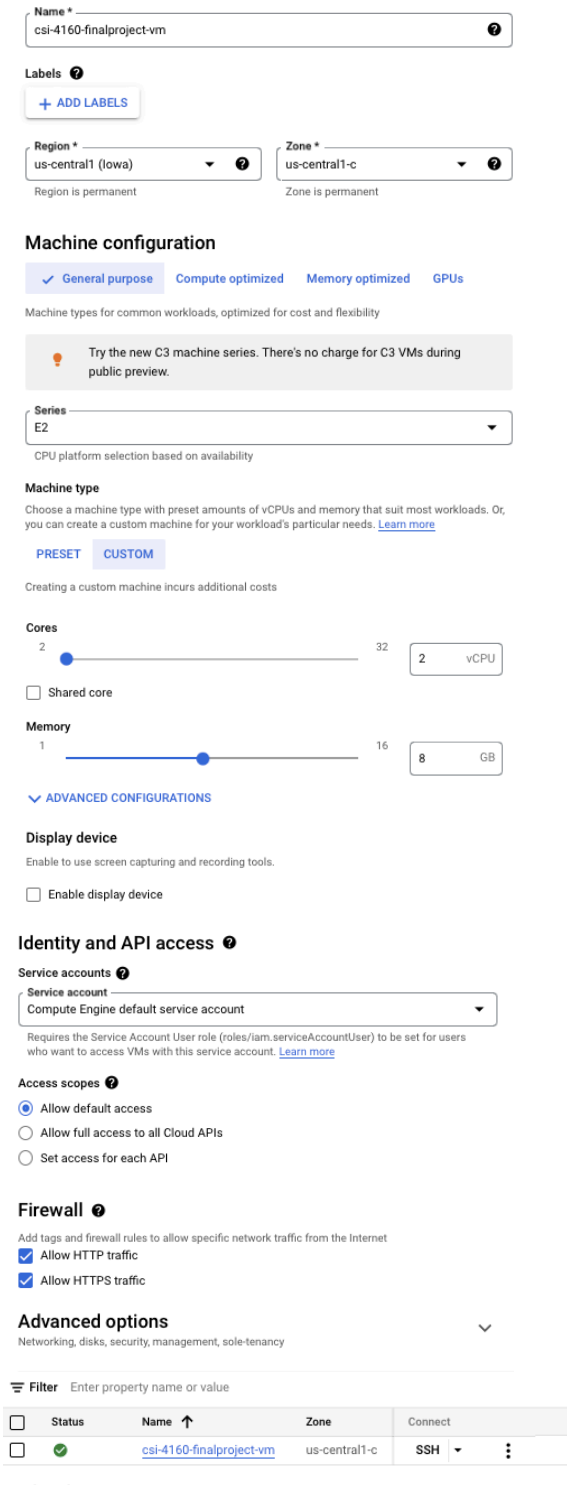
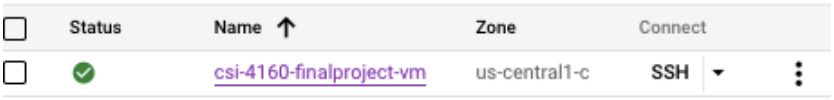
Nicholas Marogi
Final Project

- Create a VM (specs can be similar to assignment) /gcloud (20%)

