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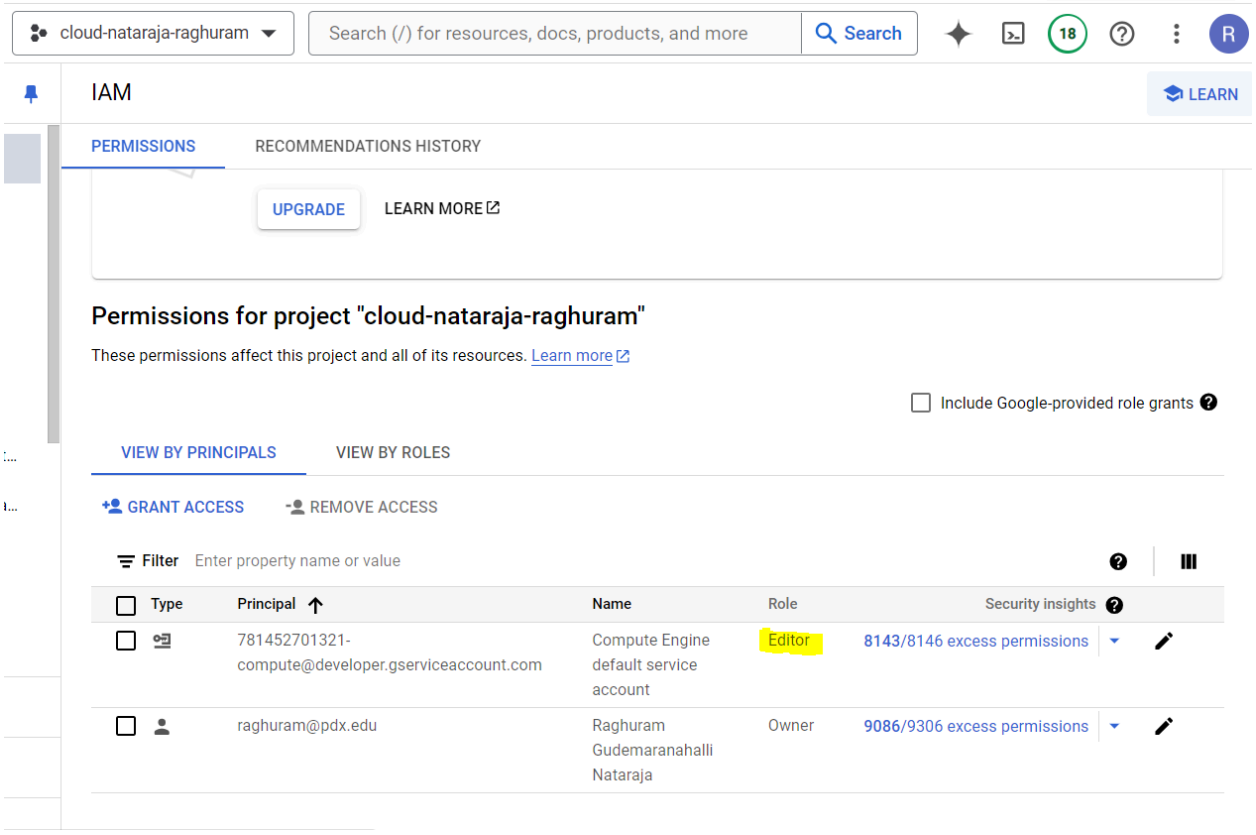
05.1g: Storage, IAM

2. GCP Cloud Storage #1 (USGS)

- What role is attached to the Compute Engine default service account?

Editor is the role attached



- Would it be sufficient for the VM to perform its functions (i.e. creating buckets and reading/writing objects in them)?

Yes

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

Default: read-only access

- Would they be sufficient for the VM to perform its functions (i.e. creating buckets and reading/writing objects in them)?

NO

- What settings are possible for setting the VM's access to the Storage API?

  None, Read Only, Write Only, Read Write, Full

4. USGS data and setup

- What time did the latest earthquake happen?

  Date: 2024-05-05 Time :21:21:28.570Z

- What was the magnitude (mag)?

