

1. SQL, Cloud SQL, RDS

- No questions or screenshots

2. SQL quiz

SQL Quiz

Result:

25 of 25

100%

Perfect!!!

Time Spent
6:58

[Check your answers](#) [Try Again](#) [Back to Quizzes](#)

Share your score:



3. GCP Cloud SQL

- To begin with, within Cloud Shell, download the database files and change into the lab directory

```
Welcome to Cloud Shell! Type "help" to get started.
Your Cloud Platform project in this session is set to cs356-w21-branden-codd.
Use "gcloud config set project [PROJECT_ID]" to change to a different project.
codd@cloudshell:~ (cs356-w21-branden-codd) $ git clone https://github.com/GoogleCloudPlatform/training-data-analyst
Cloning into 'training-data-analyst'...
remote: Enumerating objects: 1, done.
remote: Counting objects: 100% (1/1), done.
remote: Total 45046 (delta 0), reused 0 (delta 0), pack-reused 45045
Receiving objects: 100% (45046/45046), 477.89 MiB | 33.49 MiB/s, done.
Resolving deltas: 100% (28294/28294), done.
Checking out files: 100% (9153/9153), done.
codd@cloudshell:~ (cs356-w21-branden-codd) $ cd training-data-analyst/CPB100/lab3a
codd@cloudshell:~/training-data-analyst/CPB100/lab3a (cs356-w21-branden-codd) $
```

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

- **What are the names of the tables that are created?**
 - Accommodation
 - Rating
 - Recommendation
- **What are the primary keys of each table?**
 - Accommodation
 - ID
 - Rating

- accold, userId
 - Recommendation
 - userId, accold
 - **What data (e.g. columns) does the Accommodation table hold?**
 - Id
 - Title
 - Location
 - Price
 - Rooms
 - Rating
 - type
- Examine the data that fills in these tables at `cloudsql/accommodation.csv` and answer the following questions.

- **Find the accommodations in Dublin.**

```

codd@cloudshell:~/training-data-analyst/CPB100/lab3a/cloudsql (cs356-w21-branden-codd)$ grep Dublin accommodation.csv
6,Pleasant Quiet Place,Dublin,35,5,4.3,house
77,Great Private Country House,Dublin,1150,10,2.4,mansion
codd@cloudshell:~/training-data-analyst/CPB100/lab3a/cloudsql (cs356-w21-branden-codd)$

```

- **Assuming the column data is ordered as in the DDL, list the attributes and their values for each accommodation in Dublin. (listing both starting with the first)**
 - Id
 - 6, 77
 - Title
 - Pleasant Quiet Place, Great Private Country House
 - Location
 - Dublin
 - Price
 - 35, 1150
 - Rooms
 - 5, 10
 - Rating
 - 4.3, 2.4
 - Type
 - House, mansion

- To begin with, create a regional storage bucket in `us-west1` with a unique name:
- Then, copy the files from the `cloudsql` directory over to it.

```
codd@cloudshell:~/training-data-analyst/CPB100/lab3a (cs356-w21-branden-codd)$ gsutil cp cloudsql/* gs://lab3_2/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/x-sql]...
/ [3 files] [ 14.2 KiB/ 14.2 KiB]
Operation completed over 3 objects/14.2 KiB.
codd@cloudshell:~/training-data-analyst/CPB100/lab3a (cs356-w21-branden-codd)$
```

- find the external IP address of the Cloud Shell session.

```
codd@cloudshell:~/training-data-analyst/CPB100/lab3a (cs356-w21-branden-codd)$ curl http://ipecho.net/plain ; echo
35.233.156.216
codd@cloudshell:~/training-data-analyst/CPB100/lab3a (cs356-w21-branden-codd)$
```

- Finally, visit the Cloud Storage service from the web console to verify that your files have been copied over.

lab3_2										
OBJECTS CONFIGURATION PERMISSIONS RETENTION LIFECYCLE										
Buckets > lab3_2 > sql										
UPLOAD FILES UPLOAD FOLDER CREATE FOLDER MANAGE HOLDS DOWNLOAD DELETE										
Filter by name prefix only Filter objects and folders										
<input type="checkbox"/>	Name	Size	Type	Created time	Storage class	Last modified	Public access	Encryption	Retention expiration date	Holds
<input type="checkbox"/>	accommodation.csv	4.8 KB	text/csv	Jan 26, 2021, 3:07:05 PM	Regional	Jan 26, 2021, 3:07:05 PM	Not public	Google-managed key	—	None
<input type="checkbox"/>	rating.csv	8.7 KB	text/csv	Jan 26, 2021, 3:07:05 PM	Regional	Jan 26, 2021, 3:07:05 PM	Not public	Google-managed key	—	None
<input type="checkbox"/>	table_creation.sql	770 B	application/x-sql	Jan 26, 2021, 3:07:05 PM	Regional	Jan 26, 2021, 3:07:05 PM	Not public	Google-managed key	—	None

