05.1g: Storage, IAM

2. GCP Cloud Storage #1 (USGS)

- What roles are attached to the Compute Engine default service account?

  Editor
  Owner

- Would they be sufficient for the VM to perform its functions?

  Yes

- What permissions are given by the default access scope to Cloud Storage?

  logging.logEntries.create
  runtimeconfig.variables.create

- Would they be sufficient for the VM to perform its functions?

  No

4. USGS data and setup

- What time did the latest earthquake happen?

  `2021-11-01T01:52:36.260Z`

- What was the magnitude (mag)?

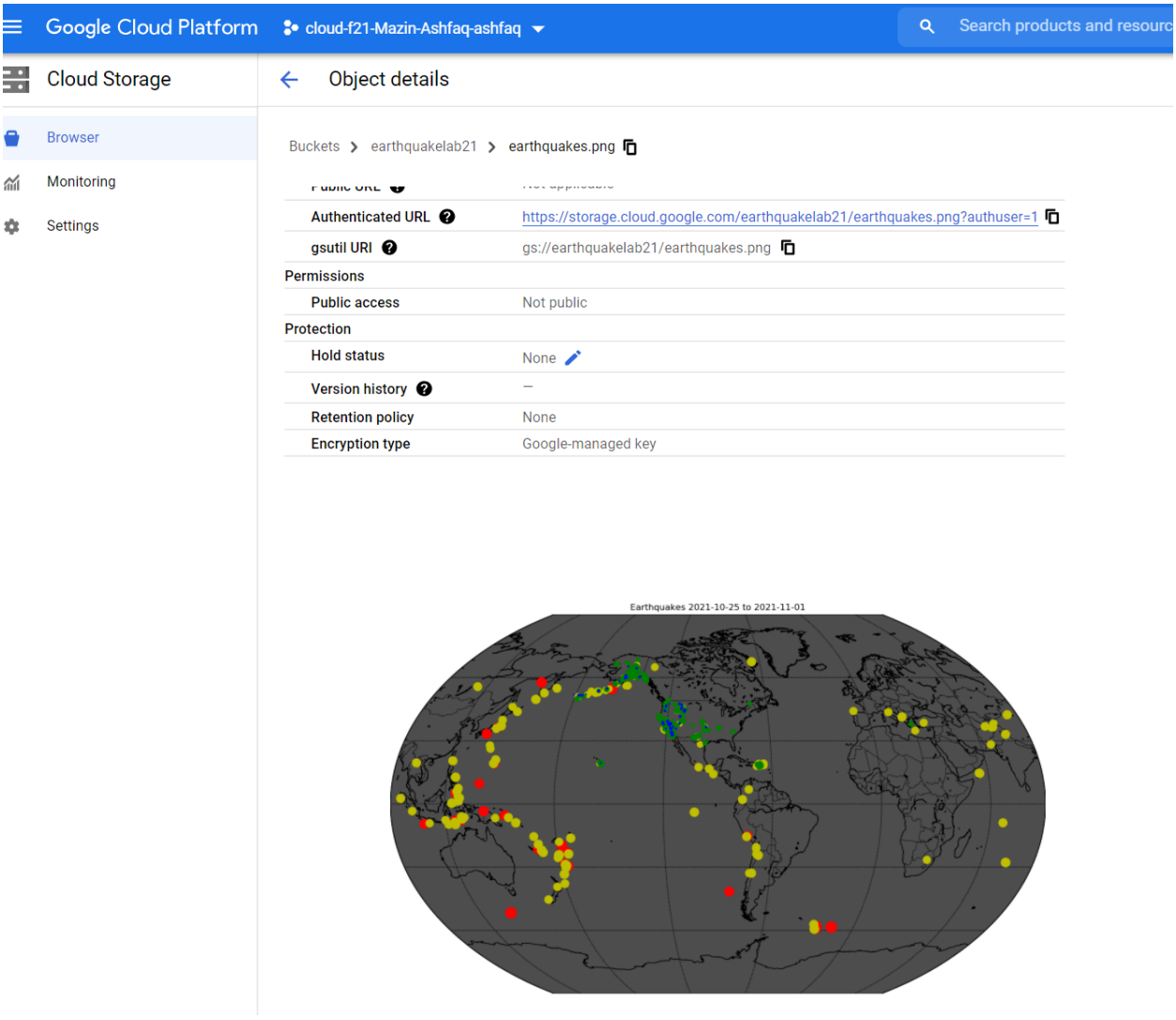
  `1.82000005`

- Where was the place it happened?

