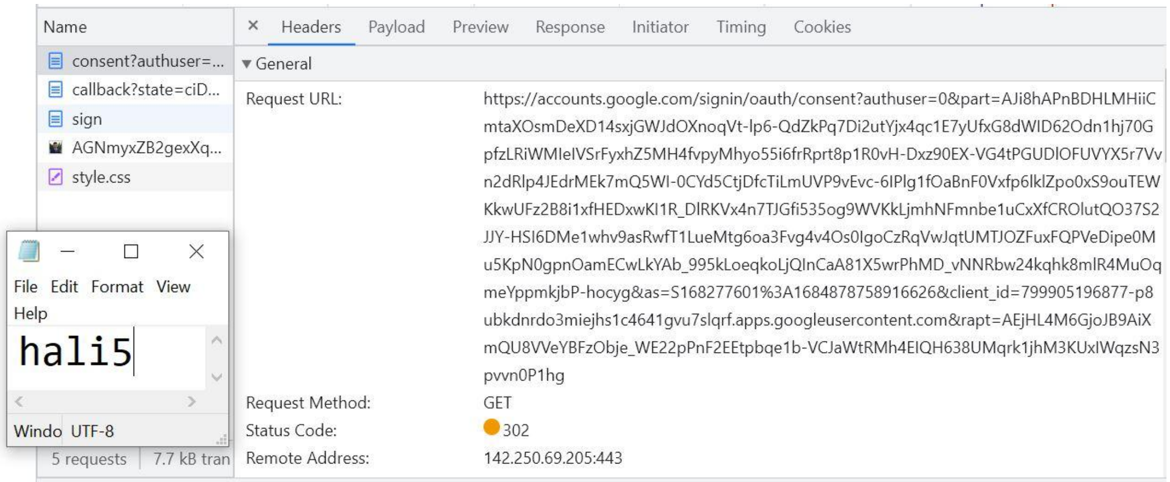
08.1 OAuth2 Guestbook

Running the code

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.



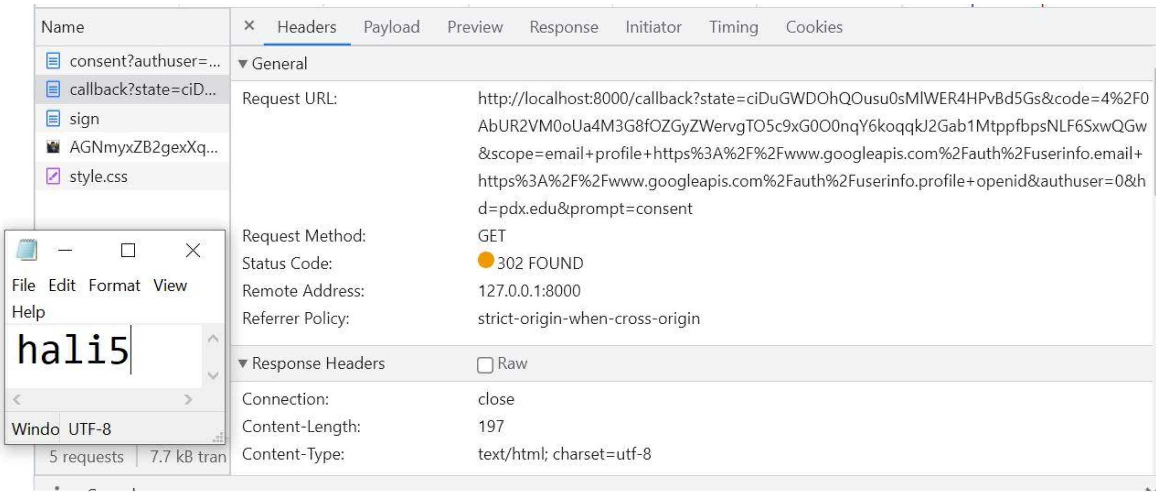
hali5

Request URL: https://accounts.google.com/signin/oauth/consent?authuser=0&part=AJi8hAPnBDHLMHiiCmtaXOsmDeXD14sxjGWJdOXnoqVt-lp6-QdZkPq7Di2utYjx4qc1E7yUfxG8dWID62Odn1hj70GpfzLRiWMIeIVSrFyxhZ5MH4fvpyMhyo55i6frRprt8p1R0vH-Dxz90EX-VG4tPGUDlOFUVYX5r7Vvn2dRlp4JEdrMEk7mQ5WI-0CYd5CtjDfcTiLmUVP9vEvc-6IPlg1fOaBnF0Vxfp6lklZpo0xS9ouTEWKkwUFz2B8i1xfHEDxwKI1R_DlRKVx4n7TJGfi535og9WVKkLjmhNFmnbe1uCxXfCROlutQO37S2JJY-HSI6DMe1whv9asRwfT1LueMtg6oa3Fvg4v4Os0IgoCzRqVwJqtUMTJOZFuxFQPVeDipe0Mu5KpN0gpnOamECwLkYAb_995kLoeqkoLjQInCaA81X5wrPhMD_vNNRbw24kqhk8mlR4MuOqmeYppmkjbP-hocyg&as=S168277601%3A1684878758916626&client_id=799905196877-p8ubkdnrdo3miejhs1c4641gvu7slqrf.apps.googleusercontent.com&rapt=AEjHL4M6GjoJB9AiXmQU8VVeYBFzObje_WE22pPnF2EEtpbqe1b-VCJaWtRMh4EIQH638UMqrk1jhM3KUxIWqzsN3pvvn0P1hg

Request Method: GET

Status Code: ● 302

Remote Address: 142.250.69.205:443



hali5

Request URL: http://localhost:8000/callback?state=ciDuGWDOhQOusu0sMlWER4HPvBd5Gs&code=4%2F0AbUR2VM0oUa4M3G8fOZGyZWervgTO5c9xG0O0nqY6koqqkJ2Gab1MtppfbpsNLF6SxwQGw&scope=email+profile+https%3A%2F%2Fwww.googleapis.com%2Fauth%2Fuserinfo.email+https%3A%2F%2Fwww.googleapis.com%2Fauth%2Fuserinfo.profile+openid&authuser=0&hd=pdx.edu&prompt=consent

