

BU DS 561 Homework 3 - David Euijoon Kim - U66545284 - Pubsub

<https://github.com/dk-davidekim/Google-Cloud-Computing.git>

- main.py

```
from google.cloud import storage, logging, pubsub_v1
import functions_framework A

def app_one(request):
    logging_client = logging.Client(project='ds-561')
    logger = logging_client.logger('hw3')

    if request.method == 'GET': # Check if request method is 'GET'

        try:
            filename = request.path.lstrip('/')
            filename = filename.replace('bu-ds561-dk98-bucket/', '')
            # Retrieve the link path "bucketname/directory/
            # Get rid of the bucketname

            storage_client = storage.Client()
            bucket = storage_client.bucket('bu-ds561-dk98-bucket') # Create storage client
            # Assign the bucket

            blob = bucket.blob(filename) # Find the file inside the bucket
            file_content = blob.download_as_text() # Download the file as text

            logger.log_text(f"200: {filename}")
            return file_content, 200 # Return the file and 200 status

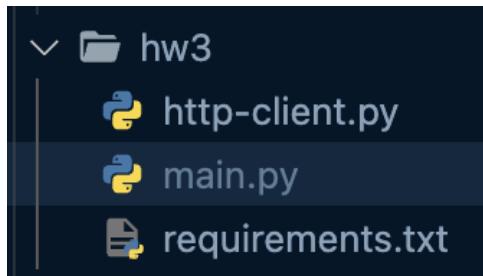
        except Exception as e:
            logger.log_text(f"Error Code 404: {filename}: {str(e)}") # If there's an error in getting the file
            return 'File not found', 404 # Log the error
            # End function with a 404 status

    else:
        logger.log_text(f"Error Code 501: {request.method}") # If method is any other than 'GET'
        return 'Not implemented', 501 # Log the 501 error
        # End function with a 501 status
```

- requirements.txt

```
BU > DS561 > hw > hw3 > requirements.txt
1  functions-framework==3.2.1
2  Flask==2.2.5
3  google-cloud-storage==2.11.0
4  google-cloud-pubsub==2.18.4
5  google-cloud-logging==3.8.0
```

