Contents

08.1a: API Gateway

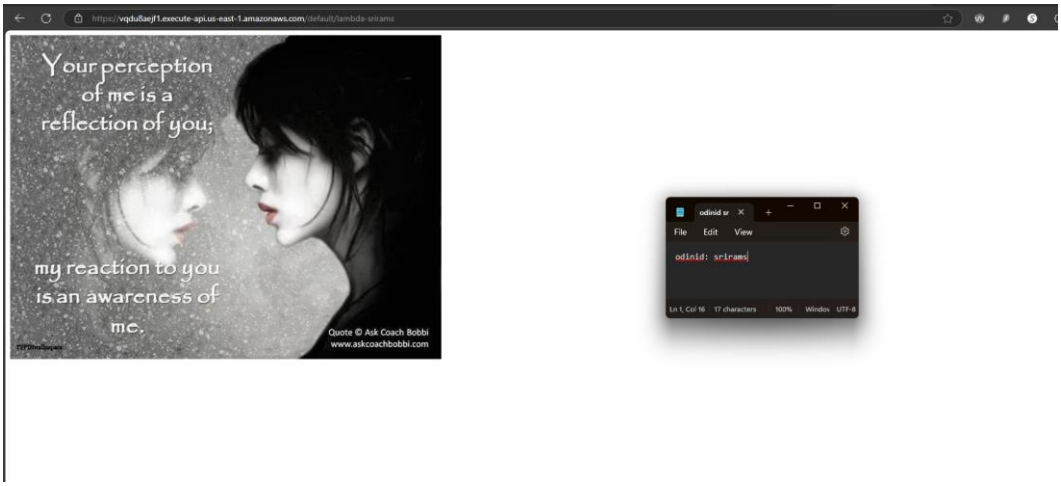
8.1.1 MoTD function

8.1.2 API integration

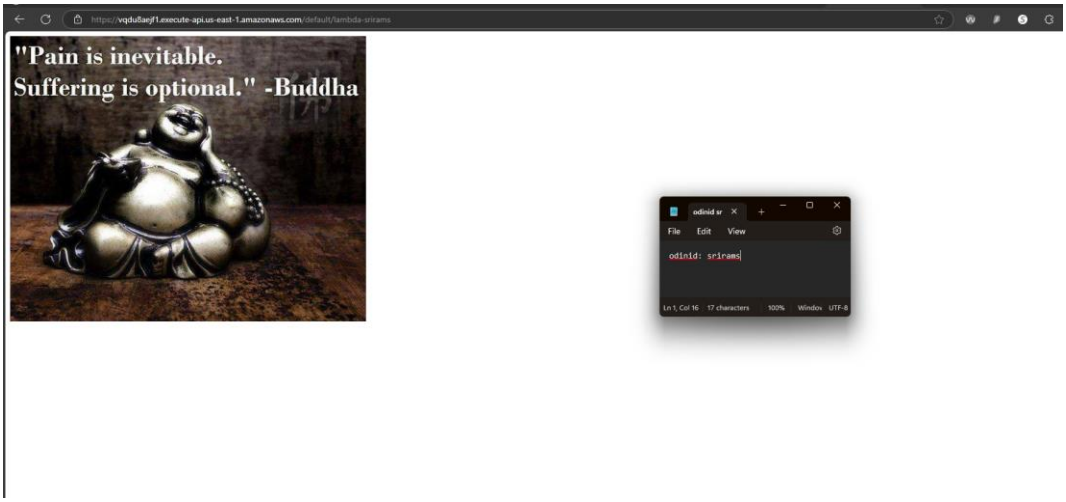
8.1.3 Lambda code

8.1.4 Test code

- **Take a screenshot of the resulting page including the URL bar.**



- **Click "Reload" in the browser and take another screenshot showing the image has changed:**



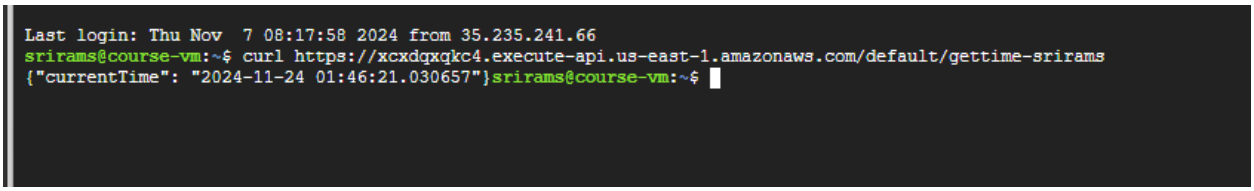
8.1.5 Clean up

8.1.6 gettime API

8.1.7 Implement code

8.1.8 Test code

- **Use curl on your Linux VM to access the API endpoint and show the results. Take a screenshot for your lab notebook.**



8.1.9 Clean up

8.2a: Lambda, API Gateway Guestbook

8.2.1 Overview

8.2.2 Obtain AWS account ID

8.2.3 REST API Code

8.2.4 Deploy the Lambda for viewing entries

8.2.5 Create API in API Gateway

8.2.6 Enable API to invoke Lambda function

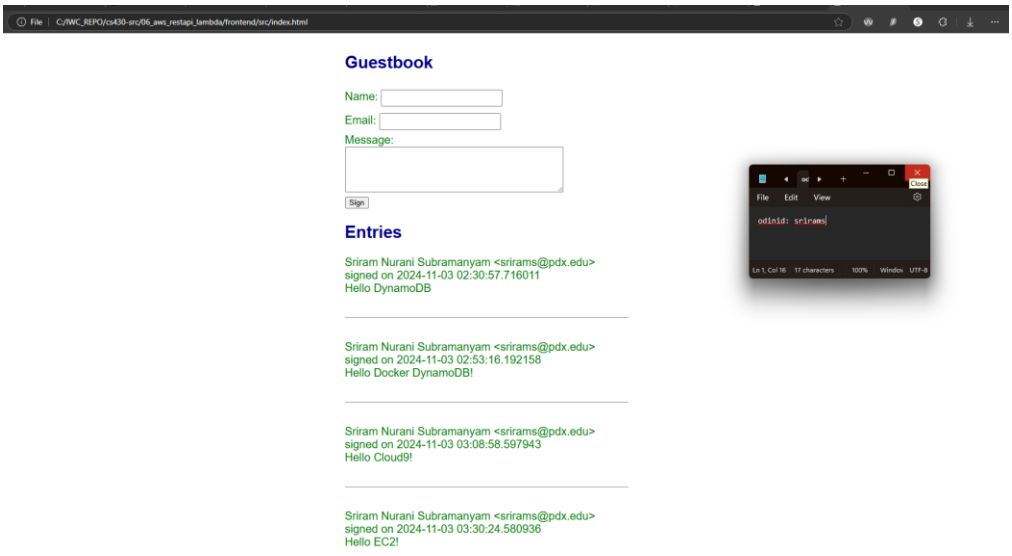
8.2.7 API endpoint for viewing entries (1)

