

CLOUD COMPUTING LAB-3

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SEC: A

Git hub link: <https://github.com/PES2UG23CS925/Cloud-Computing-lab>

SS1:

```
aakanksha@aakanksha:/mnt/c/Users/aakan/sem-6/CC/PES2UG23CS925$ 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/
aakanksha@aakanksha:/mnt/c/Users/aakan/sem-6/CC/PES2UG23CS925$ |
```

SS2:

```
aakanksha@aakanksha:/mnt/c/Users/aakan/sem-6/CC/PES2UG23CS925$ docker ps
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
aakanksha@aakanksha:/mnt/c/Users/aakan/sem-6/CC/PES2UG23CS925$ docker ps -a
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
fe378c4c0a59 hello-world "/hello" About a minute ago Exited (0) About a minute ago
4f7605b79d0b hello-world "/hello" 16 hours ago Exited (0) 16 hours ago
aakanksha@aakanksha:/mnt/c/Users/aakan/sem-6/CC/PES2UG23CS925$ docker images
          S Info → U In Use
IMAGE           ID      DISK USAGE   CONTENT SIZE   EXTRA
hello-world:latest 05813aedc15f    25.9kB     9.52kB   U
aakanksha@aakanksha:/mnt/c/Users/aakan/sem-6/CC/PES2UG23CS925$ |
```

SS3:

```
aakanksha@Aakanksha:/mnt/c/Users/aakan/sem-6/CC/PES2UG23CS925$ docker pull python:3.10-slim
3.10-slim: Pulling from library/python
47c2bec0e44b: Pull complete
119d43eec815: Pull complete
ed8cfdf59ed51: Pull complete
af233a02f79e: Pull complete
b3e684e4d1bb: Download complete
f81c64c75055: Download complete
Digest: sha256:f5d029fe39146b08200bcc73595795ac19b85997ad0e5001a02c7c32e8769efa
Status: Downloaded newer image for python:3.10-slim
docker.io/library/python:3.10-slim
aakanksha@Aakanksha:/mnt/c/Users/aakan/sem-6/CC/PES2UG23CS925$ docker images
  [+] Info → [U] In Use
IMAGE          ID             DISK USAGE   CONTENT SIZE   EXTRA
hello-world:latest 05813aedc15f    25.9kB      9.52kB      U
python:3.10-slim   f5d029fe3914    185MB       47.1MB
aakanksha@Aakanksha:/mnt/c/Users/aakan/sem-6/CC/PES2UG23CS925$
```

