

# CS 530 INTERNET WEB AND CLOUD SYSTEMS

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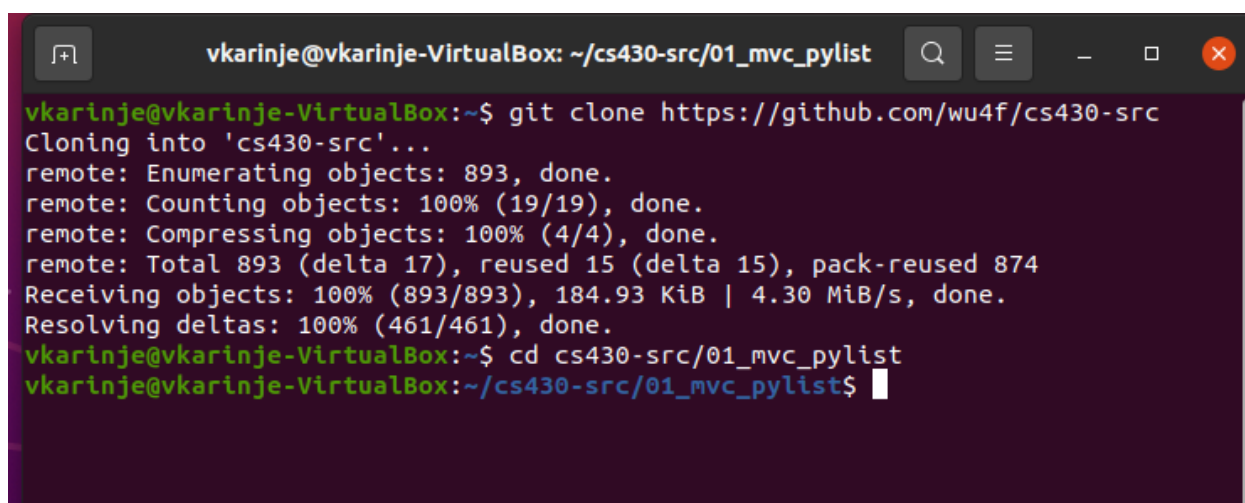
PSU ID: 925923534

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## 03.1:Python Flask Guestbook

### Python Flask

To begin with, on a Linux VM or on a linuxlab machine, clone the repository and change into the directory containing the code

A terminal window with a dark purple background. The title bar shows 'vkarinje@vkarinje-VirtualBox: ~/cs430-src/01\_mvc\_pylist'. The terminal text shows the execution of 'git clone' and 'cd' commands. The output of 'git clone' shows progress for enumerating, counting, and compressing objects, and receiving deltas. The 'cd' command successfully changes the directory to 'cs430-src/01\_mvc\_pylist'.

```
vkarinje@vkarinje-VirtualBox: ~/cs430-src/01_mvc_pylist
vkarinje@vkarinje-VirtualBox:~$ git clone https://github.com/wu4f/cs430-src
Cloning into 'cs430-src'...
remote: Enumerating objects: 893, done.
remote: Counting objects: 100% (19/19), done.
remote: Compressing objects: 100% (4/4), done.
remote: Total 893 (delta 17), reused 15 (delta 15), pack-reused 874
Receiving objects: 100% (893/893), 184.93 KiB | 4.30 MiB/s, done.
Resolving deltas: 100% (461/461), done.
vkarinje@vkarinje-VirtualBox:~$ cd cs430-src/01_mvc_pylist
vkarinje@vkarinje-VirtualBox:~/cs430-src/01_mvc_pylist$
```

### Running the code

Finally, we'll run the application

```

vkarinje@vkarinje-VirtualBox: ~/cs430-src/01_mvc_pylist
vkarinje@vkarinje-VirtualBox:~/cs430-src/01_mvc_pylist$ sudo apt update
[sudo] password for vkarinje:
Get:1 https://dl.google.com/linux/chrome/deb stable InRelease [1,811 B]
Hit:2 http://us.archive.ubuntu.com/ubuntu focal InRelease
Get:3 http://security.ubuntu.com/ubuntu focal-security InRelease [114 kB]
Get:4 http://us.archive.ubuntu.com/ubuntu focal-updates InRelease [114 kB]
Get:5 https://dl.google.com/linux/chrome/deb stable/main amd64 Packages [1,114 B]
Get:6 http://us.archive.ubuntu.com/ubuntu focal-backports InRelease [108 kB]
Get:7 http://security.ubuntu.com/ubuntu focal-security/main amd64 Packages [1,785 kB]
Get:8 http://us.archive.ubuntu.com/ubuntu focal-updates/main i386 Packages [738 kB]
Get:9 http://us.archive.ubuntu.com/ubuntu focal-updates/main amd64 Packages [2,158 kB]
Get:10 http://security.ubuntu.com/ubuntu focal-security/main i386 Packages [508 kB]
Get:11 http://security.ubuntu.com/ubuntu focal-security/main Translation-en [297 kB]
Get:12 http://security.ubuntu.com/ubuntu focal-security/main amd64 DEP-11 Metadata [40.8 kB]
Get:13 http://security.ubuntu.com/ubuntu focal-security/main amd64 c-n-f Metadata [11.2 kB]
Get:14 http://security.ubuntu.com/ubuntu focal-security/restricted i386 Packages