Request Method: GET

Status Code: ● 302 FOUND

Remote Address: 127.0.0.1:8000

Referrer Policy: strict-origin-when-cross-origin

Connection: close

Content-Length: 197

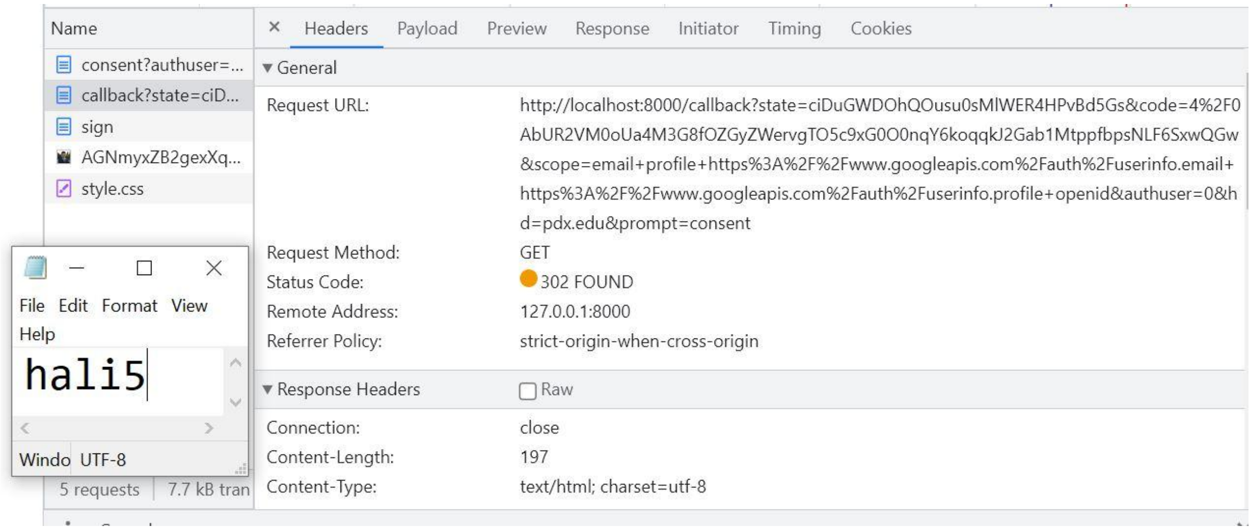
Content-Type: text/html; charset=utf-8

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

The lines of code in our application that are responsible for the second request is the callback portion that the identity provider gives to our guestbook application. Specifically, when we defined a route that handles the callback endpoint.

```
app.add_url_rule('/callback',
                 view_func=Callback.as_view('callback'),
                 methods=["GET"])
```

Take a screenshot of the Headers that includes the entire Callback URL and its returned HTTP status code. What location is the User sent to as a result of this request?



▼ General

Request URL: http://localhost:8000/callback?state=ciDuGWDOhQOusu0sMlWER4HPvBd5Gs&code=4%2F0AbUR2VM0oUa4M3G8fOZGyZWervgTO5c9xG0O0nqY6koqqkJ2Gab1MtppfbpsNLF6SxwQGw&scope=email+profile+https%3A%2F%2Fwww.googleapis.com%2Fauth%2Fuserinfo.email+https%3A%2F%2Fwww.googleapis.com%2Fauth%2Fuserinfo.profile+openid&authuser=0&hd=pdx.edu&prompt=consent

Request Method: GET

Status Code: ● 302 FOUND

Remote Address: 127.0.0.1:8000

Referrer Policy: strict-origin-when-cross-origin

▼ Response Headers ☐ Raw

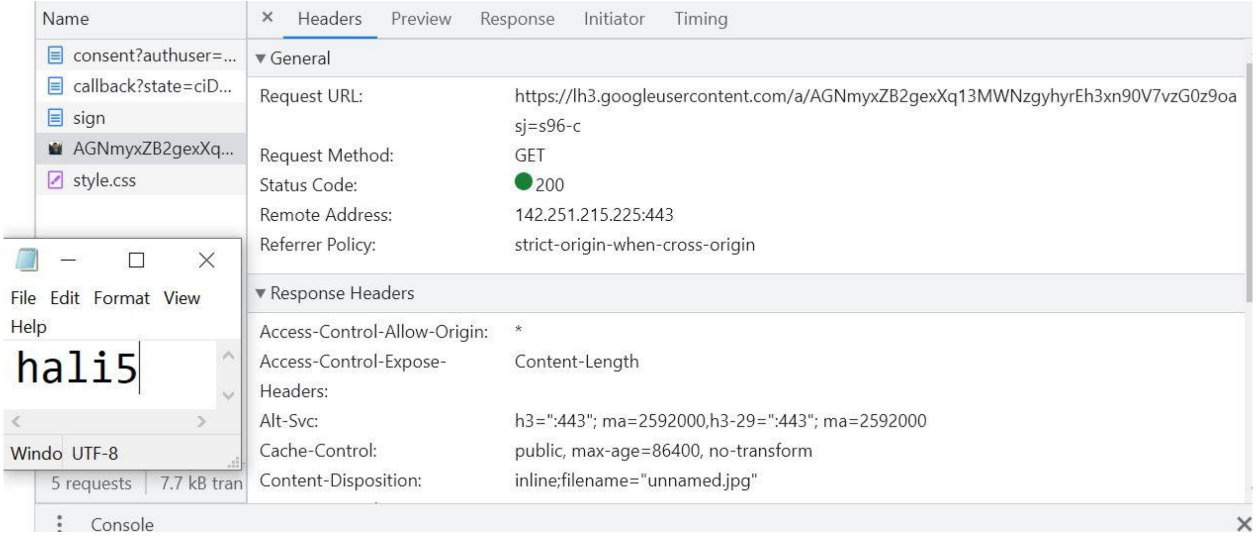
Connection: close

Content-Length: 197

Content-Type: text/html; charset=utf-8

As a result of the request, the user is sent to the callback URL using the parameter that Google has attached to it.

