35 minutes ago happy_brown
pes2ug23cs119@pes2ug23cs119:~/PES2UG23CS119$ sudo docker images
IMAGE ID DISK USAGE CONTENT SIZE EXTRA
hello-world:latest 05813aedc15f 25.9kB 9.52kB U
pes2ug23cs119@pes2ug23cs119:~/PES2UG23CS119$
```

SS3 :

```
pes2ug23cs119@pes2ug23cs119:~/PES2UG23CS119$ sudo docker pull python:3.10-slim
3.10-slim: Pulling from library/python
63ebb7511fc1: Pull complete
690eaffcf0e9: Pull complete
0c8d55a45c0d: Pull complete
d0d1977db485: Pull complete
13a7f29dd8f5: Download complete
a4e5ac615dd3: Download complete
Digest: sha256:218027ad8e5a6fb68245ccffcb8bcfa98d9891039bfedd53b1b4666dc48a4bb1
Status: Downloaded newer image for python:3.10-slim
docker.io/library/python:3.10-slim
pes2ug23cs119@pes2ug23cs119:~/PES2UG23CS119$ sudo docker images
IMAGE ID DISK USAGE CONTENT SIZE EXTRA
hello-world:latest 05813aedc15f 25.9kB 9.52kB U
python:3.10-slim 218027ad8e5a 185MB 47.1MB
pes2ug23cs119@pes2ug23cs119:~/PES2UG23CS119$
```

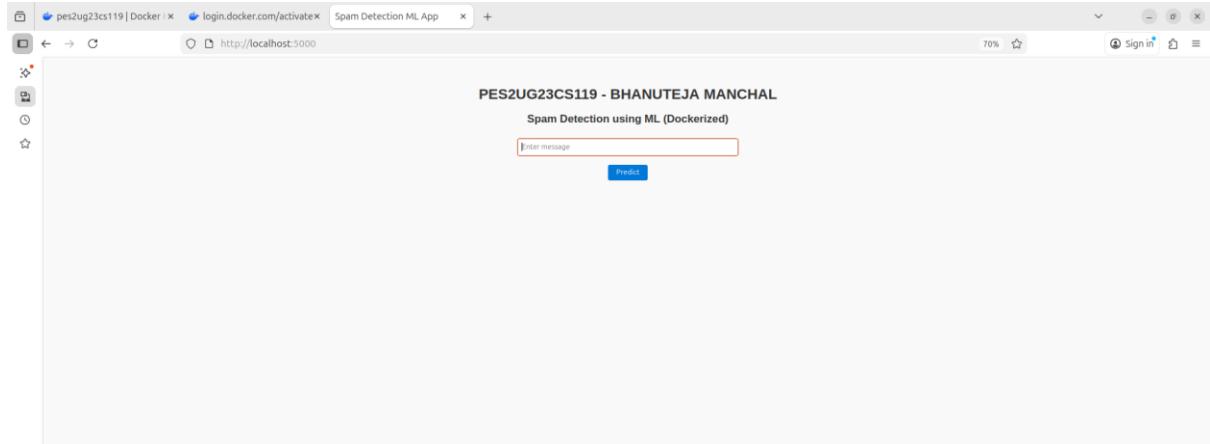
SS4 :

```
pes2ug23cs119@pes2ug23cs119:~/ml-docker-PES2UG23CS119$ sudo docker build -t spam-web-app:pes2ug23cs119 .
[+] Building 145.8s (12/12) FINISHED
=> [internal] load build definition from Dockerfile
=> => transferring Dockerfile: 278B
=> [internal] load metadata for docker.io/library/python:3.10-slim
=> [internal] load .dockerignore
=> => transferring context: 2B
=> [internal] load build context
=> => transferring context: 400.16kB
=> [1/7] FROM docker.io/library/python:3.10-slim@sha256:21b0027ad8e5a6fb68245ccffccb8bcfa98d9891039bfedd53b1b4666dc48a4bb1
=> => resolve docker.io/library/python:3.10-slim@sha256:21b0027ad8e5a6fb68245ccffccb8bcfa98d9891039bfedd53b1b4666dc48a4bb1
=> [2/7] WORKDIR /app
=> [3/7] COPY app.py ./
=> [4/7] COPY spam_classifier_model.pkl ./
=> [5/7] COPY tfiduf_vectorizer.pkl ./
=> [6/7] COPY TFIDF_TEMPLATES ./templates
=> [7/7] RUN pip install --no-cache-dir flask scikit-learn joblib
=> exporting to image
=> exporting layers
=> exporting manifest sha256:c3fc8a7f79e9206d9df0fc8c6318ac57f4ee64e00c2d61072f09793277d15e01f
=> exporting config sha256:89a4688abc43f6e3e6b2b1499bc6e6ebf1e1b1319904d5e98989e5122ed
=> exporting attestation manifest sha256:469453244046972894b645c055546728e0b0955b76d6b08e1f9a7ca708238
=> exporting manifest list sha256:2179e8340808007e0d2e15b0d046922b7a86f6be485e935a32715f31d16
=> naming to docker.io/library/spam-web-app:pes2ug23cs119:latest
=> Unpacking to docker.io/library/spam-web-app:pes2ug23cs119:latest
=> 9.5s
=> 29.6s
```

SS5 :

