SQL FINAL PROJECT

Overview

The final four class hours of this course will be the final project. The project will use all the SQL skills we have covered so far. Be sure to record all code you write in the project workbook.

Part 1

NOTE: I named my schema (database) "band", not bands

Drop Table Records
123 Sequel Way
Big Data, CA 54321
913-555-2543

Drop Table Records is excited to offer you employment as a **data analyst**.

Drop Table Records has needed a qualified data professional for a long time and is excited for you to join our team!

We look forward to working with you soon!

Best,

Sri Schema and Rob Tables

We will be working with a new database schema for the SQL final project.

The first task of the final project is to create the database schema and import that data. You can download the files needed to create the database from Canvas.

Task 1

Before a band releases a new record, Drop Table Records will work to promote the band and get fans excited for the new record.

Write a query that shows bands & their respective albums' release date in descending order.

Copy the text of your query below.

```
SELECT b.bandname, a.albumname, a.releasedate
FROM band.band AS b
RIGHT JOIN band.album AS a
ON  b.idband = a.idband
ORDER BY releasedate DESC;
```

Task 2

Drop Table Records also sends bands to play at different venues or events.

Some venues request bands that feature certain instruments. Write a query that shows all of the players that utilize drums along with the bands that they are a part of. You should only have one column that shows the full player name (i.e., the player's first and last name should not be split into two columns).

Copy the text of your query below.

```
SELECT CONCAT(pfname, ' ', plname) AS playername, b.bandname
FROM band.player AS p
INNER JOIN band.band AS b
ON p.idband = b.idband
WHERE InstID = 4; -- InstID = 4 for Drums
```

Task 3

It is important that Drop Table Records has a diversity of different bands signed to its label. We want many artists who represent different styles of music.

One way we determine the diversity in music is by looking at how many bands feature a certain instrument. Write a query that describes the number of instruments used by each band. *(Hint: some bands may have multiple players using the same instrument.)*

Copy the text of your query below.

```
SELECT b.bandname, i.instrument, COUNT(p.InstID) AS num_of_instruments
FROM band.band AS b
LEFT JOIN band.player AS p
ON b.idband = p.idband
LEFT JOIN band.instrument AS i
ON p.InstID = i.InstID
GROUP BY b.bandname, i.instrument;
```

Task 4

Write a query that lists the most popular instrument amongst the players.

Copy the text of your query below.

```
SELECT i.instrument, COUNT(p.idplayer) AS num_of_players
FROM band.player AS p
INNER JOIN band.instrument AS i
ON i.InstID = p.InstID
GROUP BY i.instrument
ORDER BY i.instrument DESC; -- The most popular instrument amongst all player is Vocals.
```

Task 5

Write a query that lists any albums that have a missing name and/or missing release dates. How should we handle these?

Copy the text of your query below.

```
SELECT idalbum, albumname, releasedate
FROM band.album
WHERE albumname IS NULL
OR releasedate IS NULL;
```

Part 2

DROP TABLE RECORDS ADDS SEVERAL MAJOR ARTISTS

By Nick Musik

nickmusikmusicblog.com

Drop Table Records is a record label based out of Big Data, California.

After several years of slow (but steady) growth, Drop Table Records is experiencing massive success.

There are rumors that the new bands could be featured in an upcoming music festival. If this rumor ends up being true, you will hear it from me first!

Task 1

We need to add more bands to the band table. Here's a list of the bands we'd like to add:

Band name
Weezer
TLC
Paramore
Blackpink
Vampire Weekend

Hint: When adding values to a table, take a look at the table schema to see if a primary key needs to be identified or if it will be auto-generated.

Copy the text of your query below.

```
INSERT INTO band.band (bandname)
VALUES ('Weezer'),
        ('TLC'),
        ('Paramore'),
        ('Blackpink'),
        ('Vampire Weekend');
```

Task 2

Now that we have added more bands, we need to ensure that we add the band members to the appropriate table. Which table would we use to add the names of band members?

