# Create a SQL instance, create a table, and load data

This page shows you how to create and connect to a MySQL instance and perform basic SQL operations using the Google Cloud Console and a client.

Set up your project

Before performing the steps in this tutorial, complete the following tasks:

1. In the Google Cloud Console, on the project selector page, select your Google Cloud project that you created with you last name in the project.
2. Enable the Cloud SQL Admin API. If you forget how to enable the APIs, please refer to your earlier directions on how to enable APIs. Don't pay attention to my Project name. You will have your project name.
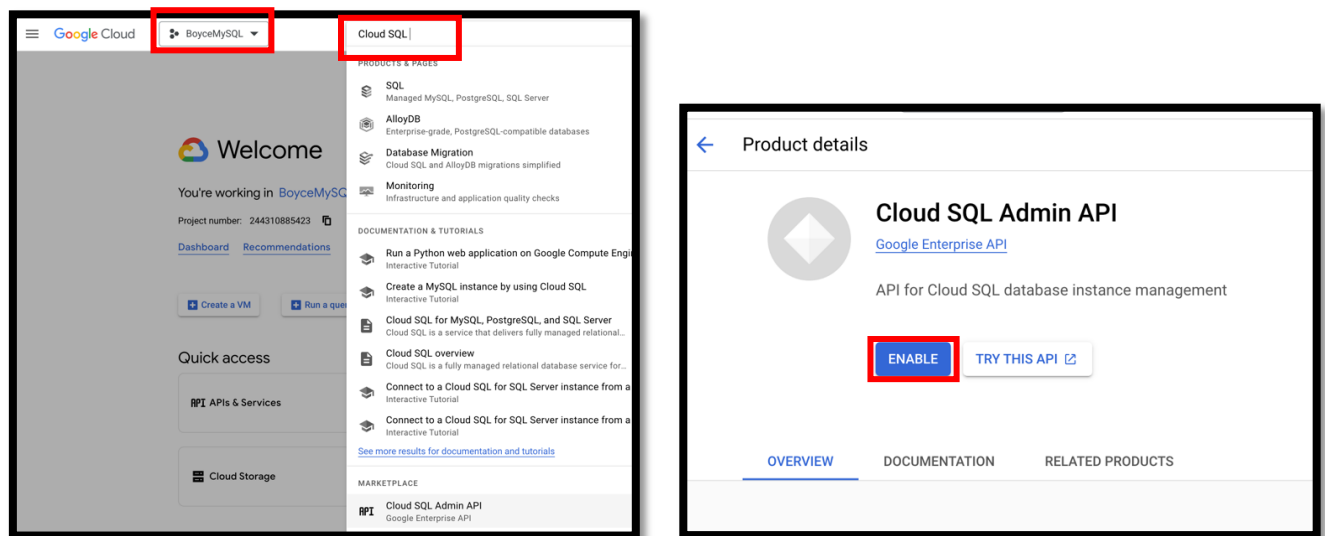

Note: If you are running a local instance of MySQL, stop it before beginning to work with a Cloud SQL instance. Otherwise, you might encounter errors such as **address already in use**.
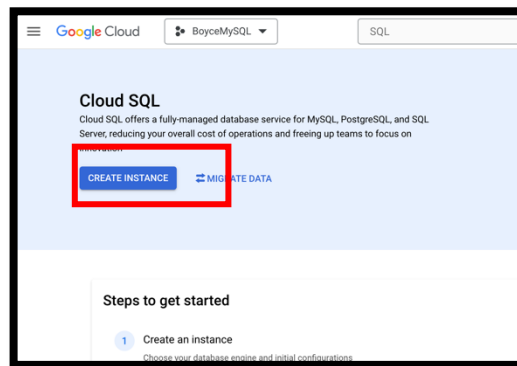
Create a Cloud SQL Instance

