```
skakade@cloudshell:~ (shraddha-kakade-fall2024)$ ls
A.npy  B.npy  generate_store_matrices.py  main.py  README-cloudshell.txt
requirements.txt

skakade@cloudshell:~ (shraddha-kakade-fall2024)$ gcloud functions deploy map_function
--runtime python39    --trigger-http    --allow-unauthenticated    --
project=shraddha-kakade-fall2024    --region=us-central1    --source=.    --entry-
point=map_function
Preparing function...done.
X  Updating function (may take a while)...
   OK [Build] Logs are available at [https://console.cloud.google.com/cloud-
build/builds;region=us-central1/eb38cf1b-ccaa-4422-8aec-8d5eaa77a05f?project
   =515245365518]
     [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-
central1/map_function?project=shraddha-kakade-fall2024

buildConfig:
  automaticUpdatePolicy: {}
  build: projects/515245365518/locations/us-central1/builds/eb38cf1b-ccaa-4422-8aec-
8d5eaa77a05f
  dockerRegistry: ARTIFACT_REGISTRY
  dockerRepository: projects/shraddha-kakade-fall2024/locations/us-
central1/repositories/gcf-artifacts
  entryPoint: map_function
  runtime: python39
  serviceAccount: projects/shraddha-kakade-fall2024/serviceAccounts/515245365518-
compute@developer.gserviceaccount.com
  source:
    storageSource:
      bucket: gcf-v2-sources-515245365518-us-central1
      generation: '1730841809360097'
      object: map_function/function-source.zip
  sourceProvenance:
    resolvedStorageSource:
      bucket: gcf-v2-sources-515245365518-us-central1
      generation: '1730841809360097'
      object: map_function/function-source.zip
createTime: '2024-11-05T04:15:51.301441165Z'
environment: GEN_2
labels:
  deployment-tool: cli-gcloud
name: projects/shraddha-kakade-fall2024/locations/us-central1/functions/map_function
serviceConfig:
  allTrafficOnLatestRevision: true
  availableCpu: '0.1666'
  availableMemory: 256M
  environmentVariables:
    LOG_EXECUTION_ID: 'true'
  ingressSettings: ALLOW_ALL
  maxInstanceCount: 100
  maxInstanceRequestConcurrency: 1
  revision: map-function-00025-kov
```

```
    service: projects/shraddha-kakade-fall2024/locations/us-central1/services/map-
function
    serviceAccountEmail: 515245365518-compute@developer.gserviceaccount.com
    timeoutSeconds: 60
    uri: https://map-function-zzj5k2wqsa-uc.a.run.app
state: ACTIVE
updateTime: '2024-11-05T21:24:20.845351099Z'
url: https://us-central1-shraddha-kakade-fall2024.cloudfunctions.net/map_function

skakade@cloudshell:~ (shraddha-kakade-fall2024)$ gcloud functions deploy
reduce_function     --runtime python39     --trigger-http     --allow-unauthenticated
--project=shraddha-kakade-fall2024     --region=us-central1     --source=.     --
entry-point=reduce_function
Preparing function...done.
X  Updating function (may take a while)...
  OK [Build] Logs are available at [https://console.cloud.google.com/cloud-
build/builds;region=us-central1/7b202ccf-7c9f-4954-85e9-f9abe2e63688?project
  =515245365518]
     [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-
central1/reduce_function?project=shraddha-kakade-fall2024

buildConfig:
  automaticUpdatePolicy: {}
  build: projects/515245365518/locations/us-central1/builds/7b202ccf-7c9f-4954-85e9-
f9abe2e63688
  dockerRegistry: ARTIFACT_REGISTRY
  dockerRepository: projects/shraddha-kakade-fall2024/locations/us-
central1/repositories/gcf-artifacts
  entryPoint: reduce_function
  runtime: python39
  serviceAccount: projects/shraddha-kakade-fall2024/serviceAccounts/515245365518-
compute@developer.gserviceaccount.com
  source:
    storageSource:
      bucket: gcf-v2-sources-515245365518-us-central1
      generation: '1730841879550649'
      object: reduce_function/function-source.zip
  sourceProvenance:
    resolvedStorageSource:
      bucket: gcf-v2-sources-515245365518-us-central1
      generation: '1730841879550649'
      object: reduce_function/function-source.zip
createTime: '2024-11-05T05:28:18.281926962Z'
environment: GEN_2
labels:
  deployment-tool: cli-gcloud
name: projects/shraddha-kakade-fall2024/locations/us-
central1/functions/reduce_function
serviceConfig:
  allTrafficOnLatestRevision: true
  availableCpu: '0.1666'
  availableMemory: 256M
  environmentVariables:
```

```
    LOG_EXECUTION_ID: 'true'
  ingressSettings: ALLOW_ALL
  maxInstanceCount: 100
  maxInstanceRequestConcurrency: 1
  revision: reduce-function-00019-kax
  service: projects/shraddha-kakade-fall2024/locations/us-central1/services/reduce-
function
  serviceAccountEmail: 515245365518-compute@developer.gserviceaccount.com
  timeoutSeconds: 120
  uri: https://reduce-function-zzj5k2wqsa-uc.a.run.app
state: ACTIVE
updateTime: '2024-11-05T21:25:32.579420427Z'
url: https://us-central1-shraddha-kakade-fall2024.cloudfunctions.net/reduce_function

skakade@cloudshell:~ (shraddha-kakade-fall2024)$ curl -X POST https://us-central1-
shraddha-kakade-fall2024.cloudfunctions.net/map_function -H "Content-Type:
application/json" -d '{"rows": 3, "cols": 4, "size": 10}'
{"responses":["Response for row 0, col 0: Partial product for row 0 and column 0
computed and saved.","Response for row 0, col 1: Partial product for row 0 and column
1 computed and saved.","Response for row 0, col 2: Partial product for row 0 and
column 2 computed and saved.","Response for row 0, col 3: Partial product for row 0
and column 3 computed and saved.","Response for row 1, col 0: Partial product for row
1 and column 0 computed and saved.","Response for row 1, col 1: Partial product for
row 1 and column 1 computed and saved.","Response for row 1, col 2: Partial product
for row 1 and column 2 computed and saved.","Response for row 1, col 3: Partial
product for row 1 and column 3 computed and saved.","Response for row 2, col 0:
Partial product for row 2 and column 0 computed and saved.","Response for row 2, col
1: Partial product for row 2 and column 1 computed and saved.","Response for row 2,
col 2: Partial product for row 2 and column 2 computed and saved.","Response for row
2, col 3: Partial product for row 2 and column 3 computed and saved."]}

skakade@cloudshell:~ (shraddha-kakade-fall2024)$ curl -X POST https://us-central1-
shraddha-kakade-fall2024.cloudfunctions.net/reduce_function -H "Content-Type:
application/json" -d '{"rows": 3, "cols": 4, "bucket_name": "matrix-multiplication-
bucket"}'
{"message":"Matrix reduction completed successfully."}

skakade@cloudshell:~ (shraddha-kakade-fall2024)$
```