8.2.8 API endpoint for viewing entries (2)

8.2.9 CORS setup for viewing entries

8.2.10 Deploy API to production and view entries

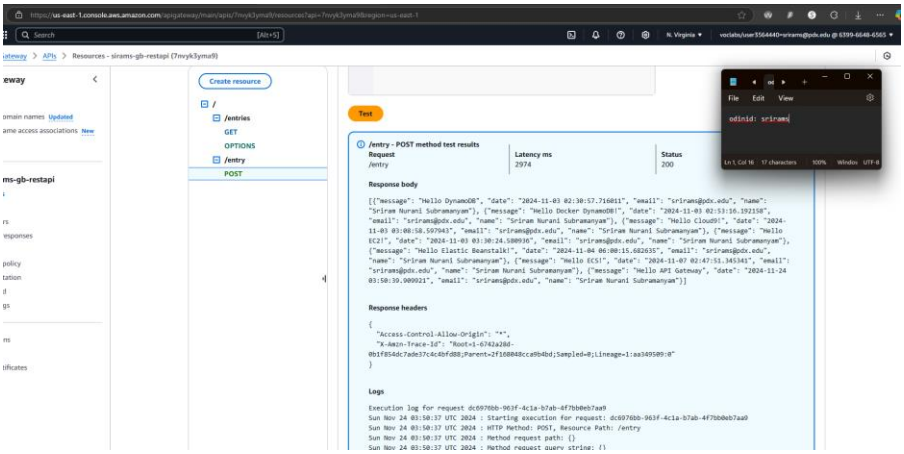
- **Take a screenshot that shows that you can view the entries in the backend database.**



8.2.11 API endpoint for signing (1)

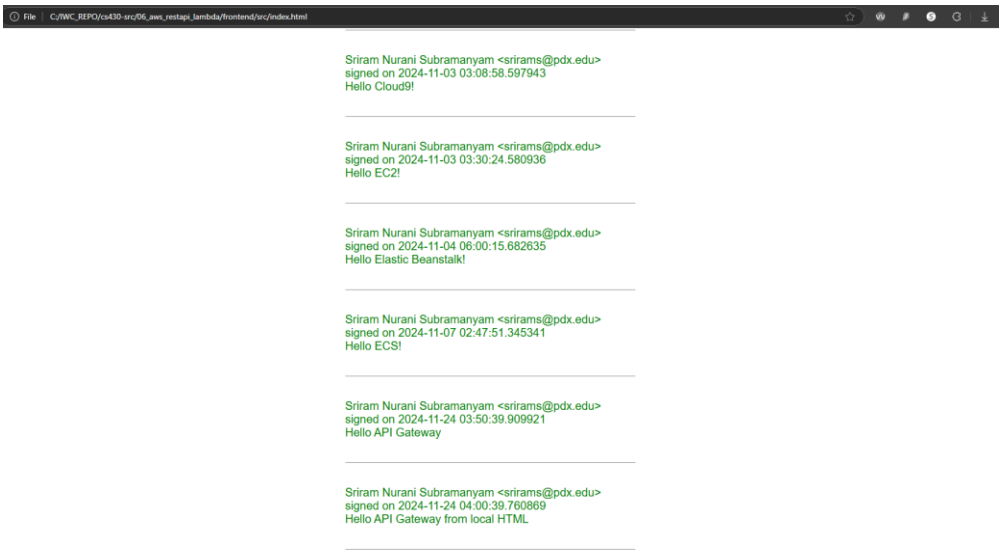
8.2.12 API endpoint for signing (2)

- **Take a screenshot showing that the submission worked.**



8.2.13 CORS setup for signing

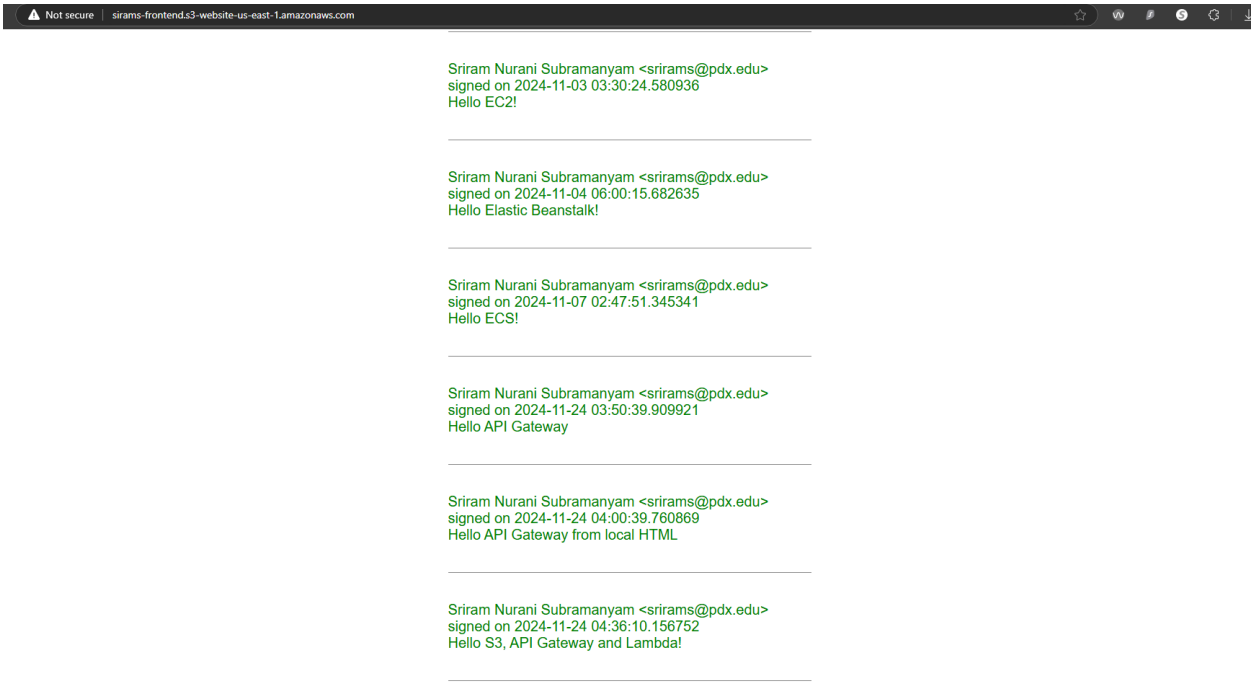
8.2.14 Deploy API to production and sign



8.2.15 Frontend Code

8.2.16 Configure and Deploy the Frontend

- **Take a screenshot as before that shows your entry and the static website hosting URL.**