In this procedure, you use the Google Cloud Console. To use the gcloud command-line tool, curl, or PowerShell.
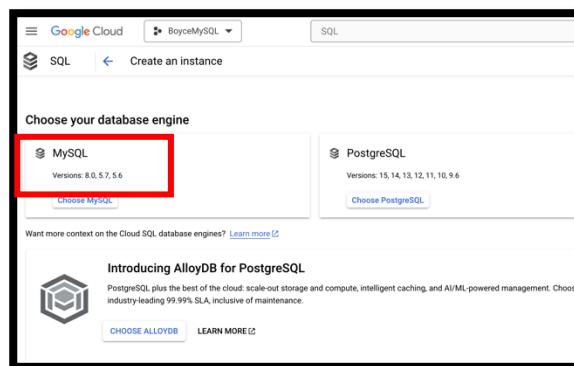
9. In the Google Cloud Console, go to the **Cloud SQL Instances** page (you can type SQL in the search bar).
10. Click SQL
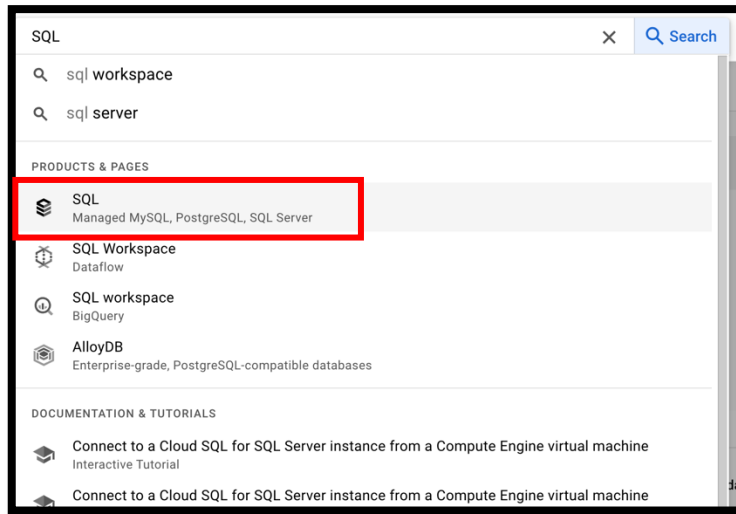
11. Click Create Instance

3. Click MySQL

4. If you're prompted to enable the **Compute API**, click the **Enable API** button. This may take a little while; be patient.
5. Enter boyceinstance for **Instance ID**. You will enter your last name instead of mine.
6. Enter a password for the root user. Be sure to remember the password as you will need it to connect to the instance.
7. Choose Enterprise for the Cloud SQL editions.
8. Choose Sandbox for the preset for this edition.

9. You can leave the Region as the default value.
10. Choose Single Zone for the Zonal availability. Play around with some of the settings to see how this changes the Pricing Estimate. Think about what you have learned about Cloud Computing when comparing the pricing. This should start to make sense.
11. It would be a good idea to unclick "Enable deletion protection" under "Data Protection" under "Customize your instance → Show Configuration Options" so you can delete your instance when you finish.
12. Click CREATE INSTANCE

13. Be patient while the instance is being created, as it may take a little while. You are returned to the instances list; you can click into the new instance right away to see the details, but it won't be available until it initializes and starts (This can take a little while).
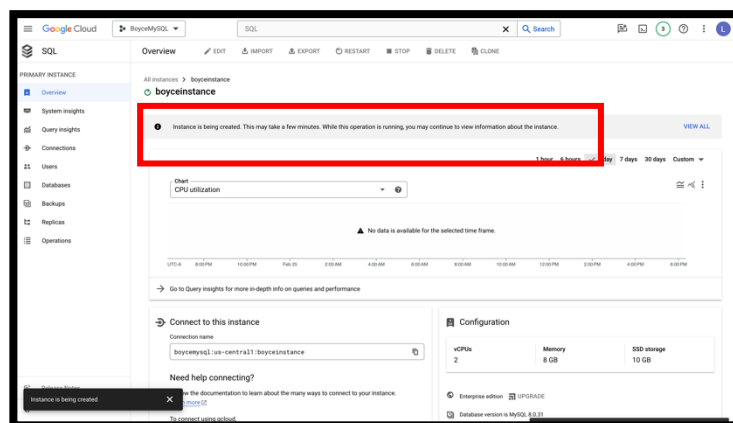

