

Question 1)

For question1 I used the “SOURCE” command with the address path of the “world.sql” file. I also used the “show tables” command to see the tables.

Command usage:

```
mac — mysql -u root -p — 80x24
Your MySQL connection id is 9
Server version: 8.0.32 MySQL Community Server - GPL

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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> SOURCE /Users/mac/Desktop/LECTURES/COMP306/HW2/world.sql
Query OK, 0 rows affected (0.00 sec)

Query OK, 0 rows affected (0.00 sec)

Query OK, 0 rows affected (0.00 sec)

Query OK, 0 rows affected (0.00 sec)

Query OK, 0 rows affected (0.00 sec)

Query OK, 0 rows affected (0.00 sec)
```

Tables after the command:

```
mysql> use world;
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_world |
+-----+
| city             |
| country          |
| countrylanguage  |
+-----+
3 rows in set (0.01 sec)

mysql>
```

Question 2)

- A) My command: "select Name, GNP from country where Continent = "Europe" and IndepYear > 1930"

Output:

	Name	GNP	
▶	Bosnia and Herzegovina	2841.00	
	Belarus	13714.00	
	Czech Republic	55017.00	
	Germany	2133367.00	
	Estonia	5328.00	
	Croatia	20208.00	
	Iceland	8255.00	
	Lithuania	10692.00	
	Latvia	6398.00	
	Moldova	1579.00	
	Macedonia	1694.00	
	Malta	3512.00	
	Russian Federation	276608.00	
	Slovakia	20594.00	
	Slovenia	19756.00	
	Ukraine	42168.00	

- B) My command: "select country.Code, country.Name as CountryName, city.Name as CityName, city.Population
from city INNER JOIN country ON country.Code = city.CountryCode
where country.LifeExpectancy > 75 and city.Population < 1000000;"

Output:

	Code	CountryName	CityName	Population	
▶	ABW	Aruba	Oranjestad	29034	
	AIA	Anguilla	South Hill	961	
	AIA	Anguilla	The Valley	595	
	AND	Andorra	Andorra la Vella	21189	
	ARG	Argentina	Rosario	907718	
	ARG	Argentina	Lomas de Zamora	622013	
	ARG	Argentina	Quilmes	559249	
	ARG	Argentina	Almirante Brown	538918	
	ARG	Argentina	La Plata	521936	
	ARG	Argentina	Mar del Plata	512880	
	ARG	Argentina	San Miguel de T...	470809	
	ARG	Argentina	Lanús	469735	
	ARG	Argentina	Merlo	463846	
	ARG	Argentina	General San Mar...	422542	
	ARG	Argentina	Salta	367550	
	ARG	Argentina	Moreno	356993	
	ARG	Argentina	Santa Fé	353063	
	ARG	Argentina	Avellaneda	353046	
	ARG	Argentina	Tres de Febrero	352311	
	ARG	Argentina	Morón	349246	
	ARG	Argentina	Florencio Varela	315432	
	ARG	Argentina	San Isidro	306341	
	ARG	Argentina	Tigre	296226	
	ARG	Argentina	Malvinas Argenti...	290335	
	ARG	Argentina	Vicente López	288341	

- C) My command: "SELECT DISTINCT countrylanguage.Language
from countrylanguage
INNER JOIN country ON country.Code = countrylanguage.CountryCode
where country.SurfaceArea > 1000000 and countrylanguage.Percentage > 50;"

Output:

	Language	
▶	Spanish	
	English	
	Portuguese	
	Chinese	
	Arabic	
	Greenlandic	
	Mongolian	
	Hassaniya	
	Hausa	
	Russian	

- D) My command: "SELECT country.code, city.Name
from city
INNER JOIN country ON city.CountryCode = country.Code
INNER JOIN countrylanguage on city.CountryCode = countrylanguage.CountryCode
WHERE city.Population < 90000 and countrylanguage.Language = "German" and
countrylanguage.Percentage > 1;"

Output:

	code	Name	
▶	CAN	Kelowna	
	CAN	Barrie	
	DEU	Velbert	
	DEU	Esslingen am Neckar	
	LIE	Schaan	
	LIE	Vaduz	
	LUX	Luxembourg [Luxemburg/Lëtzebuerg]	

Question 3)

A) My SQL statement: "CREATE TABLE restaurant (
id INT PRIMARY KEY NOT NULL,
name VARCHAR(255) NOT NULL,
type VARCHAR(255) NOT NULL,
rating INT CHECK (rating >= 1 AND rating <= 5)
);"

Output:

```
mysql> CREATE TABLE restaurant (  
-> id INT PRIMARY KEY NOT NULL,  
-> name VARCHAR(255) NOT NULL,  
-> type VARCHAR(255) NOT NULL,  
-> rating INT CHECK (rating >= 1 AND rating <= 5)  
-> );  
Query OK, 0 rows affected (0.01 sec)  
  
mysql> show tables  
-> ;  
+-----+  
| Tables_in_world |  
+-----+  
| city             |  
| country          |  
| countrylanguage |  
| restaurant      |  
+-----+  
4 rows in set (0.00 sec)
```