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



▼ General

Request URL: https://lh3.googleusercontent.com/a/AGNmyxZB2gexXq13MWNzgyhyrEh3xn90V7vzG0z9oasj=s96-c

Request Method: GET

Status Code: ● 200

Remote Address: 142.251.215.225:443

Referrer Policy: strict-origin-when-cross-origin

▼ Response Headers

Access-Control-Allow-Origin: *

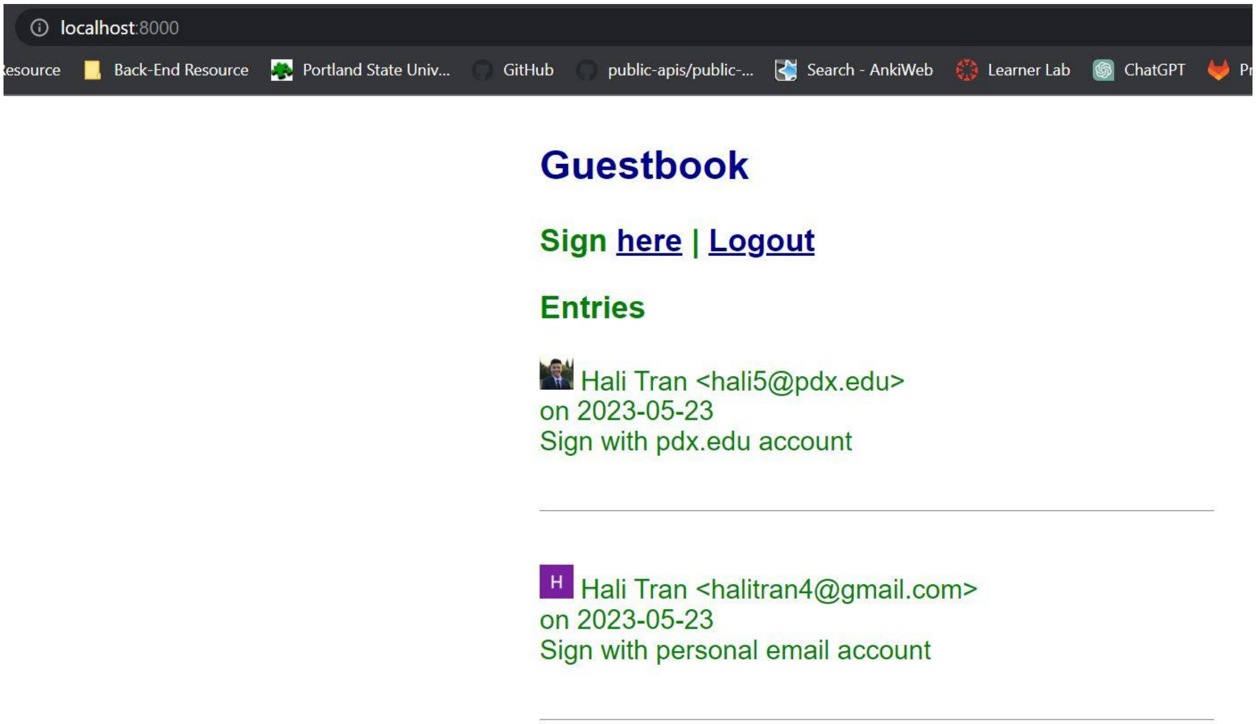
Access-Control-Expose-Headers: Content-Length

Alt-Svc: h3=":443"; ma=2592000,h3-29=":443"; ma=2592000

Cache-Control: public, max-age=86400, no-transform

Content-Disposition: inline;filename="unnamed.jpg"

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



Guestbook

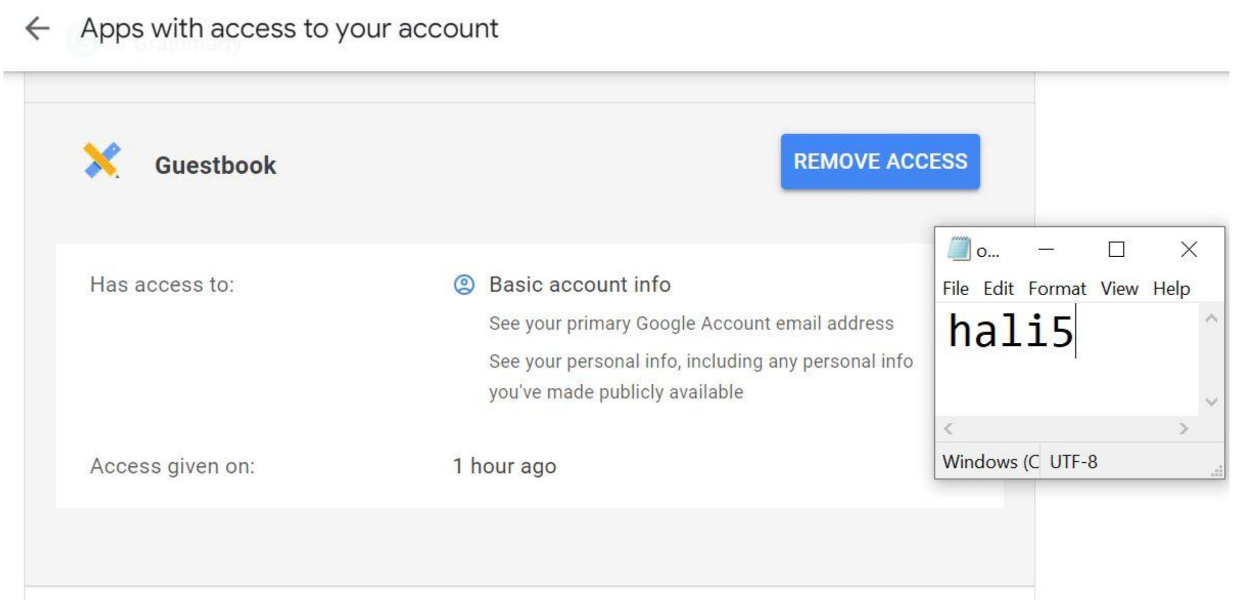
Sign here | Logout

Entries

Hali Tran <hali5@pdx.edu>
on 2023-05-23
Sign with pdx.edu account

Hali Tran <halitran4@gmail.com>
on 2023-05-23
Sign with personal email account

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



Apps with access to your account

Guestbook

Has access to: Basic account info
See your primary Google Account email address
See your personal info, including any personal info you've made publicly available

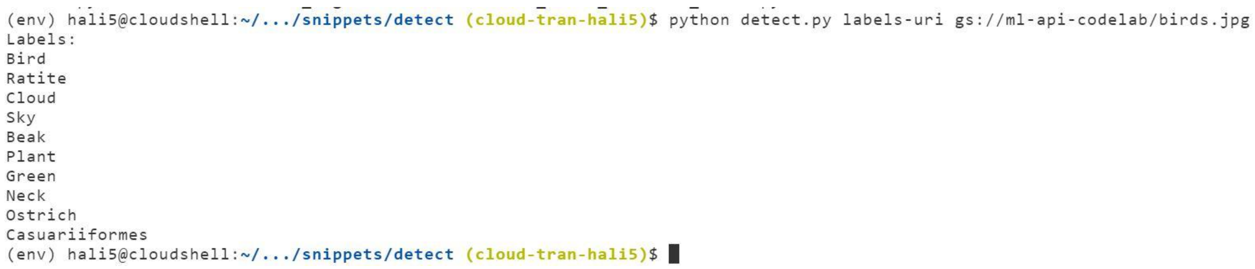
Access given on: 1 hour ago

hali5

08.2g: ML APIs

Vision

Show the output for your lab notebook.



```
(env) hali5@cloudshell:~/.../snippets/detect (cloud-tran-hali5)$ python detect.py labels-uri gs://ml-api-codelab/birds.jpg
Labels:
Bird
Ratite
Cloud
Sky
Beak
Plant
Green
Neck
Ostrich
Casuariiformes
(env) hali5@cloudshell:~/.../snippets/detect (cloud-tran-hali5)$
```

What is the name of the function?