```

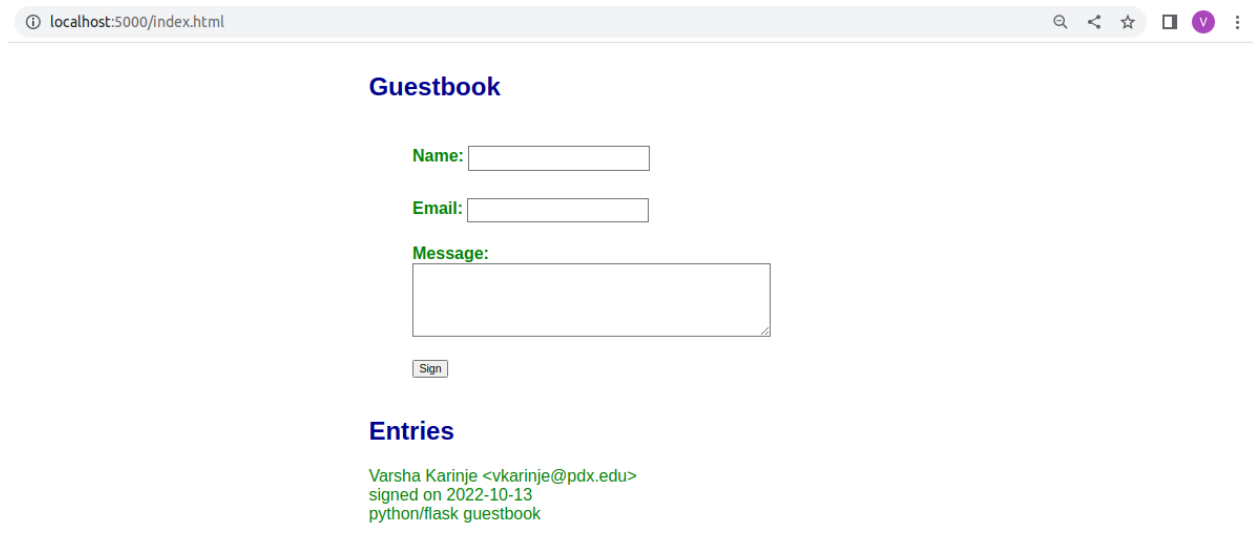
```

vkarinje@vkarinje-VirtualBox: ~/cs430-src/01_mvc_pylist
vkarinje@vkarinje-VirtualBox:~/cs430-src/01_mvc_pylist$ sudo apt install python3-dev build-essential python3-venv -y
Reading package lists... Done
Building dependency tree
Reading state information... Done
python3-dev is already the newest version (3.8.2-0ubuntu2).
python3-venv is already the newest version (3.8.2-0ubuntu2).
build-essential is already the newest version (12.8ubuntu1.1).
build-essential set to manually installed.
0 upgraded, 0 newly installed, 0 to remove and 27 not upgraded.
vkarinje@vkarinje-VirtualBox:~/cs430-src/01_mvc_pylist$ python3 -m venv env
vkarinje@vkarinje-VirtualBox:~/cs430-src/01_mvc_pylist$ source env/bin/activate
(env) vkarinje@vkarinje-VirtualBox:~/cs430-src/01_mvc_pylist$ pip install -r requirements.txt
Collecting flask
  Downloading Flask-2.2.2-py3-none-any.whl (101 kB)
    | 101 kB 2.3 MB/s
Collecting importlib-metadata>=3.6.0; python_version < "3.10"
  Downloading importlib_metadata-5.0.0-py3-none-any.whl (21 kB)
Collecting Werkzeug>=2.2.2
  Downloading Werkzeug-2.2.2-py3-none-any.whl (232 kB)
    | 232 kB 48.7 MB/s
Collecting itsdangerous>=2.0
  Downloading itsdangerous-2.1.2-py3-none-any.whl (15 kB)

```

```
vkarinje@vkarinje-VirtualBox: ~/cs430-src/01_mvc_pylist
Downloading click-8.1.3-py3-none-any.whl (96 kB)
| [REDACTED] | 96 kB 8.4 MB/s
Collecting zipp>=0.5
  Downloading zipp-3.9.0-py3-none-any.whl (5.8 kB)
Collecting MarkupSafe>=2.1.1
  Downloading MarkupSafe-2.1.1-cp38-cp38-manylinux_2_17_x86_64.manylinux2014_x86_64.whl (25 kB)
Installing collected packages: zipp, importlib-metadata, MarkupSafe, Werkzeug, itsdangerous, Jinja2, click, flask
Successfully installed Jinja2-3.1.2 MarkupSafe-2.1.1 Werkzeug-2.2.2 click-8.1.3 flask-2.2.2 importlib-metadata-5.0.0 itsdangerous-2.1.2 zipp-3.9.0
(env) vkarinje@vkarinje-VirtualBox:~/cs430-src/01_mvc_pylist$ python app.py
* Serving Flask app 'app'
* Debug mode: on
WARNING: This is a development server. Do not use it in a production deployment.
Use a production WSGI server instead.
* Running on all addresses (0.0.0.0)
* Running on http://127.0.0.1:5000
* Running on http://10.0.2.15:5000
Press CTRL+C to quit
* Restarting with stat
* Debugger is active!
* Debugger PIN: 138-205-664
```

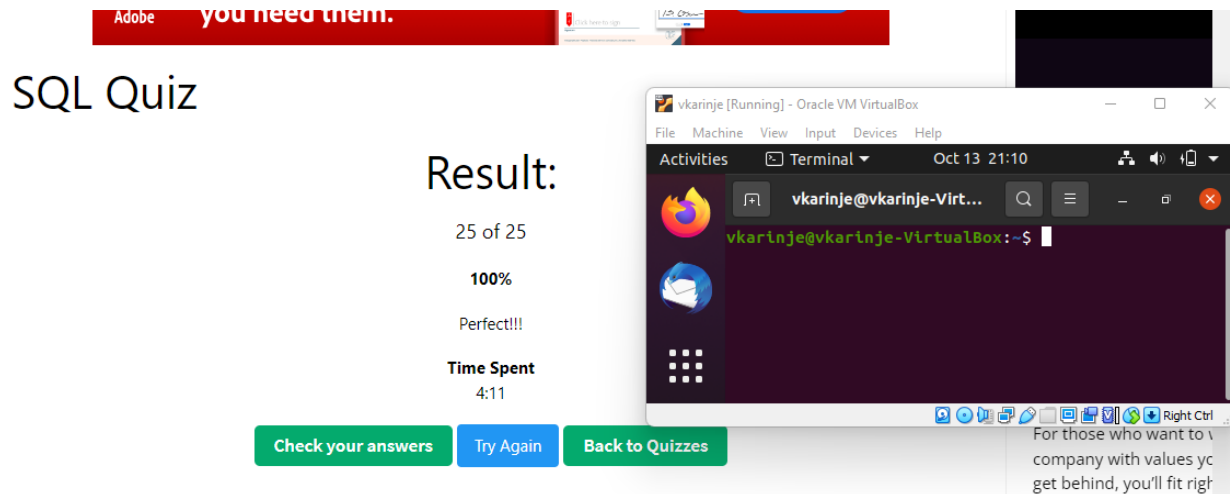
- Add an entry that includes your PSU e-mail address in it and the message "python/flask guestbook". Take a screenshot of the resulting page for your lab notebook.



## 03.2ag: SQL

## SQL Quiz

- Take the quiz and include a screenshot with your OdinID on it of the "Check your answers" page at the end of the quiz.



## GCP Cloud SQL

Examine the data definition language (DDL) commands in `cloudsql/table_creation.sql` that specifies the schema and answer the following questions:

```

cloud-CS-530-karinje-vkar... Search for resources, docs, products, and more Search
CLOUD SHELL Terminal (cloud-cs-530-karinje-vkarinje) x + Open Editor
vkarinje@cloudshell:~ (cloud-cs-530-karinje-vkarinje) $ cd training-data-analyst/CPE100/lab3a
vkarinje@cloudshell:~/training-data-analyst/CPE100/lab3a (cloud-cs-530-karinje-vkarinje) $ cat cloudsql/table_creation.sql
CREATE DATABASE IF NOT EXISTS recommendation_spark;

USE recommendation_spark;

DROP TABLE IF EXISTS Recommendation;
DROP TABLE IF EXISTS Rating;
DROP TABLE IF EXISTS Accommodation;
CREATE TABLE IF NOT EXISTS Accommodation
(
  id varchar(255),
  title varchar(255),
  location varchar(255),
  price int,
  rooms int,
  rating float,
  type varchar(255),
  PRIMARY KEY (ID)
);

CREATE TABLE IF NOT EXISTS Rating
(
  userId varchar(255),
  accoId varchar(255),
  rating int,
  PRIMARY KEY(accoId, userId),
  FOREIGN KEY (accoId)
    REFERENCES Accommodation(id)
);

CREATE TABLE IF NOT EXISTS Recommendation
(
  userId varchar(255),
  accoId varchar(255),
  prediction float,
  PRIMARY KEY(userId, accoId),
  FOREIGN KEY (accoId)
    REFERENCES Accommodation(id)
);

vkarinje@cloudshell:~/training-data-analyst/CPE100/lab3a (cloud-cs-530-karinje-vkarinje) $

```

- What are the names of the tables that are created?