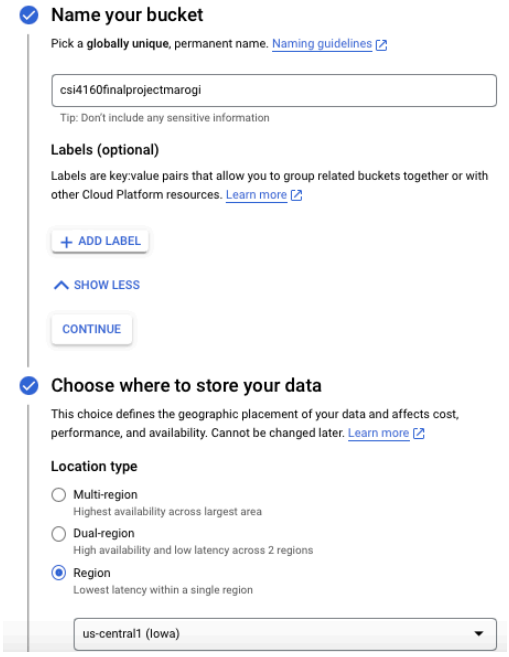


- Initiate VM (see sample below) / gcloud (15%)




```
#gcloud.sh is a tool to start/stop a VM under the ‘My First Project' in
GCP
#args [start|stop]
#run by issuing,
#sh gcloud.sh start
gcloud compute instances $1 --zone “csi-4160finlproject-vm-us-central1-c”
"VM" --project “My First Project"
```

- Create and attach new HDD to your VM / gcloud (20%)



Choose a storage class for your data

A storage class sets costs for storage, retrieval, and operations, with minimal differences in uptime. Choose if you want objects to be managed automatically or specify a default storage class based on how long you plan to store your data and your workload or use case. Learn more

- Autoclass
  Automatically transitions each object to hotter or colder storage based on object-level activity, to optimize for cost and latency. Recommended if usage frequency may be unpredictable. Can be changed to a default class at any time. Pricing details
- Set a default class
  Applies to all objects in your bucket unless you manually modify the class per object or set object lifecycle rules. Best when your usage is highly predictable. Can't be changed to Autoclass once the bucket is created.
  - Standard
    Best for short-term storage and frequently accessed data
  - Nearline
    Best for backups and data accessed less than once a month
  - Coldline
    Best for disaster recovery and data accessed less than once a quarter
  - Archive
    Best for long-term digital preservation of data accessed less than once a year

CONTINUE

Choose how to control access to objects

Prevent public access

Restrict data from being publicly accessible via the internet. Will prevent this bucket from being used for web hosting. Learn more

- [ ] Enforce public access prevention on this bucket

Filter Filter buckets

Name	Created
csi4160finalprojectmarogi	Apr 16, 2023, 10:56:40 AM

Create a disk

Name *
disk-finalproject-marogi
Name is permanent

Description
disk for final project

Location

- (•) Single zone
- ( ) Regional
  Create a failover replica in the same region for high availability.Storage and data replication is provided between both zones. Learn more

Region *
us-central1 (Iowa)

Zone *
us-central1-a

Source

Create a blank disk, apply a bootable disk image, or restore a snapshot of another disk in this project.