14. Click on the instance and click on the start button in the top of "overview."

Create a database and upload data

5. There are several ways to connect to a MySQL instance. In this quick introduction, we will use GCP cloud shell.
6. Create a SQL database on your Cloud SQL instance; my instance name is BoyceMySQL. Your instance will have a different name.
7. On the instance overview screen, under "Connect to this instance" section, select "OPEN CLOUD SHELL."
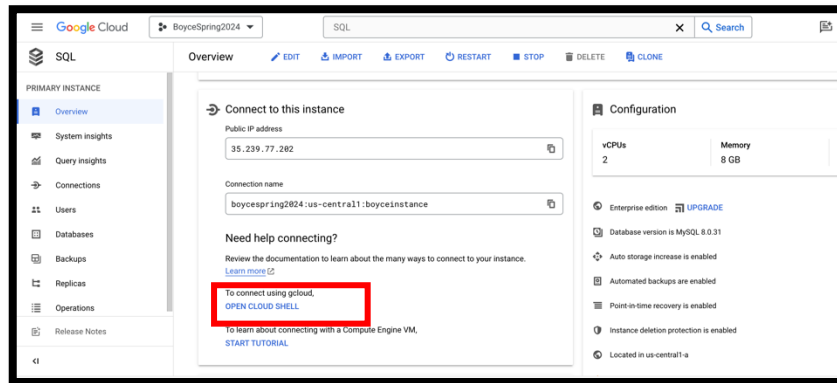
1. Once the Cloud Shell has been activated, you should see a screen similar to the following.