The name of the function is `detect_labels_uri.`

What type of Vision client is instantiated in it?

The `ImageAnnotatorClient` Vision client is instantiated in it.

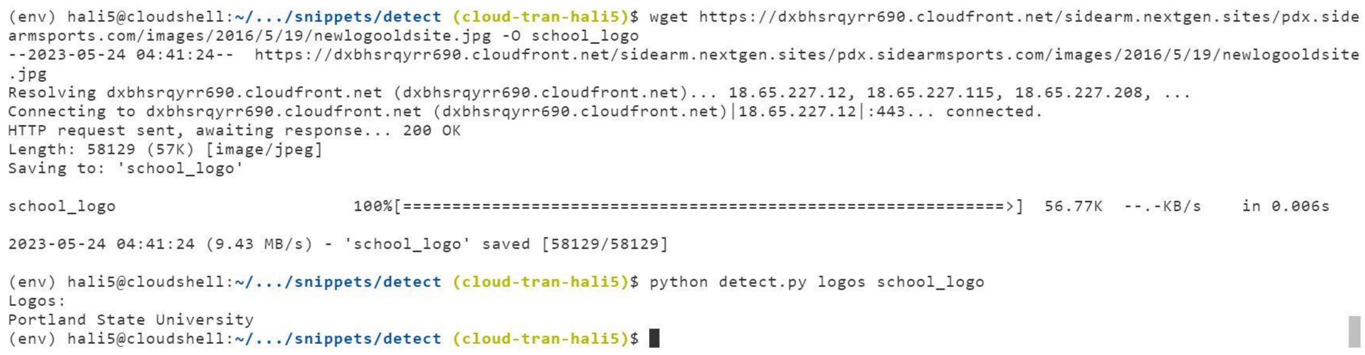
What method is invoked in the Vision client to perform the detection?

The method `label_detection` is invoked in the Vision client to perform the detection.

What is the name of the attribute in the response object that contains the results we seek?

The name of the attribute in the response object that contains the results is `label_annotations`.

Take a screenshot of the output for the above commands.



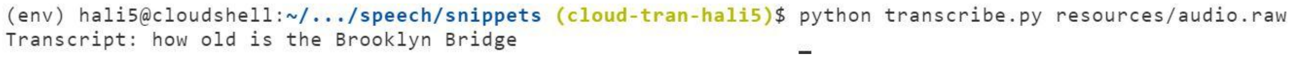
```
(env) hali5@cloudshell:~/.../snippets/detect (cloud-tran-hali5)$ wget https://dxbhsrqyrr690.cloudfront.net/sidearm.nextgen.sites/pdx.side
armsports.com/images/2016/5/19/newlogooldsite.jpg -O school_logo
--2023-05-24 04:41:24--  https://dxbhsrqyrr690.cloudfront.net/sidearm.nextgen.sites/pdx.sidearmsports.com/images/2016/5/19/newlogooldsite
.jpg
Resolving dxbhsrqyrr690.cloudfront.net (dxbhsrqyrr690.cloudfront.net)... 18.65.227.12, 18.65.227.115, 18.65.227.208, ...
Connecting to dxbhsrqyrr690.cloudfront.net (dxbhsrqyrr690.cloudfront.net)|18.65.227.12|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 58129 (57K) [image/jpeg]
Saving to: 'school_logo'

school_logo                   100%[=============================================================>]  56.77K  --.-KB/s    in 0.006s

2023-05-24 04:41:24 (9.43 MB/s) - 'school_logo' saved [58129/58129]

(env) hali5@cloudshell:~/.../snippets/detect (cloud-tran-hali5)$ python detect.py logos school_logo
Logos:
Portland State University
(env) hali5@cloudshell:~/.../snippets/detect (cloud-tran-hali5)$ █
```

What method is invoked in the Vision client to perform the detection?

The method invoked in the Vision client to perform the detection is `logo_detection`.

Speech

Show the output for your lab notebook



```
(env) hali5@cloudshell:~/.../speech/snippets (cloud-tran-hali5)$ python transcribe.py resources/audio.raw
Transcript: how old is the Brooklyn Bridge
```

What is the name of the function?

The name of the function is `transcribe_file.`

What method is invoked in the Speech client to perform the detection?

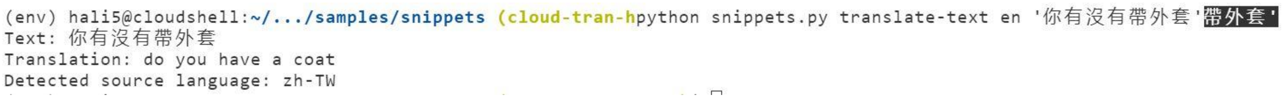
The name of the method invoked to perform the detection is called `Recognize`

What is the name of the attribute in the response object that contains the results we seek?

The name of the attribute in the response object is called `transcript,` which is located inside a list called `alternatives.`

Translate

Show the output for your lab notebook.



```
(env) hali5@cloudshell:~/.../samples/snippets (cloud-tran-hpython snippets.py translate-text en '你有沒有帶外套'帶外套'
Text: 你有沒有帶外套
Translation: do you have a coat
Detected source language: zh-TW
```

What is the name of the function?

The name of the function is `translate_text`.

What method is invoked in the Translate client to perform the detection?

