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I. Lab 3.1 - Python Flask Guestbook

1. – 5.

The screenshot shows a FreeRDP session with the address 34.82.199.121. The terminal window displays the following commands and output:

```
meelz(amminer)@course-vm: ~/cs430-src/01_mvc_pylist$ ls
Model.py  app.py  model_pylist.py  requirements.txt  static  templates  tutorial.rst
meelz(amminer)@course-vm:~/cs430-src/01_mvc_pylist$ python3 -m venv venv
meelz(amminer)@course-vm:~/cs430-src/01_mvc_pylist$ source venv/bin/activate
(venv) meelz(amminer)@course-vm:~/cs430-src/01_mvc_pylist$ pip --version
pip 22.0.2 from /home/meelz/cs430-src/01_mvc_pylist/venv/lib/python3.10/site-packages/pip (python 3.10)
(venv) meelz(amminer)@course-vm:~/cs430-src/01_mvc_pylist$ pip install -r requirements.txt
Collecting flask
  Downloading flask-3.0.0
Collecting itsdangerous==
  Downloading itsdangerous
Collecting Werkzeug==3.0.
  Downloading werkzeug-3.
Collecting Jinja2==3.1.2
  Downloading Jinja2-3.1.
Collecting click==8.1.3
  Downloading click-8.1.7
Collecting blinker==1.6.2
  Downloading blinker-1.6
Collecting MarkupSafe==2.
  Downloading MarkupSafe-
Installing collected pack
Successfully installed Ji
(venv) meelz(amminer)@cou
* Serving Flask app 'app
* Debug mode: on
WARNING: This is a develo
* Running on all address
* Running on http://127.
* Running on http://10.1
Press CTRL+C to quit
* Restarting with stat
* Debugger is active!
* Debugger PIN: 233-211-
127.0.0.1 - - [12/Oct/202
127.0.0.1 - - [12/Oct/202
127.0.0.1 - - [12/Oct/202
127.0.0.1 - - [12/Oct/202
127.0.0.1 - - [12/Oct/202
127.0.0.1 - - [12/Oct/202
```

The web browser window shows the guestbook form at localhost:5000/index.html. The form includes fields for Name, Email, and Message, and a Sign button. Below the form, there is a section for Entries, which currently shows a single entry by Amelia <amminer@pdx.edu> signed on 2023-10-12, with the text 'python/flask guestbook'.

II. Lab 3.2 - SQL

1. & 2. SQL info & quiz

SQL Quiz Results

Score: 24 of 25

96% Correct:

Question 1:

What does SQL stand for?

✓ Structured Query Language

Your answer

SELECT UNIQUE

Question 14:

Which SQL keyword is used to sort the result-set?

✓ ORDER BY

ORDER

SORT BY

SORT

Question 15:

With SQL, how can you return all the records from a table named "Persons" sorted descending by "FirstName"?

✗ SELECT * FROM Persons ORDER FirstName DESC

Your answer

SELECT * FROM Persons ORDER BY FirstName DESC

Correct answer

SELECT * FROM Persons SORT BY 'FirstName' DESC

SELECT * FROM Persons SORT 'FirstName' DESC

Question 16:

Simple mistake, didn't take enough time to read the answers.

3. GCP Cloud SQL

Examine the data definition language (DDL) commands in [cloudsql/table_creation.sql](#) that specify the schema and answer the following questions:

```
meelz@meelzBox: ~  
the Maseeh College of Engineering and Computer Science.  
ALL ACTIVITY MAY BE RECORDED  
*****  
* CAT Support:  https://cat.pdx.edu/  
* Email:        support@cat.pdx.edu  
* Phone:        503-725-5420  
* Chat:         https://support.cat.pdx.edu  
* Location:     FAB 82-01  
  
Last login: Mon Oct 9 22:20:21 2023 from 172.92.168.148  
amminer@ada:~ >
```

```
meelz@meelzBox: ~  
the Maseeh College of Engineering and Computer Science.  
ALL ACTIVITY MAY BE RECORDED  
*****  
* CAT Support:  https://cat.pdx.edu/  
* Email:        support@cat.pdx.edu  
* Phone:        503-725-5420  
* Chat:         https://support.cat.pdx.edu  
* Location:     FAB 82-01  
  
Last login: Mon Oct 9 22:20:21 2023 from 172.92.168.148  
amminer@ada:~ >
```

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

Accommodation, Rating, and Recommendation.

- What are the primary keys of each table?

Accommodation: id,

Rating: composite of acccoid and userid,

Recommendation: composite of userid and acccoid.

- 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](#). Find the accommodations in Dublin within the file. Assuming the column data is ordered as in the DDL, list the attributes and their values for each accommodation in Dublin.