4. Cloud SQL instance creation

Google Cloud Platform

cs356-w21-Branden-Codd

SQL

Create a MySQL instance

Instance info

Instance ID

Choice is permanent. Use lowercase letters, numbers, and hyphens. Start with a letter.

rentals

Root password

Set a password for the root user. [Learn more](#)

Jasmine3

Generate

☐ No password

Location

For better performance, keep your data close to the services that need it.

Region

Choice is permanent

us-west1 (Oregon)

Zone

Can be changed at any time

us-west1-b

Database version

MySQL 5.7

Show configuration options

Create

Cancel

Connect to this instance

Public IP address

34.83.189.37

Connection name

cs356-w21-branden-codd:us-west1:rentals

5. Cloud SQL network access

✓ Connectivity

Choose how you would like to connect to your database instance.

For extra security, consider using the Cloud SQL proxy to connect to your instances after creation. [Learn more](#)

☐ Private IP

Private IP connectivity requires additional APIs and permissions. You may need to contact your organization's administrator for help enabling or using this feature. Currently, Private IP cannot be disabled once it has been enabled.

☒ Public IP

Authorized networks

Authorize a network or use a Proxy to connect to your instance. Networks will only be authorized via these addresses. [Learn more](#)

CloudShell_IP (104.198.10.252/32)

+ Add network

6. Cloud SQL importing data

☰ Operations and logs

Creation Time	Type	Status
Jan 26, 2021, 6:50:16 PM	Import	Importing data from gs://lab3_2/sql/rating.csv
Jan 26, 2021, 6:49:33 PM	Import	Import from gs://lab3_2/sql/accommodation.csv succeeded.
Jan 26, 2021, 6:48:21 PM	Import	Import from gs://lab3_2/sql/table_creation.sql succeeded.

7. Cloud SQL from Cloud Shell

- Run queries for accommodations at two price levels of your choice and two types of your choice. Show screenshots of the query output for your lab notebook.
 - prices

```
mysql> select * from Accommodation where price = 40;
```

id	title	location	price	rooms	rating	type
24	Nice Private Cottage	San Francisco	40	2	1.1	cottage
53	Comfy Private Shanty	Buenos Aires	40	2	4.6	cottage
58	Nice Calm Cottage	Berlin	40	3	3.9	cottage
80	Big Quiet Cabin	San Francisco	40	3	4.3	cottage
83	Comfy Calm Shack	San Francisco	40	3	3.4	cottage

```
5 rows in set (0.01 sec)
```



```
mysql> select * from Accommodation where price = 100;
```

id	title	location	price	rooms	rating	type
86	Large Quiet House	London	100	4	4	house

```
1 row in set (0.00 sec)
```

- type

```
mysql> select * from Accommodation where 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
18	Big Peaceful Hut	Melbourne	60	2	2.4	cottage
2	Cozy Calm Hut	London	65	2	4.1	cottage
21	Big Peaceful Cabin	Seattle	80	2	4.9	cottage
23	Homy Calm House	Paris	70	2	2	cottage
24	Nice Private Cottage	San Francisco	40	2	1.1	cottage
25	Nice Calm Chalet	Seattle	55	2	4.5	cottage
36	Comfy Private Shanty	NYC	80	1	3.7	cottage
43	Nice Private Hut	Melbourne	60	3	2.8	cottage
5	Homy Quiet Shack	Paris	50	1	1.1	cottage
51	Nice Quiet Hut	Auckland	70	3	1.4	cottage
53	Comfy Private Shanty	Buenos Aires	40	2	4.6	cottage
55	Cozy Peaceful Hut	London	75	2	1.7	cottage
58	Nice Calm Cottage	Berlin	40	3	3.9	cottage
62	Comfy Calm Cabin	Buenos Aires	65	2	4.3	cottage
65	Comfy Private Chalet	NYC	45	2	1	cottage
69	Homy Quiet House	NYC	65	1	3.1	cottage
71	Cozy Calm Hut	San Francisco	55	2	3.8	cottage
73	Nice Peaceful Cabin	London	60	1	3.4	cottage
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
85	Nice Private Shack	Auckland	55	1	4.9	cottage
89	Nice Private House	Seattle	45	2	3.2	cottage
92	Cozy Quiet Bungalow	San Francisco	85	3	3.5	cottage
97	Cozy Quiet Chalet	Auckland	75	1	2.3	cottage