  `"5 km S of Pāhala, Hawaii"`

6. Create and distribute earthquake image

- Take a screenshot of the image that has been created for your lab notebook.



10. Service account roles (Compute)

- What is the exact error message that is returned?

```
Command 'gcloud' not found, did you mean:
 command 'icloud' from deb python3-pyicloud
 command 'cgcloud' from deb python-cgcloud-core
Try: apt install <deb name>
```

- Take a screenshot of the output for your notebook.

```
ashfaq@instance-2:~$ gcloud compute instances list
NAME        ZONE        MACHINE_TYPE  PREEMPTIBLE  INTERNAL_IP  EXTERNAL_IP   STATUS
instance-1  us-west1-b  f1-micro                   10.138.0.10  34.83.250.68  RUNNING
instance-2  us-west1-b  f1-micro                   10.138.0.11  34.82.201.12  RUNNING
ashfaq@instance-2:~$
```

- What role needs to be added to the service account's permissions for the VM to have access to list the project's Compute Engine instances?

  Compute Network Viewer

- What is the exact error message that is returned?

```
Copying file://moonquakes.png [Content-Type=image/png]...

AccessDeniedException: 403
gcs-lab@cloud-f21-mazin-ashfaq-ashfaq.iam.gserviceaccount.com does not
have storage.obje

cts.create access to the Google Cloud Storage object.
```

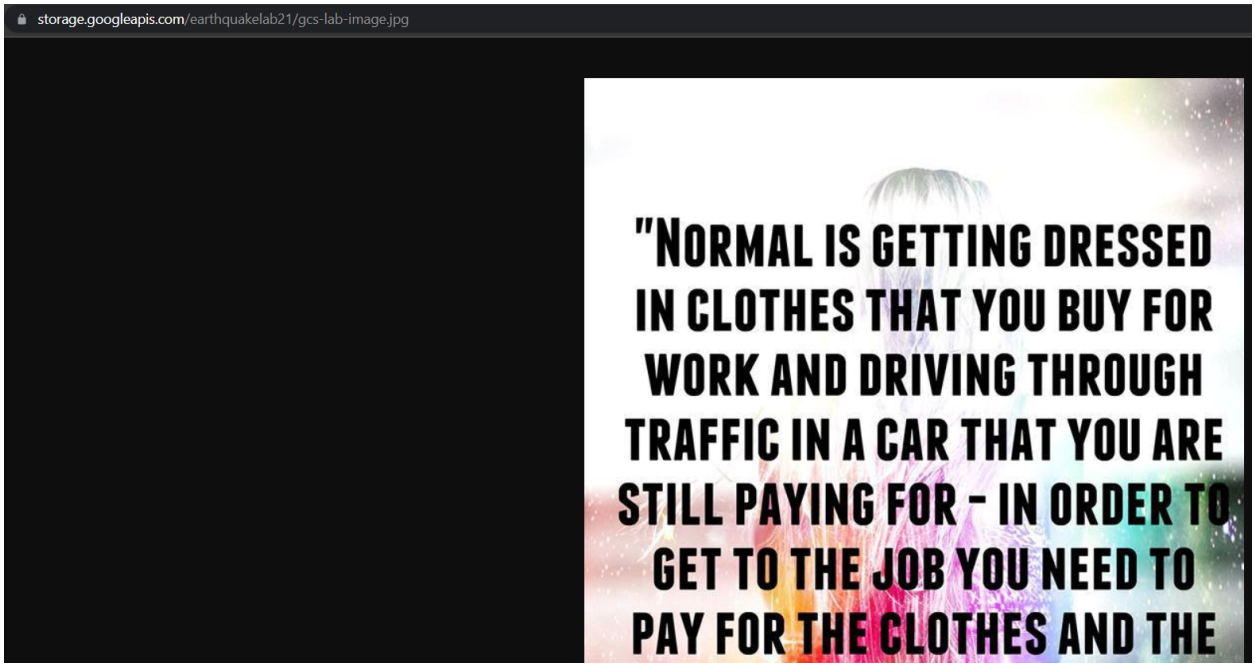
- What role needs to be added to the service account's permissions for the VM to have access to add an object to the storage bucket?