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

4. - 8. Cloud SQL instance creation, Importing data, accessing Cloud SQL from Cloud Shell, cleanup

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

```
CLOUD SHELL
Terminal cloud-miner-amminer X + v

amminer@cloudshell:~ (cloud-miner-amminer)$ mysql --host=34.83.120.25 --user=root --password
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 5998
Server version: 8.0.31-google (Google)

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Oracle is a registered trademark of Oracle Corporation and/or its
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> select * from Accommodation where type="castle" and price between 3000 and 5000;
+-----+-----+-----+-----+-----+-----+-----+
| id | title | location | price | rooms | rating | type |
+-----+-----+-----+-----+-----+-----+-----+
| 13 | Enormous Peaceful Fortress | Melbourne | 3300 | 12 | 2.3 | castle |
| 19 | Giant Quiet Castle | Paris | 4500 | 18 | 1.6 | castle |
| 34 | Vast Private Fort | NYC | 4400 | 21 | 1.7 | castle |
| 4 | Colossal Quiet Chateau | Paris | 3400 | 16 | 2.7 | castle |
| 44 | Big Peaceful Chateau | Melbourne | 3400 | 21 | 3.2 | castle |
| 48 | Big Calm Fort | Vancouver | 4500 | 22 | 4 | castle |
| 54 | Enormous Quiet Chateau | Melbourne | 4400 | 20 | 1.7 | castle |
| 64 | Enormous Peaceful Fort | Berlin | 3500 | 13 | 1.8 | castle |
| 7 | Vast Peaceful Fortress | Seattle | 3200 | 24 | 1.9 | castle |
| 8 | Giant Quiet Fortress | San Francisco | 3400 | 12 | 4.1 | castle |
| 88 | Colossal Quiet Palace | Seattle | 4100 | 16 | 3.6 | castle |
+-----+-----+-----+-----+-----+-----+-----+
11 rows in set (0.00 sec)

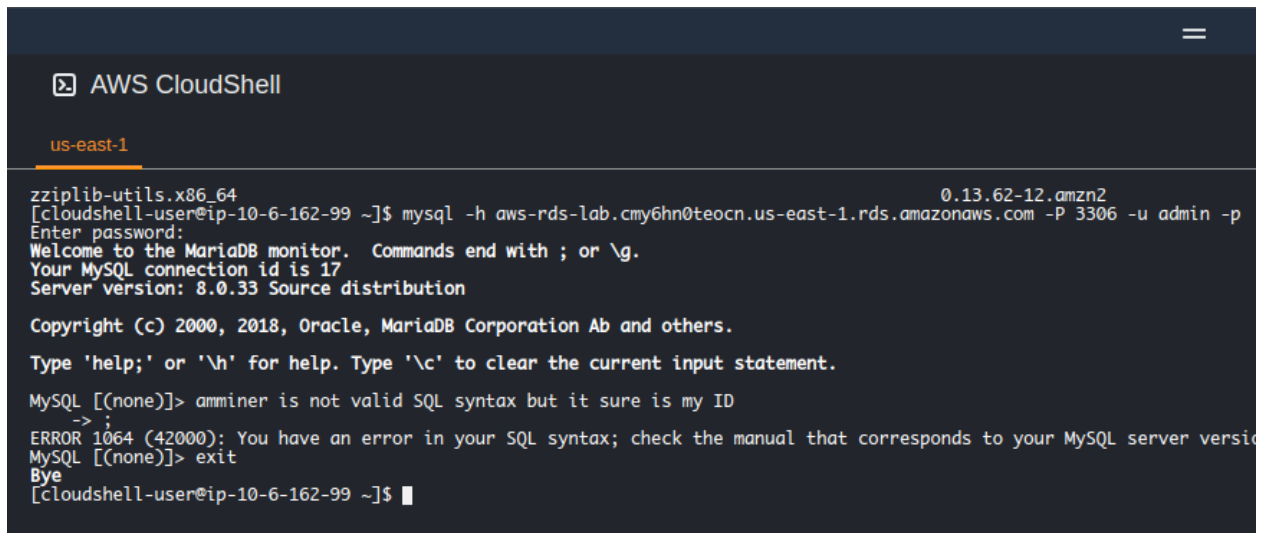
mysql> select * from Accommodation where type="mansion" and price between 1000 and 2000;
+-----+-----+-----+-----+-----+-----+-----+
| id | title | location | price | rooms | rating | type |
+-----+-----+-----+-----+-----+-----+-----+
| 70 | Great Calm Sately House | Paris | 1050 | 10 | 2.2 | mansion |
| 77 | Great Private Country House | Dublin | 1150 | 10 | 2.4 | mansion |
| 79 | Large Private Manor | Vancouver | 1050 | 10 | 4.8 | mansion |
+-----+-----+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)

mysql>
```

9. - 14. AWS RDS setup

- **AWS CloudShell IP: 18.207.249.90**
- **Security Group Rule ID: sgr-0aba967fbc2da9e09**
- **aws-rds-lab db endpoint address:**
aws-rds-lab.cmy6hn0teocn.us-east-1.rds.amazonaws.com:3306