8.2.17 Clean up

8.2g: Cloud Functions, API Gateway Guestbook

8.2.1 Overview

8.2.2 Cloud Function backend (GET)

8.2.3 Cloud Function backend (POST)

8.2.4 Deploy the Cloud Functions

8.2.5 Test the Cloud Functions deployment

8.2.6 API Gateway

8.2.7 Create OpenAPI specification

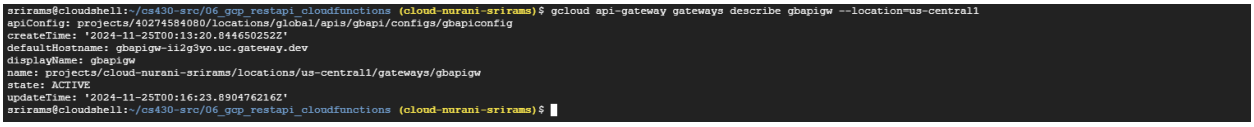
8.2.8 –

8.2.9 Service account setup

8.2.10 Create the API Gateway

- **Include the hostname for the API gateway in your lab notebook.**

gbapigw-ii2g3yo.uc.gateway.dev

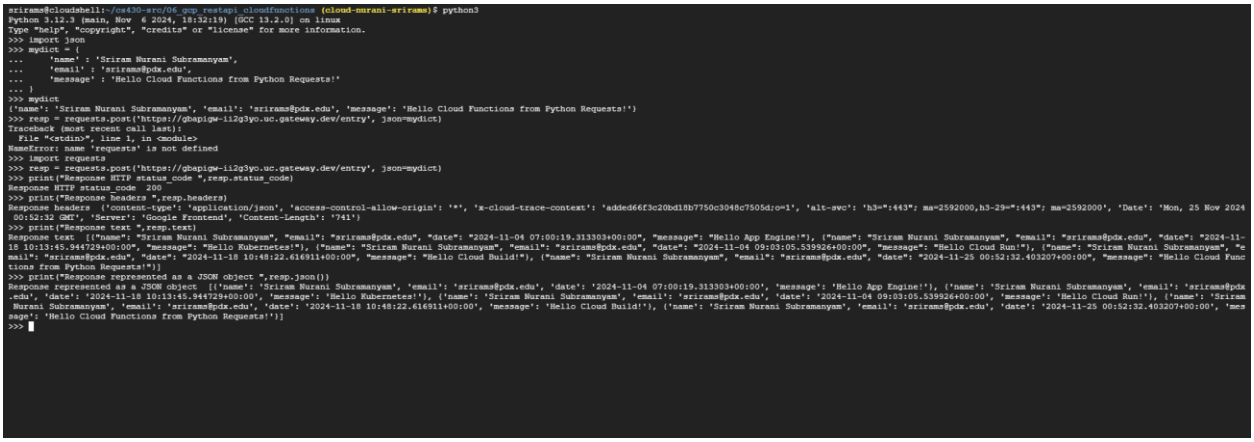


8.2.11 Test the API via Python Requests (GET)

- **Take a screenshot of its output**

8.2.12 Test the API via Python Requests (POST)

