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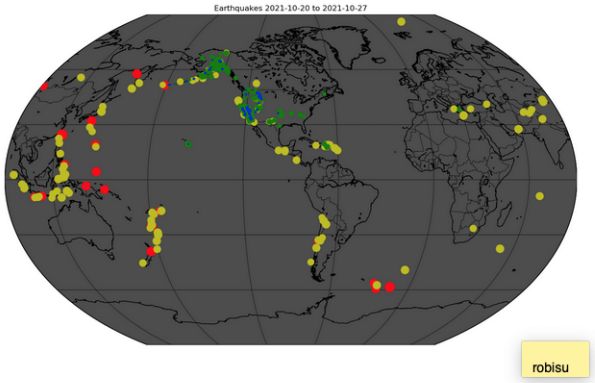
GCP Cloud Storage #1 (USGS)

- *What roles are attached to the Compute Engine default service account?*
  - **The default account has the 'Editor' role attached.**
- *Would they be sufficient for the VM to perform its functions?*
  - **They should be sufficient, as the Editor role has permissions to alter most resources for most GCP services.**
- *What permissions are given by the default access scope to Cloud Storage?*
  - **For Cloud Storage, default access gives only read only access.**
- *Would they be sufficient for the VM to perform its functions?*
  - No, if we want the VM to be able to create storage buckets and write things to them, we need to expand its permissions from this default access level.

USGS Data

- *What time did the latest earthquake happen?*
  - **10/27/2021, 22:49:07.043Z**
- *What was the magnitude (mag)?*
  - **Magnitude: 1.5**
- *Where was the place it happened?*
  - **14 km West of Fishhook, Alaska**

earthquake.png in storage bucket



GCP Storage #2

- *What is the exact error message that is returned?*

```
robisu@robisu-storage2:~$ gcloud compute instances list
ERROR: (gcloud.compute.instances.list) Some requests did not succ
eed:
 - Required 'compute.instances.list' permission for 'projects/clo
ud-f21-robin-su-robisu'
```

  - **“Required ‘compute.instances.list’ permission for ‘projects/cloud-f21-robin-su-robisu”**

Permission added to list instances with the gcloud command:

```
robisu@robisu-storage2:~$ gcloud compute instances list
NAME             ZONE        MACHINE_TYPE  PREEMPTIBLE  INTERNAL_IP  EXTERN
AL_IP  STATUS
robisu-storage1  us-west1-b  f1-micro                   10.138.0.11
       TERMINATED
robisu-storage2  us-west1-b  f1-micro                   10.138.0.12  34.145
.5.39  RUNNING
robisu@robisu-storage2:~$
```

- *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?*
  - **The role is ‘Compute Viewer’, to gain read only access to information about Compute Engine resources, including instances.**

- *What is the exact error message that is returned?*

```
robisu@robisu-storage2:~$ gsutil cp moonquakes.png gs://earthquake_data_buc
ket/
Copying file://moonquakes.png [Content-Type=image/png]...
/ [0 files][    0.0 B/312.4 KiB]
AccessDeniedException: 403 gcs-lab@cloud-f21-robin-su-robisu.iam.gserviceac
count.com does not have storage.objects.create access to the Google Cloud S
torage object.
robisu@robisu-storage2:~$
```

“gcs-lab...gserviceaccount.com does not have storage.objects.create access to the Google Cloud Storage object.”