**Ans:** The names of the tables are Accommodation, Rating and Recommendation.

- What are the primary keys of each table?

Primary key for Accommodation is ID.

Primary key for Rating is accold, userId

Primary key for Recommendation is userId, accold

- What data (e.g. columns) does the Accommodation table hold?

Id, title, location, price,rooms,rating and type

Examine the data that fills in these tables at [cloudsql/accommodation.csv](#) and answer the following questions.

```

cloud-CS-530-karinje-vkar... Search for resources, docs, products, and more Search
CLOUD SHELL Terminal (cloud-cs-530-karinje-vkarinje) + Open Editor
vkarinje@cloudshell:~/training-data-analyst/CPB100/lab3a (cloud-cs-530-karinje-vkarinje) $ cat cloudsql/accommodation.csv
1,Comfy Quiet Chalet,Vancouver,50,2,3.1,cottage
2,Cosy Calm Hut,London,65,2,4.1,cottage
3,Agreeable Calm Place,London,65,4,4.8,house
4,Colossal Quiet Chateau,Paris,2400,16,2.7,castle
5,Homy Quiet Shack,Paris,50,1,1.1,cottage
6,Pleasant Quiet Place,Dublin,35,5,4.3,house
7,Vast Peaceful Fortress,Seattle,3200,24,1.9,castle
8,Giant Quiet Fortress,San Francisco,2400,12,4.1,castle
9,Giant Peaceful Palace,London,1500,20,3.5,castle
10,Sisable Calm Country House,Auckland,650,9,4.9,mansion
11,Homy Quiet Shanty,Melbourne,50,1,2.8,cottage
12,Beautiful Peaceful Villa,Seattle,90,2,2.1,house
13,Enormous Peaceful Fortress,Melbourne,2300,12,2.3,castle
14,Colossal Peaceful Palace,Melbourne,1200,21,1.5,castle
15,Vast Private Fort,London,1300,18,2.6,castle
16,Large Calm House,Melbourne,45,3,4.1,house
17,Large Calm Sately House,NYC,850,9,1.2,mansion
18,Big Peaceful Hut,Melbourne,60,2,2.4,cottage
19,Giant Quiet Castle,Paris,4500,18,1.6,castle
20,Big Private Hall,Buenos Aires,650,12,1.2,mansion
21,Big Peaceful Cabin,Seattle,50,2,4.9,cottage
22,Pleasant Peaceful House,Auckland,50,5,3.5,house
23,Homy Calm House,Paris,70,2,2.0,cottage
24,Nice Private Cottage,San Francisco,40,2,1.1,cottage
25,Nice Calm Chalet,Seattle,65,2,4.5,cottage
26,Enormous Peaceful Palace,Paris,1200,18,1.1,castle
27,Enormous Calm Castle,Berlin,1500,12,2.3,castle
28,Beautiful Calm Villa,Tokyo,110,2,4.2,house
29,Big Quiet Manor,San Francisco,650,12,4.3,mansion
30,Large Peaceful House,Berlin,110,5,2.3,house
31,Colossal Private Castle,Buenos Aires,1400,15,3.2,castle
32,Immense Private Hall,Seattle,850,12,1.0,mansion
33,Pleasant Calm Place,Tokyo,30,2,4.8,house
34,Vast Private Fort,NYC,4400,21,1.7,castle
35,Colossal Quiet Chateau,NYC,2300,14,4.6,castle
36,Comfy Private Shanty,NYC,80,1,3.7,cottage
37,Enormous Quiet Chateau,Berlin,2000,20,2.7,castle
38,Big Private House,San Francisco,70,4,2.9,house
39,Beautiful Calm Villa,Vancouver,50,3,3.5,house
40,Colossal Private Castle,Seattle,2900,24,1.5,castle
41,Big Calm Manor,Seattle,800,11,2.7,mansion

```

- Find the accommodations in Dublin.

6, Pleasant Quiet Place, Dublin, 35, 5, 4.3, house

77, Great Private Country House, Dublin, 1150, 10, 2.4, mansion

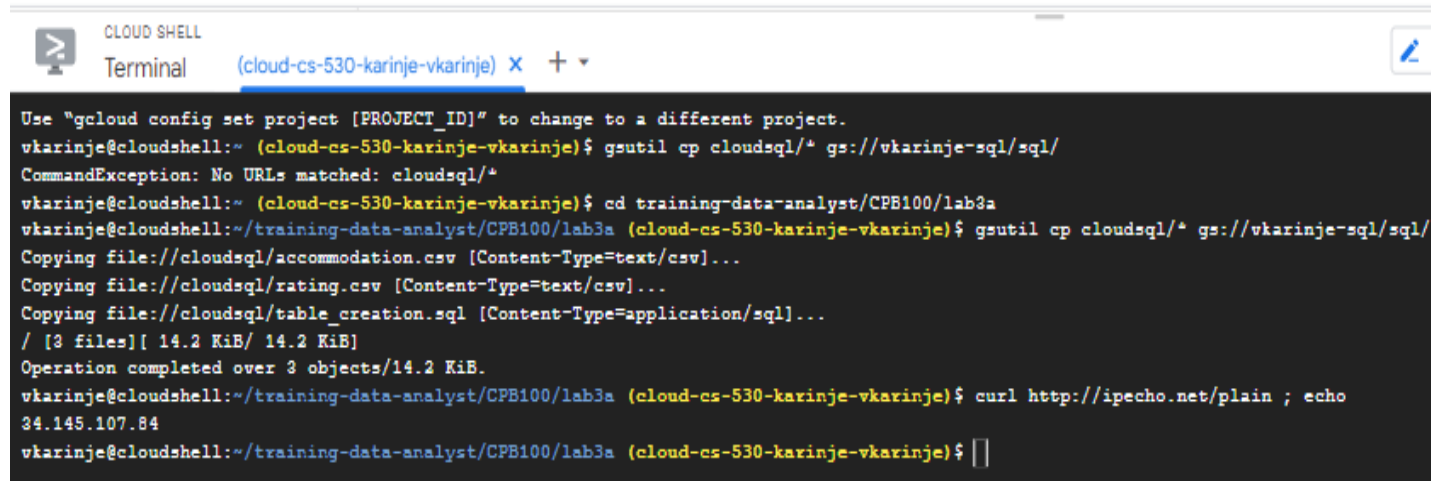
- Assuming the column data is ordered as in the DDL, list the attributes and their values for each accommodation in Dublin.