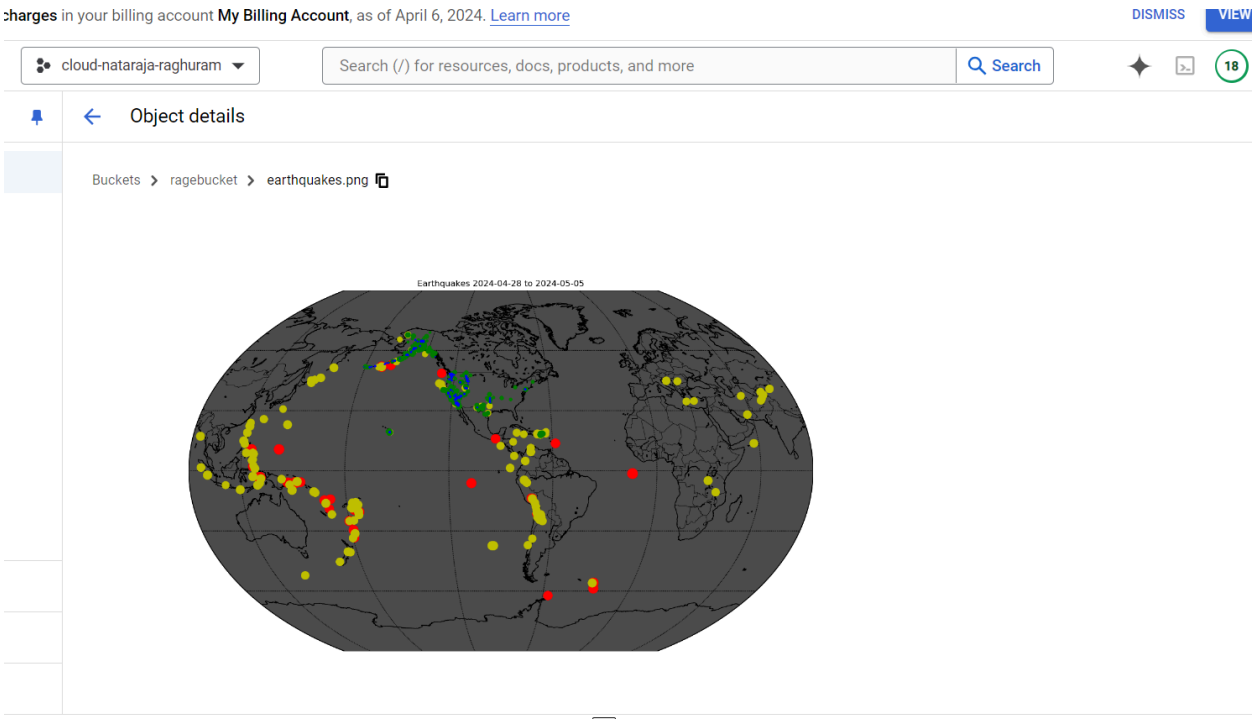
  0.42

- Where was the place it happened?

  "4 km NW of Cobb, CA"

5. Python plotting code

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



9. Service account roles (Compute)

- What is the exact error message that is returned?

ERROR: (gcloud.compute.instances.list) Some requests did not succeed:
- Required 'compute.instances.list' permission for 'projects/cloud-nataraja-raghuram'

- 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 resources?

Compute Viewer

- Take a screenshot of the output for your notebook.

```
raghuram@gcs-lab-vm:~$ gcloud compute instances list
NAME        ZONE        MACHINE_TYPE  PREEMPTIBLE  INTERNAL_IP  EXTERNAL_IP     STATUS
course-vm   us-west1-b  e2-medium                  10.138.0.10                  TERMINATED
gcs-lab-vm  us-west1-b  e2-medium                  10.138.0.18  35.233.180.125  RUNNING
usgs        us-west1-b  e2-medium                  10.138.0.17  34.82.233.74    RUNNING
raghuram@gcs-lab-vm:~$
```

10. Service account roles (Storage)

- What is the exact error message that is returned?

```
raghuram@gcs-lab-vm:~$ gsutil cp moonquakes.png gs://ragebucket/
Copying file://moonquakes.png [Content-Type=image/png]...
AccessDeniedException: 403 gcs-lab@cloud-nataraja-raghuram.iam.gserviceaccount.com does not have storage.objects.create access to the Google Cloud Storage object. Permission 'storage.objects.create' denied on resource (or it may not exist).
```