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

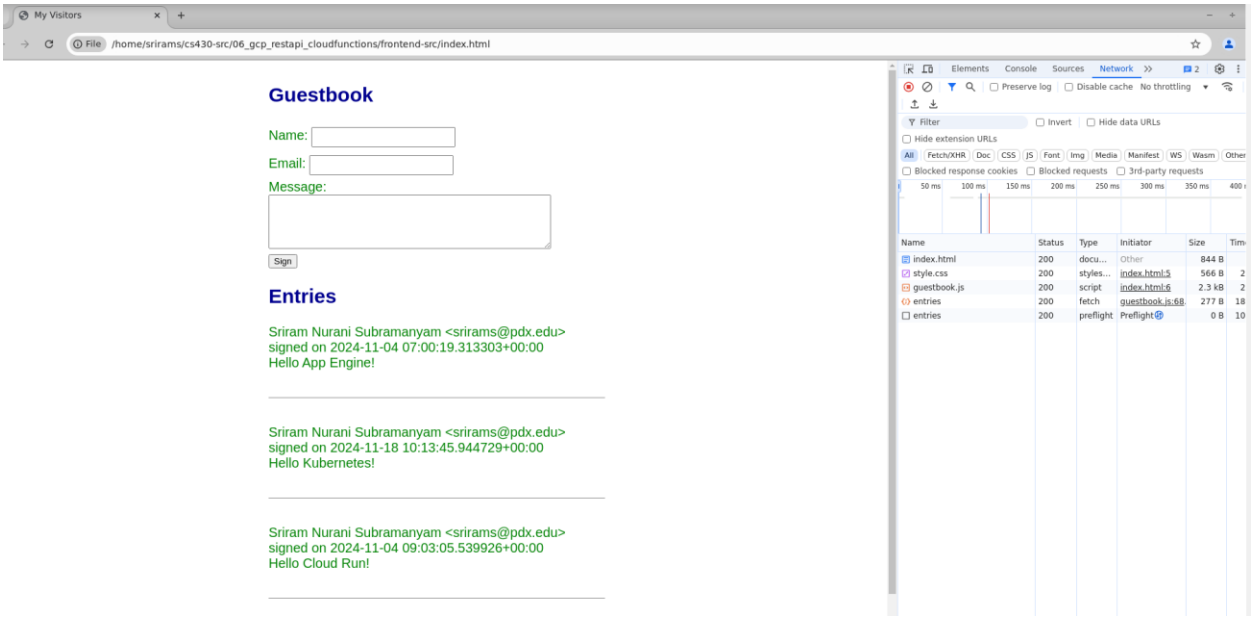


8.2.13 Client-side Guestbook application

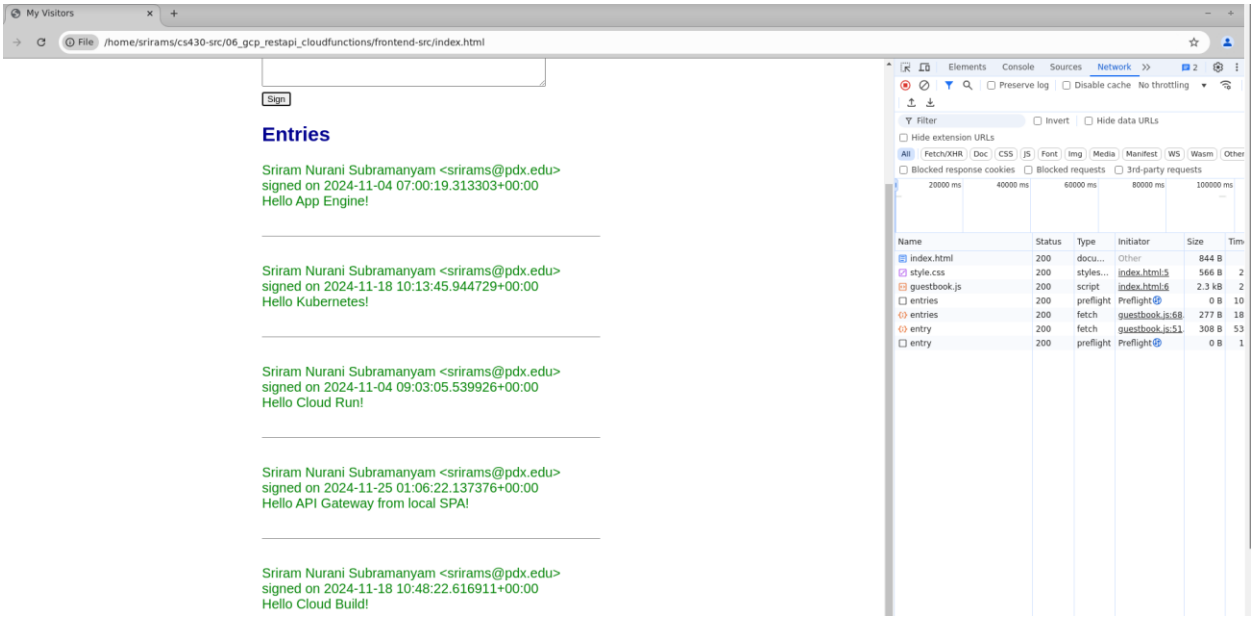
8.2.14 guestbook.js

8.2.15 Version #1: Local file system

- **Take a screenshot of the Guestbook including the URL.**

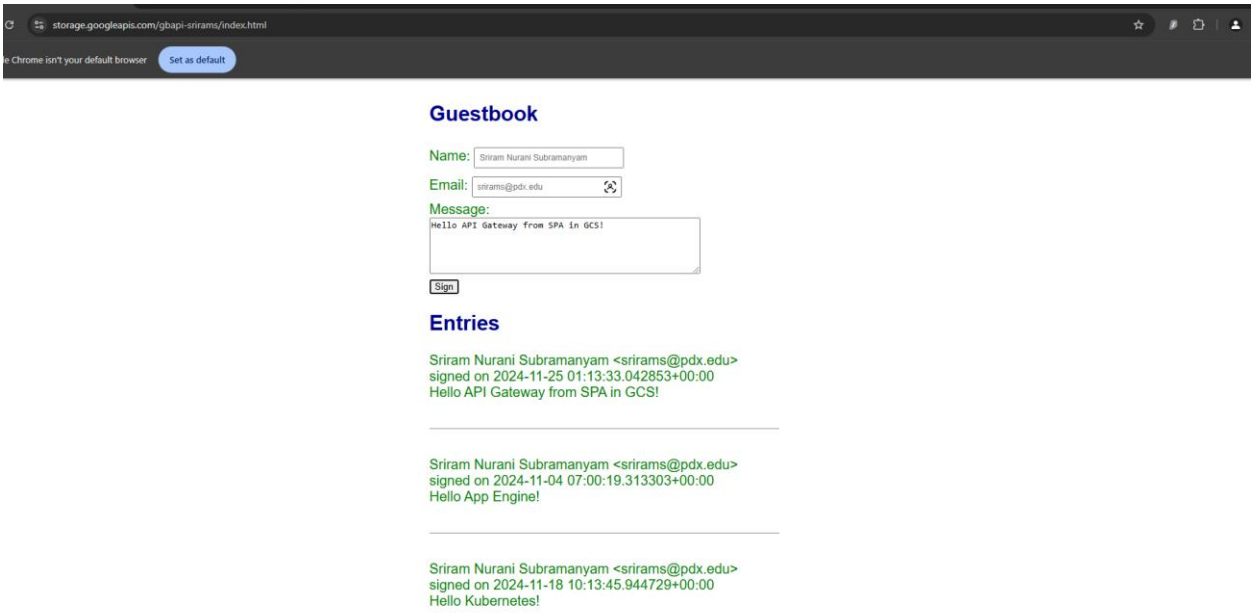


- **Take a screenshot of the Guestbook including the URL.**



8.2.16 Version #2: Google Cloud Storage bucket

Take a screenshot of the Guestbook including the URL



8.2.17 Clean up

8.3g OAuth2 Guestbook

8.3.1 OAuth2 Guestbook

8.3.2 OAuth2 Authorization Code flow

8.3.3 Checkout code

8.3.4 OAuth initiation code

8.3.5 Identity provider interaction

