

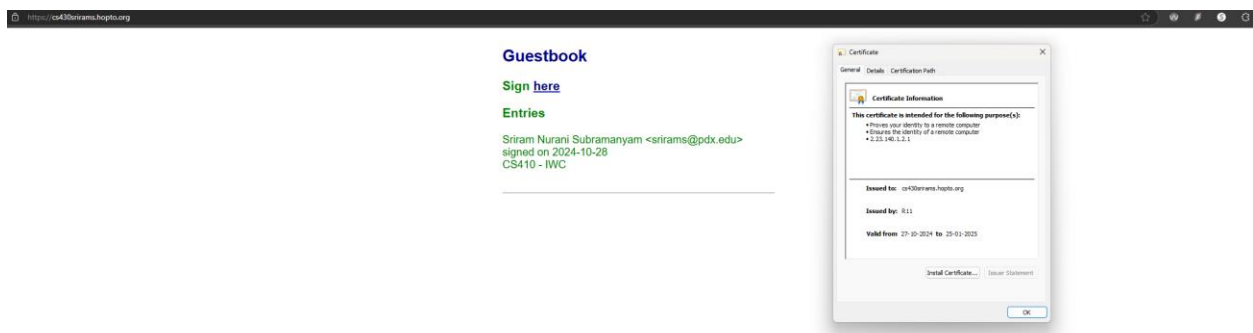
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4.1g: nginx Compute Engine Guestbook

4.1.6 Install the application

- Take a screenshot of the site along with its Let's Encrypt certificate and include it in your lab notebook



4.2g. Docker Guestbook

4.2.3 Build and run the Ubuntu-based container

- Take a screenshot of the results for your lab notebook

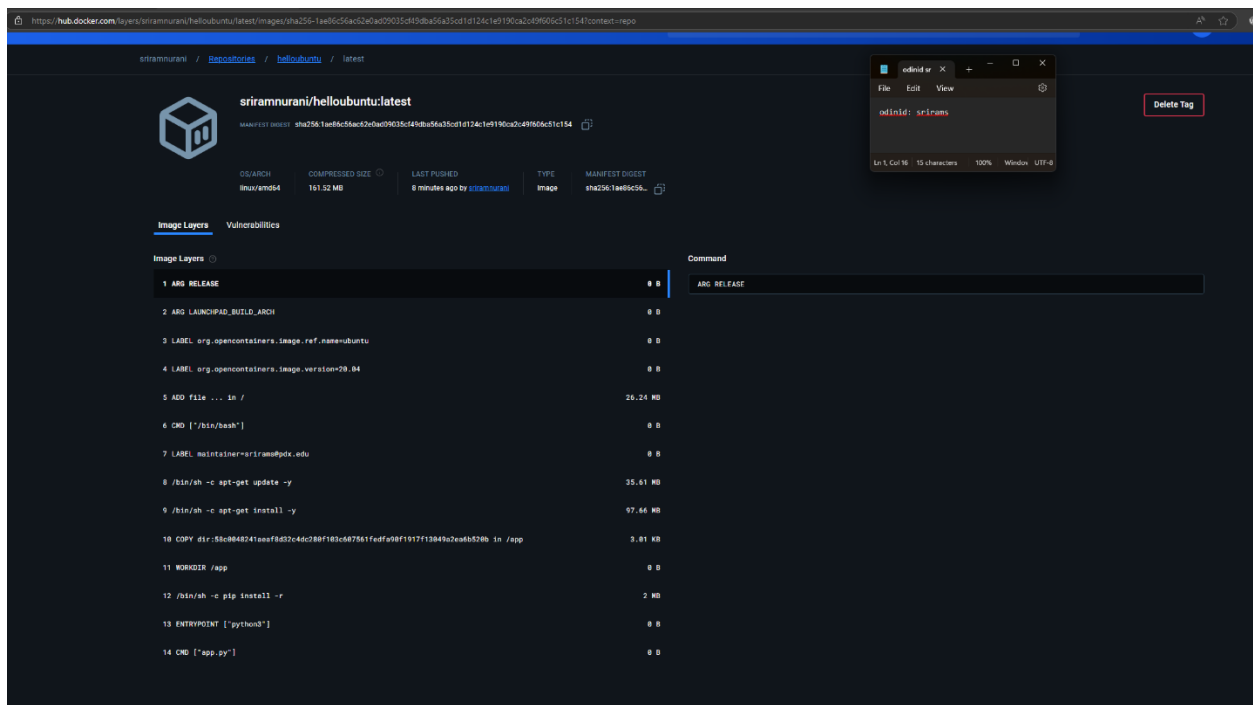
```
srirams@course-vm:~/cs430-src/04_container_dockerhub$ docker images
REPOSITORY    TAG       IMAGE ID       CREATED        SIZE
helloubuntu   latest    71118a7896d0   20 seconds ago 453MB
ubuntu        20.04    6013a61a63c2   2 weeks ago   72.8MB
srirams@course-vm:~/cs430-src/04_container_dockerhub$
```