2. Press the enter key to run the command: gcloud sql connect <your-instance-ID> -user=root –quiet . You will have the instance name that you created. In the highlighted section, I have boyceinstance.
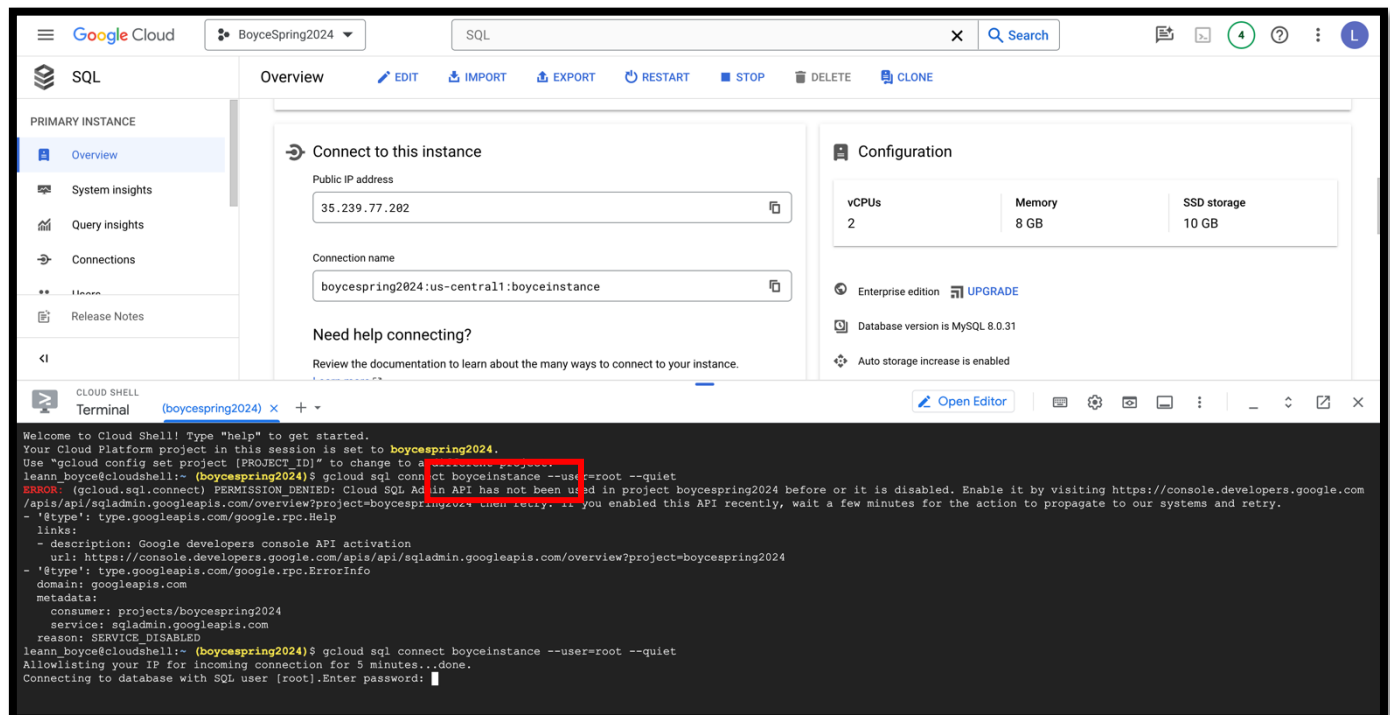
3. If you are asked to Authorize, hit "Authorize." If not, no worries.
4. You will be asked to enter your password from the instance you created in the console. *NOTE: You will **NOT** see the password on the screen. After you enter the password, hit enter.
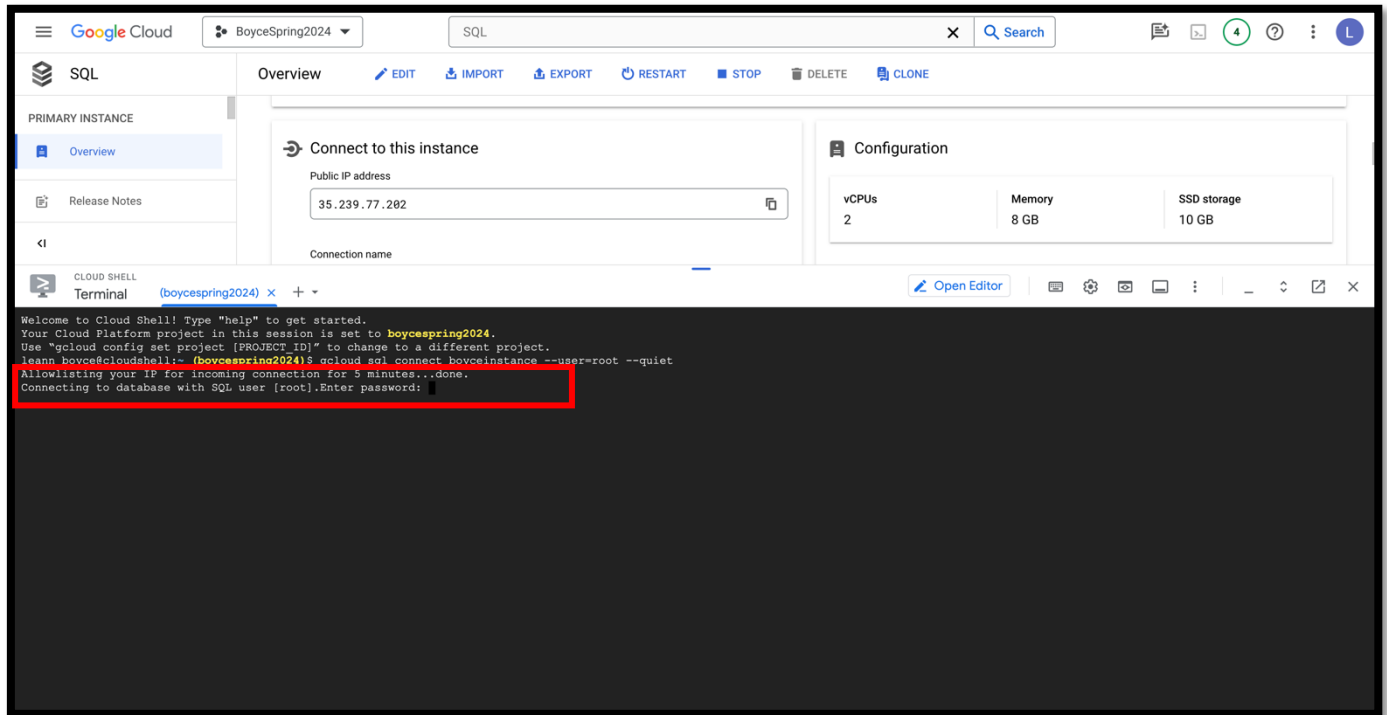