- Hw3 directory



- GCloud Functions Deployment

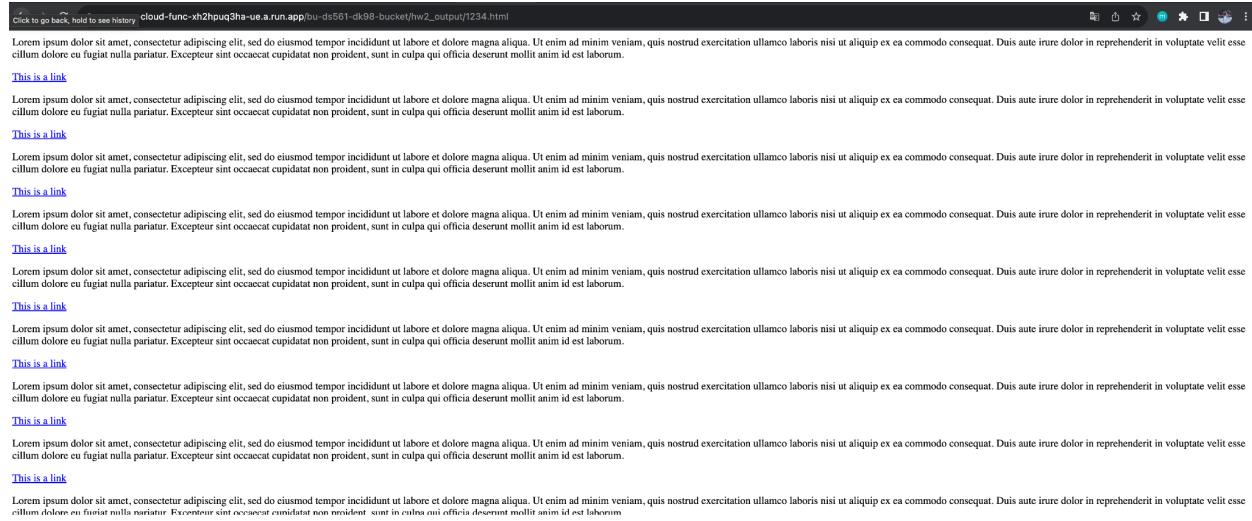
```
gcloud functions deploy app_one_cloud_func \
--gen2 \
--runtime=python39 \
--region=us-east1 \
--source=. \
--entry-point=app_one \
--trigger-http \
--set-env-vars BUCKET_NAME=bu-ds561-dk98-bucket \
--max-instances=83
```

```
gcloud functions deploy app_one_cloud_func \
--gen2 \
--runtime=python39 \
--region=us-east1 \
--source= \
--entry-point=app_one \
--trigger-http \
--set-env-vars BUCKET_NAME=bu-ds561-dk98-bucket \
--max-instances=83
Preparing function..done.
X Updating function (may take a while)...
✓ [Build] Logs are available at [https://console.cloud.google.com/cloud-build/builds;region=us-east1/f09cdbfc-56b4-4b63-be17-fb1a1995e505?project=634775913953]
[Service]
. [ArtifactRegistry]
. [Healthcheck]
. [Triggercheck]
Completed with warnings:
[INFO] A new revision will be deployed serving with 100% traffic.
You can view your function in the Cloud Console here: https://console.cloud.google.com/functions/details/us-east1/app_one_cloud_func?project=ds-561

buildConfig:
build: projects/634775913953/locations/us-east1/builds/f09cdbfc-56b4-4b63-be17-fb1a1995e505
dockerRegistry: ARTIFACT_REGISTRY
entryPoint: app_one
runtime: python39
source:
  storageSource:
    bucket: gcf-v2-sources-634775913953-us-east1
    generation: '1696910604522421'
    object: app_one_cloud_func/function-source.zip
sourceProvenance:
  resolvedStorageSource:
    bucket: gcf-v2-sources-634775913953-us-east1
    generation: '1696910604522421'
    object: app_one_cloud_func/function-source.zip
environment: GEN_2
labels:
  deployment-tool: cli-gcloud
name: projects/ds-561/locations/us-east1/functions/app_one_cloud_func
serviceConfig:
  allTrafficOnLatestRevision: true
  availableCpu: '0.1666'
  availableMemory: 256M
  environmentVariables:
    BUCKET_NAME: bu-ds561-dk98-bucket
  ingressSettings: ALLOW_ALL
  maxInstanceCount: 83
  maxInstanceRequestConcurrency: 1
  revision: app-one-cloud-func-00002-moz
  service: projects/ds-561/locations/us-east1/services/app-one-cloud-func
  serviceAccountEmail: 634775913953-compute@developer.gserviceaccount.com
  timeoutSeconds: 60
  uri: https://app-one-cloud-func-xh2hpuq3ha-ue.a.run.app
state: ACTIVE
updateTime: '2023-10-10T04:04:01.138227896Z'
url: https://us-east1-ds-561.cloudfunctions.net/app_one_cloud_func
```

- Browser 200 Status

https://app-one-cloud-func-xh2hpuq3ha-ue.a.run.app/bu-ds561-dk98-bucket/hw2_output/1234.html



```
▼ { 2023-10-10 22:23:18.446 EDT GET 200 82.84 KB 1 s Chrome 117 https://app-one-cloud-func-xh2hpuq3ha-ue.a.run.app/bu-ds561-dk98-bucket/hw2_output/1234.html
  ▶ {
    ► httpRequest: {10}
    insertId: "65260717000751b2021dd530"
    labels: {2}
    logName: "projects/ds-561/logs/run.googleapis.com%2Frequests"
    receiveTimestamp: "2023-10-11T02:23:19.483793283Z"
    resource: {2}
    severity: "INFO"
    spanId: "1926174486411403603"
    timestamp: "2023-10-11T02:23:18.446570Z"
    trace: "projects/ds-561/traces/fe24aa592f7bbca12ef2fa25ab93eb38"
    traceSampled: true
  }
```