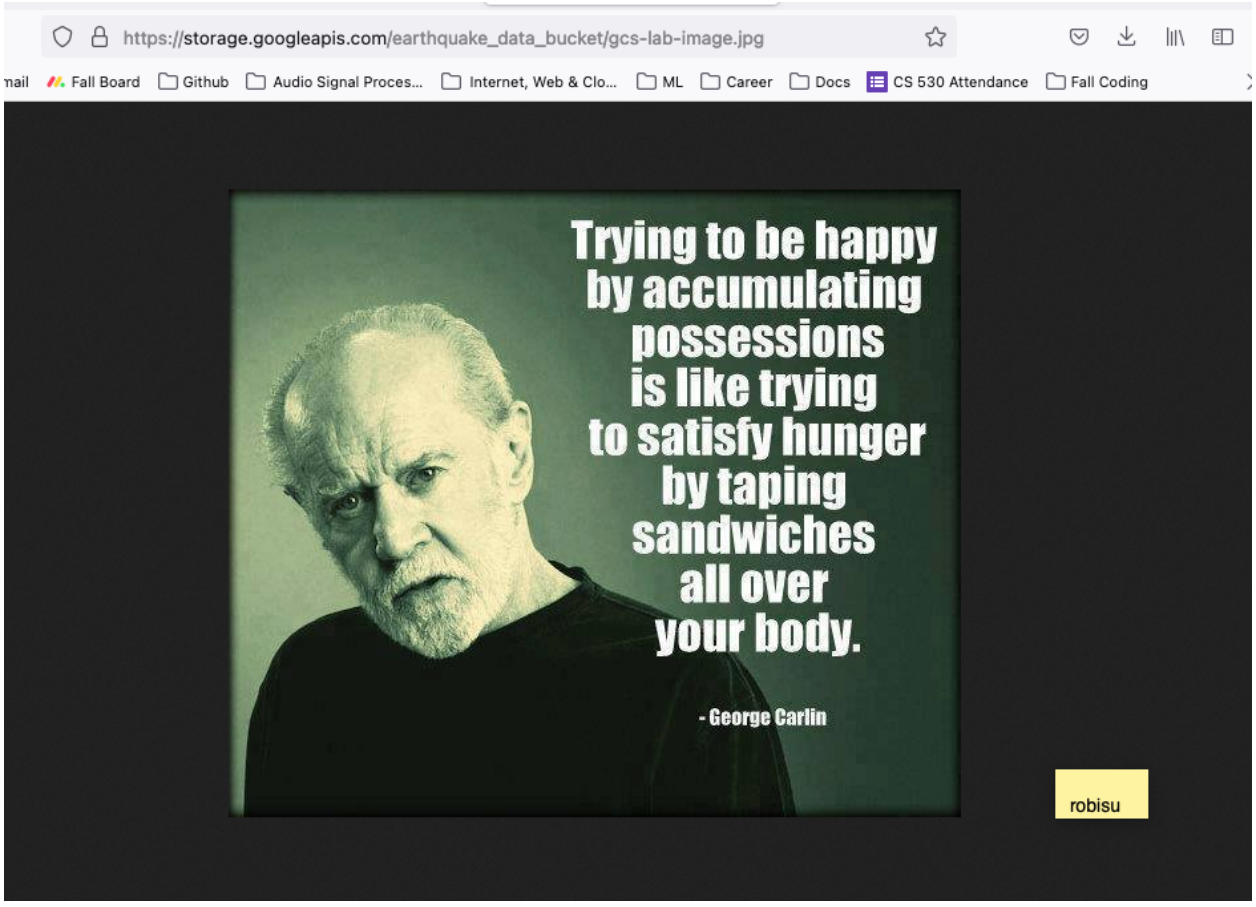
```
robisu@robisu-storage2:~$ gsutil cp moonquakes.png gs://earthquake_data_buc
ket/
Copying file://moonquakes.png [Content-Type=image/png]...
/ [0 files][    0.0 B/312.4 KiB]
/ [1 files][312.4 KiB/312.4 KiB]

Operation completed over 1 objects/312.4 KiB.
```

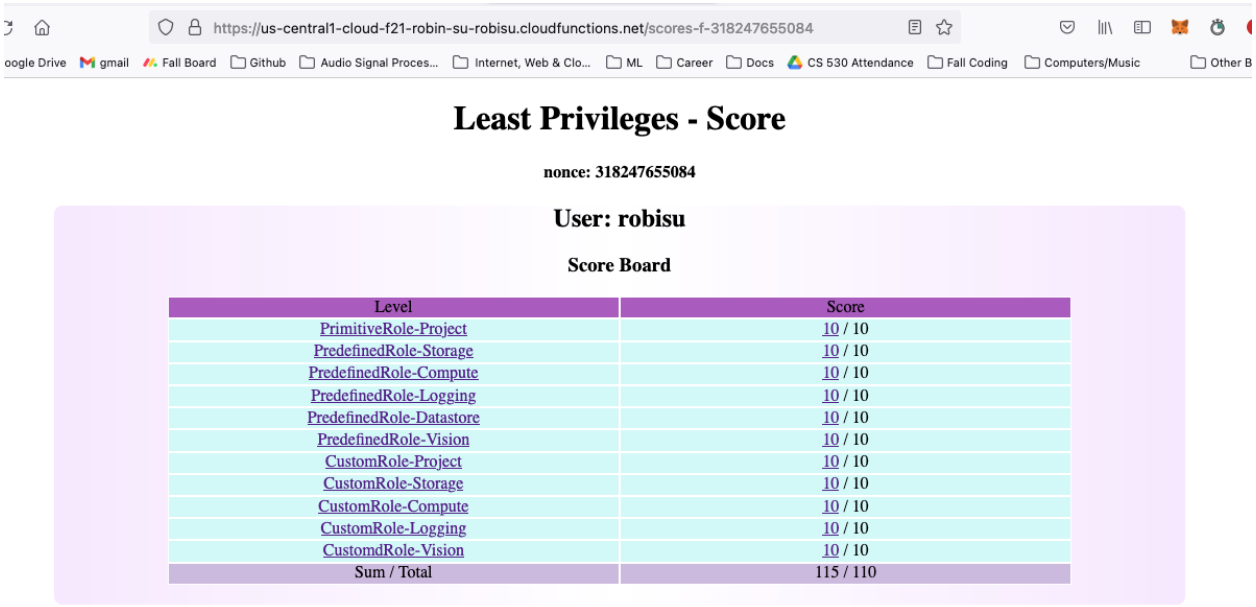
- *What role needs to be added to the service account's permissions for the VM to have access to add an object to the storage bucket?*
    - **Storage Object Admin - allows the role full control in creating, updating, and deleting storage object resources.**