  Storage Object Creator

```
bucket = storage_client.get_bucket('earthquakelab21')
```

14. View object

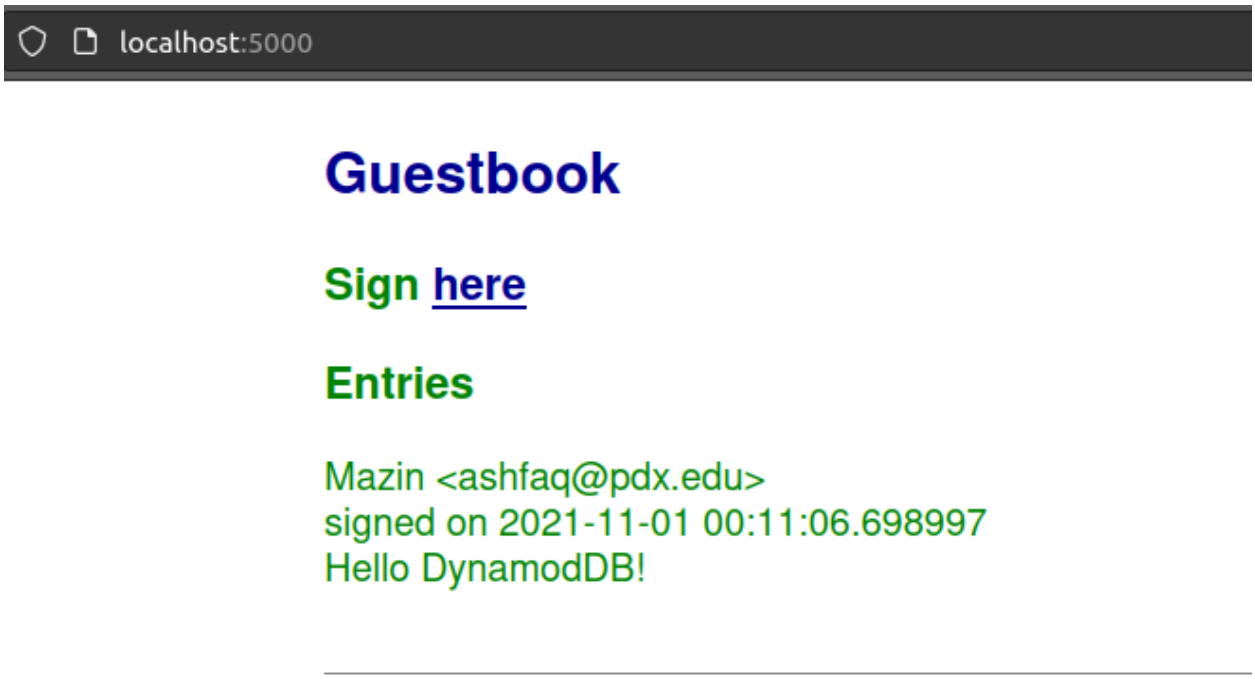
- Take a screenshot the shows the entire URL and the image that has been retrieved:



05.2a: DynamoDB Guestbook

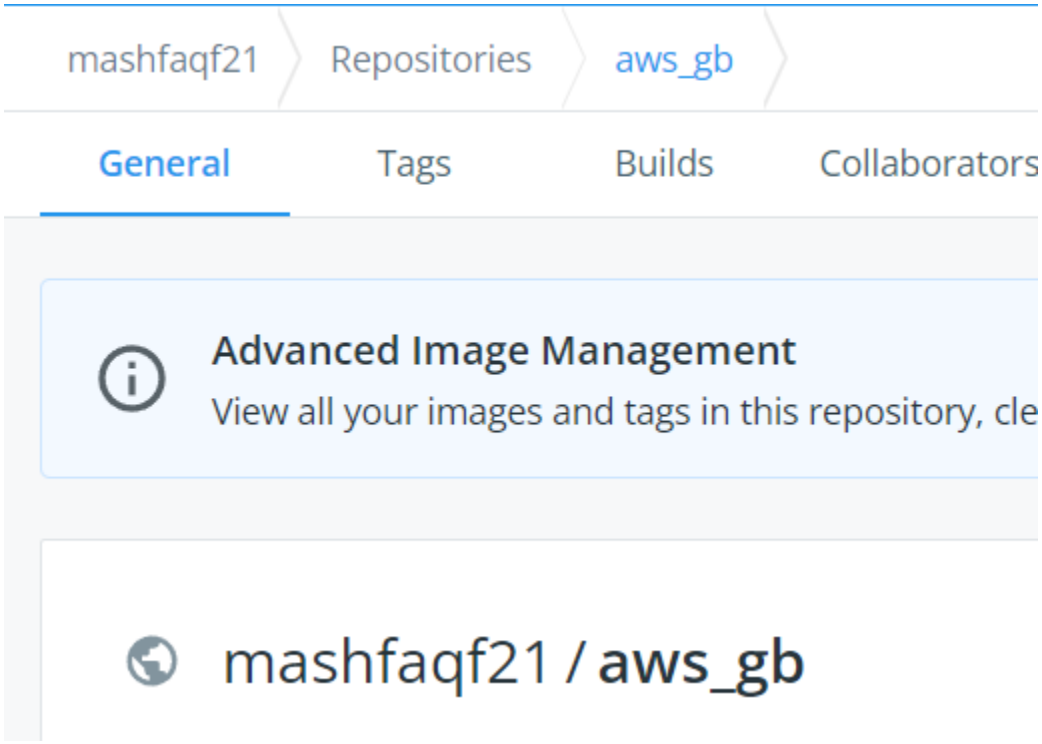
5. Run the application

- Take a screenshot of the output for your lab notebook.



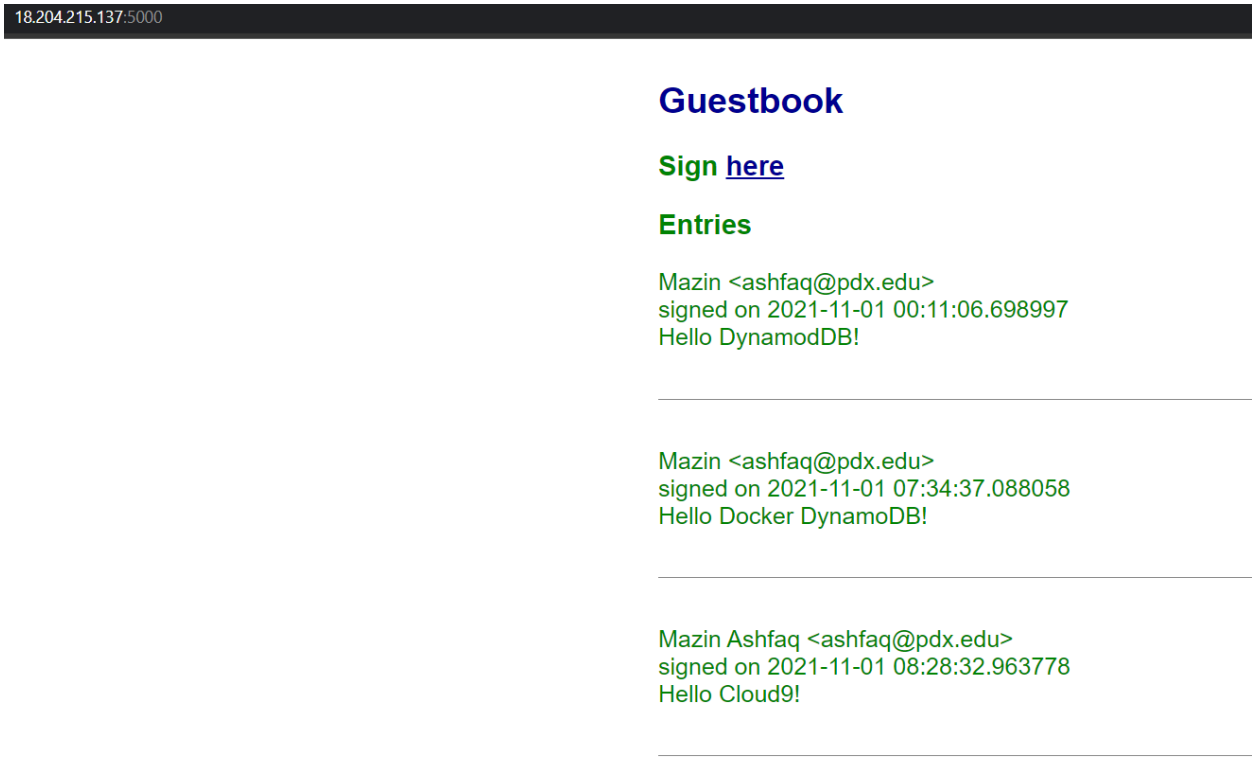
8. Push the container image

- Take a screenshot of the container image on DockerHub.