- Curl 200 Status

curl https://app-one-cloud-func-xh2hpuq3ha-ue.a.run.app/bu-ds561-dk98-bucket/hw2_output/1234.html

```
base ~/Desktop/DataScience/BU/D5561/hw/hw3 (0.613s)
curl https://app-one-cloud-func-xh2hpuq3ha-ue.a.run.app/bu-ds561-dk98-bucket/hw2_output/1234.html
<!DOCTYPE html>
<html>
<body>


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</p>


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<a href="472.html"> This is a link </a>
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</p>
<a href="4628.html"> This is a link </a>
```

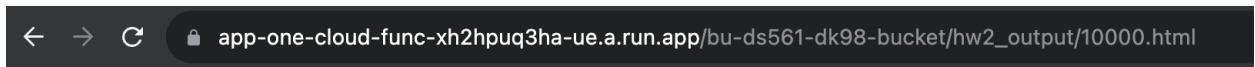
```

▼ i 2023-10-10 22:25:04.562 EDT GET 200 82.84 KB 476 ms curl/8.1.2 https://app-one-cloud-func-xh2hpuq3ha-ue.a.run.app/bu-ds561-dk98-bucket/hw2_output/1234.html
{
  httpRequest: {10}
  insertId: "652607810000a179c04dc917"
  labels: {2}
  logName: "projects/ds-561/logs/run.googleapis.com%2Frequests"
  receiveTimestamp: "2023-10-11T02:25:05.112250421Z"
  resource: {2}
  severity: "INFO"
  spanId: "12006111930265568319"
  timestamp: "2023-10-11T02:25:04.562842Z"
  trace: "projects/ds-561/traces/d9a1d2ad528cbd141872f2bd6cbd4f1b"
}

```

- Browser 404 Status

https://app-one-cloud-func-xh2hpuq3ha-ue.a.run.app/bu-ds561-dk98-bucket/hw2_output/10000.html



File not found

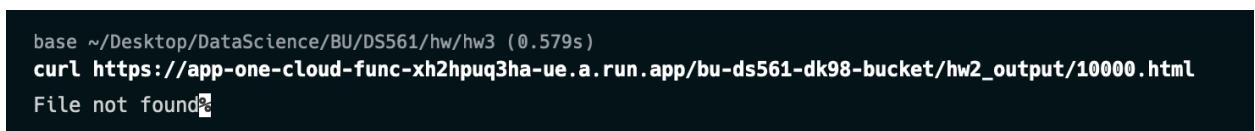
```

▼ ! 2023-10-10 22:26:25.309 EDT GET 404 667 B 543 ms Chrome 117 https://app-one-cloud-func-xh2hpuq3ha-ue.a.run.app/bu-ds561-dk98-bucket/hw2_output/10000.html
{
  httpRequest: {10}
  insertId: "652607d1000d24a7f2eae7c"
  labels: {2}
  logName: "projects/ds-561/logs/run.googleapis.com%2Frequests"
  receiveTimestamp: "2023-10-11T02:26:25.866927273Z"
  resource: {2}
  severity: "WARNING"
  spanId: "57140771341522675"
  timestamp: "2023-10-11T02:26:25.309600Z"
  trace: "projects/ds-561/traces/c1704ccdc2438c97c7d175e38ae75954"
  traceSampled: true
}

```

- Curl 404 Status

curl https://app-one-cloud-func-xh2hpuq3ha-ue.a.run.app/bu-ds561-dk98-bucket/hw2_output/10000.html



```

▼ ! 2023-10-10 22:27:59.787 EDT GET 404 666 B 442 ms curl/8.1.2 https://app-one-cloud-func-xh2hpuq3ha-ue.a.run.app/bu-ds561-dk98-bucket/hw2_output/10000.html
{
  httpRequest: {10}
  insertId: "652608300003a38e31c1454b"
  labels: {2}
  logName: "projects/ds-561/logs/run.googleapis.com%2Frequests"
  receiveTimestamp: "2023-10-11T02:28:00.241766228Z"
  resource: {2}
  severity: "WARNING"
  spanId: "4410524613696154962"
  timestamp: "2023-10-11T02:27:59.787716Z"
  trace: "projects/ds-561/traces/75e152ab710fffc90fa6a5bece88f151a"
  traceSampled: true
}