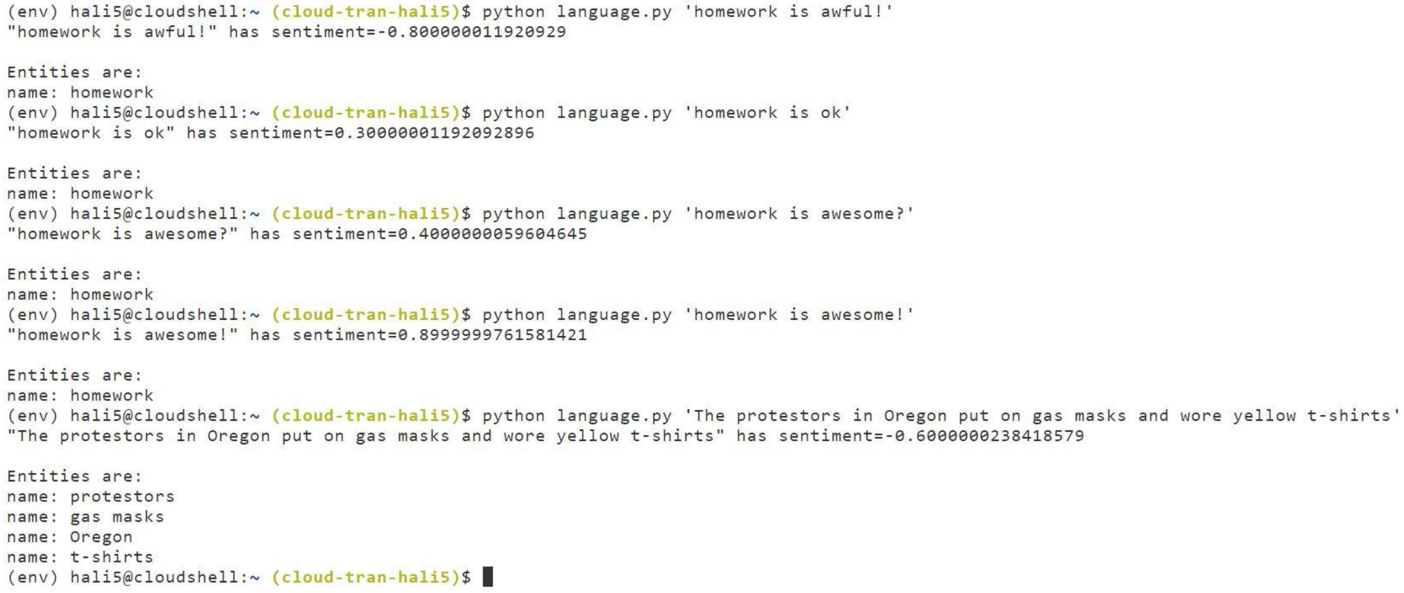
The method invoked to perform the detection is called `translate`.

What is the name of the attribute in the response object that contains the results we seek?

The name of the attribute in the response object is called `translatedText` and `detachedSourceLanguage`.

Natural Language

Show the output for your lab notebook



```
(env) hali5@cloudshell:~ (cloud-tran-hali5)$ python language.py 'homework is awful!'
"homework is awful!" has sentiment=-0.800000011920929

Entities are:
name: homework
(env) hali5@cloudshell:~ (cloud-tran-hali5)$ python language.py 'homework is ok'
"homework is ok" has sentiment=0.30000001192092896

Entities are:
name: homework
(env) hali5@cloudshell:~ (cloud-tran-hali5)$ python language.py 'homework is awesome?'
"homework is awesome?" has sentiment=0.4000000059604645

Entities are:
name: homework
(env) hali5@cloudshell:~ (cloud-tran-hali5)$ python language.py 'homework is awesome!'
"homework is awesome!" has sentiment=0.8999999761581421

Entities are:
name: homework
(env) hali5@cloudshell:~ (cloud-tran-hali5)$ python language.py 'The protestors in Oregon put on gas masks and wore yellow t-shirts'
"The protestors in Oregon put on gas masks and wore yellow t-shirts" has sentiment=-0.6000000238418579

Entities are:
name: protestors
name: gas masks
name: Oregon
name: t-shirts
(env) hali5@cloudshell:~ (cloud-tran-hali5)$
```

Code

What is the name of the function that performs the transcription?

The name of the function is `transcript_gcs.`

What is the name of the function that performs the translation?

The name of the function is `translate_text.`

What is the name of the function that performs the entity analysis on the translation?

The name of the function is `entities_text.`

What is the name of the function that performs the entity analysis on the image?

The name of the function is `detect_labels_uri.`

Test integration

If the program deems them unrelated, then based on the results from the APIs, what must be changed in the program to address this?

What must be changed in the program to address this is ensuring that the entity list produced from the translation text must match at least one entity from the entity list produced from the image. Since the results of API show that there seems to already exist matching entities, this means the problem is that the casing of the letters must exactly match which can be resolved by modifying the entities produced from the text to be stored as capitalize letters.

If the program deems them unrelated, then based on the results from the APIs, what must be changed in the program to address this?

The same changes must be done as stated previously, since the results of API show that there seems to already exist matching entities, this means the problem is that the casing of the letters must exactly match which can be resolved by modifying the entities produced from the text to be stored as capitalize letters.

If the program deems them unrelated, then based on the results from the APIs, what must be changed in the program to address this?

The same changes must be done as stated previously, since the results of API show that there seems to already exist matching entities, this means that the casing of the letters must exactly match which can be resolved by modifying the entities produced from the text to be stored as capitalize letters.

Video Intelligence

What are the top 3 labels that the Video Intelligence API associates with the video and what is its confidence in them?

The top 3 labels are sports, player, and basketball. The confidence in them are 0.9218811392784119, 0.8446521162986755, and 0.9137870669364929 respectively.

What is the name of the client class in the package that is used?