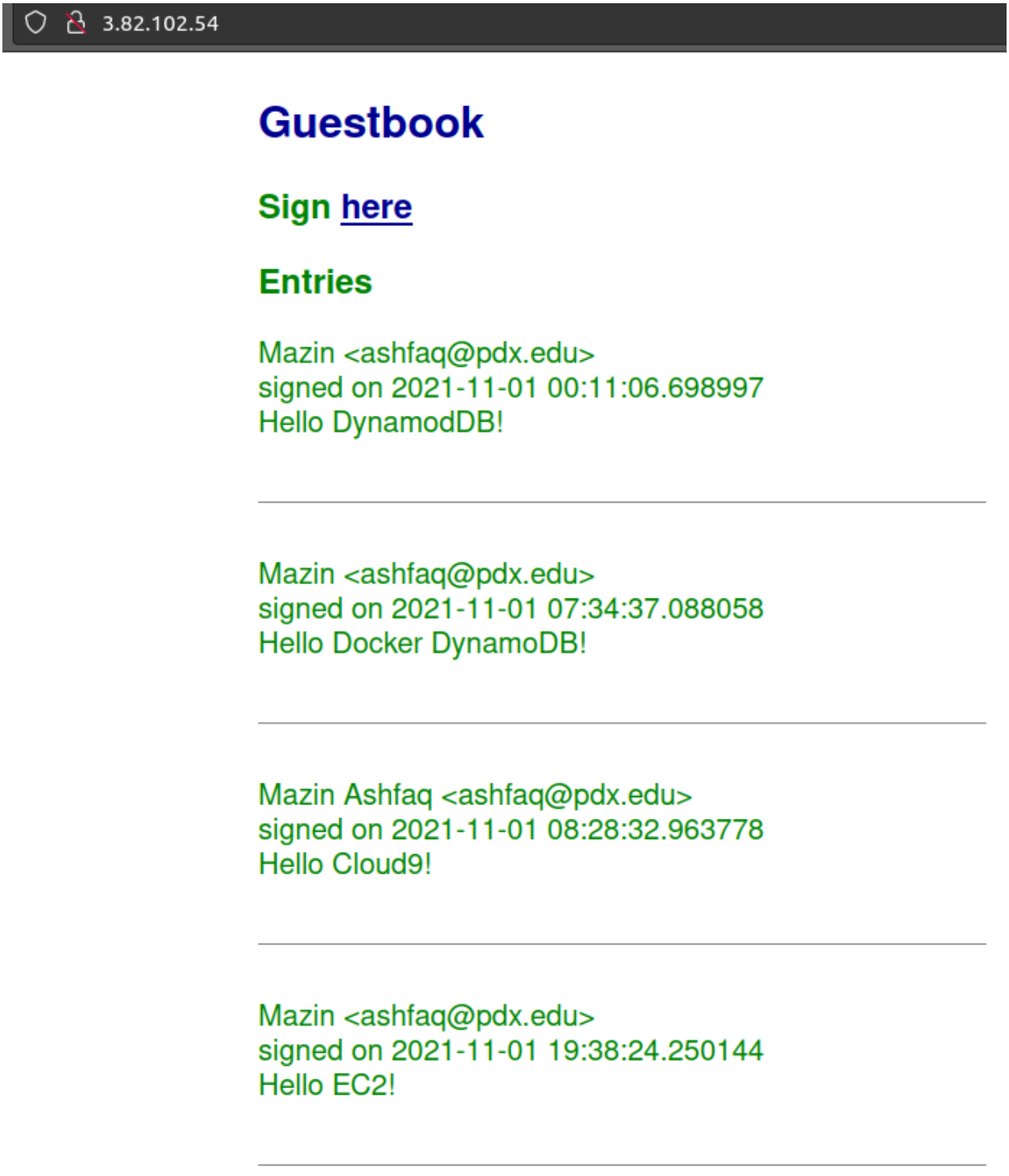
11. Run the application

- Take a screenshot as before that shows your entry and the IP address in the URL bar.