```

- Browser 501 Status

```
fetch('https://app-one-cloud-func-xh2hpuq3ha-ue.a.run.app', { method: 'POST' })
```

Chrome ⇒ Inspect ⇒ Console

```
> fetch('https://app-one-cloud-func-xh2hpuq3ha-ue.a.run.app', { method: 'POST' })
↳ ▶ Promise {<pending>} ⓘ
  ▷ [[Prototype]]: Promise
    [[PromiseState]]: "fulfilled"
  ▷ [[PromiseResult]]: Response
✖ ▶ POST https://app-one-cloud-func-xh2hpuq3ha-ue.a.run.app/ 501 (Not Implemented)
```

```
▼ !! 2023-10-10 22:34:33.258 EDT POST 501 668 B 257 ms Chrome 117 https://app-one-cloud-func-xh2hpuq3ha-ue.a.run.app/
{
  httpRequest: {11}
  insertId: "652609b90007e8f0425233c7"
  labels: {2}
  logName: "projects/ds-561/logs/run.googleapis.com%2Frequests"
  receiveTimestamp: "2023-10-11T02:34:33.814313826Z"
  resource: {2}
  severity: "ERROR"
  spanId: "17005368575633311864"
  timestamp: "2023-10-11T02:34:33.258392Z"
  trace: "projects/ds-561/traces/72b0ce70d73fec8f03805fc70d257ed8"
}
```

- Curl 501 Status

```
curl -X POST https://app-one-cloud-func-xh2hpuq3ha-ue.a.run.app/bu-ds561-dk98-bucket/hw2\_output/10000.html
```

```
base ~/Desktop/DataScience/BU/DS561/hw/hw3 (0.512s)
curl -X POST https://app-one-cloud-func-xh2hpuq3ha-ue.a.run.app/bu-ds561-dk98-bucket/hw2_output/10000.html

Not implemented
```

```
▼ !! 2023-10-10 22:33:07.016 EDT POST 501 667 B 366 ms curl/8.1.2 https://app-one-cloud-func-xh2hpuq3ha-ue.a.run.app/bu-ds561-dk98-bucket/hw2_output/10000.html
Collapse log entry
▶ httpRequest: {10}
  insertId: "652609630005f5cf3ccbba3c9"
  labels: {2}
  logName: "projects/ds-561/logs/run.googleapis.com%2Frequests"
  receiveTimestamp: "2023-10-11T02:33:07.395540234Z"
  resource: {2}
  severity: "ERROR"
  spanId: "3278031786538632517"
  timestamp: "2023-10-11T02:33:07.016769Z"
  trace: "projects/ds-561/traces/826e34f267b616b66e93bdb1c29eb84b"
  traceSampled: true
}
```

- http-client.py

```
python3 http-client.py -d app-one-cloud-func-xh2hpuq3ha-ue.a.run.app -b /bu-ds561-dk98-bucket -w hw2_output -n 200 -i 9999 -s -v -f
```

```
base ~/Desktop/DataScience/BU/DS561/hw/hw3 (1m 36.28s)
python3 http-client.py -d app-one-cloud-func-xh2hpuq3ha-ue.a.run.app -b /bu-ds561-dk98-bucket -w hw2_output -n 200 -i 9999 -s -v -f
Requesting /bu-ds561-dk98-bucket/hw2_output/2851.html from app-one-cloud-func-xh2hpuq3ha-ue.a.run.app 443
200 OK
content-type: text/html; charset=utf-8
X-Cloud-Trace-Context: e406e86ea893639bc1325d730baa527d
Date: Wed, 11 Oct 2023 02:08:09 GMT
Server: Google Frontend
Content-Length: 103466
Alt-Svc: h3=":443"; ma=2592000, h3-29=":443"; ma=2592000

b'<!DOCTYPE html>\n<html>\n<body>\nLorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse ncidullum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.\n<p><a href="3943.html"> This is a link </a></p>\nLorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse ncidullum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.\n<p><a href="8140.html"> This is a link </a></p>\nLorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse ncidullum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.\n<p><a href="3229.html"> This is a link </a></p>\n<a href="5585.html"> This is a link </a></p>\nLorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse ncidullum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.\n<p><a href="2635.html"> This is a link </a></p>\nLorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse ncidullum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.\n<p><a href="648.html"> This is a link </a></p>\nLorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse ncidullum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.\n<p><a href="2345.html"> This is a link </a></p>\nLorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse ncidullum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.\n<p><a href="3842.html"> This is a link </a></p>\nLorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse ncidullum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.\n<p><a href="9671.html"> This is a link </a></p>\nLorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse ncidullum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.\n<p><a href="4081.html"> This is a link </a></p>\nLorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse ncidullum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.\n<p><a href="120.html"> This is a link </a></p>\n
```