Attribute s	id	title	location	price	rooms	rating	type
Values	6	Pleasant Quiet Place	Dublin	35	5	4.3	house
Values	77	Great Private Country House	Dublin	1150	10	2.4	mansion

create a regional storage bucket in `us-west1` with a unique name:

Then, copy the files from the `cloudsql` directory over to it.

run the following command and record your session's IP address

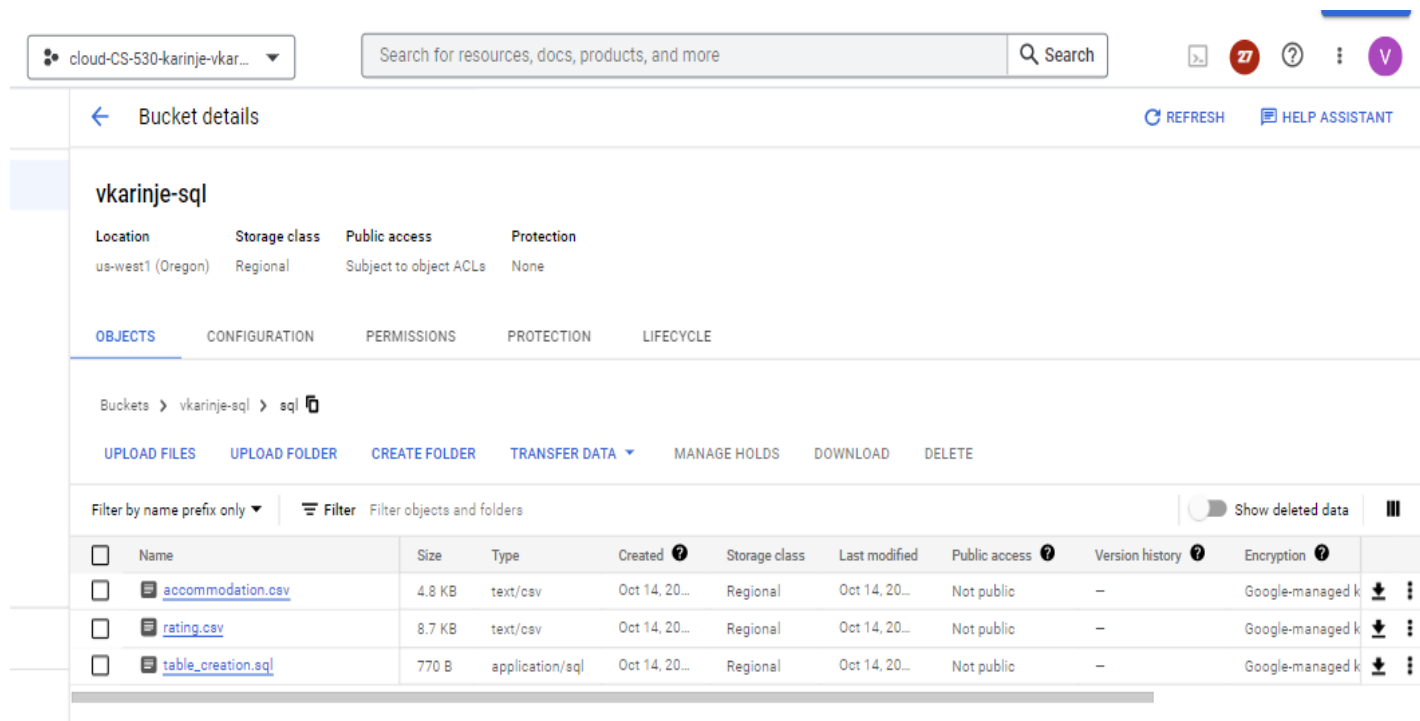


```

CLOUD SHELL
Terminal (cloud-cs-530-karinje-vkarinje) X + v

Use "gcloud config set project [PROJECT_ID]" to change to a different project.
vkarinje@cloudshell:~ (cloud-cs-530-karinje-vkarinje)$ gsutil cp cloudsql/* gs://vkarinje-sql/sql/
CommandException: No URLs matched: cloudsql/*
vkarinje@cloudshell:~ (cloud-cs-530-karinje-vkarinje)$ cd training-data-analyst/CPB100/lab3a
vkarinje@cloudshell:~/training-data-analyst/CPB100/lab3a (cloud-cs-530-karinje-vkarinje)$ gsutil cp cloudsql/* gs://vkarinje-sql/sql/
Copying file://cloudsql/accommodation.csv [Content-Type=text/csv]...
Copying file://cloudsql/rating.csv [Content-Type=text/csv]...
Copying file://cloudsql/table_creation.sql [Content-Type=application/sql]...
/ [3 files][ 14.2 KiB/ 14.2 KiB]
Operation completed over 3 objects/14.2 KiB.
vkarinje@cloudshell:~/training-data-analyst/CPB100/lab3a (cloud-cs-530-karinje-vkarinje)$ curl http://ipecho.net/plain ; echo
34.145.107.84
vkarinje@cloudshell:~/training-data-analyst/CPB100/lab3a (cloud-cs-530-karinje-vkarinje)$

```



cloud-CS-530-karinje-vkar...

Search for resources, docs, products, and more

Bucket details

**vkarinje-sql**

Location	Storage class	Public access	Protection
us-west1 (Oregon)	Regional	Subject to object ACLs	None

**OBJECTS** CONFIGURATION PERMISSIONS PROTECTION LIFECYCLE

Buckets > vkarinje-sql > sql

UPLOAD FILES UPLOAD FOLDER CREATE FOLDER TRANSFER DATA MANAGE HOLDS DOWNLOAD DELETE

Filter by name prefix only Filter Filter objects and folders Show deleted data

Name	Size	Type	Created	Storage class	Last modified	Public access	Version history	Encryption
accommodation.csv	4.8 KB	text/csv	Oct 14, 20...	Regional	Oct 14, 20...	Not public	—	Google-managed k
rating.csv	8.7 KB	text/csv	Oct 14, 20...	Regional	Oct 14, 20...	Not public	—	Google-managed k
table_creation.sql	770 B	application/sql	Oct 14, 20...	Regional	Oct 14, 20...	Not public	—	Google-managed k

## Cloud SQL instance creation



cloud-CS-530-karinje-vkar...

Search for resources, docs, products, and more

Overview

EDITIMPORTEXPORTRESTARTSTOPDELETECLONE

All instances > rentals

rentals

MySQL 8.0

Chart

CPU utilization

UTC-710:00 PM11:00 PMOct 141:00 AM2:00 AM3:00 AM4:00 AM5:00 AM6:00 AM7:00 AM8:00 AM9:00 AM

→ Go to Query insights for more in-depth info on queries and performance

Connect to this instance

Public IP address

35.185.228.171

Connection name

cloud-cs-530-karinje-vkarinje:us-west1:rentals

Need help connecting?

