# PROJECT:- 4

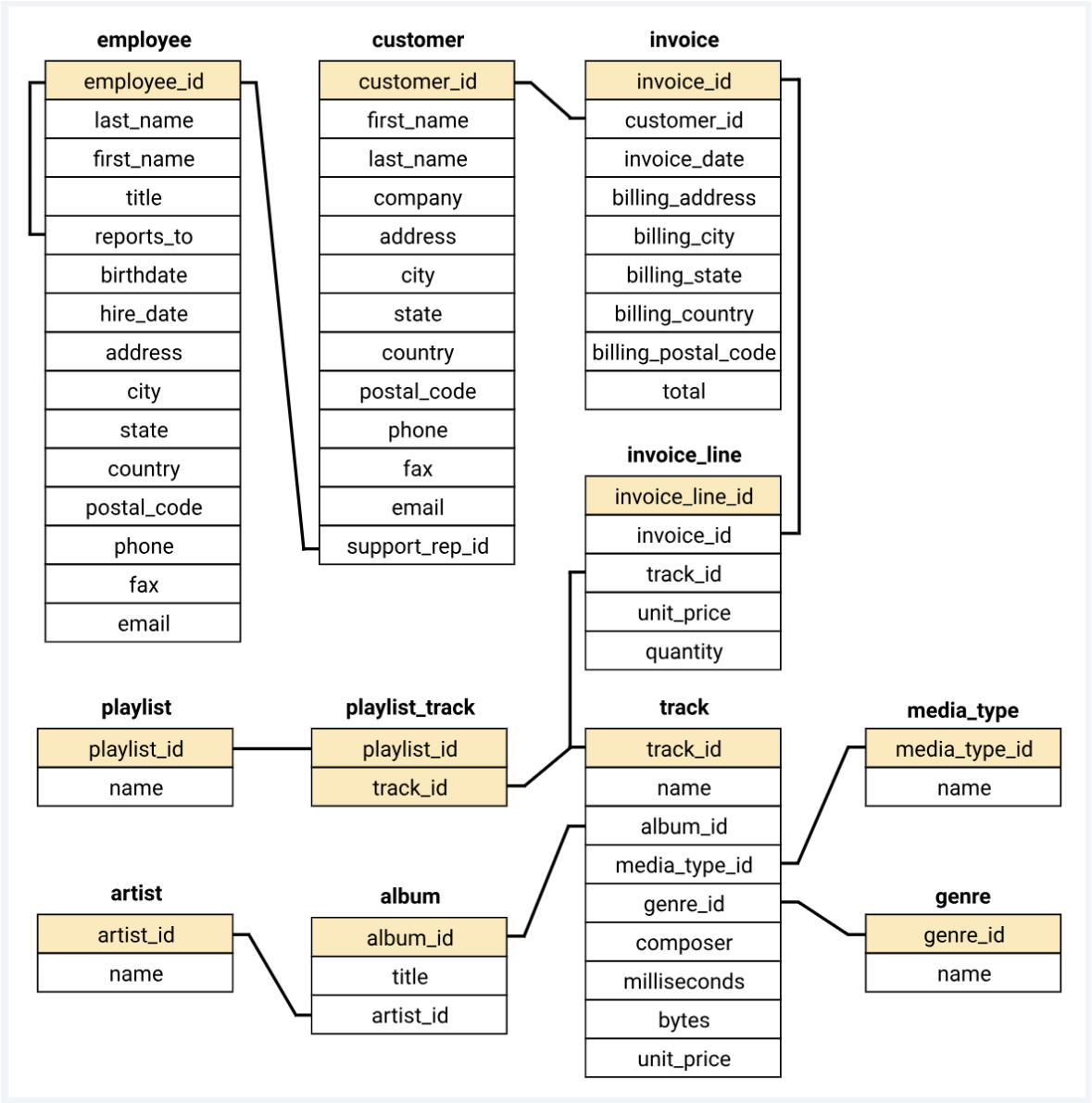
# MUSIC STORE DATA ANALYSIS IN SQL

- **You are hired as a data analyst at a music store, let's call it "Spotify". You're given access to a database with information about customers, singers, and more.**
- **As you explore connections between the data, your manager shares exciting news: the company plans to launch a new product! They need insights from the data to guide their decision-making.**
- **Your task is to analyse the database and provide answers to your manager's problem statements**