GCP Storage #3

Public storage bucket URL and image:

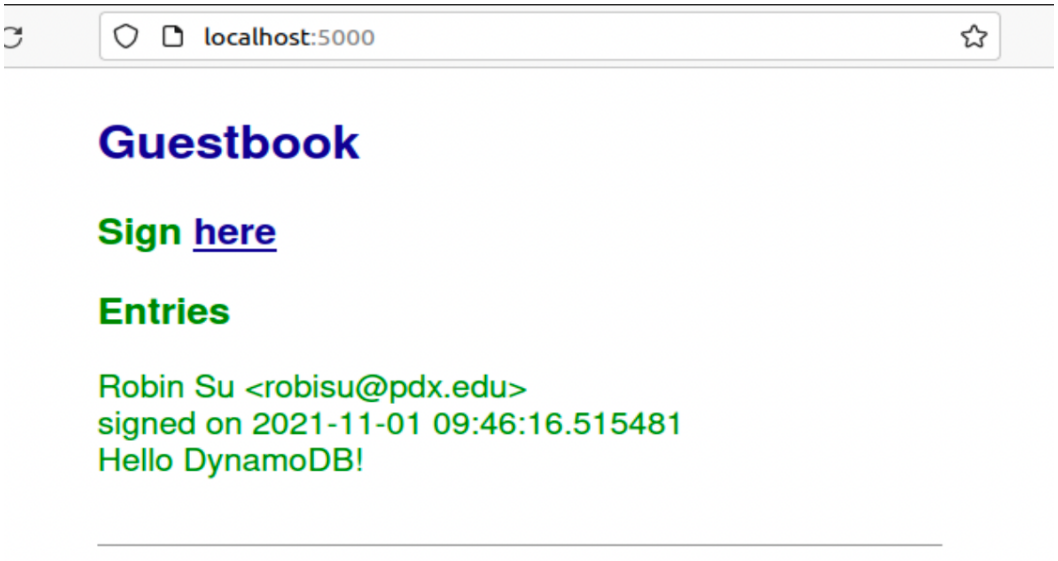


IAM and Least Privileges #4

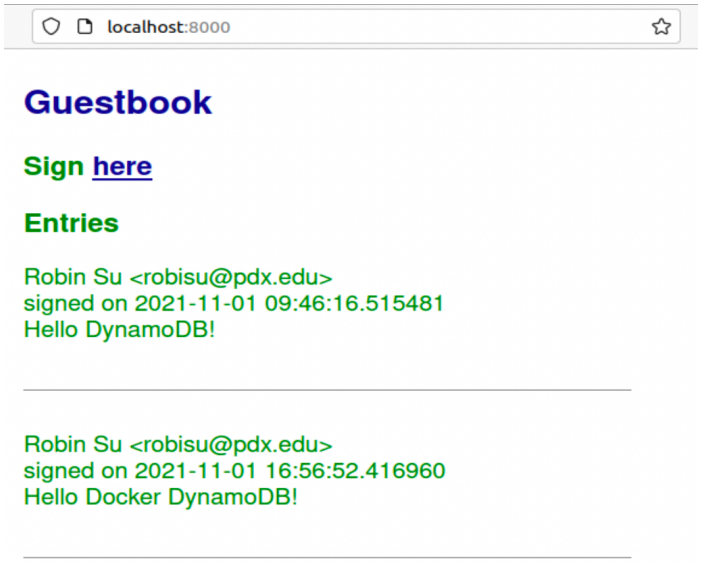


DynamoDB #1

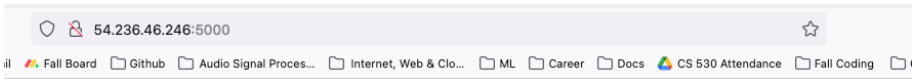