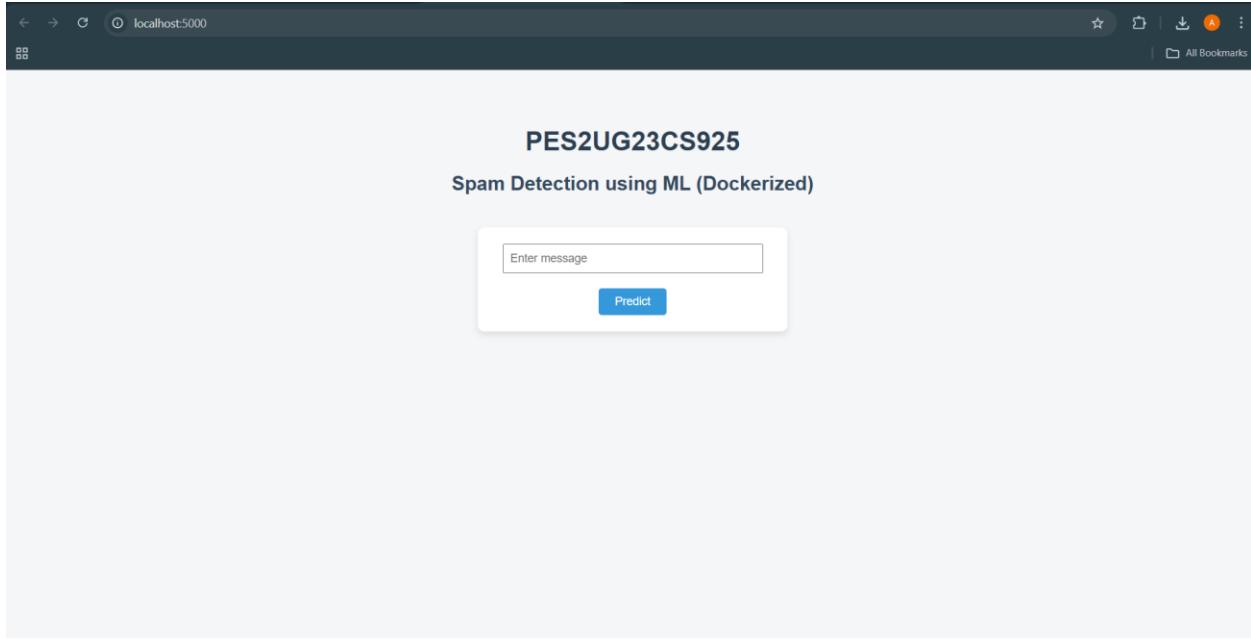
SS4:

```
aakanksha@Aakanksha:/mnt/c/Users/aakan/sem-6/CC/PES2UG23CS925$ docker build -t spam-web-app-pes2ug23cs925 .
[+] Building 97.6s (12/12) FINISHED
               docker:default
=> [internal] load build definition from Dockerfile
               0.1s
=> => transferring dockerfile: 827B
               0.1s
=> [internal] load metadata for docker.io/library/python:3.10-slim
               0.1s
=> [internal] load .dockerignore
               0.0s
=> => transferring context: 2B
               0.0s
=> => CACHED [1/7] FROM docker.io/library/python:3.10-slim@sha256:f5d02
               0.1s
=> => resolve docker.io/library/python:3.10-slim@sha256:f5d029fe3914
               0.1s
=> [internal] load build context
               0.1s
=> => transferring context: 398.78kB
               0.1s
=> [2/7] WORKDIR /app
               0.1s
=> [3/7] COPY app.py .
               0.1s
=> [4/7] COPY spam_classifier_model.pkl .
               0.1s
=> [5/7] COPY tfidf_vectorizer.pkl .
               0.1s
=> [6/7] COPY templates ./templates
               0.1s
=> [7/7] RUN pip install --no-cache-dir flask scikit-learn joblib
               86.0s
=> exporting to image
               10.6s
=> => exporting layers
               8.3s
=> => exporting manifest sha256:5ed62256b868a78d8calab93279d266c40a4
               0.0s
=> => exporting config sha256:fe5144686e0efcde279834f692a94a6e524d82
               0.0s
=> => exporting attestation manifest sha256:d2bbea494732ccb167d35aec
               0.1s
=> => exporting manifest list sha256:08385f429df969c55c690fc3371713c
               0.0s
=> => naming to docker.io/library/spam-web-app-pes2ug23cs925:latest
               0.0s
=> => unpacking to docker.io/library/spam-web-app-pes2ug23cs925:late
               2.2s
aakanksha@Aakanksha:/mnt/c/Users/aakan/sem-6/CC/PES2UG23CS925$ docker images
  [+] Info → [U] In Use
IMAGE          ID             DISK USAGE   CONTENT SIZE   EXTRA
hello-world:latest 05813aedc15f    25.9kB      9.52kB      U
python:3.10-slim   f5d029fe3914    185MB       47.1MB
spam-web-app-pes2ug23cs925:latest
               08385f429df9    541MB       125MB
```

SS5:

```
aakanksha@Aakanksha:/mnt/c/Users/aakan/sem-6/CC/PES2UG23CS925$ docker run -d -p 5000:5000 spam-web-app-pes2ug23cs925
fb4769442d50d8028cfdf16db0f7d11691618f8383914141773d1b61850f0066d
aakanksha@Aakanksha:/mnt/c/Users/aakan/sem-6/CC/PES2UG23CS925$ docker ps
CONTAINER ID IMAGE           COMMAND      CREATED     STATUS      PORTS          NAMES
fb4769442d50  spam-web-app-pes2ug23cs925 "python app.py" 14 seconds ago Up 13 seconds 0.0.0.0:5000->5000/tcp, [::]:5000->5000/tcp objective_borg
aakanksha@Aakanksha:/mnt/c/Users/aakan/sem-6/CC/PES2UG23CS925$
```

SS6:



SS7:

```
aakanksha@Aakanksha:/mnt/c/Users/aakan/sem-6/CC/PES2UG23CS925$ docker login
Authenticating with existing credentials... [Username: pes2ug23cs925]

Info → To login with a different account, run 'docker logout' followed by 'docker login'

Login Succeeded
aakanksha@Aakanksha:/mnt/c/Users/aakan/sem-6/CC/PES2UG23CS925$
```