8.3.6 Callback code

8.3.7 –

8.3.8 Signing page

8.3.9 Model code

8.3.10 Build and deploy the code

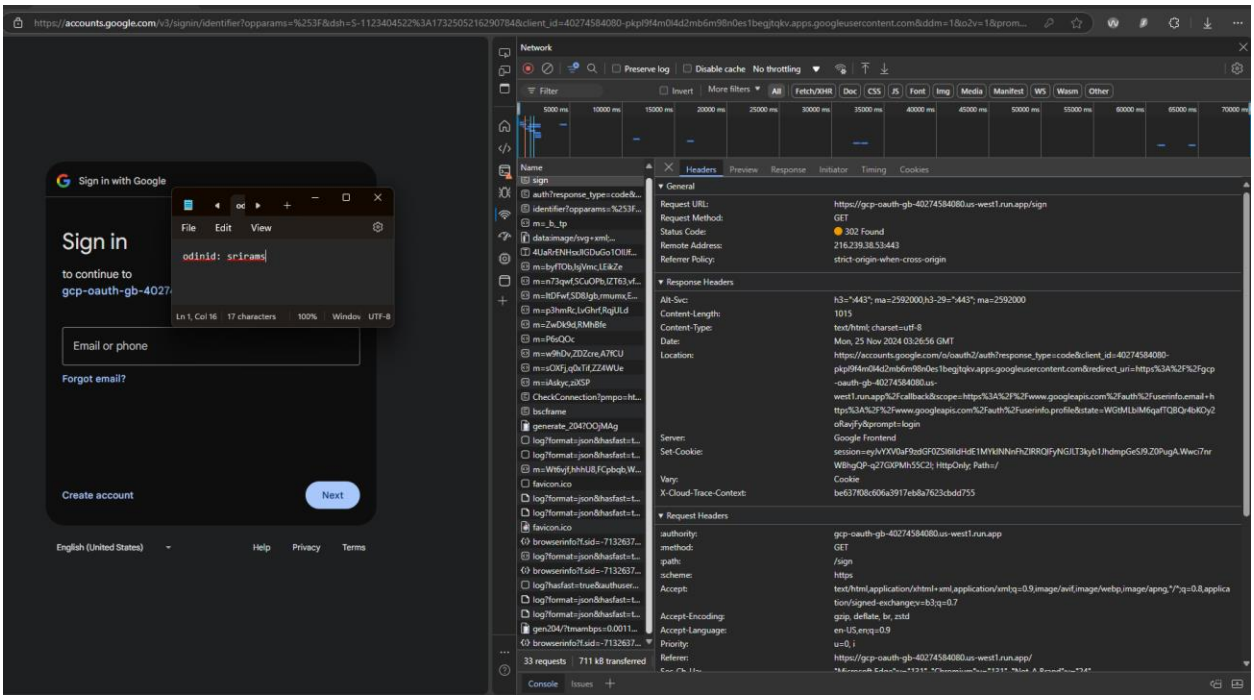
8.3.11 Set up Identity Provider

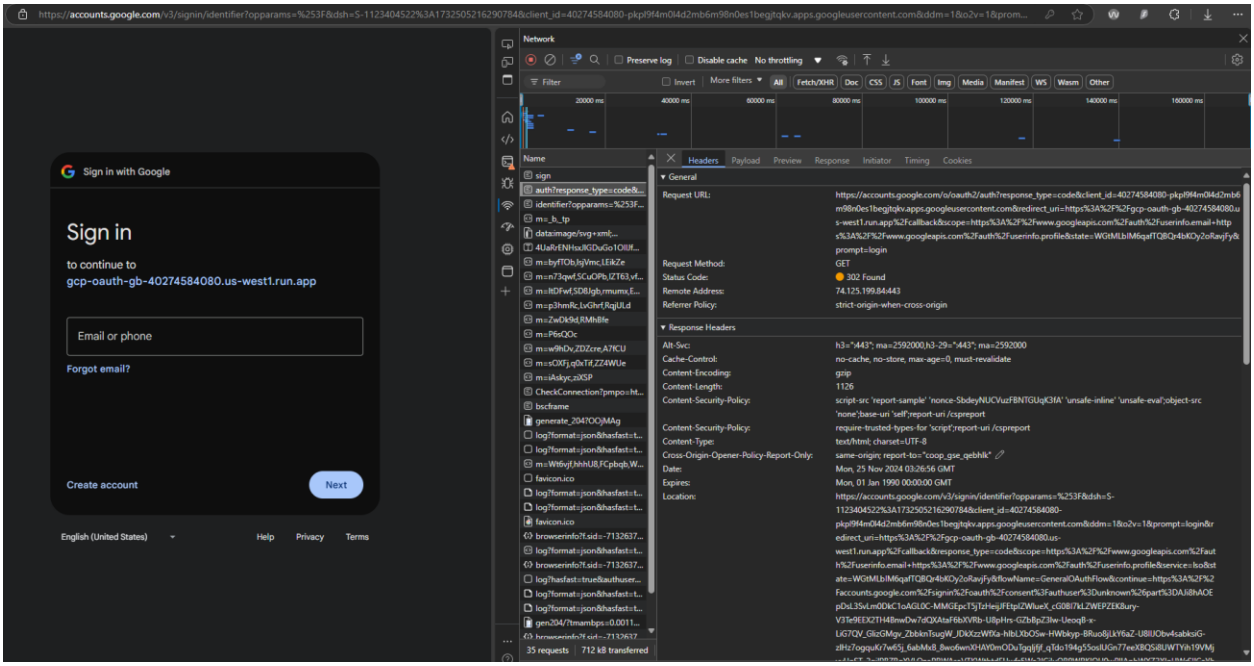
8.3.12 –

8.3.13 Update deployment

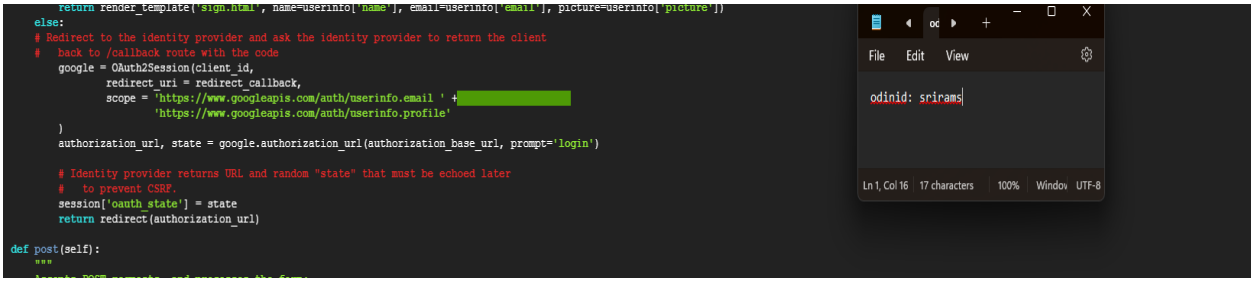
8.3.14 Visit the application

- **Take a screenshot of the Headers that includes the URL and the returned HTTP status code for the first two requests for your lab notebook.**

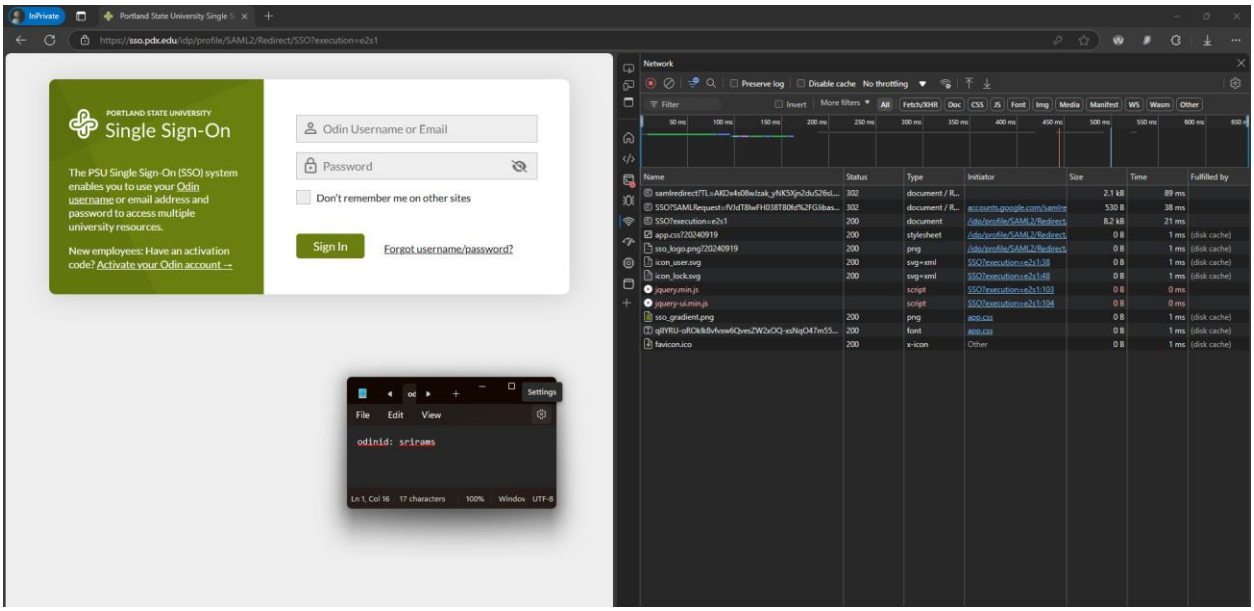


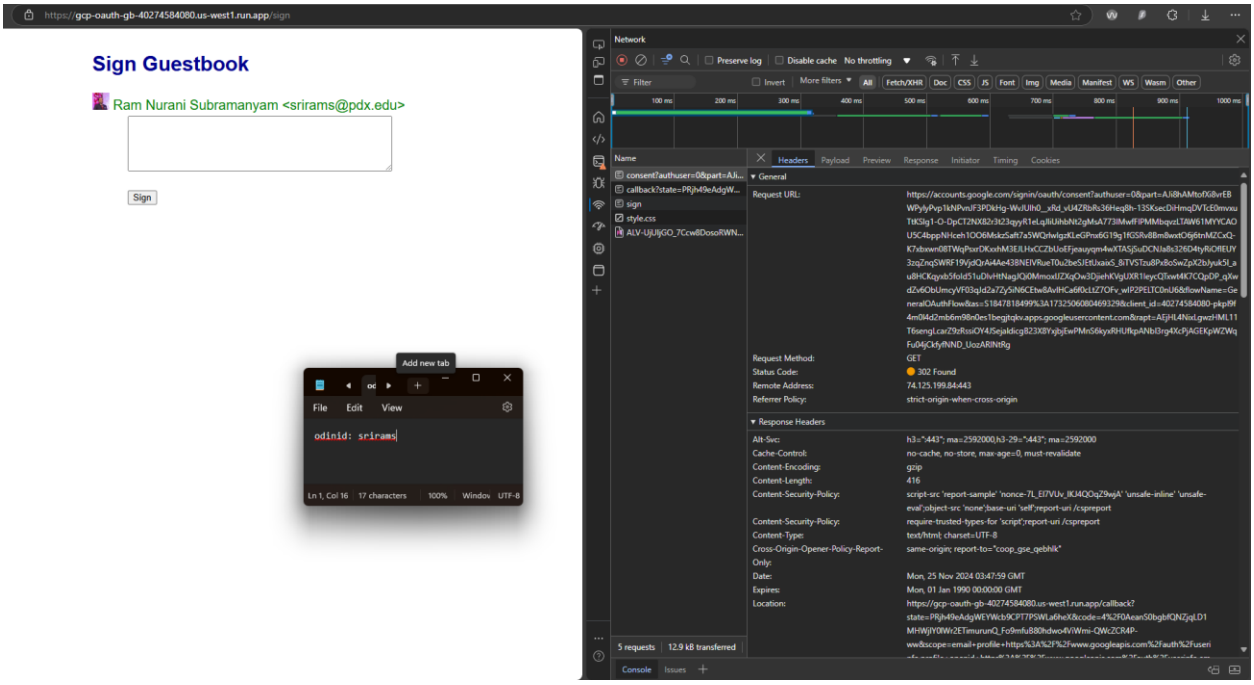


- **Based on the description of the source code, what lines of code in our application are responsible for the second request shown?**