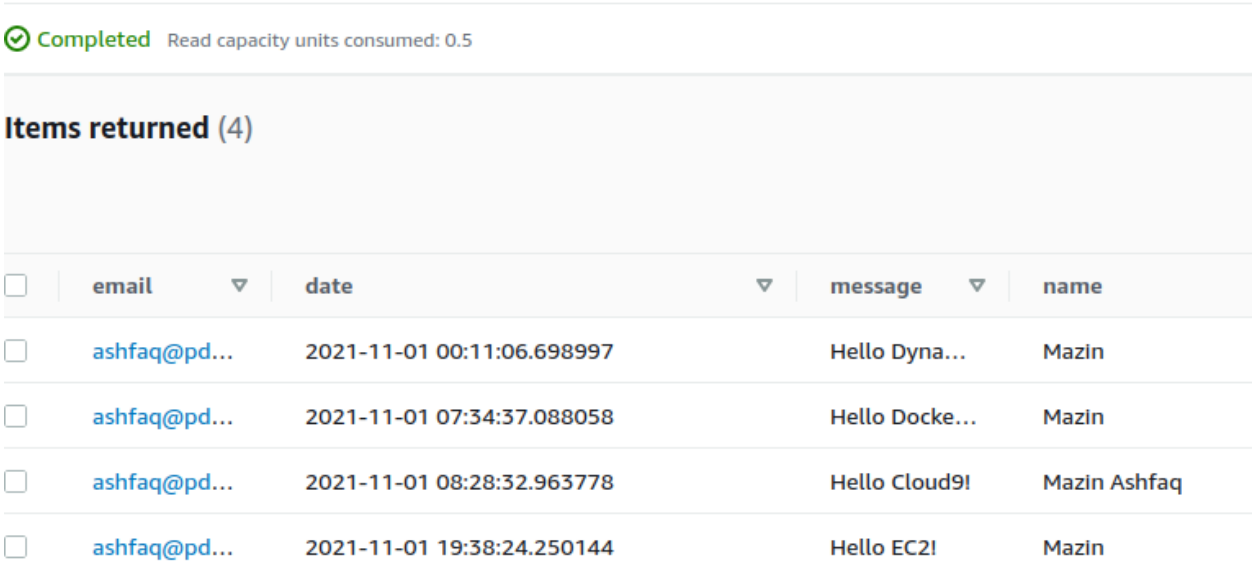
15. Visit the application

- Take a screenshot as before that shows your entry and the IP address in the URL bar.



16. View the database

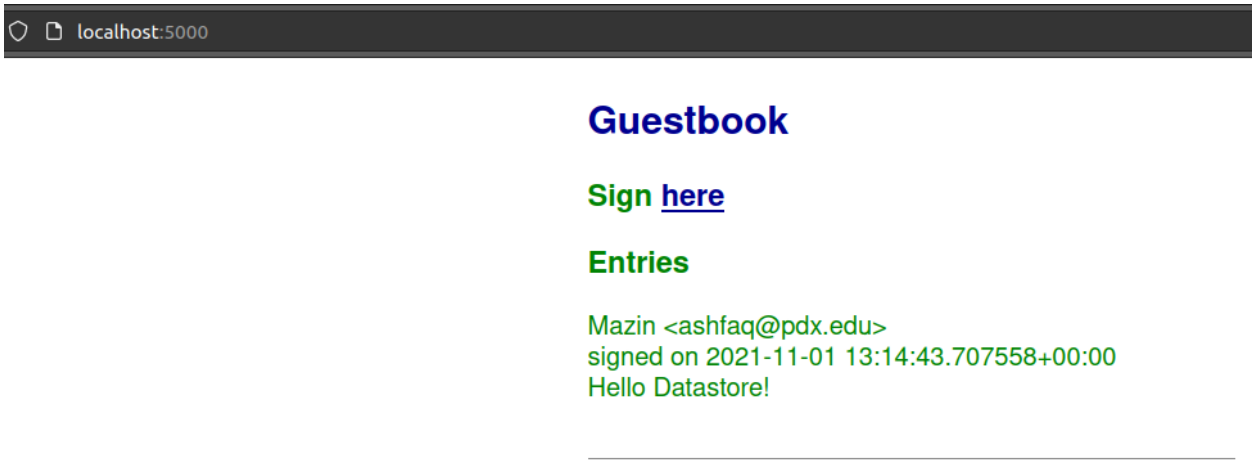
- Take a screenshot that shows all of the guestbook entries that you added to the DynamoDB table including their timestamps.