Enter your answer below.

Player table

Task 3

Using the table you identified in Task 2, add the following values

Band	First Name	Last Name	Instrument	Home City	Home State
Weezer	Rivers	Cuomo	Vocals	Rochester	New York
Weezer	Brian	Bell	Guitar	Iowa City	Iowa
Weezer	Patrick	Wilson	Drums	Buffalo	New York
Weezer	Scott	Shriner	Bass	Toledo	Ohio
TLC	Tionne	Watkins	Vocals	Des Moines	Iowa
TLC	Rozonda	Thomas	Vocals	Columbus	Georgia
Paramore	Hayley	Williams	Vocals	Franklin	Tennessee
Paramore	Taylor	York	Guitar	Nashville	Tennessee
Paramore	Zac	Farro	Drums	Voorhees Township	New Jersey
Blackpink	Jisoo	Kim	Vocals		South Korea
Blackpink	Jennie	Kim	Vocals		South Korea
Blackpink	Roseanne	Park	Vocals		New Zealand
Blackpink	Lisa	Manoban	Vocals		Thailand
Vampire Weekend	Ezra	Koenig	Vocals	New York	New York
Vampire Weekend	Chris	Baio	Bass	Bronxville	New York
Vampire Weekend	Chris	Tomson	Drums	Upper Freehold Township	New Jersey

Copy the text of your query below.

```
INSERT INTO band.player (InstID, idband, pfname, plname, homecity, homestate)
VALUES (3, 22, 'Rivers', 'Cuomo', 'Rochester', 'New York'),
        (1, 22, 'Brian', 'Bell', 'Iowa City', 'Iowa'),
        (4, 22, 'Patrick', 'Wilson', 'Buffalo', 'New York'),
        (2, 22, 'Scott', 'Shriner', 'Toledo', 'Ohio'),
        (3, 23, 'Tionne', 'Watkins', 'Des Moines', 'Iowa'),
        (3, 23, 'Rozonda', 'Thomas', 'Columbus', 'Georgia'),
        (3, 24, 'Hayley', 'Williams', 'Franklin', 'Tennessee'),
        (1, 24, 'Taylor', 'York', 'Nashville', 'Tennessee'),
        (4, 24, 'Zac', 'Farro', 'Voorhees Township', 'New Jersey'),
        (3, 25, 'Jisoo', 'Kim', NULL, 'South Korea'),
        (3, 25, 'Jennie', 'Kim', NULL, 'South Korea'),
        (3, 25, 'Roseanne', 'Park', NULL, 'New Zealand'),
        (3, 25, 'Lisa', 'Manoban', NULL, 'Thailand'),
        (3, 26, 'Ezra', 'Koenig', 'New York', 'New York'),
        (2, 26, 'Chris', 'Baio', 'Bronxville', 'New York'),
        (4, 26, 'Chris', 'Tomson', 'Upper Freehold Township', 'New Jersey');
```

Task 4

Drop Table Records has signed a contract with a new venue! A new venue should be added to the venue table.

Attribute	Value
Venue	Twin City Rock House
City	Minneapolis
State	Minnesota
Zip Code	55,414
Seating Capacity	2,000

Copy the text of your query below.

```
INSERT INTO band.venue (vname, city, state, zipcode, seats)
VALUES('Twin City Rock House', 'Minneapolis', 'MN', '55414', 2000);
```

Task 5

Which state has the largest amount of seating available (regardless of the number of venues at the state)?

Hint: We are trying to determine the total number of seats for each state.

Copy the text of your query below.

```
SELECT state, SUM(seats) AS total_num_of_seats
FROM band.venue
GROUP BY state
ORDER BY total_num_of_seats DESC; -- CA has the largest amount of seating available
```

Part 3

TWIN CITY ROCK HOUSE ANNOUNCES NEW MUSIC FESTIVAL

By Nick Musik
nickmusikmusicblog.com

The rumors are true! Twin City Rock House (TCRH) is a new music venue opening in Minneapolis, Minnesota.