Disk source type *
Blank disk

Disk settings

Disk type *
Standard persistent disk

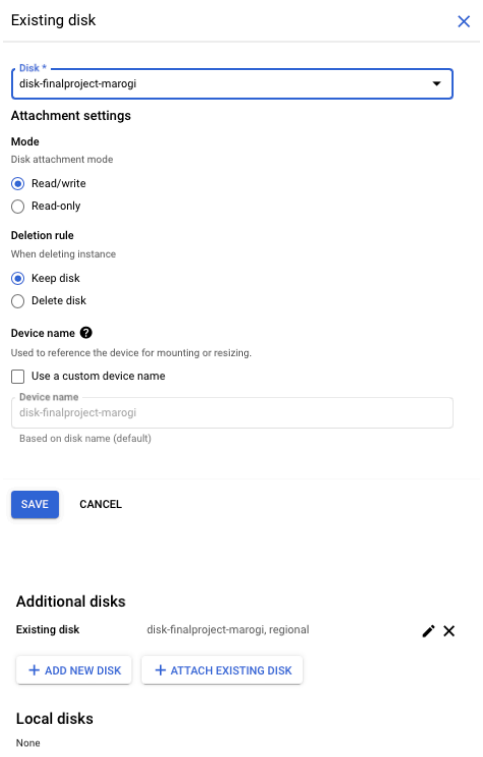
COMPARE DISK TYPES

Additional disks

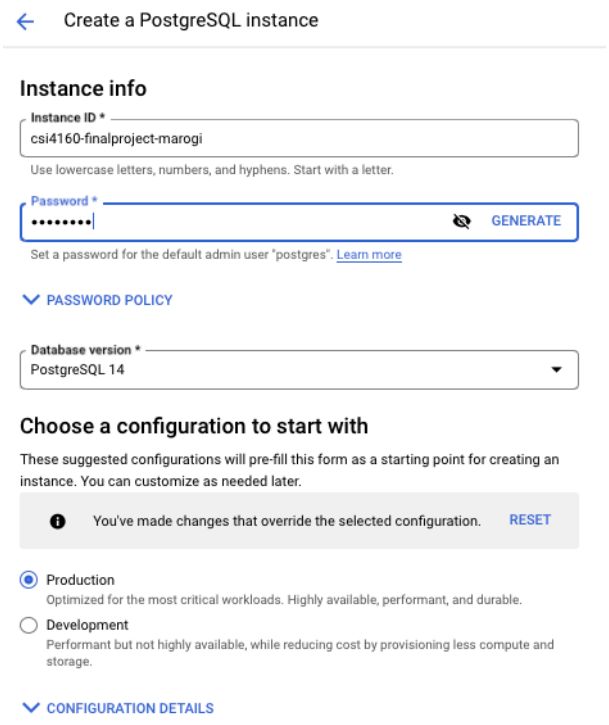
+ ADD NEW DISK + ATTACH EXISTING DISK

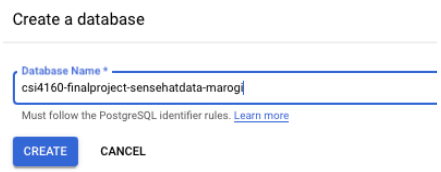
Local disks

None



- Create a Cloud SQL / database / Table (20%)