```
pes2ug23cs119@pes2ug23cs119: ~/ml-docker-PES2UG23CS119
pes2ug23cs119@pes2ug23cs119: ~/ml-docker-PES2UG23CS119$ sudo docker run -d -p 5000:5000 spam-web-app-pes2ug23cs119
fbef6d3f6ab0c8e119eb56ea13bfbed3e976fe0fe42b3ced8dc4255e4ad415e
pes2ug23cs119@pes2ug23cs119: ~/ml-docker-PES2UG23CS119$ sudo docker ps
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
fbef6d3f6ab0c spam-web-app-pes2ug23cs119 "python app.py" 8 seconds ago Up 7 seconds 0.0.0.0:5000->5000/tcp, [::]:5000->5000/tcp hungry_franklin
pes2ug23cs119@pes2ug23cs119: ~/ml-docker-PES2UG23CS119$
```

SS6 :



SS6 :

```
pes2ug23cs119@pes2ug23cs119:~/ml-docker-PES2UG23CS119$ sudo docker login  
Authenticating with existing credentials... [Username: pes2ug23cs119]  
! Info → To login with a different account, run 'docker logout' followed by 'docker login'  
  
Login Succeeded  
pes2ug23cs119@pes2ug23cs119:~/ml-docker-PES2UG23CS119$ █
```

SS7 :

```
pes2ug23cs119@pes2ug23cs119:~$ sudo docker images
[sudo] password for pes2ug23cs119:

IMAGE                                ID          DISK USAGE   CONTENT SIZE  EXTRA
PES2UG23CS119/spam-web-app-pes2ug23cs119:v1  219a834e08d8    541MB        125MB      U
hello-world:latest                     05813aedc15f    25.9kB       9.52kB      U
python:3.10-slim                      218027ad8e5a    185MB        47.1MB      U
spam-web-app-pes2ug23cs119:latest     219a834e08d8    541MB        125MB      U
pes2ug23cs119@pes2ug23cs119:~$
```

SS8 :

```
pes2ug23cs119@pes2ug23cs119:~$ sudo docker push pes2ug23cs119/spam-web-app-pes2ug23cs119:v1
The push refers to repository [docker.io/pes2ug23cs119/spam-web-app-pes2ug23cs119]
f84401c41b27: Pushed
86afc78c9897: Pushed
d0d1977db485: Mounted from library/python
0c8d55a45c0d: Mounted from library/python
21d525fd1560: Pushed
aa8beedfdb29: Pushed
950aa718d042: Pushed
1693140a99b2: Pushed
7f0b193bb357: Pushed
63ebb7511fc1: Mounted from library/python
690eafffcf0e9: Mounted from library/python
v1: digest: sha256:219a834e08d8907e8dff2e25b0f6436922b7a866f6be4485ea35a32715f31d16 size: 856
pes2ug23cs119@pes2ug23cs119:~$
```

SS9 :

Name	Last Pushed	Contains	Visibility	Scout
pes2ug23cs119/spam-web-app-pes2ug23cs119	2 minutes ago	IMAGE	Public	Inactive

SS10 :

```

pes2ug23cs119@pes2ug23cs119:~$ sudo docker ps
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
bf8165a1e020 spam-web-app-pes2ug23cs119 "python app.py" 20 seconds ago Up 19 seconds 0.0.0.0:5000->5000/tcp, [:]:5000->5000/tcp angry_burnell
bf8165a1e020
pes2ug23cs119@pes2ug23cs119:~$ sudo docker stop bf8165a1e020
bf8165a1e020
pes2ug23cs119@pes2ug23cs119:~$ sudo docker ps
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
pes2ug23cs119@pes2ug23cs119:~$
```

SS11 :