## Problem Statements

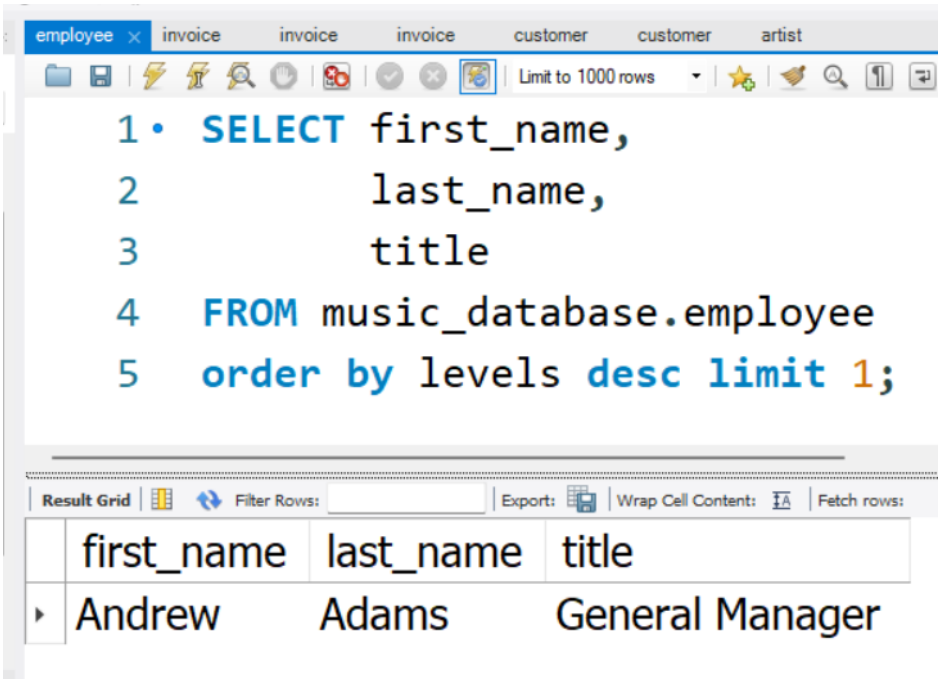
1. We want to assign an senior employee to lead that project. Who is the senior most employee based on job title?
2. Which county has most number of Invoices?
3. What is value of top 3 invoices ?
4. We would like to throw a promotional Music Festival in the city we made the most money. Which city has the best customers?
5. Who is the best customer? The customer who has spent the most money will be declared the best customer.
6. Details of customers who listens  Rock music.
7. Let's invite the artists who have written the most rock music in our dataset.
8. We want to find out the most popular music Genre for each country.

## Database Schema:



## Problem Statements:

### 1.Who is the senior most employee based on job title?

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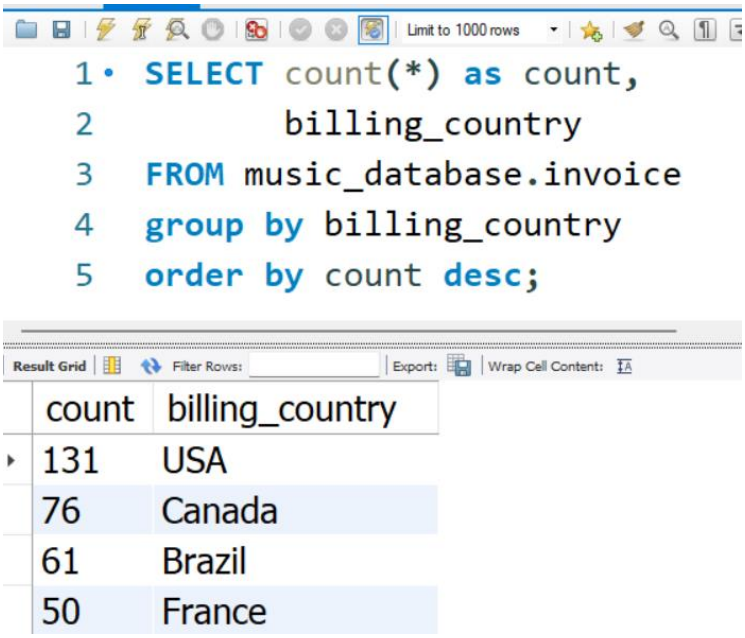
### 2. Which countries have the most Invoices?

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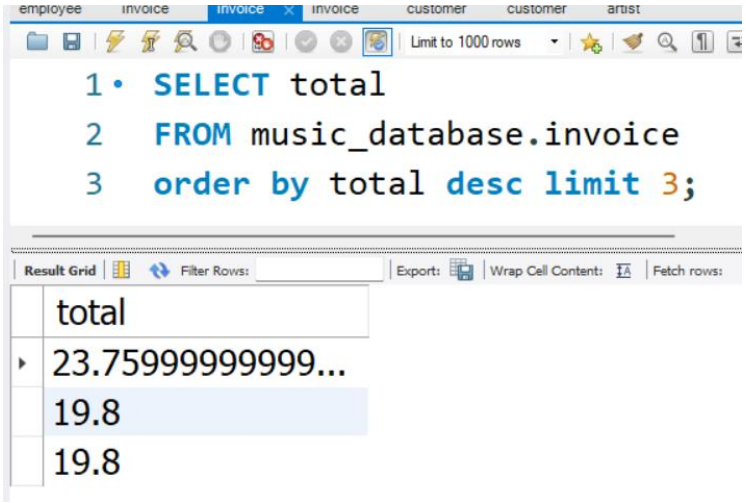
### 3. What are top 3 values of total invoice?