SS8:

```
aakanksha@Aakanksha:/mnt/c/Users/aakan/sem-6/CC/PES2UG23CS925$ docker tag spam-web-app-pes2ug23cs925 PES2UG23CS925/spam-web-app-pes2ug23cs925:v1
aakanksha@Aakanksha:/mnt/c/Users/aakan/sem-6/CC/PES2UG23CS925$ docker images
IMAGE           ID          IMAGE   TAG      CREATED     SIZE
PES2UG23CS925/spam-web-app-pes2ug23cs925:v1  08385f429df9    541MB   125MB   U
hello-world:latest  05813aecd15f   25.9kB  9.52kB  U
python:3.10-slim   f5d029fe3914   185MB   47.1MB  U
spam-web-app-pes2ug23cs925:latest  08385f429df9    541MB   125MB   U
aakanksha@Aakanksha:/mnt/c/Users/aakan/sem-6/CC/PES2UG23CS925$
```

SS9:

```
aakanksha@Aakanksha:/mnt/c/Users/aakan/sem-6/CC/PES2UG23CS925$ docker push pes2ug23cs925/spam-web-app-pes2ug23cs925:v1
The push refers to repository [docker.io/pes2ug23cs925/spam-web-app-pes2ug23cs925]
ed8cf59ed51: Mounted from library/python
119d43eec815: Mounted from library/python
47c2bec0e44b: Mounted from library/python
af233a02f79e: Mounted from library/python
93a675f93839: Pushed
2a7e7d96a849: Pushed
322dd709c0fe: Pushed
cf28112140f8: Pushed
daf5da1625c5: Pushed
4f247b1bc16b: Pushed
7785c9a33b69: Pushed
v1: digest: sha256:08385f429df969c55c690fc3371713ca0d493887618cf965cafd5615872ec82c size: 856
```

SS10:

The screenshot shows the Docker Hub interface. In the top navigation bar, there's a banner for 'Docker Hardened Images'. Below it, the 'My Hub' tab is selected. On the left, a sidebar for the namespace 'pes2ug23cs925' is open, showing options like 'Repositories', 'Hardened Images', 'Collaborations', 'Settings', 'Default privacy', 'Notifications', 'Billing', 'Usage', 'Pulls', and 'Storage'. The main area is titled 'Repositories' and shows a single repository entry: 'spam-web-app-pes2ug23cs925'. It was last pushed 3 minutes ago, is an IMAGE, has Public visibility, and is Inactive. There's a 'Create a repository' button at the top right of the list.

SS11:

```
aakanksha@aakanksha:/mnt/c/Users/aakan/sem-6/CC/PES2UG23CS925$ docker ps
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
fb4769442d50 spam-web-app-pes2ug23cs925 "python app.py" 18 minutes ago Up 18 minutes 0.0.0.0:5000->5000/tcp, [:]:5000->5000/tcp objective_borg
aakanksha@aakanksha:/mnt/c/Users/aakan/sem-6/CC/PES2UG23CS925$ docker stop fb4769442d50
fb4769442d50
aakanksha@aakanksha:/mnt/c/Users/aakan/sem-6/CC/PES2UG23CS925$ docker ps
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
aakanksha@aakanksha:/mnt/c/Users/aakan/sem-6/CC/PES2UG23CS925$
```

SS12:

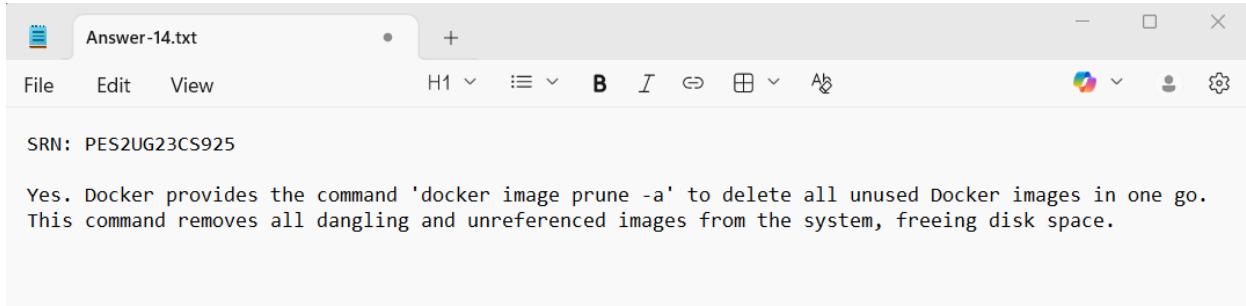
```
aakanksha@aakanksha:/mnt/c/Users/aakan/sem-6/CC/PES2UG23CS925$ docker ps -a
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
fb4769442d50 spam-web-app-pes2ug23cs925 "python app.py" 20 minutes ago Exited (137) 58 seconds ago objective_borg
fe378c4c0a59 hello-world "/hello" 46 minutes ago Exited (0) 46 minutes ago crazy_moser
4f7605b79d0b hello-world "/hello" 17 hours ago Exited (0) 17 hours ago serene_kepler
aakanksha@aakanksha:/mnt/c/Users/aakan/sem-6/CC/PES2UG23CS925$ docker rm fb4769442d50
fb4769442d50
aakanksha@aakanksha:/mnt/c/Users/aakan/sem-6/CC/PES2UG23CS925$ docker ps -a
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
fe378c4c0a59 hello-world "/hello" 46 minutes ago Exited (0) 46 minutes ago crazy_moser
4f7605b79d0b hello-world "/hello" 17 hours ago Exited (0) 17 hours ago serene_kepler
aakanksha@aakanksha:/mnt/c/Users/aakan/sem-6/CC/PES2UG23CS925$
```