```
28 rows in set (0.00 sec)
```



```
mysql> select * from Accommodation where type = "house";
```

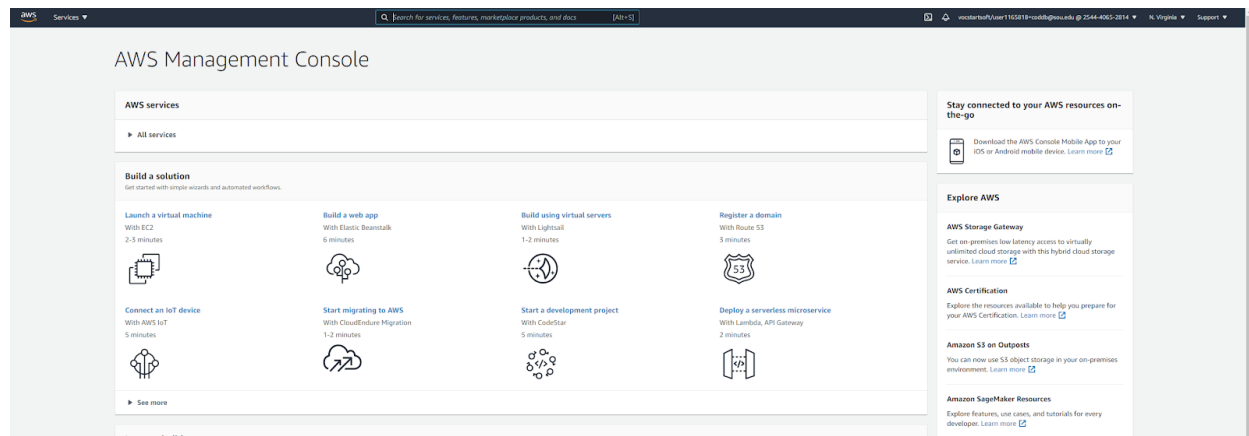
id	title	location	price	rooms	rating	type
12	Beautiful Peaceful Villa	Seattle	90	2	2.1	house
16	Large Calm House	Melbourne	45	3	4.1	house
22	Pleasant Peaceful House	Auckland	50	5	3.5	house
28	Beautiful Calm Villa	Tokyo	110	2	4.2	house
3	Agreeable Calm Place	London	65	4	4.8	house
30	Large Peaceful House	Berlin	110	5	2.3	house
33	Pleasant Calm Place	Tokyo	30	2	4.8	house
38	Big Private House	San Francisco	70	4	2.9	house
39	Beautiful Calm Villa	Vancouver	50	3	3.5	house
49	Big Private Villa	NYC	90	2	4.8	house
59	Large Peaceful Place	Tokyo	55	5	1.2	house
6	Pleasant Quiet Place	Dublin	35	5	4.3	house
61	Large Calm Place	NYC	60	2	1.3	house
66	Beautiful Private Villa	London	80	2	2.4	house
72	Beautiful Calm Place	Paris	80	4	2.1	house
75	Large Private Place	Berlin	50	4	3.6	house
76	Pleasant Calm Villa	Berlin	30	2	2.4	house
86	Large Quiet House	London	100	4	4	house
90	Big Quiet House	Seattle	35	5	3.2	house
99	Pleasant Quiet Place	NYC	80	4	3.2	house