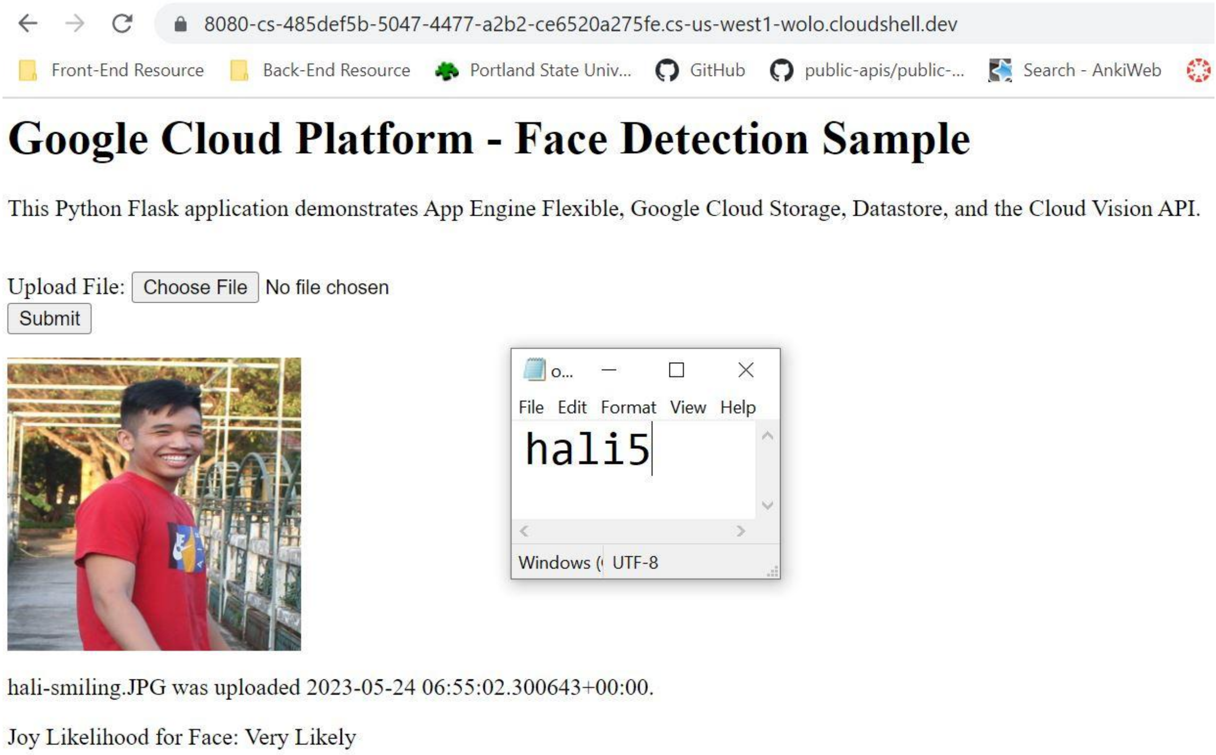
The name of the client class is `VideoIntelligenceServiceClient`.

What method is used in that class to perform the annotation?

The method used to perform the annotation is `annotate_video.`

Application

Take a screenshot for your lab notebook that includes the URL.



Google Cloud Platform - Face Detection Sample

This Python Flask application demonstrates App Engine Flexible, Google Cloud Storage, Datastore, and the Cloud Vision API.

Upload File: Choose File No file chosen
Submit

hali5

hali-smiling.JPG was uploaded 2023-05-24 06:55:02.300643+00:00.

Joy Likelihood for Face: Very Likely

Code

What line of code creates the query for previous detections?

```
query = datastore_client.query(kind="Faces")
```

What line of code sends the query to Cloud Datastore?

```
image_entities = list(query.fetch())
```

Show the line that retrieves the name of the storage bucket to use.

```
CLOUD_STORAGE_BUCKET = os.environ.get("CLOUD_STORAGE_BUCKET")
```

What form field is used to specify the uploaded photo?

The form field used to specify the uploaded photo is file.

```
photo = request.files["file"]
```

Show the line that copies the photo's contents to the storage bucket.

```
blob.upload_from_string(photo.read(),
content_type=photo.content_type)
```

What method in Vision's annotation client is used to perform the analysis?

The `face_detection` method is used to perform the analysis.

What fields are stored in Cloud Datastore for each image?

The fields that are stored for each image are `blob name, image public URL, timestamp`, and `joy.`

What happens at the end of the upload_photo route?

The client is redirected back to the homepage.

08.3g: Firebase

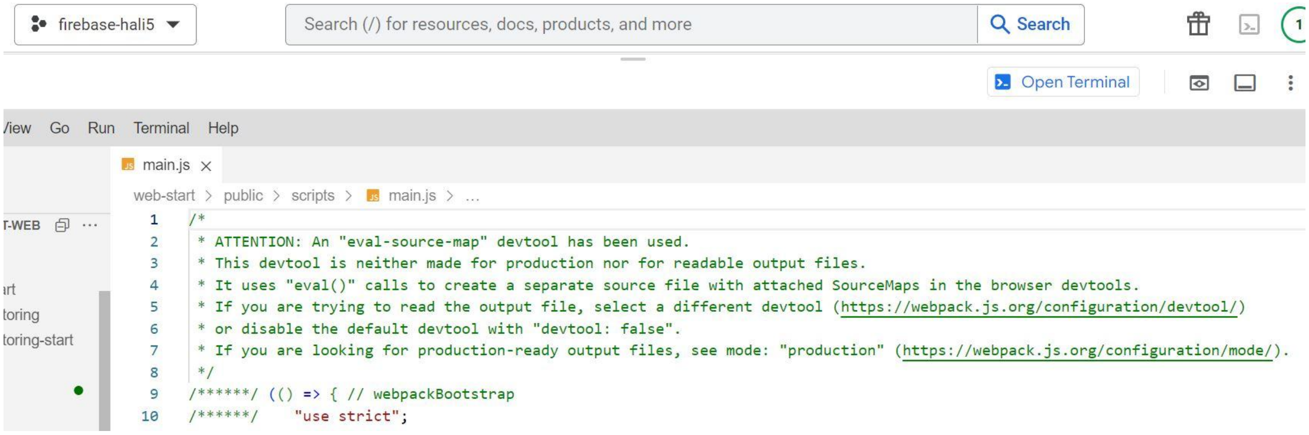
Authentication setup

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

The domains that are given access to the Firebase project by default are *localhost*, and two firebase hosting URLs, namely *fir-hali5.firebaseapp.com*, and *fir-hali5.web.app*.

Bundling with Webpack

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


firebase-hali5
Search (/) for resources, docs, products, and more
Search
Open Terminal
/iew Go Run Terminal Help
main.js
web-start > public > scripts > main.js > …
T-WEB
ırt
toring
toring-start

```
/*
 * 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";
```

Add authentication

What missing functions deal with user authentication?

- signIn
- signOutUser
- initFirebaseAuth
- isUserSignedIn

What missing functions deal with sending and receiving messages?