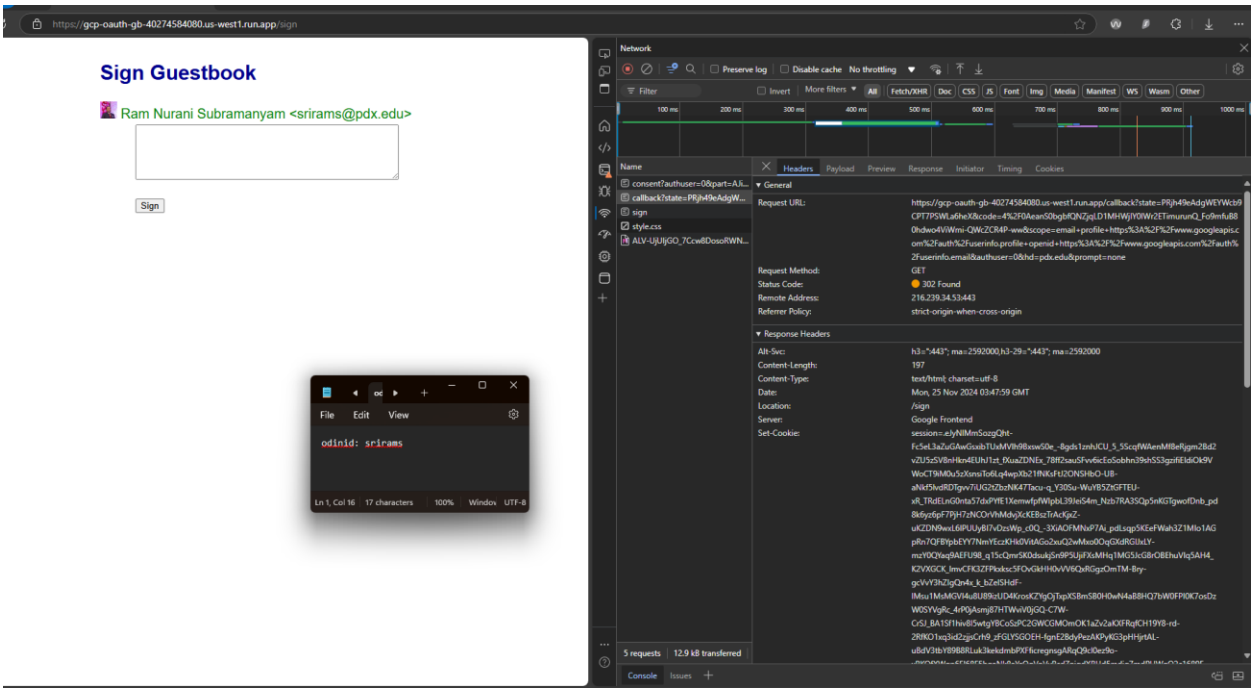


- **Take a screenshot of the permissions you (as a user) are granting the Guestbook access to.**



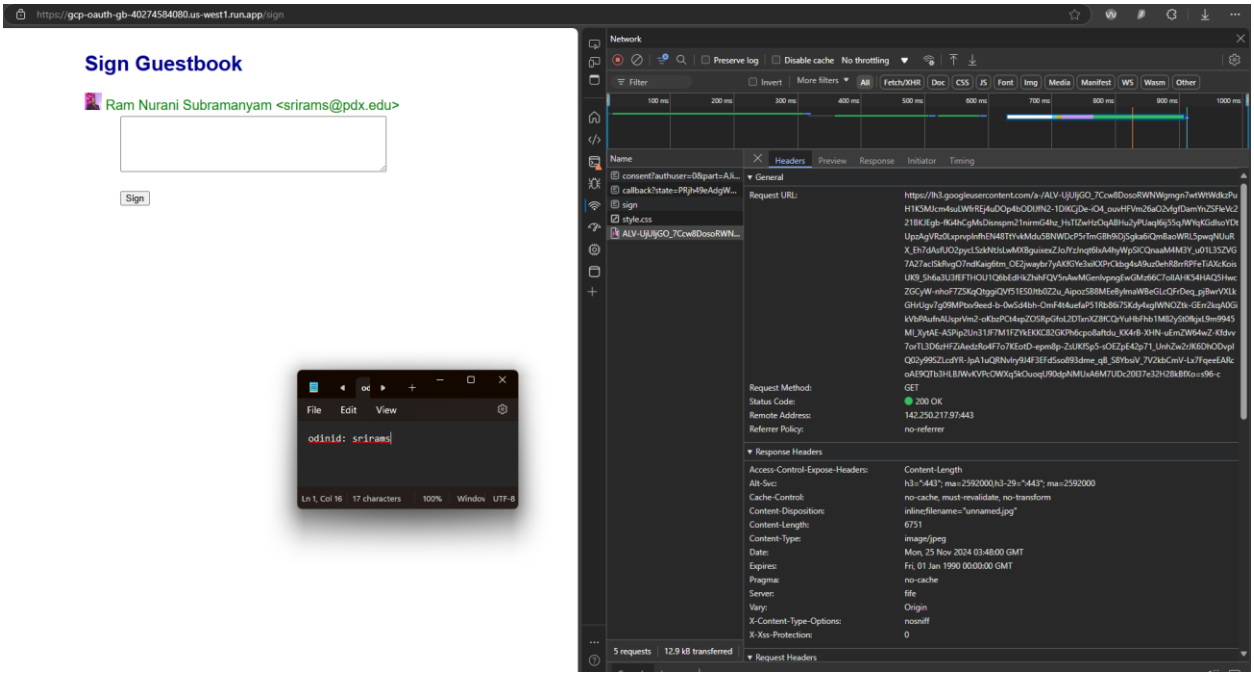


- **Take a screenshot of the Headers that includes the entire Callback URL and its returned HTTP status code. What is the URI for the Location that the User sent to by the Callback?**



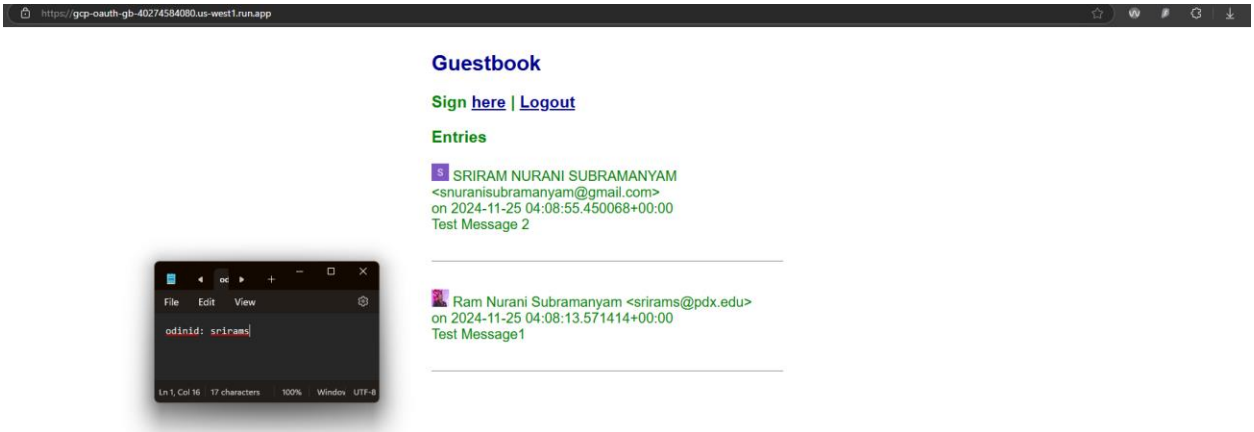
Location: /sign

- **Find the request within Developer Tools that fetches the embedded image and take a screenshot of its URL.**