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

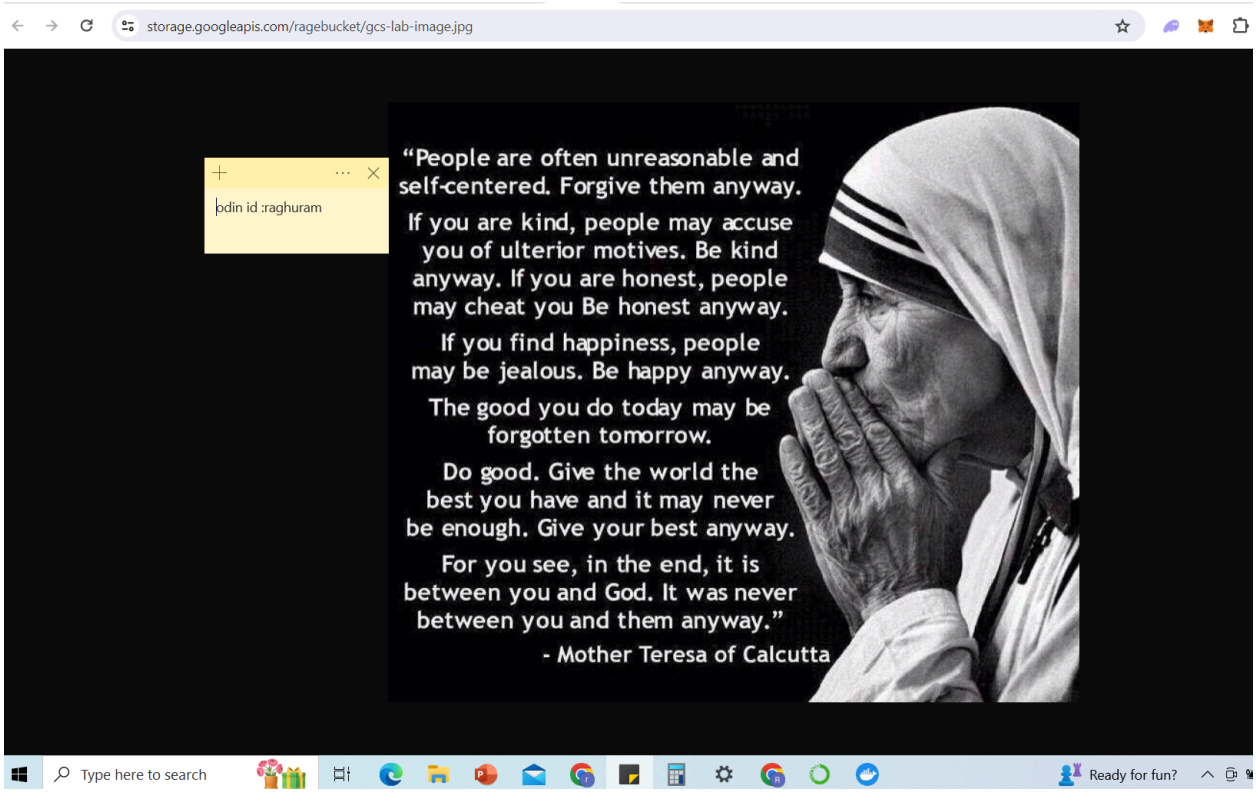
  Storage Object Creator

- Take a screenshot of the output for your notebook

```
raghuram@gcs-lab-vm:~$ gsutil cp moonquakes.png gs://ragebucket/
Copying file://moonquakes.png [Content-Type=image/png]...
/ [1 files][315.6 KiB/315.6 KiB]
Operation completed over 1 objects/315.6 KiB.
raghuram@gcs-lab-vm:~$
```

13. View object

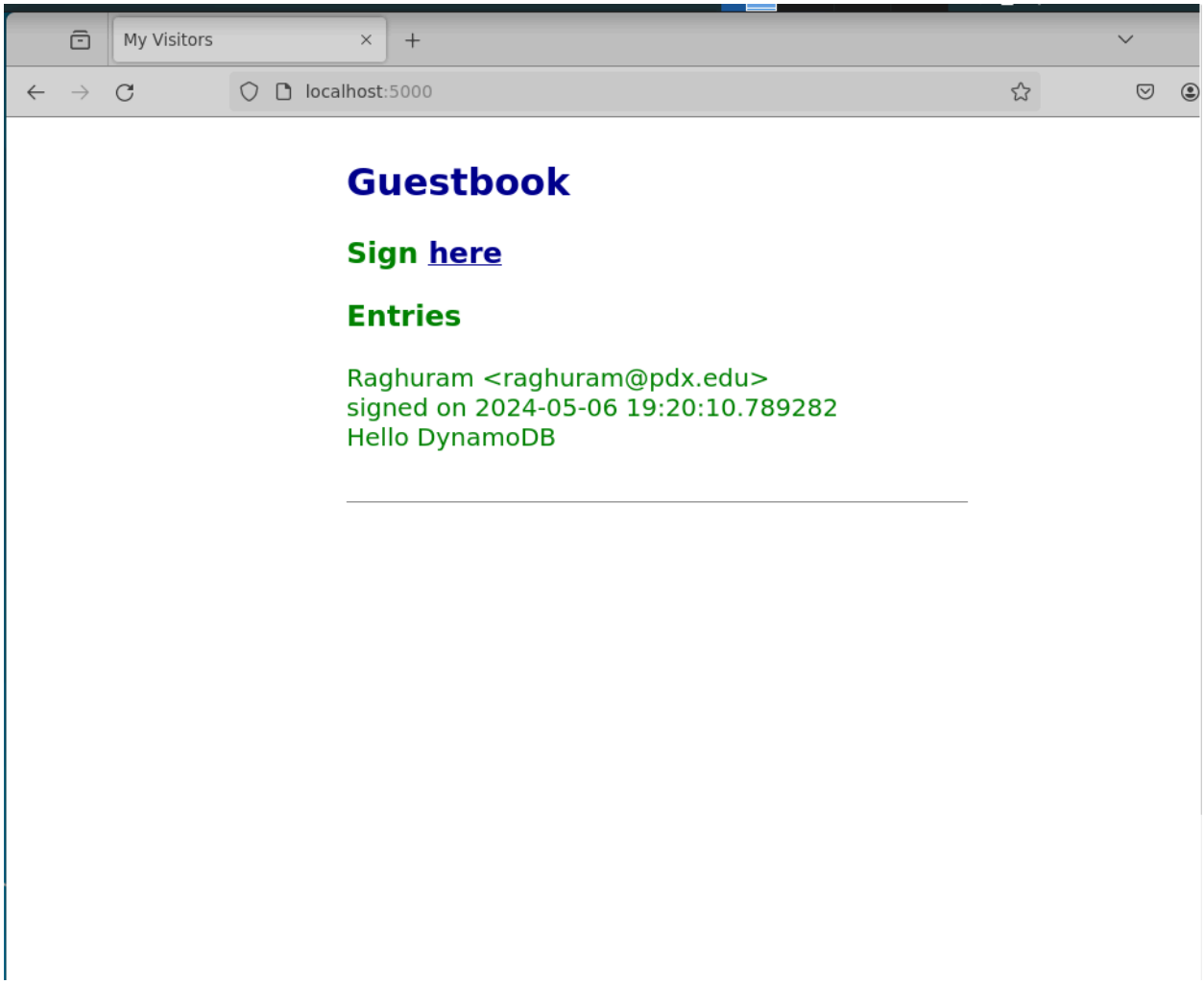
- Take a screenshot the shows the entire URL and the image that has been retrieved:



05.2a: DynamoDB Guestbook

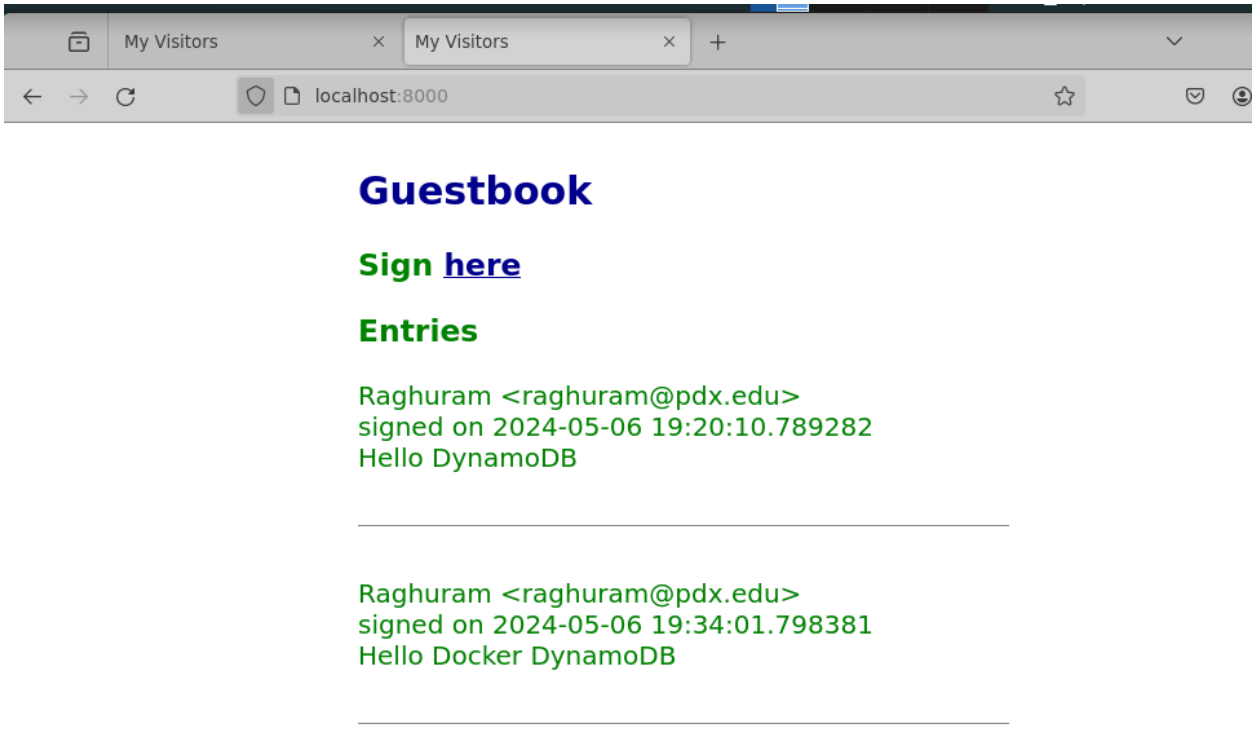
5. Run the application

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



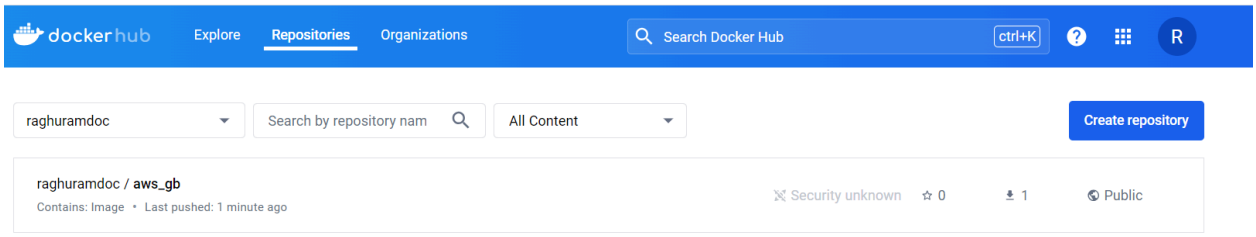
7. Run the application

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

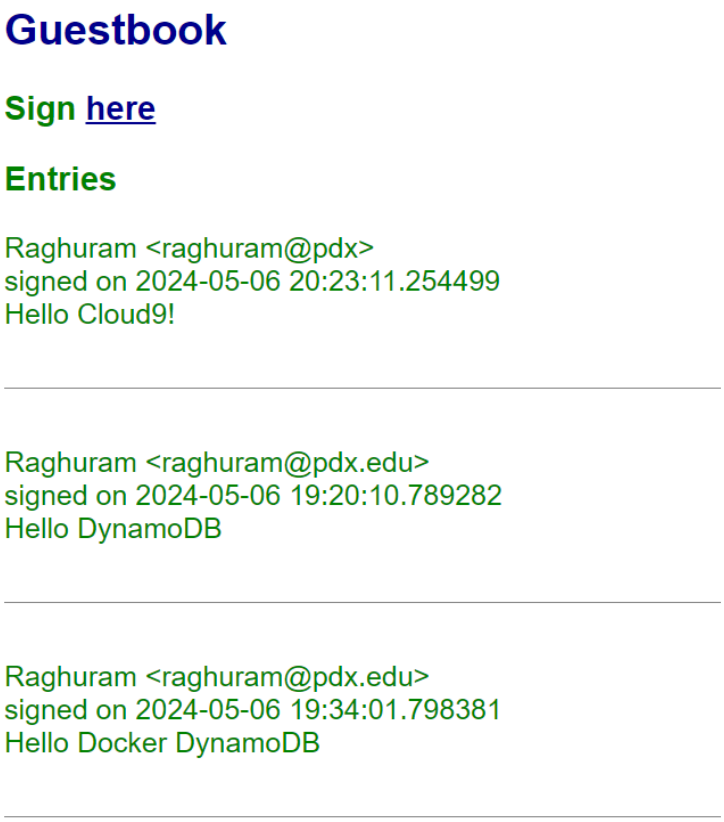


8. Push the container image

- Take a screenshot of the container image on DockerHub.