TCRH has partnered with Drop Table Records to host a new music festival. While we don't know who will be performing yet, we do know the performers will be some big names in the music industry.

Stay tuned for more information.

Task 1

We need to add some data on upcoming performances for some of the artists. Which table should we use to add this information?

Copy the text of your query below.

gig table

Task 2

Using the table you mentioned in Task 1 (above), add the following information

Venue	Band	Date	Expected Attendees
TD Garden	Eminem	May 5, 2022	19,000
Twin City Rock House	Vampire Weekend	April 15, 2022	
SAP Center	TLC	June 7, 2022	18,000
The River Club	Weezer	July 3, 2022	175

Copy the text of your query below.

```
INSERT INTO band.gig(idvenue, idband, gigdate, numattendees)
VALUES (4, 2, '2022-05-05', 19000),
       (12, 26, '2022-04-15', NULL),
       (8, 23, '2022-06-07', 18000),
       (2, 22, '2022-07-03', 175);
```

Task 3

Are any of the venues oversold?

Copy the text of your query below.

```
SELECT v.vname, b.bandname, g.gigdate, g.numattendees, v.seats,
CASE WHEN g.numattendees > v.seats THEN TRUE   -- TRUE == 1
        WHEN g.numattendees < v.seats THEN FALSE  -- FALSE == 0
ELSE 'N/A' END AS 'Oversold?'FROM band.gig AS g
LEFT JOIN band.venue AS v ON v.idvenue = g.idvenue
LEFT JOIN band.band AS bON b.idband = g.idband;
```

Task 4

We just got word that Vampire Weekend can expect 1,750 guests. Write a query to update the table accordingly.

Copy the text of your query below.

```
UPDATE band.gig
SET numattendees = 1750
WHERE GigID = 2;
```

Task 5

We just got an update that the expected number of attendees at the River Club for Weezer will only have 125 guests. Write a query to update the table accordingly.

Copy the text of your query below.

```
UPDATE band.gig
SET numattendees = 125
WHERE GigID = 4;
```

Task 6

Create a view (called vw_giginfo) that will show the band, the dates they will play, the venue they will play at, the number of attendees, and the venue capacity. For this view, also create a column that describes what percentage of the venue capacity was utilized.

Copy the text of your query below.

```
CREATE VIEW band.vw_giginfo AS
SELECT b.bandname, g.gigdate, v.vname, g.numattendees,
ROUND(g.numattendees * 100 / v.seats, 2) AS percent_venue_occupied
FROM band.gig AS g
INNER JOIN band.band AS b ON g.idband = b.idband
INNER JOIN band.venue AS v ON g.idvenue = v.idvenue;
```

Part 4

Task 1

Create a stored procedure that lists all of the venues that can handle more than 10,000 guests.

Copy the text of your query below.

```
DELIMITER $
CREATE PROCEDURE band.large_venue()
BEGIN
        SELECT vname
        FROM band.venue
        WHERE seats > 10000;
END $
CALL band.large_venue();
```

Task 2

Create a stored procedure that lists all of the players that come from a specific state. We want to see (once we run this stored procedure), what bands they are a part of, their full name (in one column), and the state they are from.

Copy the text of your query below.

```
DELIMITER $
CREATE PROCEDURE band.location_of_players(IN state_name VARCHAR(45))
BEGIN
        SELECT CONCAT(pfname, ' ', plname) AS playername, b.bandname AS Band ,p.homestate
        FROM band.player AS p
        INNER JOIN band.band AS b
        ON p.idband = b.idband
        WHERE p.homestate NOT IN ('Ireland', 'Canada', 'Australia', 'South Korea', 'New Zealand', 'Thailand')
        AND p.homestate = state_name
        GROUP BY CONCAT(pfname, ' ', plname);
END $

CALL band.location_of_players('Tennessee');
```