Review the documentation to learn about the many ways to connect to your instance.  
[Learn more](#)

To connect using gcloud,  
[OPEN CLOUD SHELL](#)

To learn about connecting with a Compute Engine VM,  
[START TUTORIAL](#)

Suggested actions

→ Enable high availability

## Cloud SQL network access

cloud-CS-530-karinje-vkar...
Search for resources, docs, products, and more
Search

Edit rentals

In case of outage, no failover. Not recommended for production.

☐ Multiple zones (Highly available)

Automatic failover to another zone within your selected region. Recommended for production instances. Increases cost.

▼ SPECIFY ZONES

### Customize your instance

You can also customize instance configurations later

#### Machine type

Machine has 4 vCPUs and 26 GB of memory.

#### Storage

Storage type is SSD. Storage size is 100 GB, and will automatically scale as needed.

#### Connections

Choose how you want your source to connect to this instance, then define which networks are authorized to connect. [Learn more](#)

You can use the Cloud SQL Proxy for extra security with either option. [Learn more](#)

**Instance IP assignment**

☐ Private IP

Assigns an internal, Google-hosted VPC IP address. Requires additional APIs and permissions. Can't be disabled once enabled. [Learn more](#)

☒ Public IP

Assigns an external, internet-accessible IP address. Requires using an authorized network or the Cloud SQL Proxy to connect to this instance. [Learn more](#)

**Authorized networks**

You can specify CIDR ranges to allow IP addresses in those ranges to access your instance. [Learn more](#)

CloudShell\_IP (35.185.220.171/32)

[ADD NETWORK](#)

#### Data Protection

Automatic backups enabled. Point-in-time recovery (via binary logs) enabled.

Instance deletion protection enabled.

#### Maintenance

Updates may occur any day of the week. Maintenance timing set to 'Later.'

### Summary

Region	us-west1 (Oregon)
DB Version	MySQL 8.0.26
vCPUs	4 vCPU
Memory	26 GB
Storage	100 GB
Network throughput (MB/s)	1,000 of 2,000
Disk throughput (MB/s)	Read: 48.0 of 240.0
	Write: 48.0 of 240.0
IOPS	Read: 3,000 of 15,000
	Write: 3,000 of 15,000
Connections	Public IP
Backup	Automated
Availability	Single zone
Point-in-time recovery	Enabled

## Cloud SQL importing data

The screenshot displays the Google Cloud Platform console for a Cloud SQL instance. The top navigation bar includes the instance name, a search bar, and a notification icon with 27 alerts. The main content area is divided into several sections:

- Connect to this instance:** Shows the public IP address (35.185.228.171) and connection name (cloud-cs-530-karinje-vkarinje:us-west1:rentals). It includes links for help, documentation, and tutorials.
- Suggested actions:** A single action to 'Enable high availability'.
- Service account:** Displays the service account ID (p791612885972-ka@uvx@gcp-sa-cloud-sql.iam.gserviceaccount.com).
- Operations and logs:** A table showing recent operations:
 

Creation Time	Completion Time	Type	Status
Oct 14, 2022, 10:08:24 PM		Import	Importing data from gs://vkarinje-sql/sql/rating.csv
Oct 14, 2022, 10:07:26 PM	Oct 14, 2022, 10:07:39 PM	Import	Import from gs://vkarinje-sql/sql/accommodation.csv succeeded.
Oct 14, 2022, 9:15:27 PM	Oct 14, 2022, 9:15:41 PM	Import	Import from gs://vkarinje-sql/sql/table_creation.sql succeeded.
Oct 14, 2022, 8:55:51 PM	Oct 14, 2022, 8:56:20 PM	Update	Update finished
Oct 14, 2022, 8:24:55 PM	Oct 14, 2022, 8:26:17 PM	Backup	Backup finished
- Configuration:** Shows instance details: 4 vCPUs, 26 GB Memory, 100 GB SSD storage. It lists various settings like database version (MySQL 8.0.28), auto storage increase, automated backups, point-in-time recovery, instance deletion protection, location (us-west1-b), and labels.
- Maintenance:** Shows the maintenance window (Updates may occur any day of the week), order of update (Later), notifications (Off), and upcoming maintenance (No maintenance scheduled right now).

On the right side, there is a notification banner titled 'Uploads and cloud-CS-530-karinje-vkar...' showing two successful imports: 'Imported from rating.csv to rentals' and 'Imported from accommodation.csv to rentals', both with a count of 10.

## Cloud SQL from Cloud Shell

Within your Cloud Shell session, connect to the Cloud SQL instance using its IP address and the root password you set previously.

Within the MySQL client shell, set the database for the session.

```

ERROR 1013 (20000): Access denied for user 'root'@'10.10.10.10' (using password: YES)
vkarinje@cloudshell:~ (cloud-cs-530-karinje-vkarinje)$ gcloud sql connect rentals --user=root --quiet
Allowlisting your IP for incoming connection for 5 minutes...done.
Connecting to database with SQL user [root].Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 706
Server version: 8.0.26-google (Google)

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affiliates. Other names may be trademarks of their respective
owners.


Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> use recommendation_spark;
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A

Database changed
mysql> 

```

View the tables that have been created.



CLOUD SHELL

Terminal (cloud-cs-530-karinje-vkarinje) X + ▾

```

Welcome to Cloud Shell! Type "help" to get started.
Your Cloud Platform project in this session is set to cloud-cs-530-karinje-vkarinje.
Use "gcloud config set project [PROJECT_ID]" to change to a different project.
vkarinje@cloudshell:~ (cloud-cs-530-karinje-vkarinje)$ gcloud sql connect rentals --user=root --quiet
Allowlisting your IP for incoming connection for 5 minutes...done.
Connecting to database with SQL user [root].Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 755
Server version: 8.0.26-google (Google)

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owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> use recommendation_spark;
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A

Database changed
mysql> show tables;
+-----+
| Tables_in_recommendation_spark |
+-----+
| Accommodation                  |
| Rating                         |
| Recommendation                  |
+-----+
3 rows in set (0.00 sec)

mysql> 

```

Verify the data has been imported properly.