```
20 rows in set (0.00 sec)
```

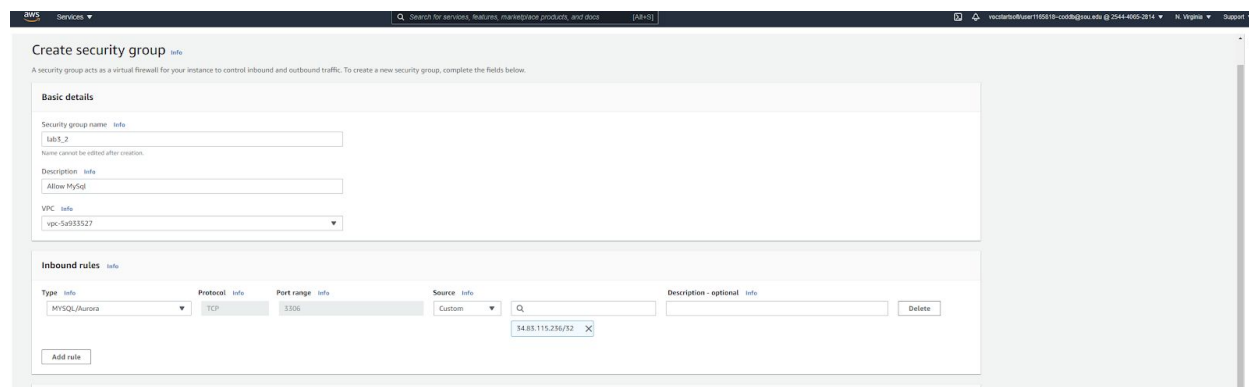
8. Cloud SQL cleanup

- No screenshots or overservations

9. Amazon RDS



10. RDS security group



11. RDS instance creation

Create database

Choose a database creation method [Info](#)

☒ **Standard create**

You set all of the configuration options, including ones for availability, security, backups, and maintenance.

☐ **Easy create**

Use recommended best-practice configurations. Some configuration options can be changed after the database is created.

Engine options

Engine type [Info](#)

☐ Amazon Aurora



☒ MySQL



☐ MariaDB



☐ PostgreSQL



☐ Oracle



☐ Microsoft SQL Server



Edition

☒ MySQL Community



Known Issues/Limitations

Review the [Known Issues/Limitations](#) to learn about potential compatibility issues with specific database versions.

Version

MySQL 8.0.17

Templates

Choose a sample template to meet your use case.

☐ **Production**

Use defaults for high availability and fast, consistent performance.

☐ **Dev/Test**

This instance is intended for development use outside of a production environment.

☒ **Free tier**

Use RDS Free Tier to develop new applications, test existing applications, or gain hands-on experience with Amazon RDS.

[Info](#)

12. RDS database creation

Settings

DB instance identifier [Info](#)

Type a name for your DB instance. The name must be unique across all DB instances owned by your AWS account in the current AWS Region.

The DB instance identifier is case-insensitive, but is stored as all lowercase (as in "mydbinstance"). Constraints: 1 to 60 alphanumeric characters or hyphens (1 to 15 for SQL Server). First character must be a letter. Can't contain two consecutive hyphens. Can't end with a hyphen.

▼ **Credentials Settings**

Master username [Info](#)

Type a login ID for the master user of your DB instance.

1 to 16 alphanumeric characters. First character must be a letter

☐ **Auto generate a password**

Amazon RDS can generate a password for you, or you can specify your own password

Master password [Info](#)

Constraints: At least 8 printable ASCII characters. Can't contain any of the following: / (slash), '(single quote), "(double quote) and @ (at sign).

Confirm password [Info](#)

13. RDS network access

Amazon RDS

aws-rds-lab

Summary

DB identifier aws-rds-lab	CPU 2.88%	Status Available	Class db.t2.micro
Role Instance	Current activity 0 Connections	Engine MySQL Community	Region & AZ us-east-1c

Connectivity & security

Endpoint & port Endpoint aws-rds-lab.cnccozmo3lw5.us-east-1.rds.amazonaws.com Port 3306	Networking Availability zone us-east-1c VPC vpc-5a935527 Subnet group default-vpc-5a935527 Subnets subnet-98a050b9 subnet-3af365d5 subnet-d6d70a95 subnet-1c71b7fa subnet-4b6e4006 subnet-d2ade136	Security VPC security groups default (sg-41ba0bed) (active) lab3-2 (sg-06179ca7a779e14d) (active) Public accessibility Yes Certificate authority rds-ca-2019 Certificate authority date Aug 22nd, 2024
--	--	--

14. RDS test instance

```
coddh@cloudshell:~ (cs356-w21-branden-codd) $ mysql -h aws-rds-lab.cnccozmo3lw5.us-east-1.rds.amazonaws.com -P 3306 -u admin -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 13
Server version: 8.0.17 Source distribution

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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>
```

15. RDS cleanup