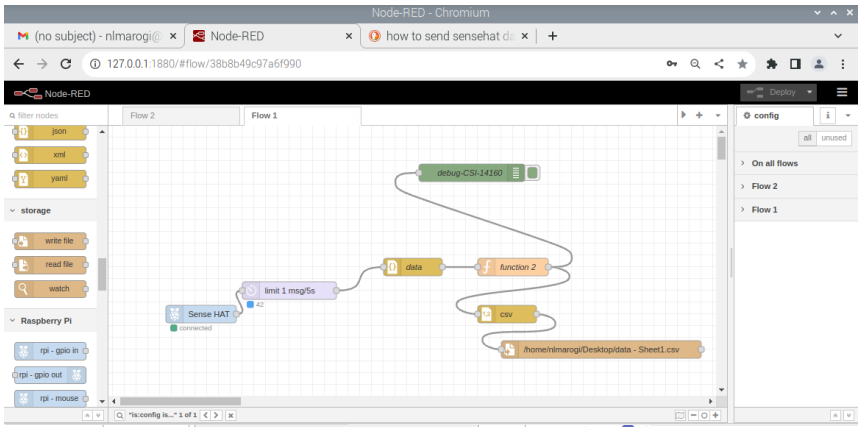


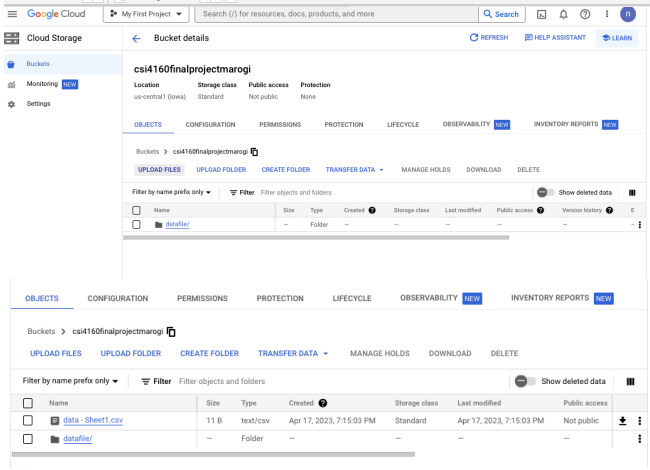

```
Welcome to Cloud Shell! Type "help" to get started.
Your Cloud Platform project in this session is set to wired-episode-380823.
Use "gcloud config set project [PROJECT_ID]" to change to a different project.
csi4160_nlmarogi@cloudshell:~ (wired-episode-380823)$ gcloud sql connect csi4160-finalproject-marogi --user=postgres --quiet
Allowlisting your IP for incoming connection for 5 minutes...done.
Connecting to database with SQL user [postgres].Password:
psql (15.2 (Debian 15.2-1.pgdg110+1), server 14.5)
SSL connection (protocol: TLSv1.3, cipher: TLS_AES_256_GCM_SHA384, compression: off)
Type "help" for help.

postgres=>
postgres=> lvly8t99
postgres-> \list
                                                    List of databases
                Name                |       Owner       | Encoding |  Collate   |   Ctype    | ICU Locale | Locale Provider |            Access privileges
------------------------------------+-------------------+----------+------------+------------+------------+-----------------+-----------------------------------------
 cloudsqladmin                      | cloudsqladmin     | UTF8     | en_US.UTF8 | en_US.UTF8 |            | libc            |
 csi4160-finalproject-sensehatdata-marogi | cloudsqlsuperuser | UTF8     | en_US.UTF8 | en_US.UTF8 |            | libc            |
 postgres                           | cloudsqlsuperuser | UTF8     | en_US.UTF8 | en_US.UTF8 |            | libc            |
 template0                          | cloudsqladmin     | UTF8     | en_US.UTF8 | en_US.UTF8 |            | libc            | =c/cloudsqladmin                +
                                    |                   |          |            |            |            |                 | cloudsqladmin=CTc/cloudsqladmin
 template1                          | cloudsqlsuperuser | UTF8     | en_US.UTF8 | en_US.UTF8 |            | libc            | =c/cloudsqlsuperuser            +
```

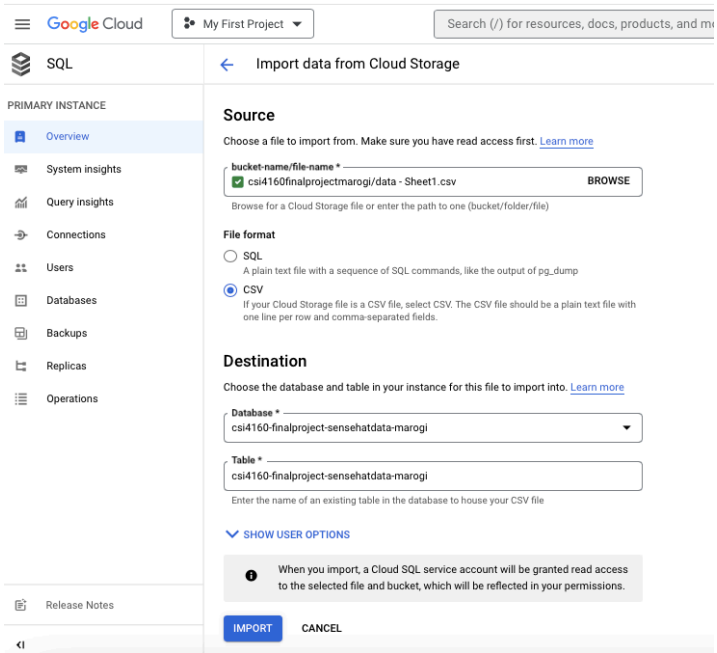
```
postgres-> \c csi4160-finalproject-sensehatdata-marogi
Password:
psql (15.2 (Debian 15.2-1.pgdg110+1), server 14.5)
SSL connection (protocol: TLSv1.3, cipher: TLS_AES_256_GCM_SHA384, compression: off)
You are now connected to database "csi4160-finalproject-sensehatdata-marogi" as user "postgres".
csi4160-finalproject-sensehatdata-marogi->
```

```
csi4160-finalproject-sensehatdata-marogi=> create table sensehat(
id int primary key not null,
timesent varchar(55),
transmitiontype varchar(45),
temperature varchar(30)
);
CREATE TABLE
csi4160-finalproject-sensehatdata-marogi=> \d
          List of relations
 Schema |   Name   | Type  |  Owner
--------+----------+-------+----------
 public | sensehat | table | postgres
(1 row)

csi4160-finalproject-sensehatdata-marogi=>
```

- IoT device







- Github https://github.com/nlmarogi/CSI-4160-Final-Marogi.git