CLOUD SHELL  
Terminal (cloud-cs-530-karinje-vkarinje) X + ▾

```
| 19 | 95 | 4 |
| 2 | 95 | 2 |
| 20 | 95 | 1 |
| 21 | 95 | 1 |
| 22 | 95 | 4 |
| 23 | 95 | 2 |
| 24 | 95 | 3 |
| 3 | 95 | 2 |
| 4 | 95 | 1 |
| 5 | 95 | 2 |
| 6 | 95 | 1 |
| 7 | 95 | 1 |
| 8 | 95 | 1 |
| 9 | 95 | 3 |
| 10 | 96 | 2 |
| 12 | 96 | 4 |
| 16 | 96 | 1 |
| 1 | 97 | 3 |
| 10 | 97 | 1 |
| 15 | 97 | 2 |
| 17 | 97 | 4 |
| 18 | 97 | 3 |
| 19 | 97 | 3 |
| 2 | 97 | 3 |
| 20 | 97 | 4 |
| 21 | 97 | 2 |
| 23 | 97 | 1 |
| 7 | 97 | 1 |
| 1 | 98 | 3 |
| 10 | 98 | 2 |
| 11 | 98 | 1 |
| 12 | 98 | 3 |
| 13 | 98 | 4 |
| 15 | 98 | 1 |
| 16 | 98 | 1 |
| 17 | 98 | 2 |
| 18 | 98 | 4 |
| 19 | 98 | 1 |
| 2 | 98 | 2 |
| 20 | 98 | 1 |
| 21 | 98 | 1 |
| 22 | 98 | 3 |
| 23 | 98 | 2 |
| 24 | 98 | 2 |
| 4 | 98 | 2 |
| 6 | 98 | 3 |
| 7 | 98 | 2 |
| 8 | 98 | 1 |
| 10 | 99 | 4 |
| 16 | 99 | 5 |
| 21 | 99 | 5 |
| 23 | 99 | 5 |
| 4 | 99 | 4 |
| 7 | 99 | 5 |
| 8 | 99 | 5 |
+-----+-----+-----+
1186 rows in set (0.00 sec)

mysql> |
```

Run queries for accommodations at two price levels of your choice and two types of your choice.

```

CLOUD SHELL
Terminal (cloud-cs-530-karinje-vkarinje) X +
| 61 | Large Calm Place | NYC | 60 | 2 | 1.3 | house |
| 62 | Comfy Calm Cabin | Buenos Aires | 65 | 2 | 4.3 | cottage |
| 63 | Big Private Chateau | Buenos Aires | 2400 | 23 | 4.5 | castle |
| 64 | Enormous Peaceful Fort | Berlin | 3500 | 13 | 1.8 | castle |
| 65 | Comfy Private Chalet | NYC | 45 | 2 | 1 | cottage |
| 66 | Beautiful Private Villa | London | 80 | 2 | 2.4 | house |
| 67 | Giant Calm Chateau | Vancouver | 2300 | 13 | 3.2 | castle |
| 68 | Giant Peaceful Fort | Paris | 1800 | 21 | 1.1 | castle |
| 69 | Homy Quiet House | NYC | 65 | 1 | 3.1 | cottage |
| 7 | Vast Peaceful Fortress | Seattle | 3200 | 24 | 1.9 | castle |
| 70 | Great Calm Sately House | Paris | 1050 | 10 | 2.2 | mansion |
| 71 | Cozy Calm Hut | San Francisco | 55 | 2 | 3.8 | cottage |
| 72 | Beautiful Calm Place | Paris | 80 | 4 | 2.1 | house |
| 73 | Nice Peaceful Cabin | London | 60 | 1 | 3.4 | cottage |
| 74 | Giant Calm Fort | Melbourne | 2400 | 12 | 2.3 | castle |
| 75 | Large Private Place | Berlin | 50 | 4 | 3.6 | house |
| 76 | Pleasant Calm Villa | Berlin | 30 | 2 | 2.4 | house |
| 77 | Great Private Country House | Dublin | 1150 | 10 | 2.4 | mansion |
| 78 | Giant Private Fortress | Tokyo | 2100 | 17 | 2.5 | castle |
| 79 | Large Private Manor | Vancouver | 1050 | 10 | 4.8 | mansion |
| 8 | Giant Quiet Fortress | San Francisco | 3400 | 12 | 4.1 | castle |
| 80 | Big Quiet Cabin | San Francisco | 40 | 3 | 4.3 | cottage |
| 81 | Homy Quiet Shack | Seattle | 70 | 3 | 2.2 | cottage |
| 82 | Cozy Peaceful Cabin | San Francisco | 75 | 1 | 1.6 | cottage |
| 83 | Comfy Calm Shack | San Francisco | 40 | 3 | 3.4 | cottage |
| 84 | Great Peaceful Sately House | Melbourne | 700 | 8 | 3.2 | mansion |
| 85 | Nice Private Shack | Auckland | 55 | 1 | 4.9 | cottage |
| 86 | Large Quiet House | London | 100 | 4 | 4 | house |
| 87 | Immense Peaceful Hall | San Francisco | 850 | 12 | 4.4 | mansion |
| 88 | Colossal Quiet Palace | Seattle | 4100 | 16 | 3.6 | castle |
| 89 | Nice Private House | Seattle | 45 | 2 | 3.2 | cottage |
| 9 | Giant Peaceful Palace | London | 1500 | 20 | 3.5 | castle |
| 90 | Big Quiet House | Seattle | 35 | 5 | 3.2 | house |
| 91 | Large Peaceful Hall | Melbourne | 650 | 10 | 1.9 | mansion |
| 92 | Cozy Quiet Bungalow | San Francisco | 85 | 3 | 3.5 | cottage |
| 93 | Giant Quiet Chateau | Vancouver | 1800 | 16 | 3.9 | castle |
| 94 | Giant Peaceful Castle | Auckland | 2900 | 25 | 3.3 | castle |
| 95 | Great Calm Hall | San Francisco | 800 | 11 | 3.8 | mansion |
| 96 | Immense Private Country House | Tokyo | 800 | 9 | 3.8 | mansion |
| 97 | Cozy Quiet Chalet | Auckland | 75 | 1 | 2.3 | cottage |
| 98 | Big Private Castle | Paris | 2000 | 23 | 4.6 | castle |
| 99 | Pleasant Quiet Place | NYC | 80 | 4 | 3.2 | house |
+-----+-----+-----+-----+-----+-----+
99 rows in set (0.00 sec)

mysql> select * from Accommodation where( price=850 OR price=50) and (type='mansion' OR type='cottage');
+-----+-----+-----+-----+-----+-----+
| id | title | location | price | rooms | rating | type |
+-----+-----+-----+-----+-----+-----+
| 1 | Comfy Quiet Chalet | Vancouver | 50 | 3 | 3.1 | cottage |
| 11 | Homy Quiet Shanty | Melbourne | 50 | 1 | 2.8 | cottage |
| 17 | Large Calm Sately House | NYC | 850 | 9 | 1.2 | mansion |
| 32 | Immense Private Hall | Seattle | 850 | 12 | 1 | mansion |
| 5 | Homy Quiet Shack | Paris | 50 | 1 | 1.1 | cottage |
| 87 | Immense Peaceful Hall | San Francisco | 850 | 12 | 4.4 | mansion |
+-----+-----+-----+-----+-----+-----+
6 rows in set (0.01 sec)

```

## Cloud SQL cleanup

The screenshot shows the Google Cloud Platform console. At the top, there's a search bar and navigation tabs for SQL, Instances, and Buckets. The 'Instances' tab is active, displaying 'Cloud SQL Instances'. Below this, there's a description of Cloud SQL instances and two buttons: 'CREATE INSTANCE' and 'MIGRATE DATA'. The 'Buckets' tab is also visible, showing a table with columns for Name, Created, Location type, Location, Default storage class, Last modified, Public access, Access control, Protection, Lifecycle rules, Tags, and Encryption. Below the table, there's a message 'Store and retrieve your data' and two buttons: 'CREATE BUCKET' and 'TAKE QUICKSTART'.