4.2.6 Running from Docker Hub

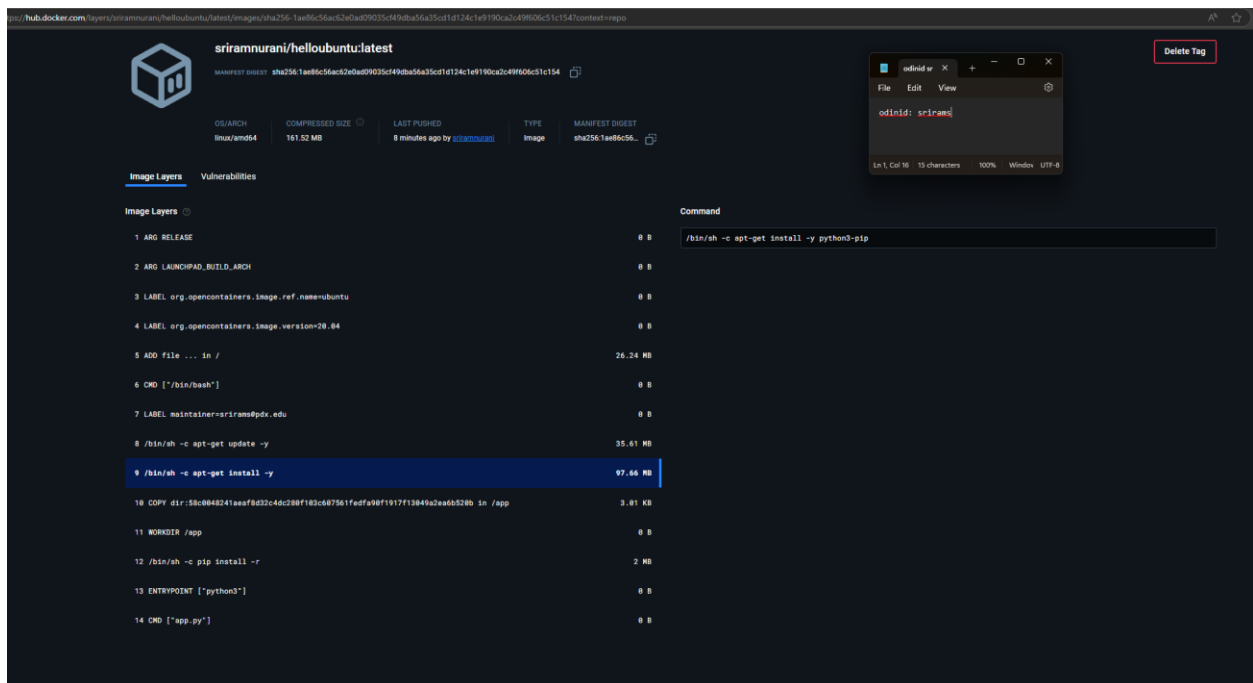
- Run the image directly from Docker Hub and show a screenshot of the output of the command in your lab notebook.

```
srirams@course-vm:~/cs430-src/04_container_dockerhub$ docker run -di -p 8000:5000 --name hellou sriramurani/helloubuntu
Unable to find image 'sriramurani/helloubuntu:latest' locally
latest: Pulling from sriramurani/helloubuntu
d9802f032d67: Already exists
c33eaf2718ea: Pull complete
962b21ff475b: Pull complete
61ed77858bc3: Pull complete
7f0d7e7eb904: Pull complete
Digest: sha256:1ae86c56ac62e0ad09035cf49dba56a35cd1d124c1e9190ca2c49f606c51c154
Status: Downloaded newer image for sriramurani/helloubuntu:latest
89260129d24d3651c175673a47967e09aaea3f4e8303ea6ccc4be5ca4cea9a
srirams@course-vm:~/cs430-src/04_container_dockerhub$
```

- Take a screenshot of the container image and its size for your lab notebook.



What layer adds the most to the container image? How much does it add?



4.2.8 Build and run the Alpine-based container

- Take a screenshot of the image generated and its size for your lab notebook. How much smaller is the image than the Ubuntu one?

```

srirams@course-vm:~/cs430-src/04_container_dockerhub$ docker images
REPOSITORY      TAG         IMAGE ID      CREATED        SIZE
helloalpine     latest     b3e8ffb6f167  37 seconds ago 57.3MB
python          alpine     408c9504056e  9 days ago    44.6MB
ubuntu          20.04      6013ae1a63c2  2 weeks ago   72.8MB
srirams@course-vm:~/cs430-src/04_container_dockerhub$

```

The size of helloulpine is 395.7 mb smaller than the hello ubuntu

- Show the output of this command in a screenshot for your lab notebook. What might have happened?

```

srirams@course-vm:~/cs430-src/04_container_dockerhub$ docker exec -it helloa /bin/bash
OCI runtime exec failed: exec failed: unable to start container process: exec: "/bin/bash": stat /bin/bash: no such file or directory: unknown
srirams@course-vm:~/cs430-src/04_container_dockerhub$

```

Alpine Docker Images don't come with bash installed by default and hence /bin/bash may not work.