05.2g: Cloud Datastore Guestbook

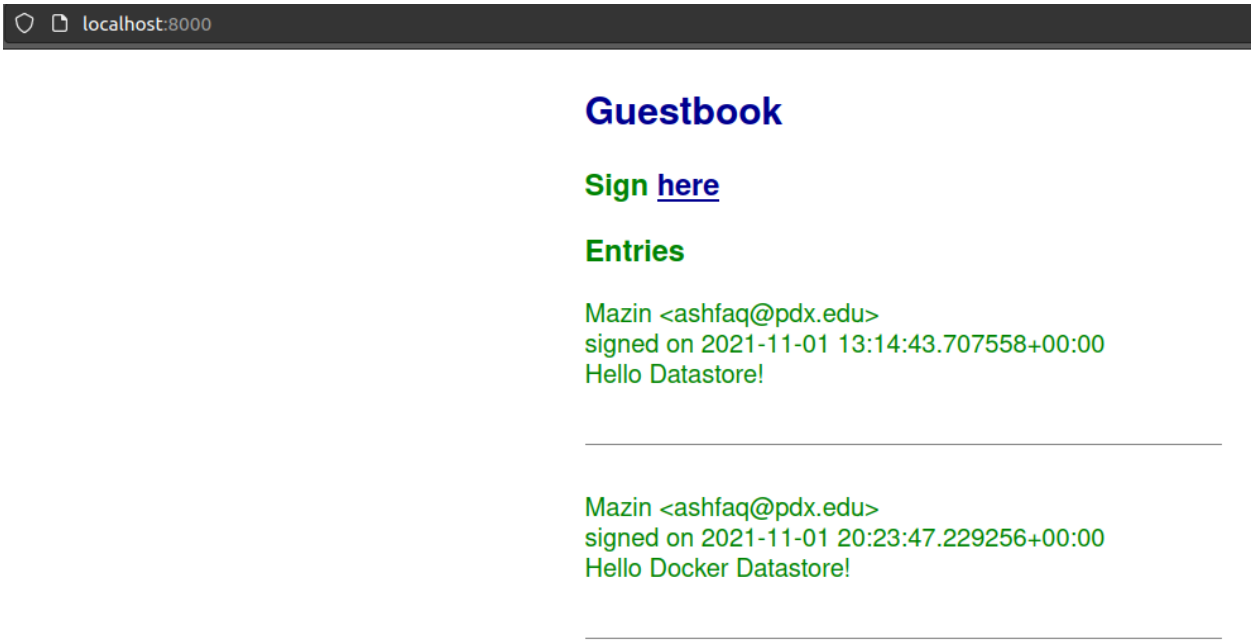
6. Run the application

- Take a screenshot of the output for your lab notebook.



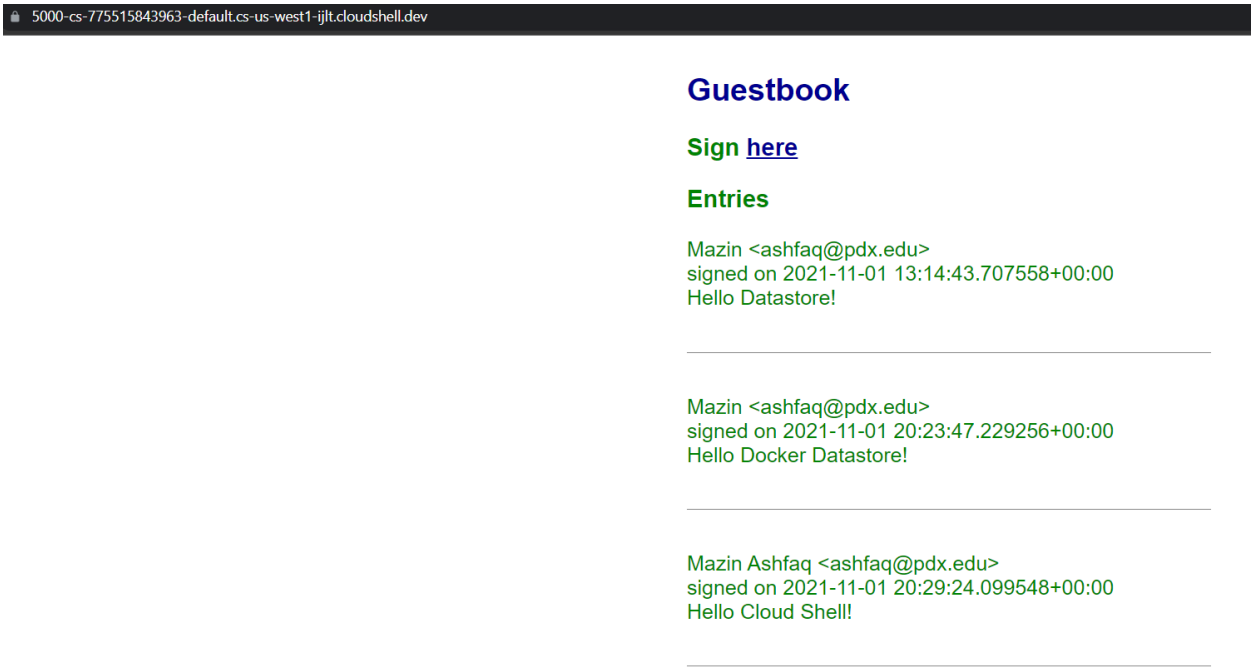
8. Run the application

- Take a screenshot of the output for your lab notebook.