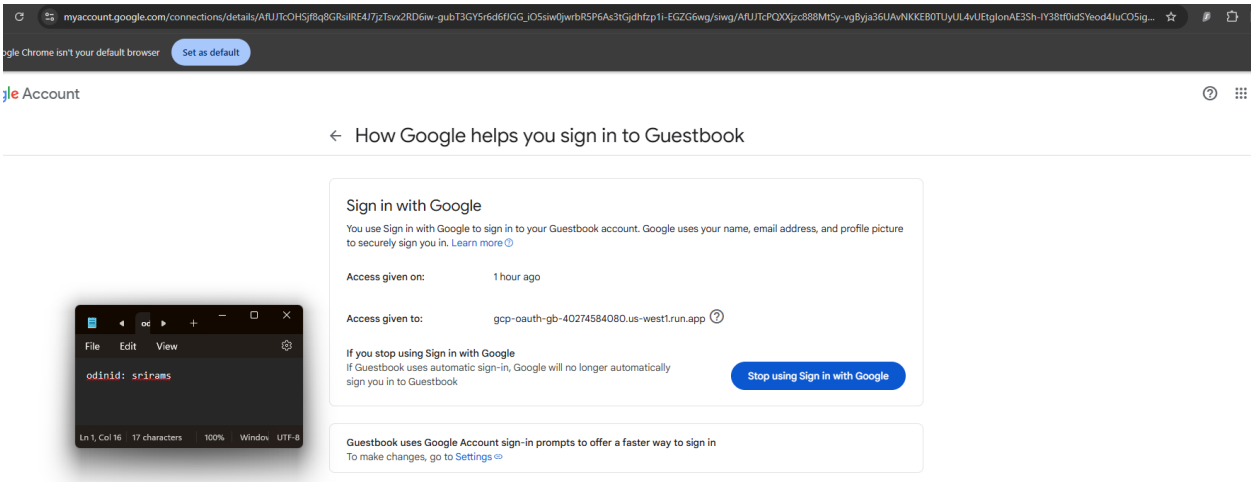
8.3.15 Secrets manager deployment

- **Take a screenshot showing multiple authenticated accounts have been able to sign the Guestbook.**



8.3.16 Removing access

- **Take a screenshot of the expanded information that includes your OdinId for your lab notebook.**



8.3.17 Clean up

8.4g: Firebase

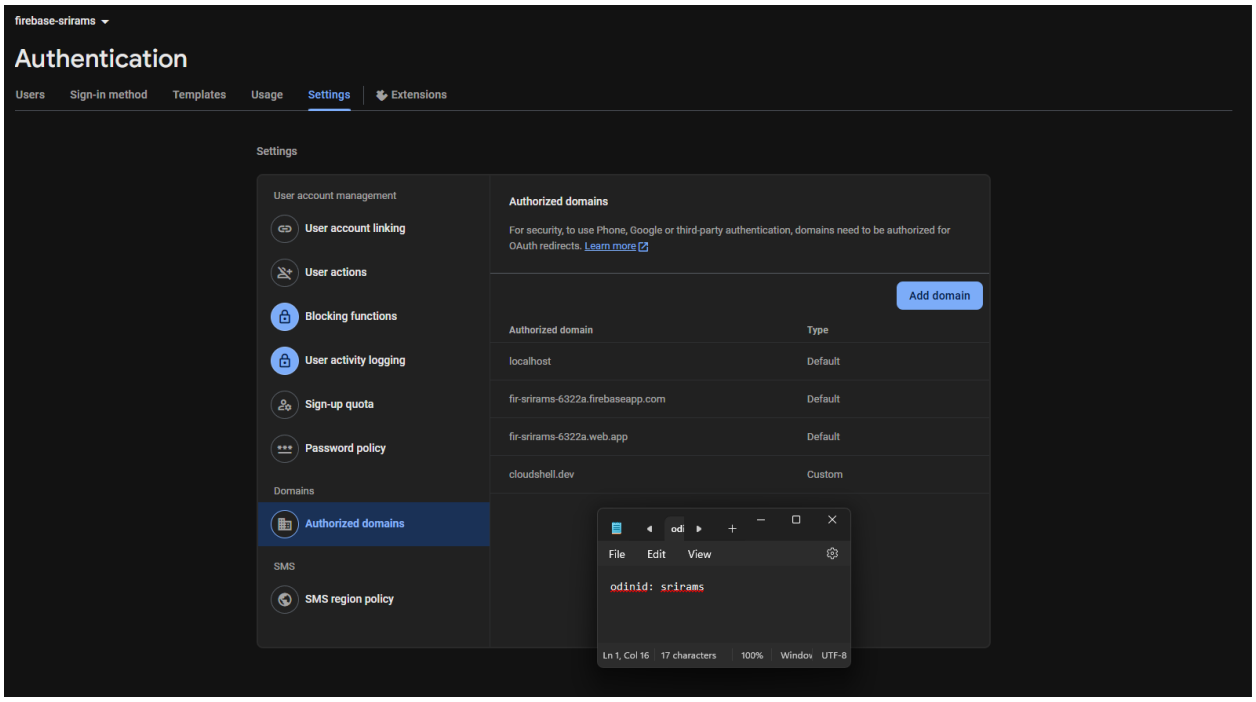
8.4.1 Firebase web application

8.4.2 Project setup

8.4.3 Application setup

8.4.4 Authentication setup

- **What other domains are given access to this Firebase project by default?**



8.4.5 Database setup

8.4.6 Storage setup

8.4.7 CLI setup

8.4.8 Bundling with Webpack

- **Take a screenshot of the first 10 lines of the produced file.**

```
srirams@cloudshell:~/codelab-friendlychat-web/web-start/public/scripts (firebase-srirams)$ head -10 main.js
/*
 * ATTENTION: An "eval-source-map" devtool has been used.
 * This devtool is neither made for production nor for readable output files.
 * It uses "eval()" calls to create a separate source file with attached SourceMaps in the browser devtools.
 * If you are trying to read the output file, select a different devtool (https://webpack.js.org/configuration/devtool/)
 * or disable the default devtool with "devtool: false".
 * If you are looking for production-ready output files, see mode: "production" (https://webpack.js.org/configuration/mode/).
 */
/******/ (() => { // webpackBootstrap
/******/ 	"use strict";
srirams@cloudshell:~/codelab-friendlychat-web/web-start/public/scripts (firebase-srirams)$
```

8.4.9 Configure Firebase within application

8.4.10 Initialize Firebase within application

8.4.11 Test application

8.4.12 Add authentication

- **What missing functions deal with user authentication?**

  signIn()

- **What missing functions deal with sending and receiving messages?**

  saveMessage(messageText)

  loadMessages()

8.4.13 Update UI

- **What are the names of the elements that are hidden when the user is signed out?**

  userNameElement

  userPicElement

  signOutButtonElement

- **What is the name of the element that is not hidden when the user is signed out?**