5. Once you hit enter, you should see a screen like below.
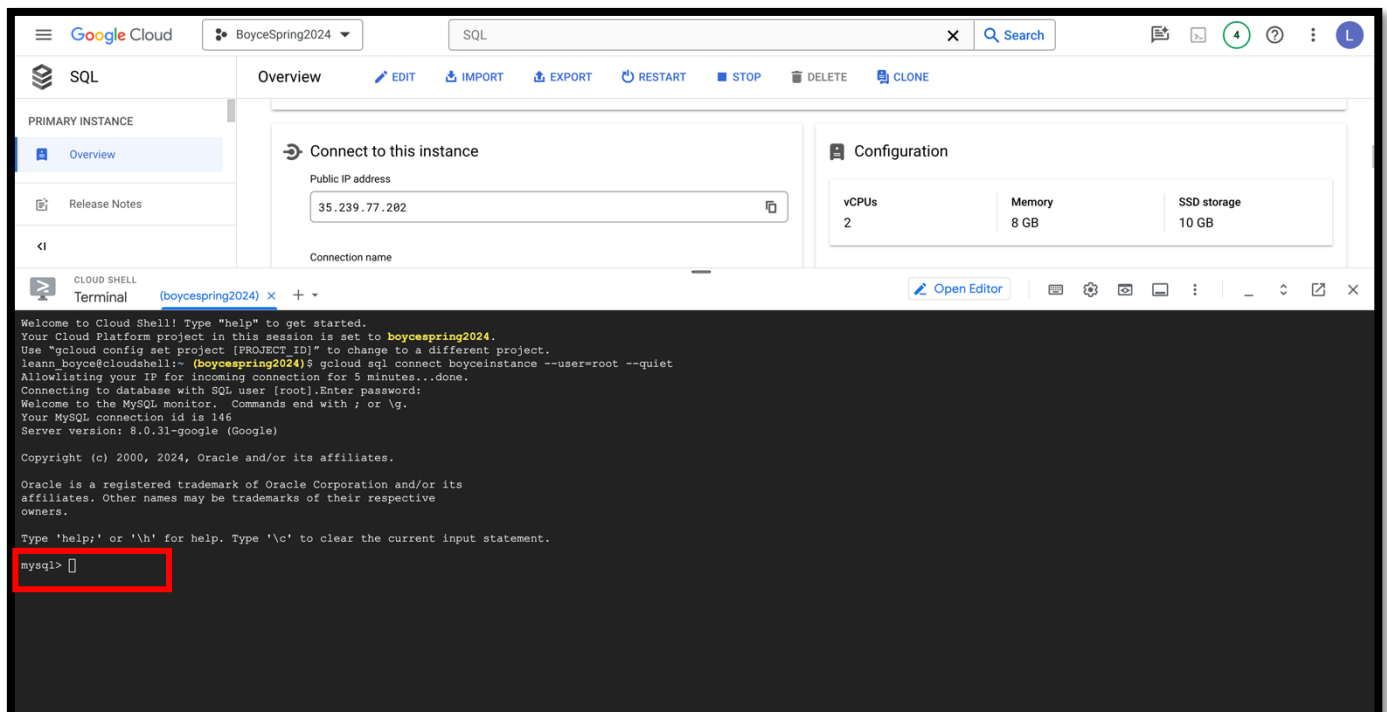
6. We will now create a new database "customers" and table "entries". After each line below, hit enter.
   CREATE DATABASE customers;
   USE customers;
   CREATE TABLE customers
   (fName VARCHAR(225),
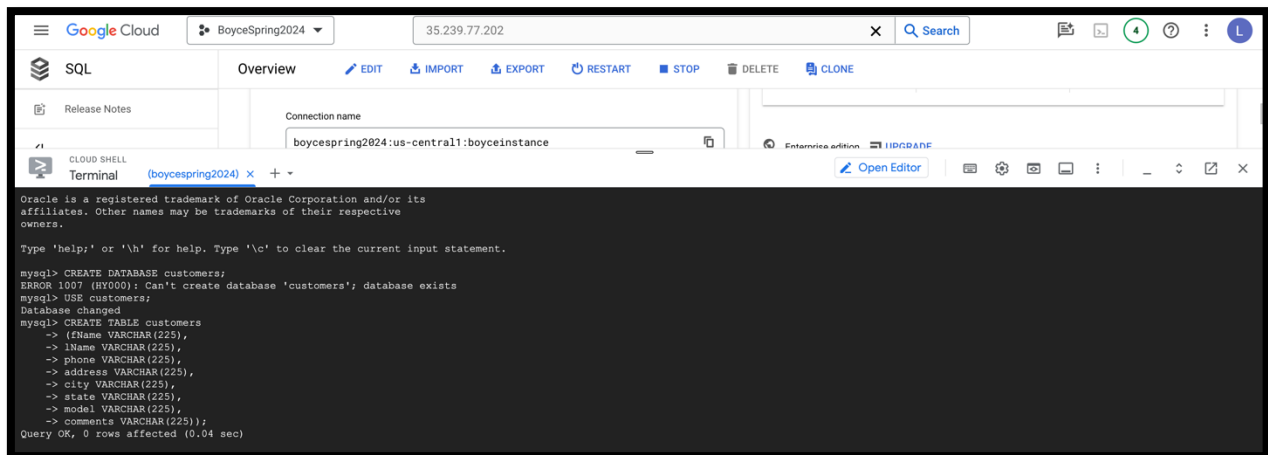   lName VARCHAR(225),
   phone VARCHAR(225),
   address VARCHAR(225),
   city VARCHAR(225),
   state VARCHAR(225),
   model VARCHAR(225),
   comments VARCHAR(225));
7. You should see a screen like this:

***Note the Error: This is due to the fact I had already created this database. You should not see this in your output. If you do not see this, do not worry.

8. Now you will enter data into your newly created table. Enter the following commands:
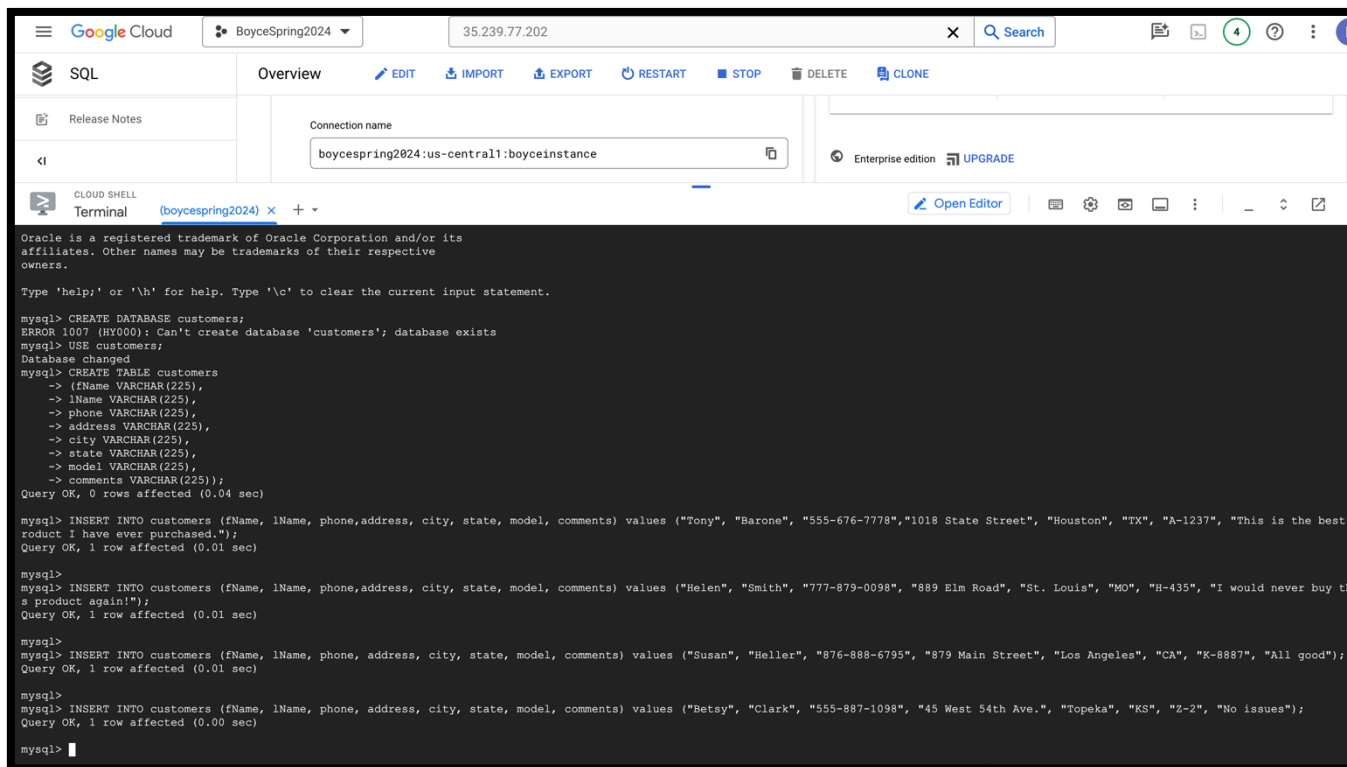
INSERT INTO customers (fName, lName, phone,address, city, state, model, comments) values ("Tony", "Barone", "555-676-7778","1018 State Street", "Houston", "TX", "A-1237", "This is the best product I have ever purchased.");