B) My SQL statement: "INSERT INTO restaurant (id, name, type, rating)
VALUES (1, 'Tuna Önal', 'Italian', 5);"

Output:

```
mysql> INSERT INTO restaurant (id, name, type, rating)  
-> VALUES (1, 'Tuna Önal', 'Italian', 5);  
Query OK, 1 row affected (0.00 sec)  
  
mysql> select * from restaurant;  
+----+-----+-----+-----+  
| id | name   | type   | rating |  
+----+-----+-----+-----+  
| 1  | Tuna Önal | Italian | 5      |  
+----+-----+-----+-----+  
1 row in set (0.00 sec)  
  
mysql> 
```

C) My SQL statements:

"INSERT INTO restaurant
VALUES(2, 'El Taquito Loco', 'Mexican', 4);"

" INSERT INTO restaurant
VALUES(3, 'The Greek Taverna', 'Greek', 5);"

"INSERT INTO restaurant
VALUES(4, 'The Wok Inn', 'Chinese', 3);"

```
"INSERT INTO restaurant  
VALUES(5, 'La Pizzeria Bella', 'Italian', 4);"
```

```
"INSERT INTO restaurant  
VALUES(6, 'The Tap House', 'Pub Food', 3);"
```

```
"INSERT INTO restaurant  
VALUES (7, 'Bao Bun House', 'Asian Fusion', 4);"
```

```
"INSERT INTO restaurant  
VALUES (8, 'The Vegan Kitchen', 'Barbecue', 4);"
```

```
"INSERT INTO restaurant  
VALUES (9, 'La Brasserie Belge', 'Belgian', 4);"
```

```
"INSERT INTO restaurant  
VALUES (10, 'The Smokestack BBQ', 'Barbecue', 4);"
```

```
"INSERT INTO restaurant  
VALUES (11, 'Sushi Island', 'Japanese', 3);"
```

Output:

```
mysql> select * from restaurant;
```

id	name	type	rating
1	Tuna Önal	Italian	5
2	El Taquito Loco	Mexican	4
3	The Greek Taverna	Greek	5
4	The Wok Inn	Chinese	3
5	La Pizzeria Bella	Italian	4
6	The Tap House	Pub Food	3
7	Bao Bun House	Asian Fusion	4
8	The Vegan Kitchen	Barbecue	4
9	La Brasserie Belge	Belgian	4
10	The Smokestack BBQ	Barbecue	4
11	Sushi Island	Japanese	3

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

D) My SQL command: "UPDATE restaurant
SET type = 'Vegan'
WHERE id = 8;"

Output:

```
mysql> select * from restaurant;
```

id	name	type	rating
1	Tuna Önal	Italian	5
2	El Taquito Loco	Mexican	4
3	The Greek Taverna	Greek	5
4	The Wok Inn	Chinese	3
5	La Pizzeria Bella	Italian	4
6	The Tap House	Pub Food	3
7	Bao Bun House	Asian Fusion	4
8	The Vegan Kitchen	Vegan	4
9	La Brasserie Belge	Belgian	4
10	The Smokestack BBQ	Barbecue	4
11	Sushi Island	Japanese	3

E) My SQL command: "DELETE FROM restaurant
WHERE name = 'The Tap House';"

Output:

```
mysql> DELETE FROM restaurant
-> WHERE name = 'The Tap House';
Query OK, 1 row affected (0.00 sec)

mysql> select * from restaurant;
```

id	name	type	rating
1	Tuna Önal	Italian	5
2	El Taquito Loco	Mexican	4
3	The Greek Taverna	Greek	5
4	The Wok Inn	Chinese	3
5	La Pizzeria Bella	Italian	4
7	Bao Bun House	Asian Fusion	4
8	The Vegan Kitchen	Vegan	4
9	La Brasserie Belge	Belgian	4
10	The Smokestack BBQ	Barbecue	4
11	Sushi Island	Japanese	3

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

Question 4)

A) My SQL command:

```
"CREATE TABLE city_restaurant
(ResID INT,
CitID INT,
PRIMARY KEY (ResID, CitID),
FOREIGN KEY (ResID) REFERENCES restaurant(id) ON DELETE RESTRICT ON
UPDATE CASCADE,
FOREIGN KEY (CitID) REFERENCES city(ID) ON DELETE RESTRICT ON UPDATE
CASCADE
);"
```

Output:

```
[mysql> show tables;
+-----+
| Tables_in_world |
+-----+
| city             |
| city_restaurant  |
| country          |
| countrylanguage  |
| restaurant       |
+-----+
5 rows in set (0.00 sec)
```


B) Commands that I use:

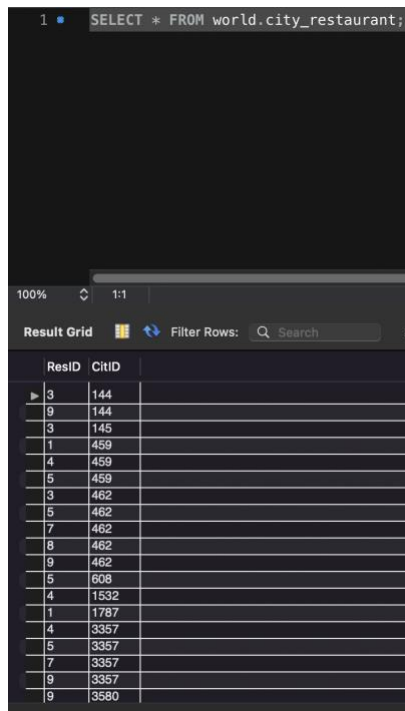
```
"SET GLOBAL local_infile=1;"
```

```
"mysql --local-infile=1 -u root -p",
```

```
"LOAD DATA LOCAL INFILE
```

```
'/Users/mac/Desktop/Lectures/Comp306/HW2/city_restaurant.txt' INTO TABLE  
city_restaurant;"
```

Output:



1 • SELECT * FROM world.city_restaurant;

100% 1:1

Result Grid Filter Rows: Search

ResID	CitID
3	144
9	144
3	145
1	459
4	459
5	459
3	462
5	462
7	462
8	462
9	462
5	608
4	1532
1	1787
4	3357
5	3357
7	3357
9	3357
9	3580

C) My SQL query:

```
"SELECT city.ID, city.Name
```

```
from city
```

```
INNER JOIN city_restaurant on city.ID = city_restaurant.CitID
```

```
GROUP BY city.ID
```

```
HAVING COUNT(city_restaurant.ResID) > 1;"
```

Output:

	ID	Name
▶	144	Baku
	459	Liverpool
	462	Manchester
	3357	Istanbul

D) My SQL query: “SELECT restaurant.id, restaurant.name
 from restaurant
 INNER JOIN city_restaurant ON restaurant.id = city_restaurant.ResID
 INNER JOIN city ON city_restaurant.CitID = city.ID
 WHERE city.Name = 'Manchester' AND
 restaurant.id NOT IN (SELECT restaurant.id
 from restaurant
 INNER JOIN city_restaurant ON restaurant.id = city_restaurant.ResID
 INNER JOIN city ON city_restaurant.CitID = city.ID
 WHERE city.Name = 'Liverpool');”

Output:

	id	name
▶	3	The Greek Taverna
	7	Bao Bun House
	8	The Vegan Kitchen
	9	La Brasserie Belge

E) My SQL query: “SELECT restaurant.id, restaurant.name
 FROM restaurant
 INNER JOIN city_restaurant ON restaurant.id = city_restaurant.ResID
 INNER JOIN city ON city_restaurant.CitID = city.ID
 WHERE city.Population >100000;”

Output:

	id	name
▶	3	The Greek Taverna
	9	La Brasserie Belge
	3	The Greek Taverna
	1	Tuna Onal
	4	The Wok Inn
	5	La Pizzeria Bella
	3	The Greek Taverna
	5	La Pizzeria Bella
	7	Bao Bun House
	8	The Vegan Kitchen
	9	La Brasserie Belge
	5	La Pizzeria Bella
	4	The Wok Inn
	1	Tuna Onal
	4	The Wok Inn
	5	La Pizzeria Bella
	7	Bao Bun House
	9	La Brasserie Belge
	9	La Brasserie Belge
	7	Bao Bun House
	8	The Vegan Kitchen

F) My SQL query: “SELECT restaurant.id, restaurant.name
 FROM restaurant
 INNER JOIN city_restaurant ON restaurant.id = city_restaurant.ResID
 INNER JOIN city ON city_restaurant.CitID = city.ID
 GROUP BY restaurant.id
 HAVING COUNT(DISTINCT city.CountryCode = 'AZE') >= 2;”

Output:

	id	name
▶	3	The Greek Taverna

G) My SQL query: “SELECT distinct country.Name
 FROM country
 LEFT JOIN city on city.CountryCode = country.Code
 LEFT JOIN city_restaurant on city_restaurant.CitID = city.id
 WHERE city_restaurant.ResID is NULL;”

Output:

	Name
▶	Aruba
●	Afghanistan
●	Angola
●	Anguilla
●	Albania
●	Andorra
●	Netherlands Antilles
●	United Arab Emirates
●	Argentina
●	Armenia
●	American Samoa
●	Antarctica
●	French Southern territories
●	Antigua and Barbuda
●	Australia
●	Austria
●	Azerbaijan
●	Burundi
●	Belgium
●	Benin
●	Burkina Faso
●	Bangladesh
●	Bulgaria
●	Bahrain

239 rows.

Question 5)

```
mac@tunasmac ~ % mysqldump -u root -p world > /Users/mac/Desktop/world-export.sql
Enter password:
mac@tunasmac ~ %
```