Local app, DynamoDB database backend



DynamoDB / Docker #2



DynamoDB / Cloud9 #3



Guestbook

Sign here

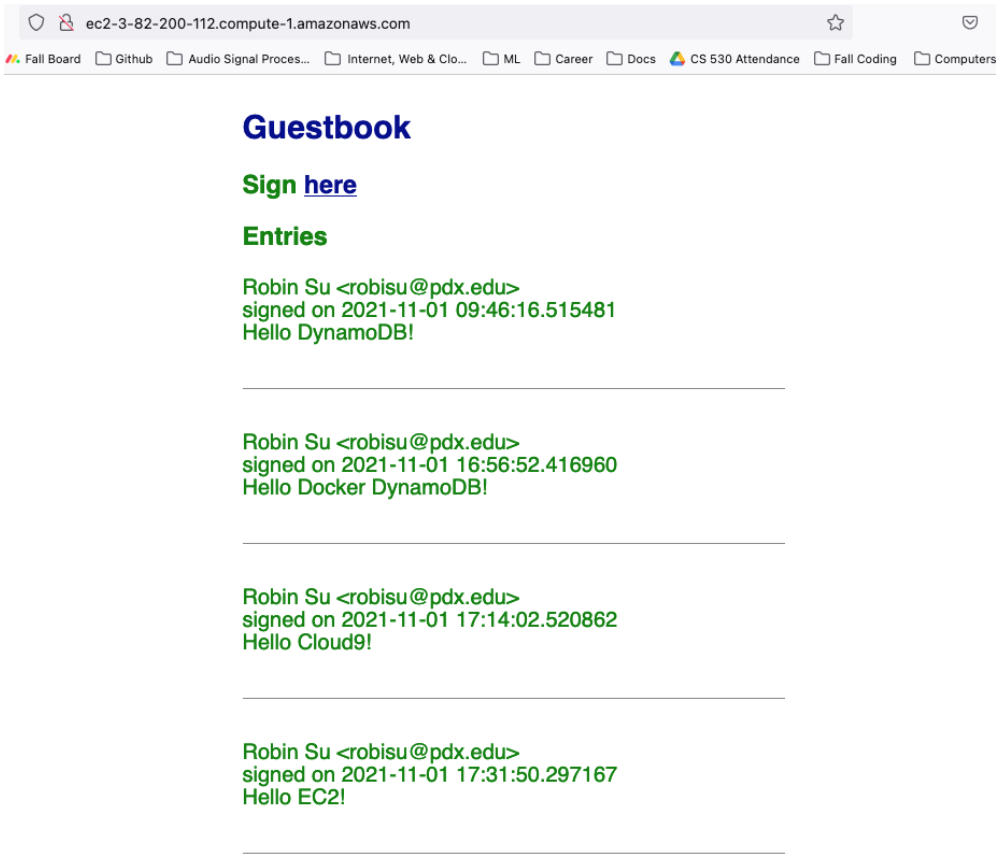
Entries

Robin Su <robisu@pdx.edu>
signed on 2021-11-01 09:46:16.515481
Hello DynamoDB!