15. RDS test instance



```

AWS CloudShell

us-east-1

zziplib-utils.x86_64 0.13.62-12.amzn2
[cloudshell-user@ip-10-6-162-99 ~]$ mysql -h aws-rds-lab.cmy6hn0teocn.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: 8.0.33 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.

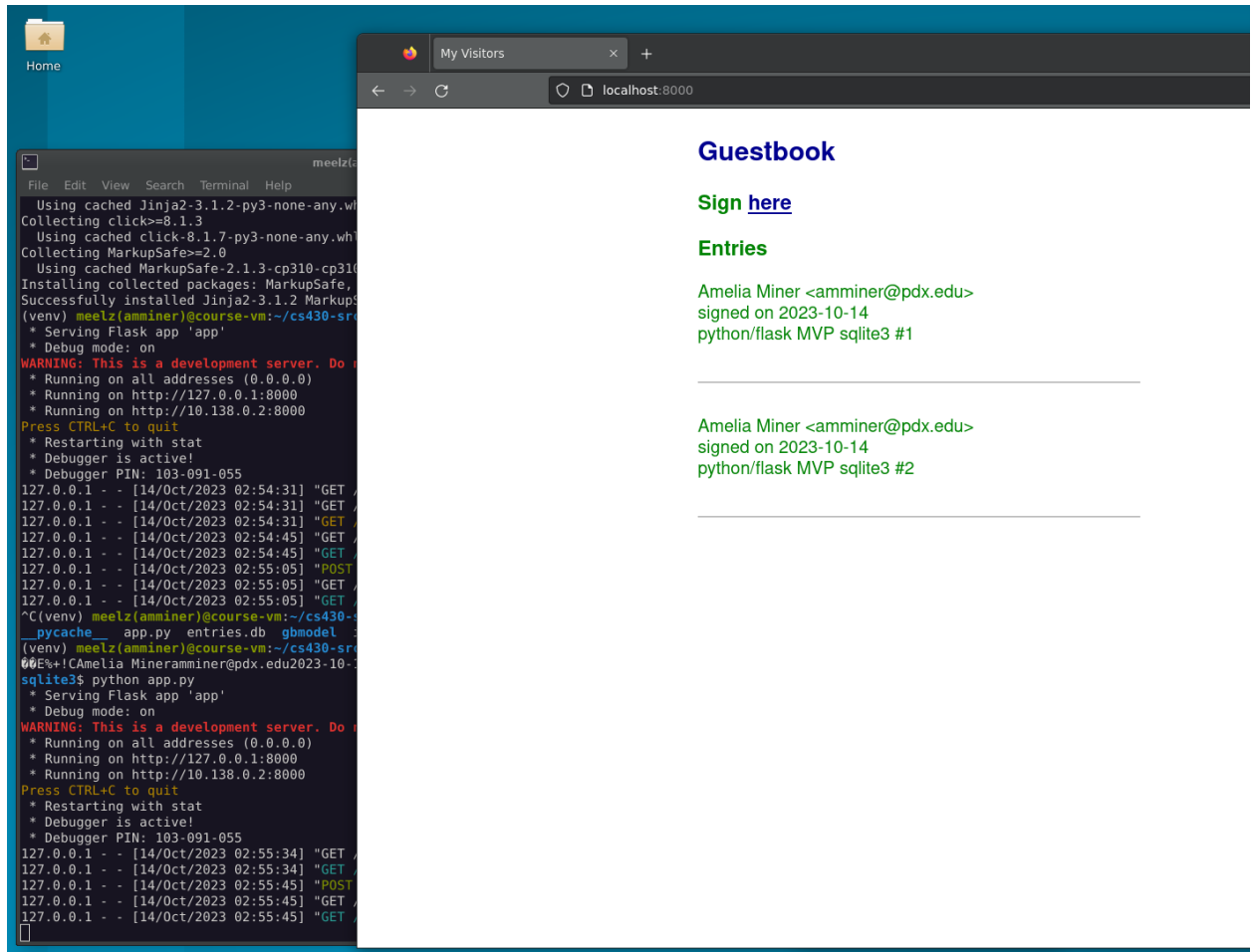
MySQL [(none)]> amminer is not valid SQL syntax but it sure is my ID
-> ;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version
MySQL [(none)]> exit
Bye
[cloudshell-user@ip-10-6-162-99 ~]$
```

16. AWS RDS Cleanup

Done!

III. Lab 3.3 - sqlite3 guestbook

1. - 4. sqlite3, gbmodel package, presenter architecture, running the code



5. sqlite3 database

- Bring up the entries.db database within sqlite3. within the sqlite client, perform the following commands:

.tables

.schema <table_name>

select * from <table_name>;

```
(venv) meelz(amminer)@course-vm:~/cs430-src/02_mvp_modules_sqlite3$ sqlite3 entries.db
SQLite version 3.37.2 2022-01-06 13:25:41
Enter ".help" for usage hints.
sqlite> .tables
guestbook
sqlite> .schema guestbook
CREATE TABLE guestbook (name text, email text, signed_on date, message text);
sqlite> select * from guestbook ;
Amelia Miner|amminer@pdx.edu|2023-10-14|python/flask MVP sqlite3 #1
Amelia Miner|amminer@pdx.edu|2023-10-14|python/flask MVP sqlite3 #2
sqlite> █
```