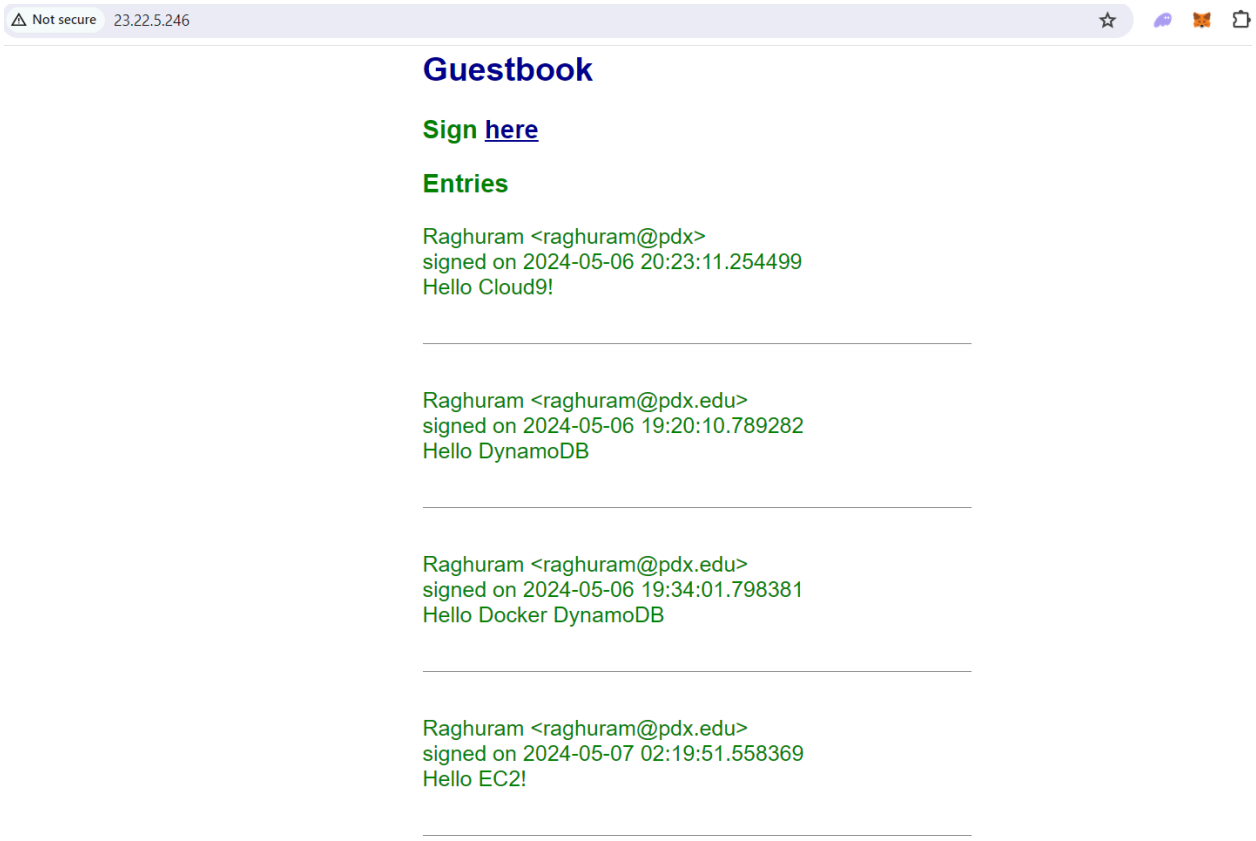


11. Run the application



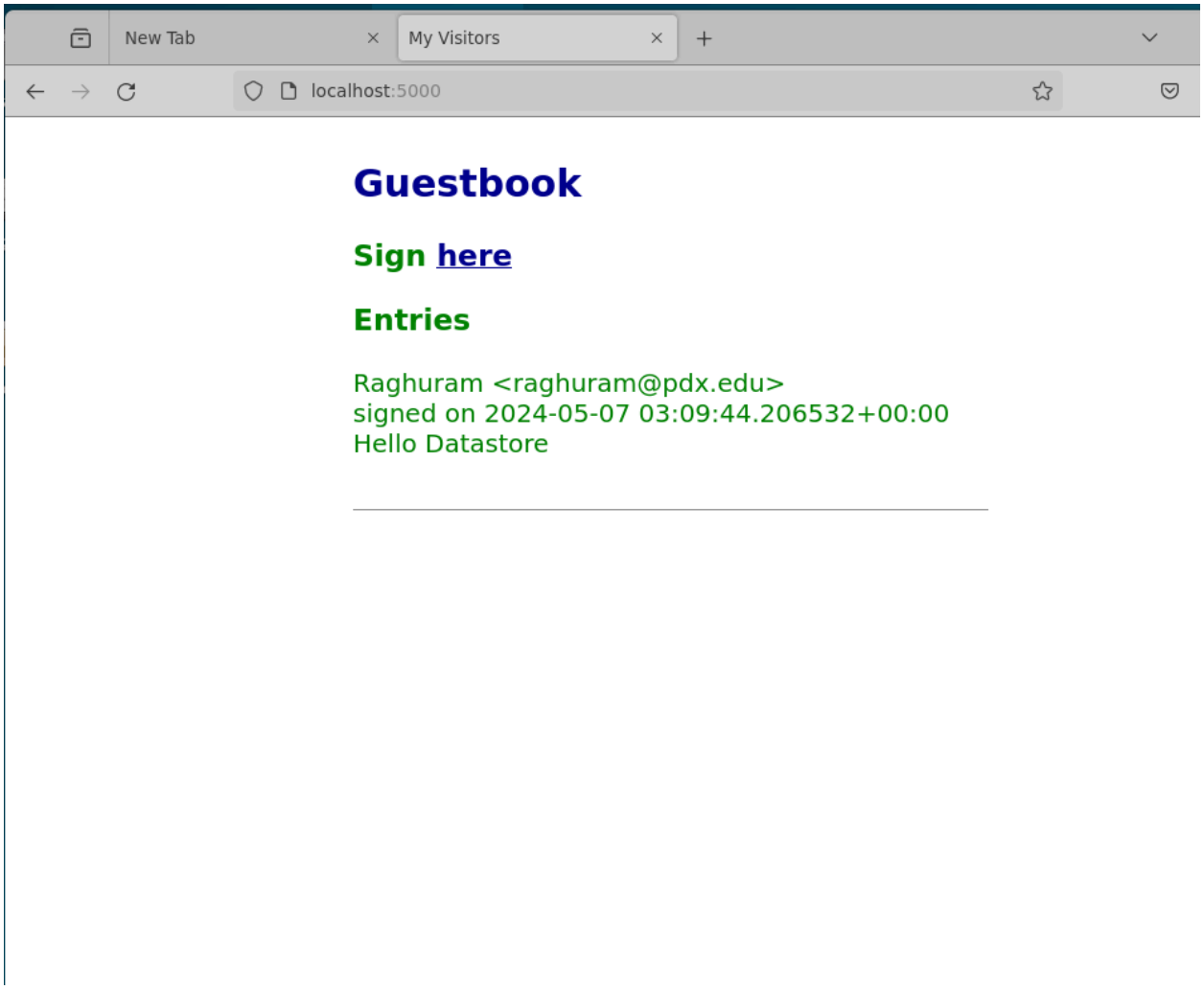
15. Visit the application

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