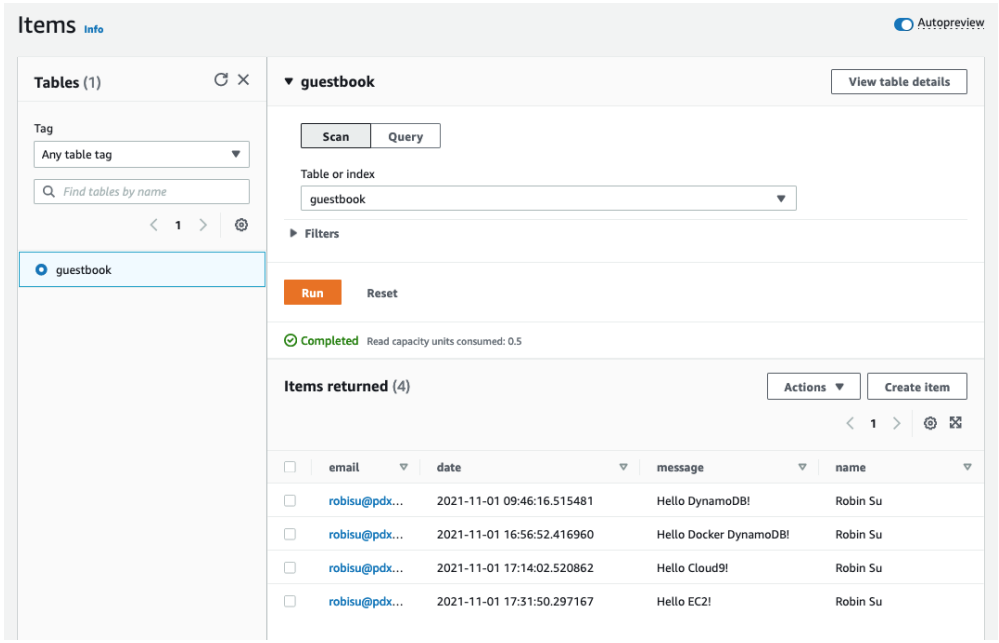
Robin Su <robisu@pdx.edu>
signed on 2021-11-01 16:56:52.416960
Hello Docker DynamoDB!

Robin Su <robisu@pdx.edu>
signed on 2021-11-01 17:14:02.520862
Hello Cloud9!

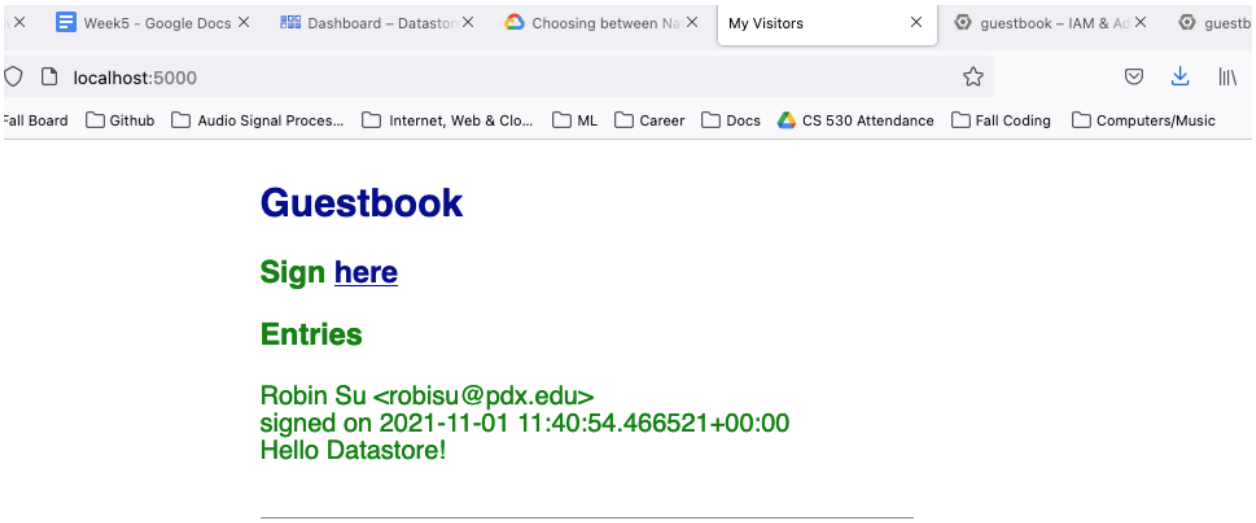
DynamoDB / EC2 #4



Item in DynamoDB Interface:



Cloud Datastore #1



Cloud Datastore #2

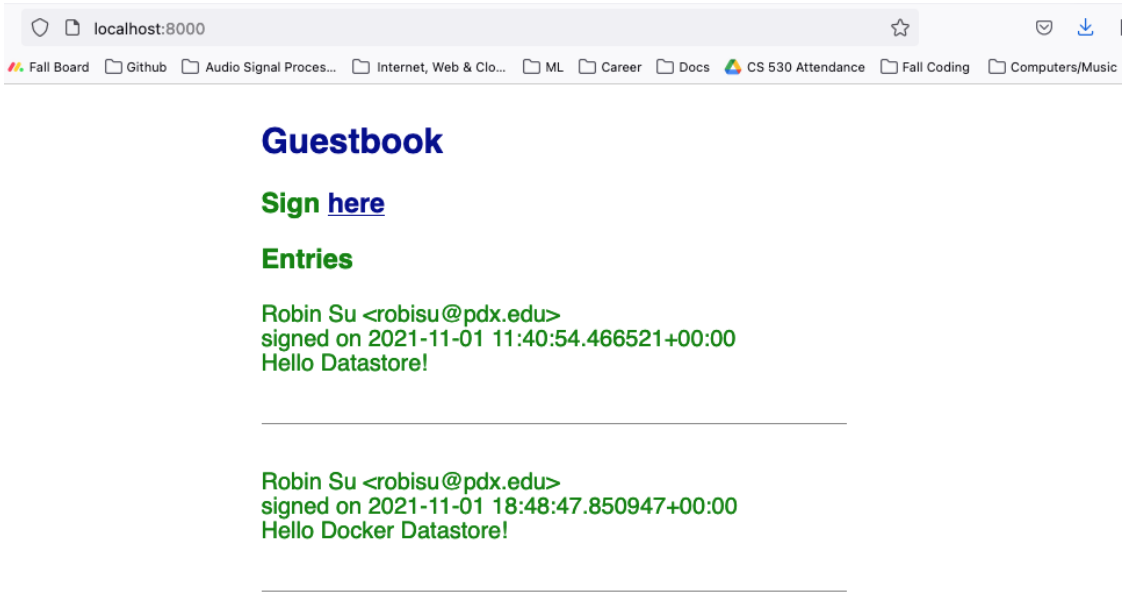
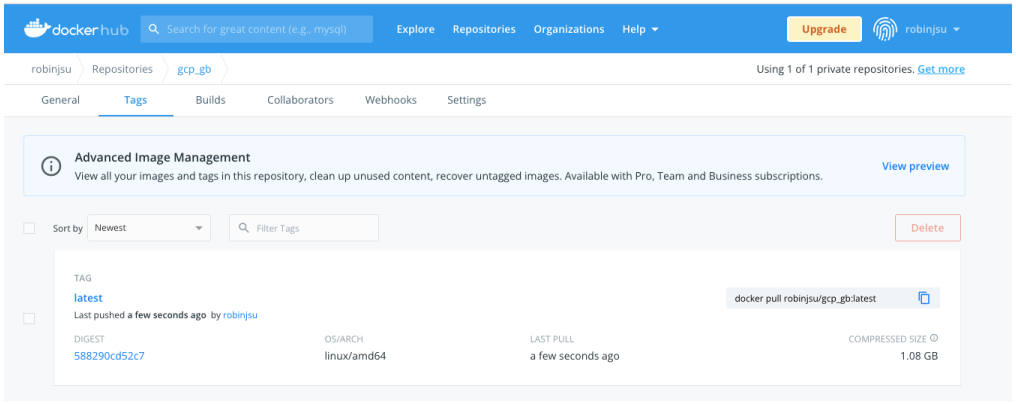
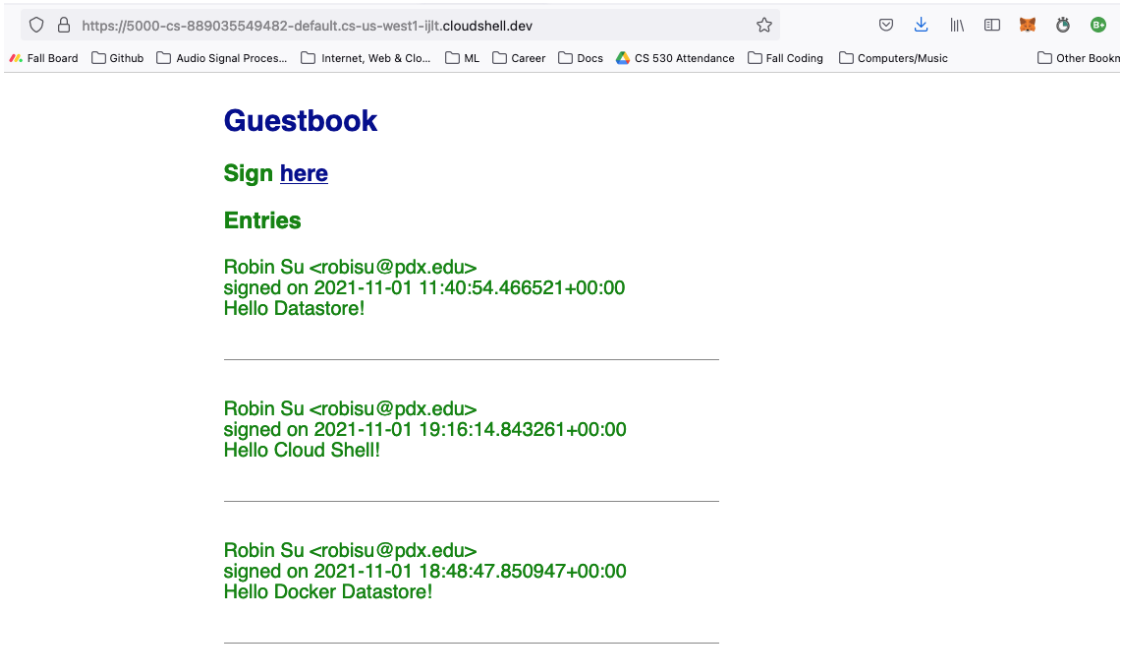