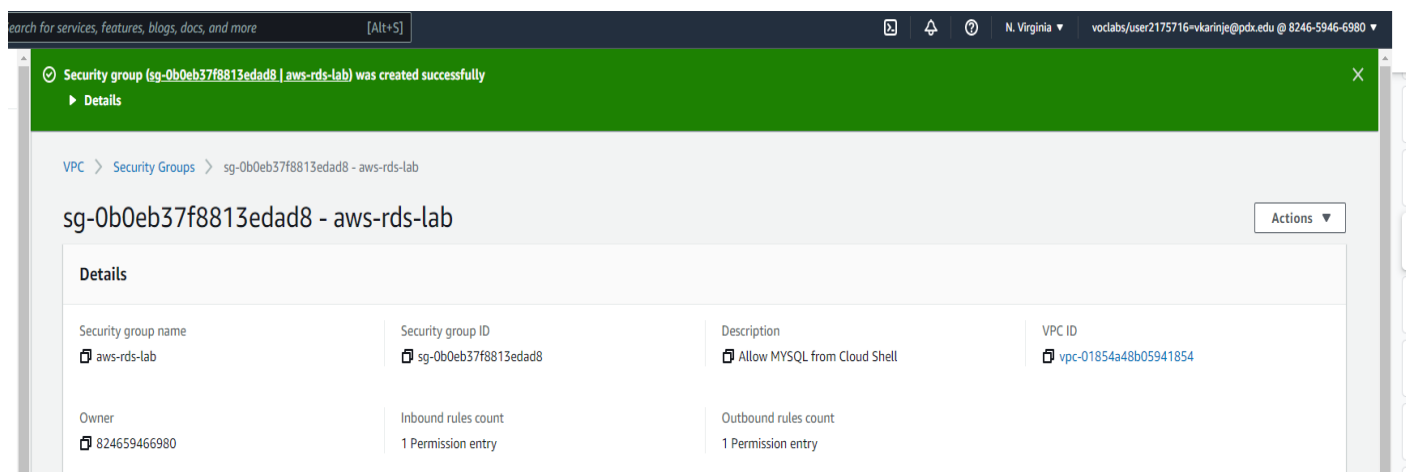
## RDS security group

The screenshot shows the AWS CloudShell terminal interface. The top bar includes the AWS logo, 'Services', a search bar, and the region 'N. Virginia'. The terminal output shows the following commands and their results:

```

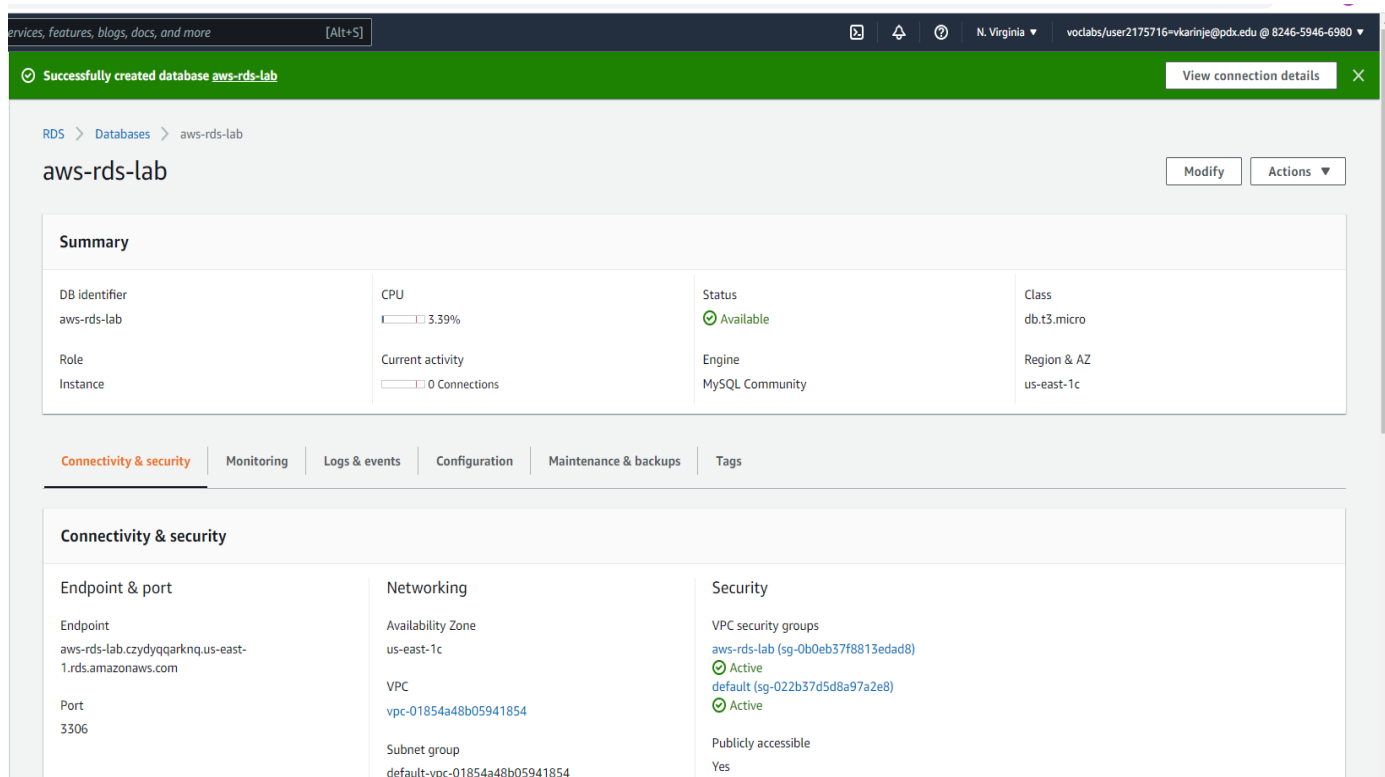
Preparing your terminal...
[cloudshell-user@ip-10-0-14-92 ~]$ Try these commands to get started:
aws help or aws <command> help or aws <command> --cli-auto-prompt
[cloudshell-user@ip-10-0-14-92 ~]$ curl http://ipecho.net/plain ; echo
3.238.5.24
[cloudshell-user@ip-10-0-14-92 ~]$
  
```





## RDS network access

Finally, create the database. Visit the web console of RDS and wait until the "Status" of the database is "Available". Note the endpoint address on the bottom-left that will be used to connect to as shown below:



## RDS test instance

- Show a screenshot of the successful connection similar to below that includes your OdinID

```

aws
Services
Search for services, features, blogs, docs, and more [Alt+S]
N. Virginia voclabs/user2175716-vkarinje@pdx.edu @ 8246-5946-6980
AWS CloudShell
US-east-1
Preparing your terminal...
[cloudshell-user@ip-10-0-14-92 ~]$ Try these commands to get started:
aws help or aws <command> help or aws <command> --cli-auto-prompt
[cloudshell-user@ip-10-0-14-92 ~]$ curl http://ipecho.net/plain ; echo
3.238.5.24
[cloudshell-user@ip-10-0-14-92 ~]$ mysql -h aws-rds-lab.czydyqqarknq.us-east-1.rds.amazonaws.com -P 3306 -u admin -p
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MySQL connection id is 17
Server version: 8.0.28 Source distribution

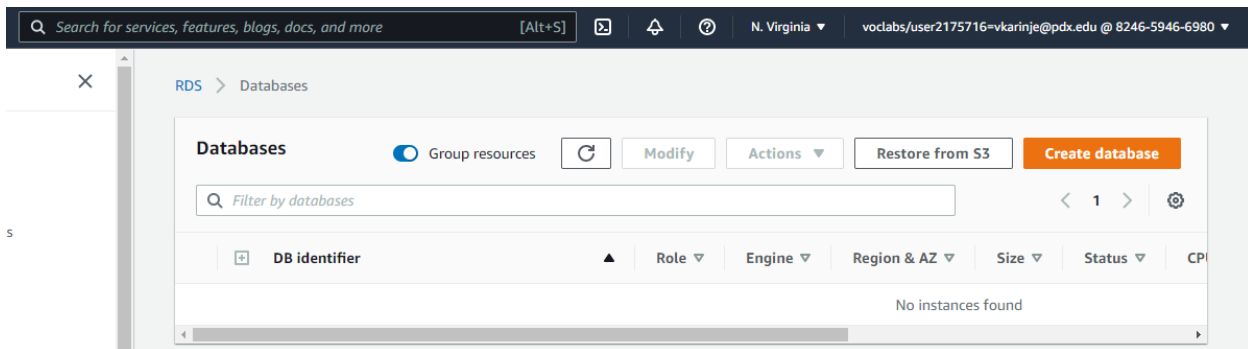
Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MySQL [(none)]>

```

## RDS cleanup



### 03.3: sqlite3 Guestbook

## Running the code

```

(env) vkarinje@vkarinje-VirtualBox:~/cs430-src/02_mvp_modules_sqlite3$ python app.py
* Serving Flask app 'app'
* Debug mode: on
WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.
* Running on all addresses (0.0.0.0)
* Running on http://127.0.0.1:8000
* Running on http://10.0.2.15:8000
Press CTRL+C to quit
* Restarting with stat
* Debugger is active!
* Debugger PIN: 366-871-715
127.0.0.1 - - [15/Oct/2022 18:57:21] "GET / HTTP/1.1" 200 -
127.0.0.1 - - [15/Oct/2022 18:57:21] "GET /static/style.css HTTP/1.1" 200 -
127.0.0.1 - - [15/Oct/2022 18:57:21] "GET /favicon.ico HTTP/1.1" 404 -
127.0.0.1 - - [15/Oct/2022 18:58:48] "GET /sign HTTP/1.1" 200 -
127.0.0.1 - - [15/Oct/2022 18:58:48] "GET /static/style.css HTTP/1.1" 304 -
127.0.0.1 - - [15/Oct/2022 19:05:09] "POST /sign HTTP/1.1" 302 -
127.0.0.1 - - [15/Oct/2022 19:05:09] "GET / HTTP/1.1" 200 -
127.0.0.1 - - [15/Oct/2022 19:05:09] "GET /static/style.css HTTP/1.1" 304 -

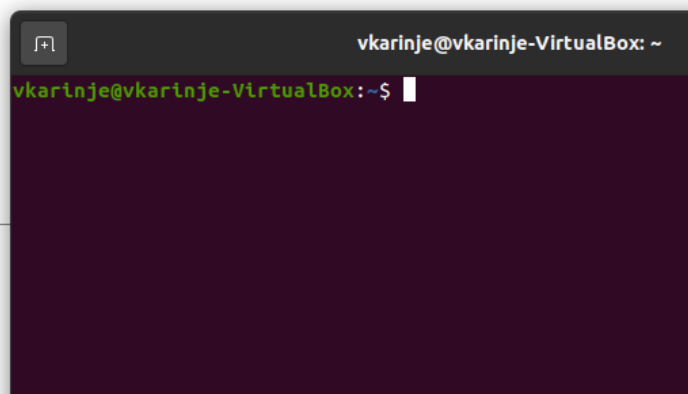
```

## Guestbook

Sign [here](#)

### Entries

Varsha Karinje <vkarinje@pdx.edu>  
signed on 2022-10-15  
python/flask MVP sqlite3 #1



## Guestbook

[Sign here](#)

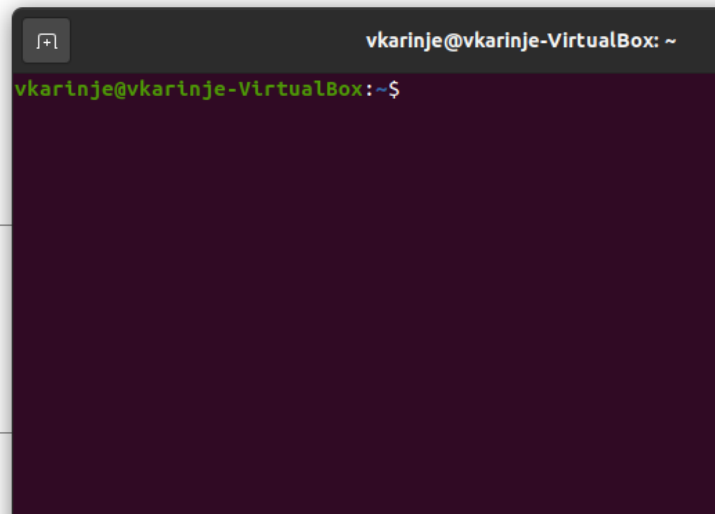
### Entries

Varsha Karinje <vkarinje@pdx.edu>  
signed on 2022-10-15  
python/flask MVP sqlite3 #1

---

Varsha Karinje <vkarinje@pdx.edu>  
signed on 2022-10-15  
python/flask MVP sqlite3 #2

---



## sqlite3 database

Bring up the entries.db database within sqlite3 via the following command:  
List the tables in the database and note the table name

- Then, output the schema for the table via its name

```
(env) vkarinje@vkarinje-VirtualBox:~/cs430-src/02_mvp_modules_sqlite3$ sqlite3 entries.db
SQLite version 3.31.1 2020-01-27 19:55:54
Enter ".help" for usage hints.
sqlite> .tables
guestbook
sqlite> .schema guestbook
CREATE TABLE guestbook (name text, email text, signed_on date, message);
```

The table name is guestbook

- Finally, perform a SQL query to dump out all rows in the table

```
sqlite> select * from guestbook;  
Varsha Karinje|vkarinje@pdx.edu|2022-10-15|python/flask MVP sqlite3 #1  
Varsha Karinje|vkarinje@pdx.edu|2022-10-15|python/flask MVP sqlite3 #2  
sqlite> █
```