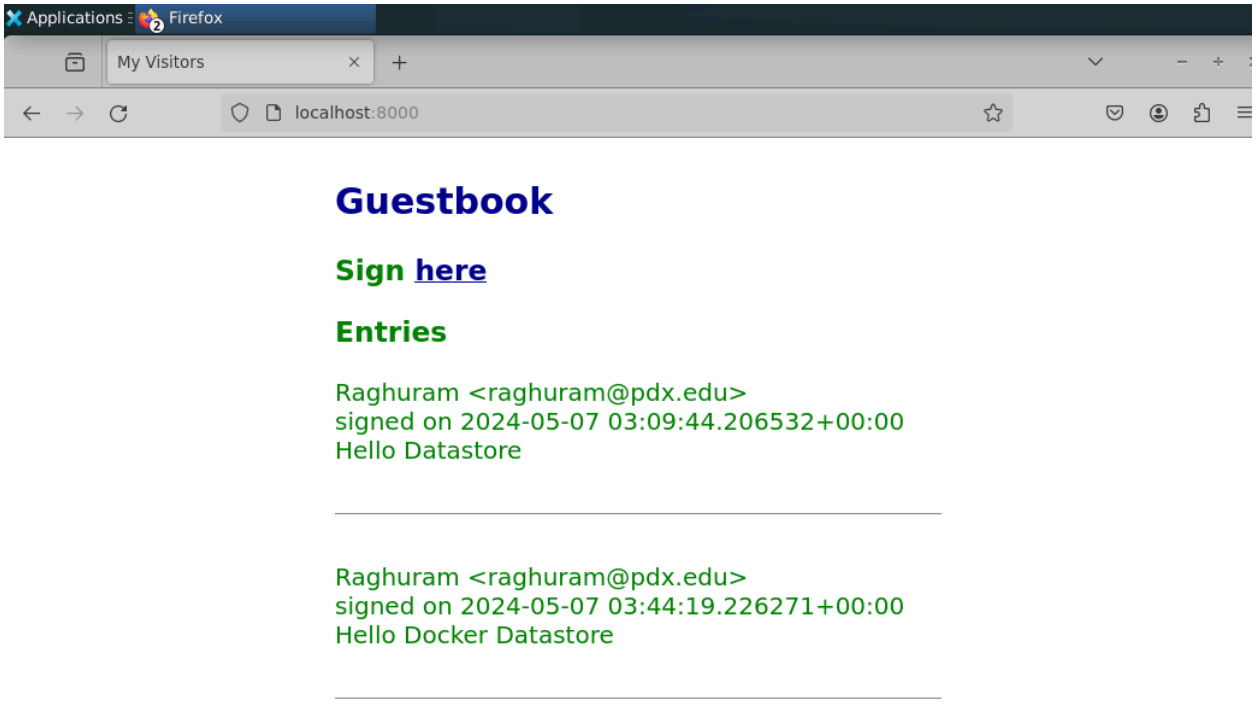


05.2g: Cloud Datastore Guestbook

7. Run the application

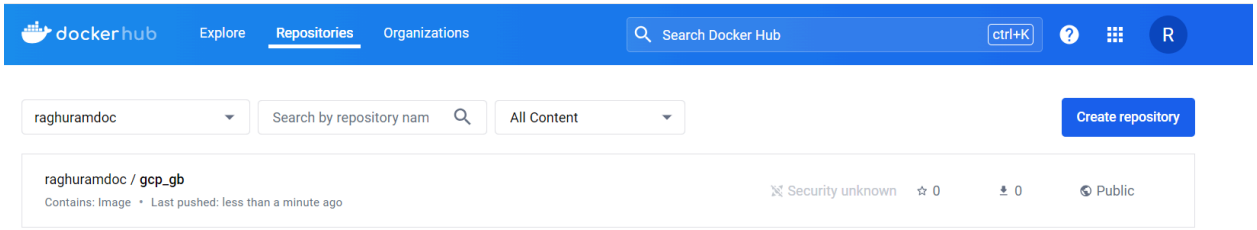