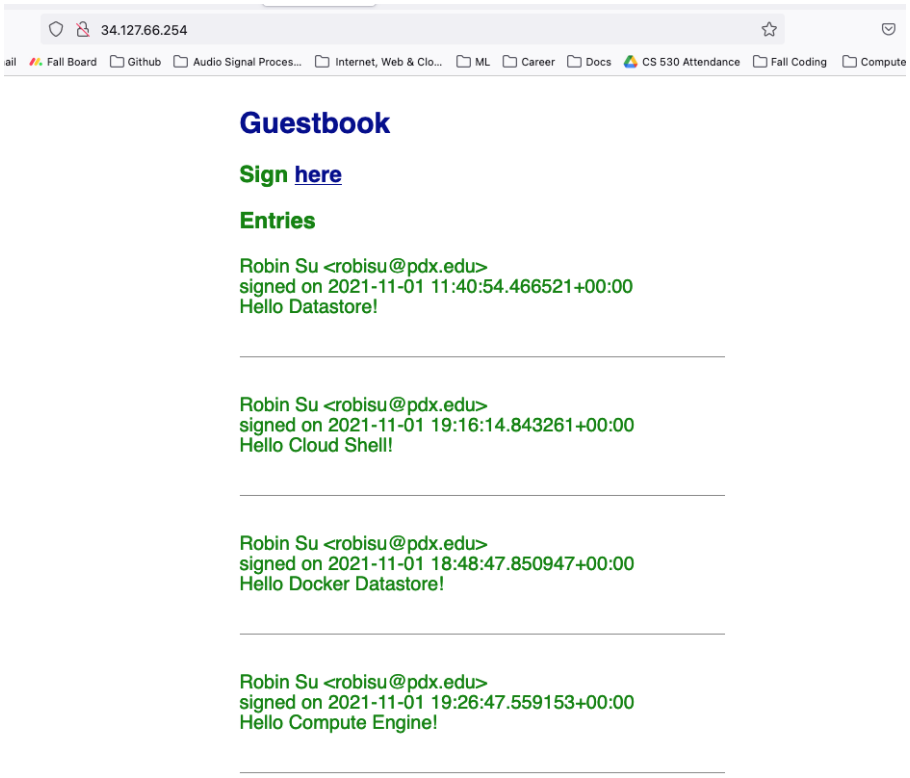
Image on DockerHub:



Cloud Datastore #3



Cloud Datastore #4



Entries in the Datastore UI:

Name/ID	date	email	message	name
id=5632499082330112	2021-11-01 (04:40:54.466) PDT	robisu@pdx.edu	Hello Datastore!	Robin Su
id=5636645067948032	2021-11-01 (12:16:14.843) PDT	robisu@pdx.edu	Hello Cloud Shell!	Robin Su
id=5642368648740864	2021-11-01 (11:48:47.850) PDT	robisu@pdx.edu	Hello Docker Datastore!	Robin Su
id=5646488461901824	2021-11-01 (12:26:47.559) PDT	robisu@pdx.edu	Hello Compute Engine!	Robin Su