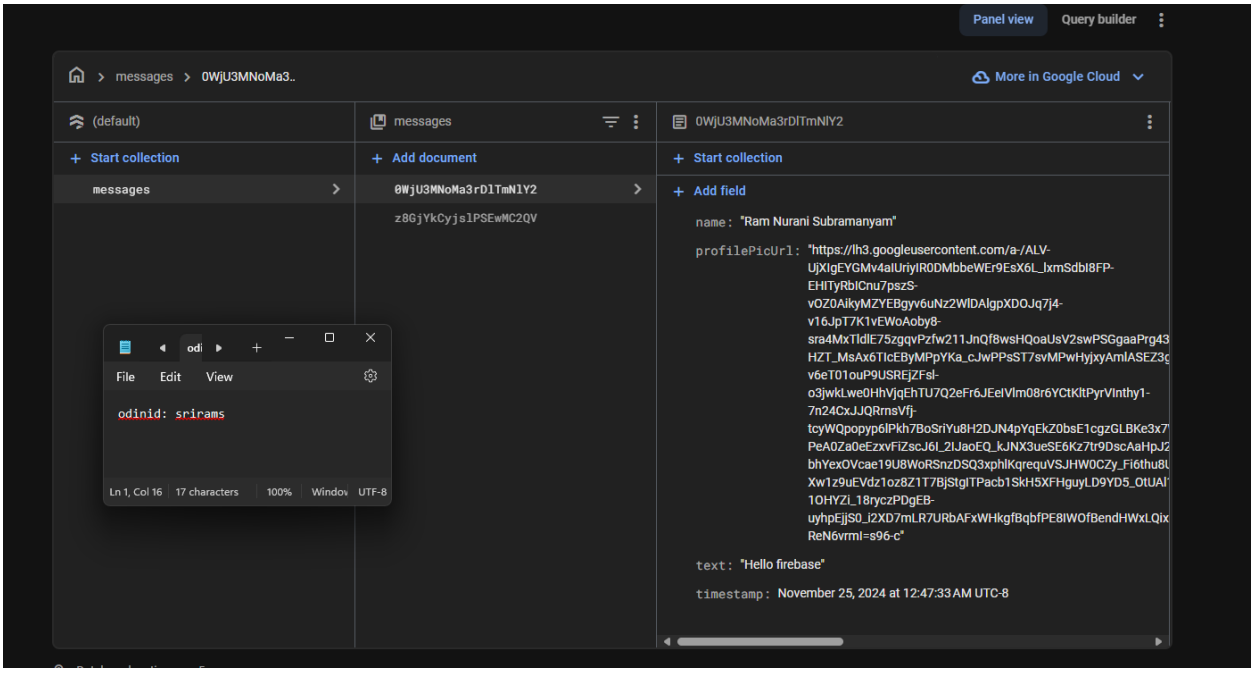
  signInButtonElement

8.4.14 Test application with authentication

8.4.15 Add text messaging

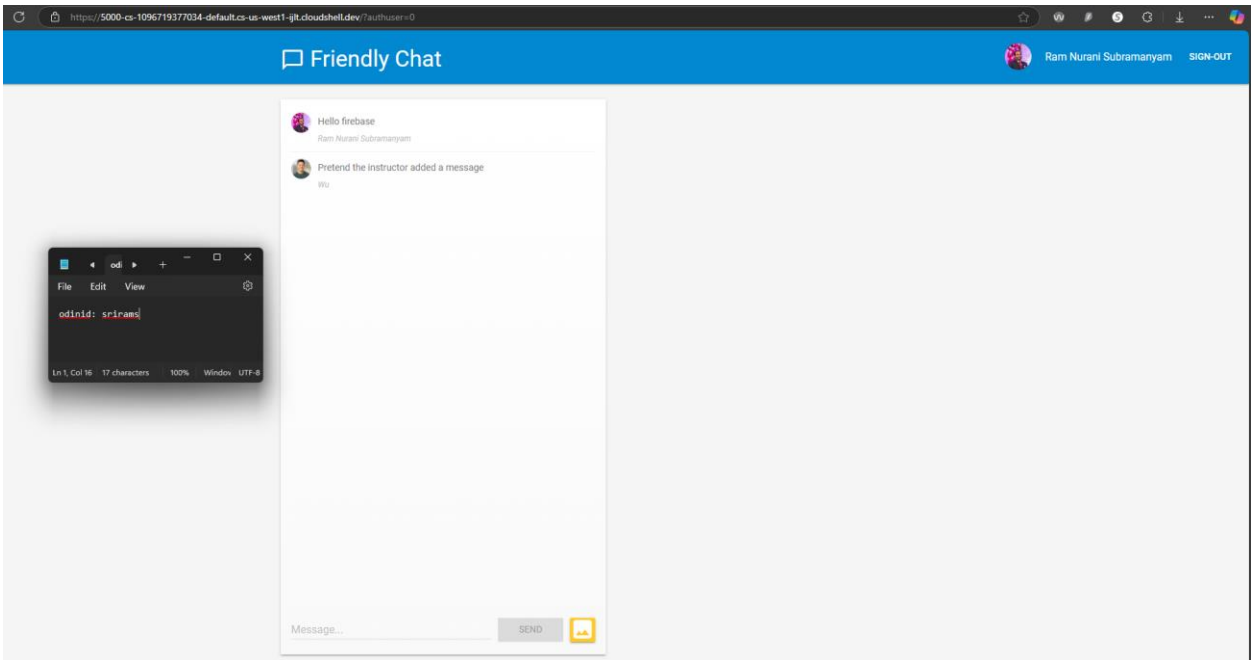
8.4.16 Test application with text messaging

- **Include a screenshot of the message and its fields in the database for your lab notebook**



8.4.17 Manual message insertion

- **Include a screenshot of the application with its two messages for your lab notebook**



8.4.18 Add image messaging

- **What is the URL of the image that is first shown in the UI as the message is loading?**

  https://www.google.com/images/spin-32.gif?a

8.4.19 Test application with image messaging

- **How do the fields in an image document differ from that of the text document?**

  Text Document Fields

  Name, profilePicUrl, text, timestamp

  Text Document Fields

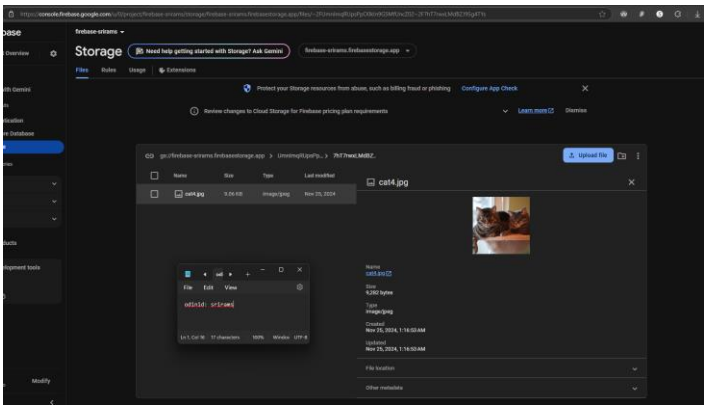
  imageUrl, name, profilePicUrl, storageUri, timestamp

- **What URL and storage location can the image be found at?**

https://firebasestorage.googleapis.com/v0/b/firebase-srirams.firebasestorage.app/o/UmnImqRUpsPpO0kIn9G5MfUncZ02%2F7hT7rwxLMdBZJ9Sg4TYs%2Fcat4.jpg?alt=media&token=1b43841a-c633-493d-9891-ef2cc207bcf5

StorageURI is UmnImqRUpsPpO0kIn9G5MfUncZ02/7hT7rwxLMdBZJ9Sg4TYs/cat4.jpg

- **Take a screenshot of the image in the storage bucket for your lab notebook.**



8.4.20 Deploy application

- **What directory is the application going to be served from?**

Public

- **Take a screenshot of the message including the URL for your lab notebook.**

```
srirams@cloudshell:~/codelab-friendlychat-web/web-start (firebase-srirams)$ firebase deploy --except functions
(node:4595) [DEP0040] DeprecationWarning: The `punycode` module is deprecated. Please use a userland alternative instead.
(Use `node --trace-deprecation ...` to show where the warning was created)

=== Deploying to 'firebase-srirams'...

i  deploying hosting
i  hosting[fir-srirams-6322a]: beginning deploy...
i  hosting[fir-srirams-6322a]: found 8 files in ./public
✓  hosting[fir-srirams-6322a]: file upload complete
i  hosting[fir-srirams-6322a]: finalizing version...
✓  hosting[fir-srirams-6322a]: version finalized
i  hosting[fir-srirams-6322a]: releasing new version...
✓  hosting[fir-srirams-6322a]: release complete

✓  Deploy complete!

Project Console: https://console.firebase.google.com/project/firebase-srirams/overview
Hosting URL: https://fir-srirams-6322a.web.app
srirams@cloudshell:~/codelab-friendlychat-web/web-start (firebase-srirams)$
```