app_one_cloud_func 2nd gen (Deployed at Oct 10, 2023, 12:32:38 AM) URL: https://us-east1-ds-561.cloudfunctions.net/app_one_cloud_func  

METRICS	DETAILS	SOURCE	VARIABLES	TRIGGER	PERMISSIONS	LOGS	TESTING
Logs	Severity Default	<input type="button" value="Filter"/> Search all fields and values					
SEVERITY	TIMESTAMP	SUMMARY					
> i	2023-10-10 22:08:22.837 EDT	GET 200 47.57 KB 223 ms Unknown					
> i	2023-10-10 22:08:23.160 EDT	GET 200 41.76 KB 316 ms Unknown					
> i	2023-10-10 22:08:23.814 EDT	GET 200 107.01 KB 361 ms Unknown					
> i	2023-10-10 22:08:24.386 EDT	GET 200 6.96 KB 327 ms Unknown					
> i	2023-10-10 22:08:24.876 EDT	GET 200 21.47 KB 284 ms Unknown					
> i	2023-10-10 22:08:25.252 EDT	GET 200 16.63 KB 296 ms Unknown					
> i	2023-10-10 22:08:25.727 EDT	GET 200 22.92 KB 215 ms Unknown					
> i	2023-10-10 22:08:26.041 EDT	GET 200 98.31 KB 243 ms Unknown					
> i	2023-10-10 22:08:26.490 EDT	GET 200 37.89 KB 270 ms Unknown					
> i	2023-10-10 22:08:26.929 EDT	GET 200 52.88 KB 176 ms Unknown					
> i	2023-10-10 22:08:27.298 EDT	GET 200 79.94 KB 272 ms Unknown					
> i	2023-10-10 22:08:27.820 EDT	GET 200 44.18 KB 510 ms Unknown					
> i	2023-10-10 22:08:28.728 EDT	GET 200 111.84 KB 233 ms Unknown					

- GCloud PubSub

```
gcloud pubsub topics create hw3
```

```
~/Desktop/DataScience/BU/DS561/hw3 (5.327s)
gcloud pubsub topics create hw3
Created topic [projects/ds-561/topics/hw3].
```

```
gcloud pubsub subscriptions create app_one_two --topic=hw3
```

```
~/Desktop/DataScience/BU/DS561/hw3 (3.235s)
gcloud pubsub subscriptions create app_one_two --topic=hw3
Created subscription [projects/ds-561/subscriptions/app_one_two].
```

- app_one_edited

```
from google.cloud import pubsub_v1

pub = pubsub_v1.PublisherClient()
path = pub.topic_path('ds-561', 'hw3')

BANNED_COUNTRIES = ["North Korea", "Iran", "Cuba", "Myanmar",
                     "Iraq", "Libya", "Sudan", "Zimbabwe", "Syria"]

def app_one_edited(request):
    logging_client = logging.Client(project='ds-561')
    logger = logging_client.logger('hw3')

    country = request.headers["X-country"]

    if country in BANNED_COUNTRIES:
        try:
            data = str({'400 Forbidden from country': country})
            future=pub.publish(path, data.encode("utf-8"))
            message_id = future.result()
            logger.log_text(f"Message published with ID: {message_id}")
        except Exception as e:
            logger.log_text(f"PubSub Notification Failed {str(e)}")
            logger.log_text(f"Error Code 400: Forbidden: {str(country)}")
            return "Permission Denied", 400

    else:
        app_one(request)
```