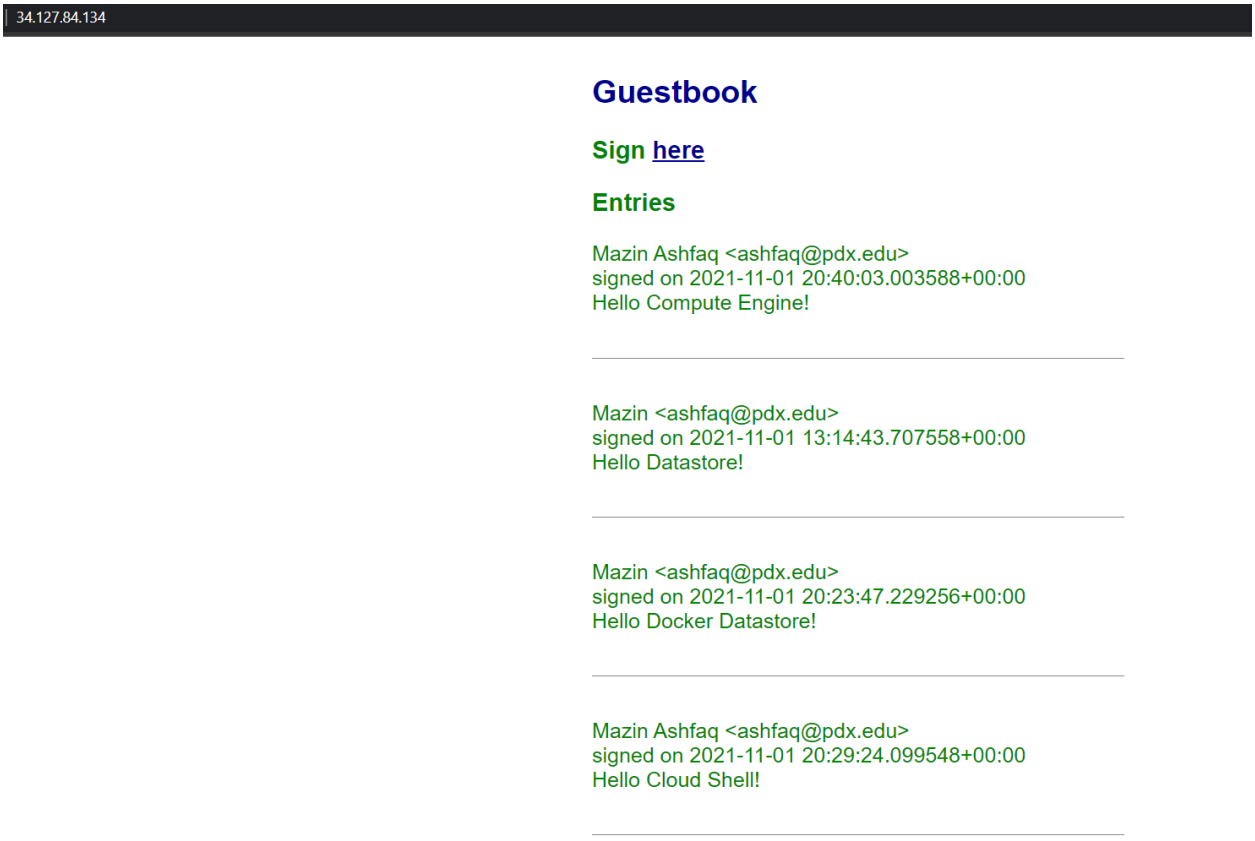
11. Run the application

- Take a screenshot as before that shows your entry and the URL bar.



15. Visit the application

- Take a screenshot as before that shows your entry and the IP address in the URL bar.



16. View the database

- Take a screenshot of all of the entries that have been added including their timestamps for your lab notebook.

Name/ID ↑	date	email	message	name
id=5071211717459968	2021-11-01 (13:40:03.003) PDT	ashfaq@pdx.edu	Hello Compute Engine!	Mazin Ashfaq
id=5081054809423872	2021-11-01 (06:14:43.707) PDT	ashfaq@pdx.edu	Hello Datastore!	Mazin
id=5632499082330112	2021-11-01 (13:23:47.229) PDT	ashfaq@pdx.edu	Hello Docker Datastore!	Mazin
id=5642368648740864	2021-11-01 (13:29:24.099) PDT	ashfaq@pdx.edu	Hello Cloud Shell!	Mazin Ashfaq