9. Run the application



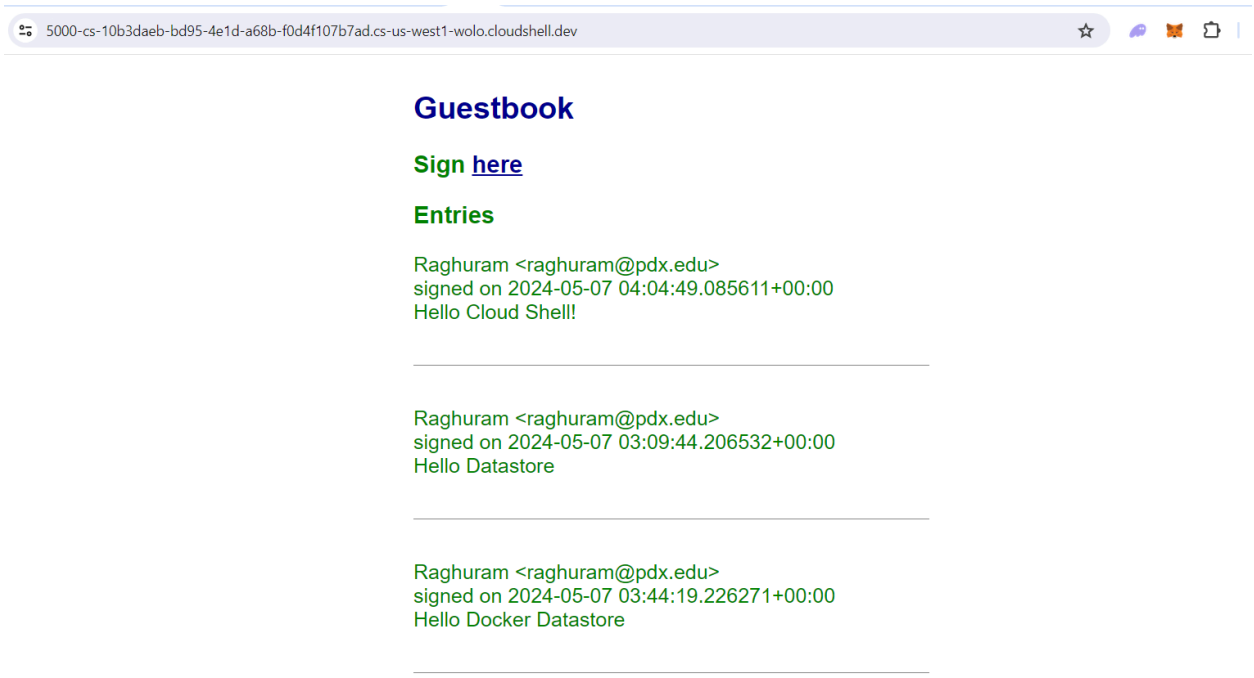
10. Push the container image

- Take a screenshot of the container image on DockerHub.