SS13:

```
aakanksha@aakanksha:/mnt/c/Users/aakan/sem-6/CC/PES2UG23CS925$ docker images
IMAGE ID DISK USAGE CONTENT SIZE EXTRA
PES2UG23CS925/spam-web-app-pes2ug23cs925:v1 08385f429df9 541MB 125MB
hello-world:latest 05813aedc15f 25.9kB 9.52kB [U]
pes2ug23cs925/spam-web-app-pes2ug23cs925:v1 08385f429df9 541MB 125MB
python:3.10-slim f5d029fe3914 185MB 47.1MB
spam-web-app-pes2ug23cs925:latest 08385f429df9 541MB 125MB
aakanksha@aakanksha:/mnt/c/Users/aakan/sem-6/CC/PES2UG23CS925$ docker rmi spam-web-app-pes2ug23cs925:latest
Untagged: spam-web-app-pes2ug23cs925:latest
aakanksha@aakanksha:/mnt/c/Users/aakan/sem-6/CC/PES2UG23CS925$ docker images
IMAGE ID DISK USAGE CONTENT SIZE EXTRA
PES2UG23CS925/spam-web-app-pes2ug23cs925:v1 08385f429df9 541MB 125MB
hello-world:latest 05813aedc15f 25.9kB 9.52kB [U]
pes2ug23cs925/spam-web-app-pes2ug23cs925:v1 08385f429df9 541MB 125MB
python:3.10-slim f5d029fe3914 185MB 47.1MB
aakanksha@aakanksha:/mnt/c/Users/aakan/sem-6/CC/PES2UG23CS925$
```

SS14:

```
aakanksha@aakanksha:/mnt/c/Users/aakan/sems-6/CC/PES2UG23CS925$ docker rmi pes2ug23cs925/spam-web-app-pes2ug23cs925:v1
Untagged: pes2ug23cs925/spam-web-app-pes2ug23cs925:v1
Deleted: sha256:08385f429df969c55c690fc3371713ca0d493887618cf965cafd5615872ec82c
aakanksha@aakanksha:/mnt/c/Users/aakan/sems-6/CC/PES2UG23CS925$ docker images
  IMAGE           ID      DISK USAGE     CONTENT SIZE   EXTRA
hello-world:latest  05813aedc15f    25.9kB       9.52kB   U
python:3.10-slim    f5d029fe3914   185MB        47.1MB
aakanksha@aakanksha:/mnt/c/Users/aakan/sems-6/CC/PES2UG23CS925$
```



SS15:

```
aakanksha@aakanksha:/mnt/c/Users/aakan/sems-6/CC/PES2UG23CS925$ docker pull pes2ug23cs925/spam-web-app-pes2ug23cs925:v1
v1: Pulling from pes2ug23cs925/spam-web-app-pes2ug23cs925
cf28112140f8: Pull complete
93a675f93839: Pull complete
4f247b1bc16b: Pull complete
2a7e7d96a849: Pull complete
daf5da1625c5: Pull complete
7785c9a33b69: Pull complete
322dd709c0fe: Download complete
Digest: sha256:08385f429df969c55c690fc3371713ca0d493887618cf965cafd5615872ec82c
Status: Downloaded newer image for pes2ug23cs925/spam-web-app-pes2ug23cs925:v1
docker.io/pes2ug23cs925/spam-web-app-pes2ug23cs925:v1
aakanksha@aakanksha:/mnt/c/Users/aakan/sems-6/CC/PES2UG23CS925$ docker images
  IMAGE           ID      DISK USAGE     CONTENT SIZE   EXTRA
hello-world:latest  05813aedc15f    25.9kB       9.52kB   U
pes2ug23cs925/spam-web-app-pes2ug23cs925:v1          08385f429df9    541MB       125MB
python:3.10-slim    f5d029fe3914   185MB        47.1MB
aakanksha@aakanksha:/mnt/c/Users/aakan/sems-6/CC/PES2UG23CS925$
```