- saveMessage
- loadMessages
- saveImageMessage
- saveMessagingDeviceToken
- requestNotificationPermissions
- onMediaFileSelected
- onMessageFormSubmit
- checkSignedInWithMessage
- deleteMessagecreateAndInsertMessage
- displayMessage

Update UI

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

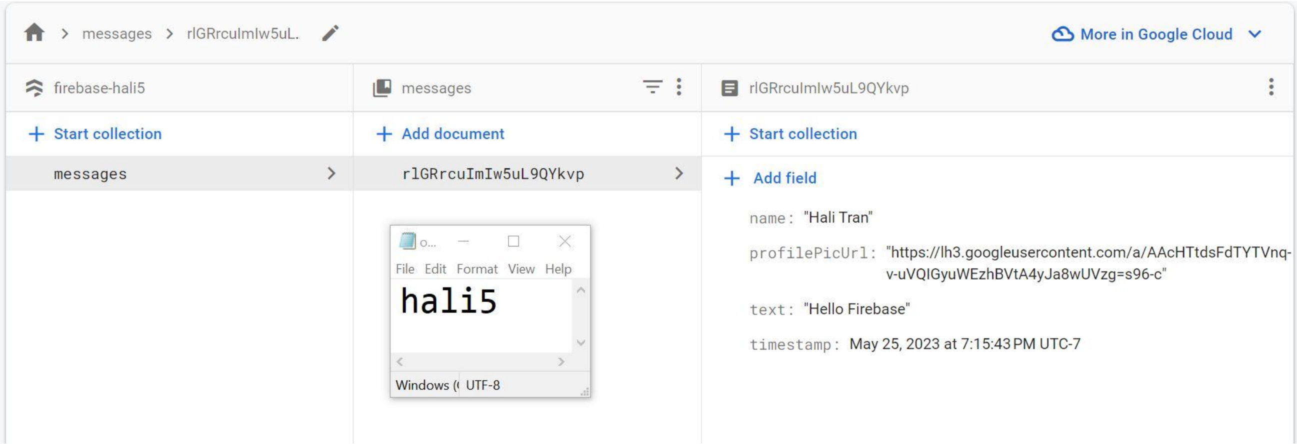
The names of the elements that are hidden are `userNameElement`, `userPicElement`, and `signOutButtonElement`.

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

The name of the element that is not hidden is `signInButtonElement`.

Test application with text messaging

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

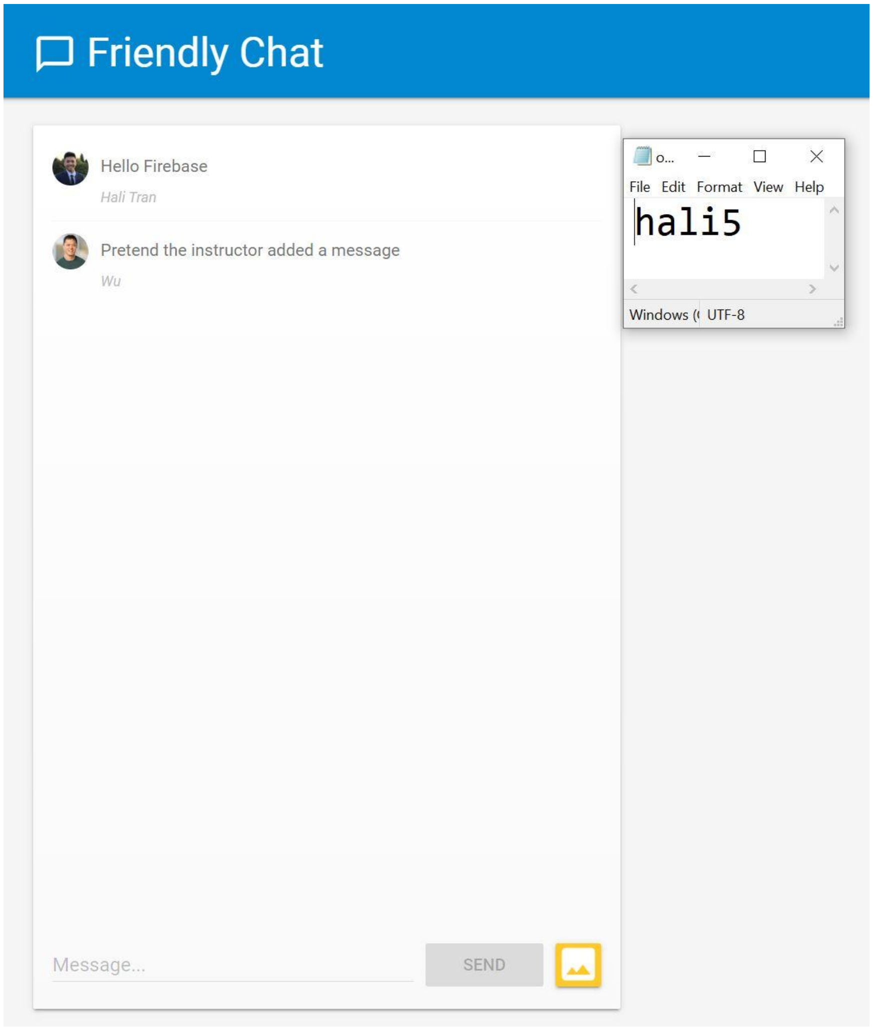


hali5

```
name: "Hali Tran"
profilePicUrl: "https://lh3.googleusercontent.com/a/AAcHTtdsFdTYTVnq-
               v-uVQIGyuWEzhBVtA4yJa8wUVzg=s96-c"
text: "Hello Firebase"
timestamp: May 25, 2023 at 7:15:43 PM UTC-7
```