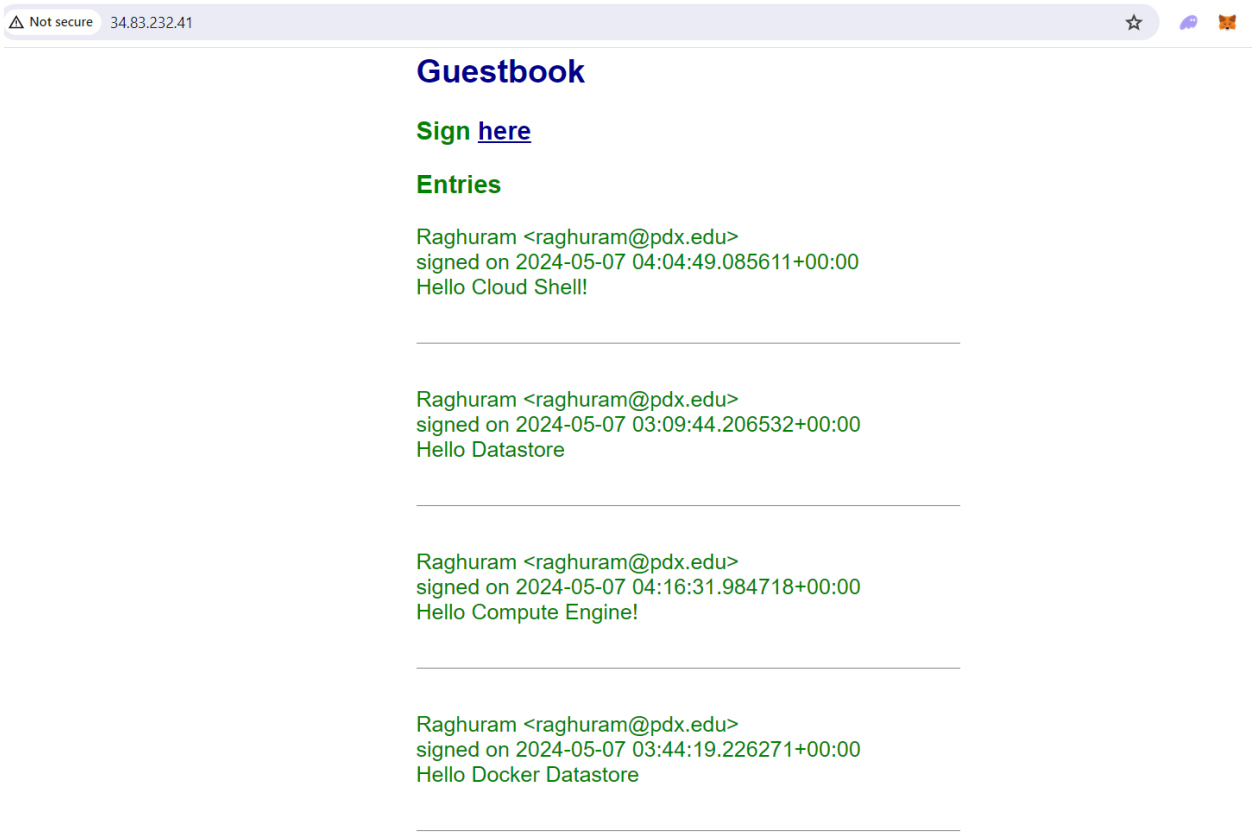
12. Run the application

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



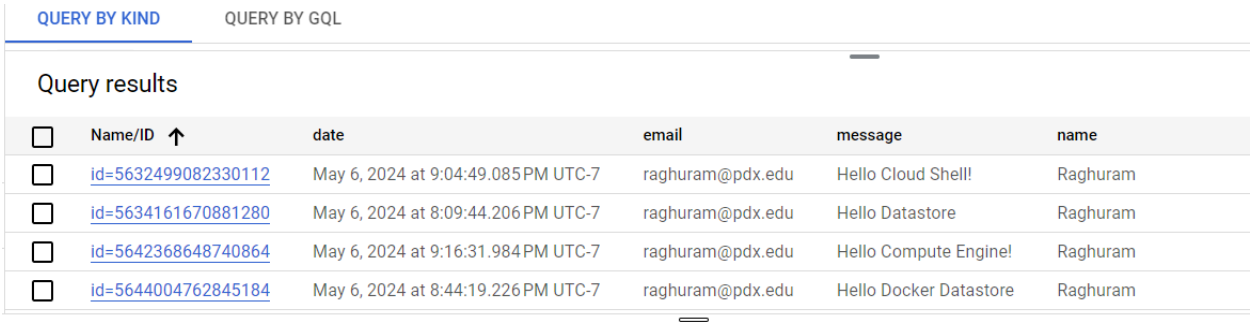
15. Visit the application

- 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=5632499082330112	May 6, 2024 at 9:04:49.085 PM UTC-7	raghuram@pdx.edu	Hello Cloud Shell!	Raghuram
id=5634161670881280	May 6, 2024 at 8:09:44.206 PM UTC-7	raghuram@pdx.edu	Hello Datastore	Raghuram
id=5642368648740864	May 6, 2024 at 9:16:31.984 PM UTC-7	raghuram@pdx.edu	Hello Compute Engine!	Raghuram
id=5644004762845184	May 6, 2024 at 8:44:19.226 PM UTC-7	raghuram@pdx.edu	Hello Docker Datastore	Raghuram