- Deploy GCloud Function

```
gcloud functions deploy app_one_edited_cloud_func \
--gen2 \
--runtime=python39 \
--region=us-east1 \
--source=. \
--entry-point=app_one_edited \
```

```
--trigger-http \
--set-env-vars BUCKET_NAME=bu-ds561-dk98-bucket \
--max-instances=83
```

```
~/Desktop/DataScience/BU/D5561/hw/hw3 1m 9.08s
gcloud functions deploy app_one_edited_cloud_func \
--runtime=python39 \
--region=us-east1 \
--source= \
--entry-point=app_one_edited \
--trigger-http \
--set-env-vars BUCKET_NAME=bu-ds561-dk98-bucket \
--max-instances=83
Preparing function...done.
X Deploying function (may take a while)...
[Build] Logs are available at [https://console.cloud.google.com/cloud-build/builds;region=us-east1/cdd04be9-11e3-487c-932c-062d18eeeebaa
?project=634775913953]
[Service]
  [ArtifactRegistry]
    [Healthcheck]
      [DockerImage]
Completed with warnings:
[INFO] A new revision will be deployed serving with 100% traffic.
You can view your function in the Cloud Console here: https://console.cloud.google.com/functions/details/us-east1/app_one_edited_cloud_func?project=ds-561

buildConfig:
  build: projects/634775913953/locations/us-east1/builds/cdd04be9-11e3-487c-932c-062d18eeeebaa
  dockerRegistry: ARTIFACT_REGISTRY
  entryPoint: app_one_edited
  runtime: python39
  source:
    storageSource:
      bucket: gcf-v2-sources-634775913953-us-east1
      generation: '1606979449261257'
      object: app_one_edited_cloud_func/function-source.zip
  sourceProvenance:
    resolvedStorageSource:
      bucket: gcf-v2-sources-634775913953-us-east1
      generation: '1606979449261257'
      object: app_one_edited_cloud_func/function-source.zip
environment: GEN_2
labels:
  deployment-tool: cli-gcloud
name: projects/ds-561/functions/app_one_edited_cloud_func
serviceConfig:
  allTrafficOnLatestRevision: true
  availableCpu: 0.1666
  availableMemory: 256M
  environmentVariables:
    BUCKET_NAME: bu-ds561-dk98-bucket
    MAX_INSTANCE_COUNT: ALLOW_ALL
    maxInstanceCount: 83
  maxInstanceRequestConcurrency: 1
  revision: app-one-edited-cloud-func-00002-gls
  service: projects/ds-561/locations/us-east1/services/app-one-edited-cloud-func
  timeoutSeconds: 60
  url: https://app-one-edited-cloud-func-xh2hpuq3ha-ue.a.run.app
state: ACTIVE
updateTime: '2023-10-10T23:11:52.325Z'
url: https://us-east1-ds-561.cloudfunctions.net/app_one_edited_cloud_func
```