- Take a screenshot of the output of each

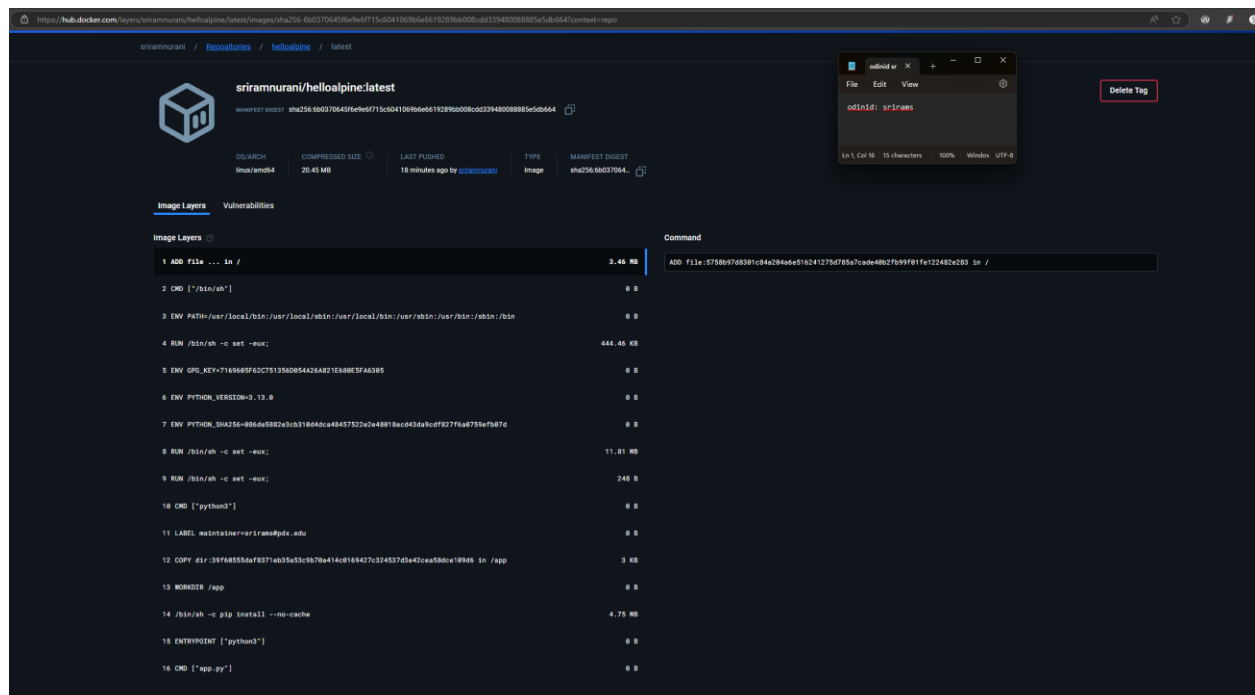
```

srirams@course-vm:~/cs430-src/04_container_dockerhub$ docker exec -it helloa /bin/sh
/app # cat /etc/alpine-release
3.20.3
/app # ps -ef
PID  USER    TIME  COMMAND
  1  root    0:00  python3 app.py
  7  root    0:01  /usr/local/bin/python3 app.py
 17  root    0:00  /bin/sh
 24  root    0:00  ps -ef
/app #

```

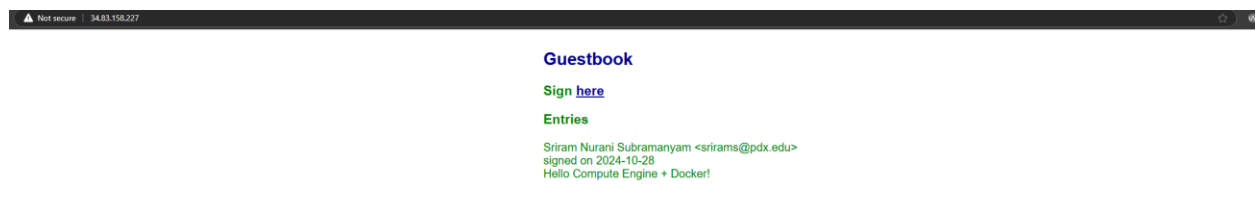
4.2.9 Docker Hub Alpine

- Take a screenshot of the container image and its size.



4.2.10 Compute Engine Ubuntu VM deployment

- Take a screenshot of the entry that includes the VM's external IP address for your lab notebook



4.2.13 -

- Take a screenshot of the entry that includes the VM's external IP address for your lab notebook