Manual message insertion

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



Friendly Chat

Hello Firebase
Hali Tran

Pretend the instructor added a message
Wu

hali5

Add image messaging

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

LOADING_IMAGE_URL

Test application with image messaging

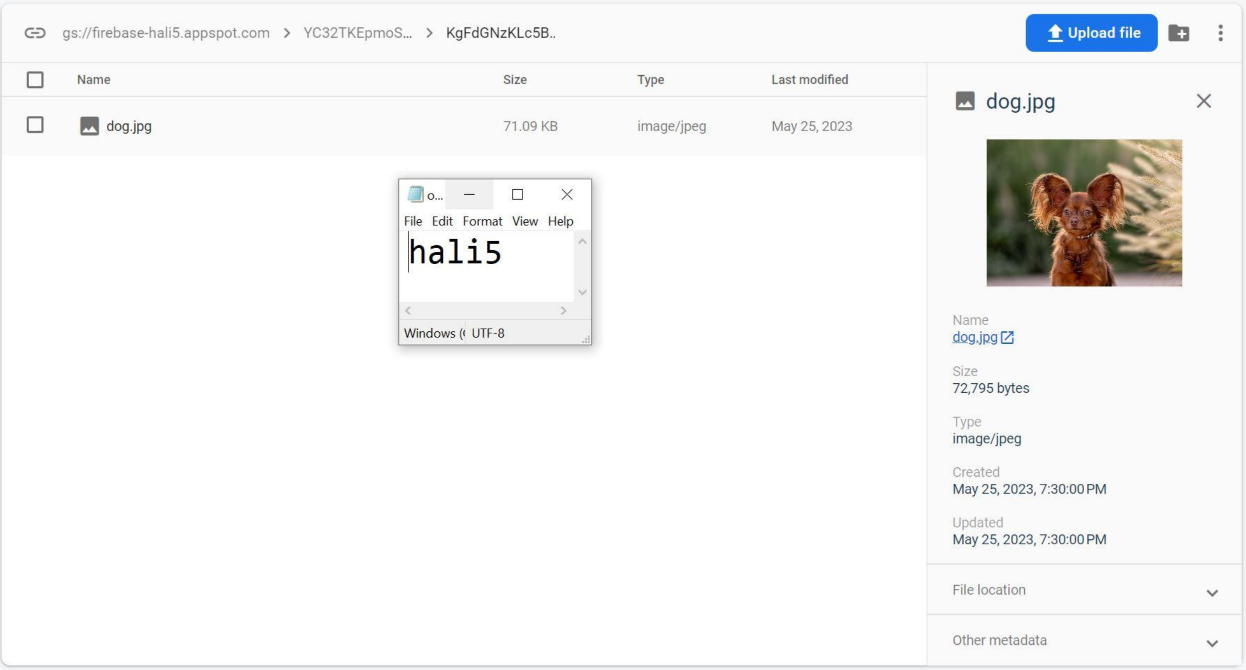
How do the fields in an image document differ from that of the text document?

The field of an image document differs from that of a text document in that it has an ImageUrl and a StorageURI associated with it compared to a text document which has a text field.

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

The URL the image can be found at is specified by the ImageUrl field and the storage location can be found at by the StorageURI field of the image document.

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



gs://firebase-hali5.appspot.com > YC32TKEpmoS... > KgFdGNzKLc5B..

Name	Size	Type	Last modified
dog.jpg	71.09 KB	image/jpeg	May 25, 2023

hali5

dog.jpg

Name
dog.jpg

Size
72,795 bytes

Type
image/jpeg

Created
May 25, 2023, 7:30:00 PM

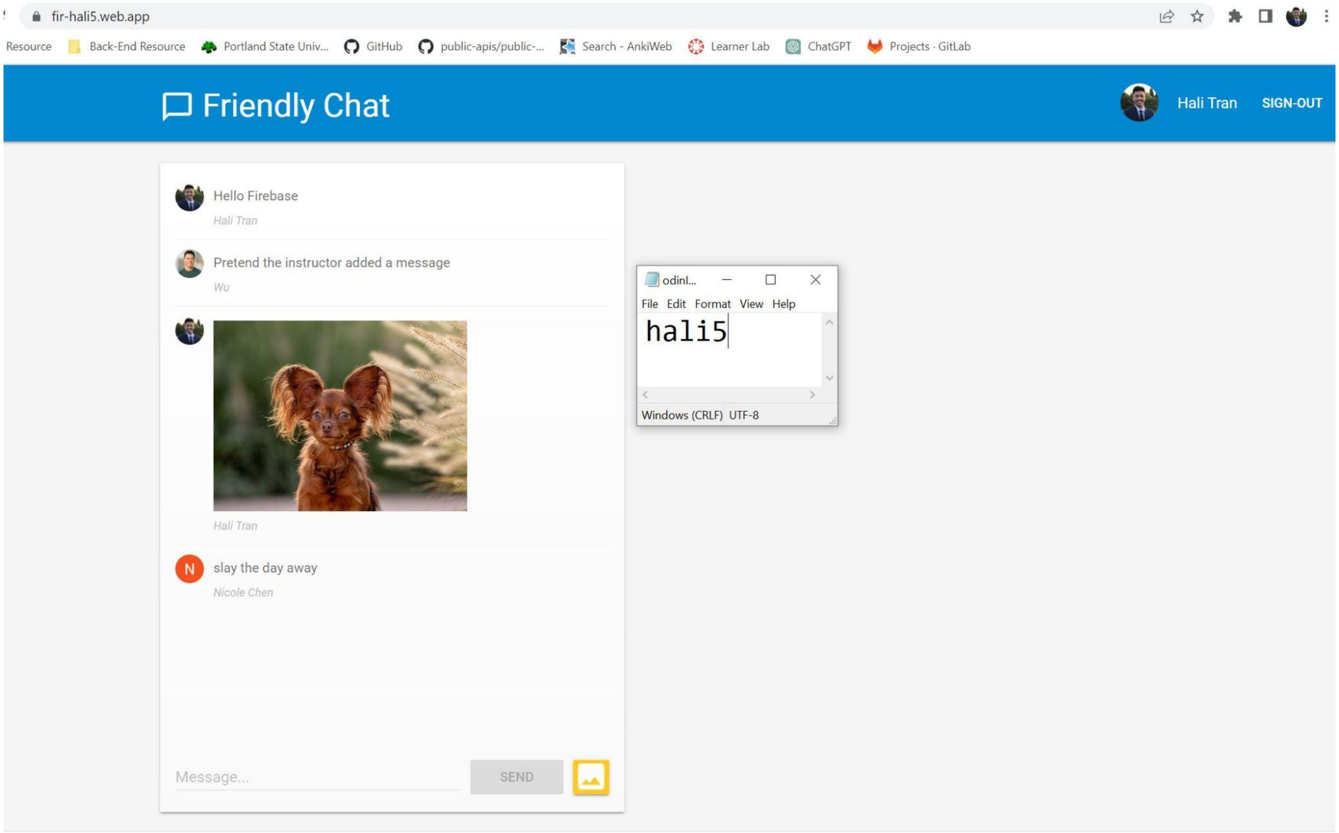
Updated
May 25, 2023, 7:30:00 PM

Deploy application

What directory is the application going to be served from?

The application is going to be served from the public directory

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



Friendly Chat

Hello Firebase

Hali Tran

Pretend the instructor added a message

Wu

Hali Tran

slay the day away

Nicole Chen

hali5