INSERT INTO customers (fName, lName, phone,address, city, state, model, comments) values ("Helen", "Smith", "777-879-0098", "889 Elm Road", "St. Louis", "MO", "H-435", "I would never buy this product again!");

INSERT INTO customers (fName, lName, phone, address, city, state, model, comments) values ("Susan", "Heller", "876-888-6795", "879 Main Street", "Los Angeles", "CA", "K-8887", "All good");

INSERT INTO customers (fName, lName, phone, address, city, state, model, comments) values ("Betsy", "Clark", "555-887-1098", "45 West 54th Ave.", "Topeka", "KS", "Z-2", "No issues");

9. You should see a screen like this:

10. Retrieve the data:

SELECT * FROM customers;

The result is:

Cleanup

1. Close out of the Terminal by clicking on the "X" in the upper-right-hand corner in the terminal.

2. In the Google Cloud Console, go to the **Cloud SQL Instances** page.

3. Select your instance's name to open the **Overview** page.

4. In the icon bar at the top of the page, click **Stop**. You can also click delete but you may have to edit the instance depending on how the instance was created.

5. You cannot reuse an instance name for about 7 days after the instance is deleted.

Information obtained from (with some modification: https://cloud.google.com/sql/docs/mysql/quickstart
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For additional help, please refer to https://cloud.google.com/sql/docs/mysql/quickstart