- http-client.py

```
python3 http-client.py -d app-one-edited-func-xh2hpuq3ha-ue.a.run.app -b /bu-ds561-dk98-bucket -w none -n 100 -i
11000 -s -v -f
```

```
base ~/Desktop/DataScience/BU/D5561/hw/hw3 (6.436s)
python3 http-client.py -d app-one-edited-func-xh2hpuq3ha-ue.a.run.app -b /bu-ds561-dk98-bucket -w none -n 100 -i 11000 -s -v -f
Requesting /bu-ds561-dk98-bucket/2956.html from app-one-edited-func-xh2hpuq3ha-ue.a.run.app 443
400 Bad Request
content-type: text/html; charset=utf-8
X-Cloud-Trace-Context: 25a3270cd7ff615cba1f8550be9ff3de;o=1
Date: Wed, 11 Oct 2023 01:57:56 GMT
Server: Google Frontend
Content-Length: 17
Alt-Svc: h3=":443"; ma=2592000,h3-29=:443"; ma=2592000

b'Permission Denied'
Requesting /bu-ds561-dk98-bucket/6705.html from app-one-edited-func-xh2hpuq3ha-ue.a.run.app 443
400 Bad Request
content-type: text/html; charset=utf-8
X-Cloud-Trace-Context: b4b0ef98b28b744d52c7d3f0d61e7da2
Date: Wed, 11 Oct 2023 01:57:57 GMT
Server: Google Frontend
Content-Length: 17
Alt-Svc: h3=":443"; ma=2592000,h3-29=:443"; ma=2592000

b'Permission Denied'
```

```

▼ ⓘ 2023-10-10 21:57:56.001 EDT GET 400 669 B 621 ms Unknown https://app-one-edited-func-xh2hpuq3ha-ue.a.run.app/bu-ds561-dk98-bucket/2956.html
  ▾ {
    ▾ httpRequest: {
      latency: "0.621512898s"
      protocol: "HTTP/1.1"
      remoteIp: "128.197.29.228"
      requestMethod: "GET"
      requestSize: "472"
      requestUrl: "https://app-one-edited-func-xh2hpuq3ha-ue.a.run.app/bu-ds561-dk98-bucket/2956.html"
      responseSize: "669"
      serverIp: "216.239.34.53"
      status: 400
    }
    insertId: "652601240009aaa0732f61de"
  ▶ labels: {2}
    logName: "projects/ds-561/logs/run.googleapis.com%2Frequests"
    receiveTimestamp: "2023-10-11T01:57:56.639833545Z"
  ▶ resource: {2}
    severity: "WARNING"
    spanId: "13495510059719845531"
    timestamp: "2023-10-11T01:57:56.001192Z"
    trace: "projects/ds-561/traces/25a3270cd7ff615cba1f8550be9ff3de"
    traceSampled: true
  }
▼ ⓘ 2023-10-10 21:57:56.704 EDT GET 400 669 B 445 ms Unknown https://app-one-edited-func-xh2hpuq3ha-ue.a.run.app/bu-ds561-dk98-bucket/6705.html
  ▾ {
    ▾ httpRequest: {9}
    insertId: "6526012500025472dffcc0dd"
  ▶ labels: {2}
    logName: "projects/ds-561/logs/run.googleapis.com%2Frequests"
    receiveTimestamp: "2023-10-11T01:57:57.302529390Z"
  ▶ resource: {2}
    severity: "WARNING"
    spanId: "11506644952216433869"
    timestamp: "2023-10-11T01:57:56.7047207Z"

```

- app_two.py

```

BU > DS561 > hw > hw3 > 🐍 app_two.py > ...
1   from google.cloud import pubsub_v1
2
3   def call_back(message):                                     # Callback if message received
4       print(f"Received message: {message.data.decode('utf-8')}") # Print the message
5       message.ack()
6
7   sub = pubsub_v1.SubscriberClient()                         # SubscriberClient
8   path = sub.subscription_path('ds-561', 'app_one_two')     # Subscription Path
9
10  future = sub.subscribe(path, callback=call_back)          # Subscribe to the path and callback
11  print("Listening for messages on: {}".format(path))       # Indicating that it's listening
12
13  with sub:                                                 # Keep the app running
14      try:
15          future.result()
16      except KeyboardInterrupt:
17          future.cancel()

```

```

(base) davidekim@crc-dotix-nat-10-239-144-196 hw3 % /Users/davidekim/tensorflow/bin/python /Users/davidekim/Desktop/DataScience/
BU/DS561/hw/hw3/app_two.py
Listening for messages on: projects/ds-561/subscriptions/app_one_two
Received message: {'400 Forbidden from country': 'North Korea'}
Received message: {'400 Forbidden from country': 'Iran'}
Received message: {'400 Forbidden from country': 'Iraq'}
Received message: {'400 Forbidden from country': 'Syria'}
Received message: {'400 Forbidden from country': 'Zimbabwe'}
Received message: {'400 Forbidden from country': 'Sudan'}
Received message: {'400 Forbidden from country': 'Cuba'}
Received message: {'400 Forbidden from country': 'Myanmar'}
Received message: {'400 Forbidden from country': 'Libya'}
Received message: {'400 Forbidden from country': 'North Korea'}
Received message: {'400 Forbidden from country': 'Libya'}

```