```

pes2ug23cs119@pes2ug23cs119:~$ sudo docker ps -a
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
bf8165a1e020 spam-web-app-pes2ug23cs119 "python app.py" 4 minutes ago Exited (137) 3 minutes ago
aaeae0756ae3 hello-world "/hello" 2 hours ago Exited (0) 2 hours ago
reverent_albattani
bf8165a1e020
pes2ug23cs119@pes2ug23cs119:~$ sudo docker rm bf8165a1e020
bf8165a1e020
pes2ug23cs119@pes2ug23cs119:~$ sudo docker ps -a
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
aaeae0756ae3 hello-world "/hello" 2 hours ago Exited (0) 2 hours ago
reverent_albattani
pes2ug23cs119@pes2ug23cs119:~$
```

SS12 :

```

pes2ug23cs119@pes2ug23cs119:~$ sudo docker images
IMAGE ID DISK USAGE CONTENT SIZE EXTRA
PES2UG23CS119/spam-web-app-pes2ug23cs119:v1 219a834e08d8 541MB 125MB
hello-world:latest 05813aedc15f 25.9kB 9.52kB U
pes2ug23cs119/spam-web-app-pes2ug23cs119:v1 219a834e08d8 541MB 125MB
python:3.10-slim 218027ad8e5a 185MB 47.1MB
spam-web-app-pes2ug23cs119:latest 219a834e08d8 541MB 125MB
pes2ug23cs119@pes2ug23cs119:~$ sudo docker rmi spam-web-app-pes2ug23cs119
Untagged: spam-web-app-pes2ug23cs119:latest
pes2ug23cs119@pes2ug23cs119:~$ sudo docker images
IMAGE ID DISK USAGE CONTENT SIZE EXTRA
PES2UG23CS119/spam-web-app-pes2ug23cs119:v1 219a834e08d8 541MB 125MB
hello-world:latest 05813aedc15f 25.9kB 9.52kB U
pes2ug23cs119/spam-web-app-pes2ug23cs119:v1 219a834e08d8 541MB 125MB
python:3.10-slim 218027ad8e5a 185MB 47.1MB
```

SS13 :

```
pes2ug23cs119@pes2ug23cs119:~$ sudo docker images
IMAGE                      ID          DISK USAGE   CONTENT SIZE   EXTRA
hello-world:latest          05813aedc15f    25.9kB      9.52kB       U
pes2ug23cs119/spam-web-app-pes2ug23cs119:v1  219a834e08d8    541MB      125MB
python:3.10-slim            218027ad8e5a    185MB      47.1MB
pes2ug23cs119@pes2ug23cs119:~$ sudo docker rmi pes2ug23cs119/spam-web-app-pes2ug23cs119:v1
Untagged: pes2ug23cs119/spam-web-app-pes2ug23cs119:v1
Deleted: sha256:219a834e08d8907e8dff2e25b0f6436922b7a866f6be4485ea35a32715f31d16
pes2ug23cs119@pes2ug23cs119:~$ sudo docker images
IMAGE                      ID          DISK USAGE   CONTENT SIZE   EXTRA
hello-world:latest          05813aedc15f    25.9kB      9.52kB       U
python:3.10-slim            218027ad8e5a    185MB      47.1MB
pes2ug23cs119@pes2ug23cs119:~$
```

SS14 :

PES2UG23CS119

//

Yes. Docker provides the command `docker image prune -a` which removes all unused images completely in one go.

SS15 :

```
pes2ug23cs119@pes2ug23cs119:~$ sudo docker pull pes2ug23cs119/spam-web-app-pes2ug23cs119:v1
v1: Pulling from pes2ug23cs119/spam-web-app-pes2ug23cs119
950aa718d042: Pull complete
aa8beedfdb29: Pull complete
f84401c41b27: Pull complete
21d525fd1560: Pull complete
86afc78c9897: Pull complete
7f0b193bb357: Pull complete
1693140a99b2: Download complete
Digest: sha256:219a834e08d8907e8dff2e25b0f6436922b7a866f6be4485ea35a32715f31d16
Status: Downloaded newer image for pes2ug23cs119/spam-web-app-pes2ug23cs119:v1
docker.io/pes2ug23cs119/spam-web-app-pes2ug23cs119:v1
pes2ug23cs119@pes2ug23cs119:~$
```