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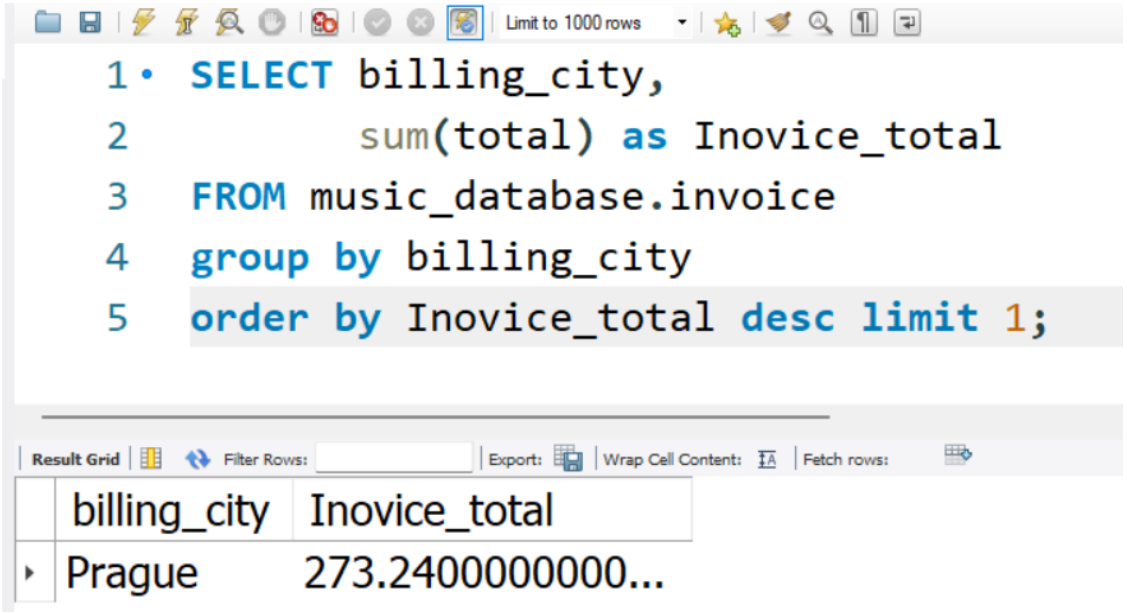
### 4. Which city has the best customers? We would like to throw a promotional Music Festival in the city we made the most money.

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**5.Who is the best customer? The customer who has spent the most money will be declared the best customer.**

```
1  SELECT customer.customer_id,
2         first_name,
3         last_name,
4         sum(invoice.total) as Amount
5  FROM music_database.customer
6  JOIN music_database.invoice
7  ON customer.customer_id=invoice.customer_id
8  GROUP BY customer.customer_id,
9           customer.first_name,
10          customer.last_name
11 ORDER BY Amount DESC
12 LIMIT 1;
```

| customer_id | first_name | last_name | Amount |
|---|---|---|---|
| 5 | FrantiÅiek | WichterlovÃi | 144.5400000000... |

**6.Write query to return the email, first name, last name, & Genre of all Rock Music listeners. Return your list ordered alphabetically by email starting with A.**

```
1  SELECT DISTINCT email,
2                  first_name,
3                  last_name
4  FROM music_database.customer
5  JOIN music_database.invoice
6  ON customer.customer_id=invoice.customer_id
7  JOIN music_database.invoice_line
8  ON invoice_line.invoice_id=invoice.invoice_id
9  WHERE track_id IN (
10                    SELECT track_id FROM music_database.track
11                    JOIN music_database.genre
12                    ON track.track_id=genre.genre_id
13                    where genre.name LIKE "Rock")
14 ORDER BY email asc;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

| email | first_name | last_name |
|---|---|---|
| aaronmitchell@y... | Aaron | Mitchell |
| johavanderberg... | Johannes | Van der Berg |

**7.Let's invite the artists who have written the most rock music in our dataset. Write a query that returns the Artist name and total track count of the top 10 rock bands.**

employee | invoice | invoice | invoice | customer | customer | artist

```
1  SELECT artist.artist_id,
2         artist.name,
3         COUNT(artist.artist_id) AS no_of_songs
4  FROM music_database.artist
5  JOIN music_database.album
6  ON artist.artist_id=album.artist_id
7  JOIN music_database.track
8  ON album.album_id=track.album_id
9  JOIN music_database.genre
10 ON track.genre_id=genre.genre_id
11 WHERE genre.name LIKE "Rock"
12 GROUP BY artist.artist_id, artist.name
13 ORDER BY no_of_songs DESC LIMIT 10;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

| artist_id | name | no_of_songs |
|---|---|---|
| 1 | AC/DC | 18 |
| 3 | Aerosmith | 15 |

**8. We want to find out the most popular music Genre for each country. We determine the most popular genre as the genre with the highest amount of purchases. Write a query that returns each country along with the top Genre. For countries where the maximum number of purchases is shared return all Genres**

```sql
WITH popular_genre as
(SELECT invoice.billing_country,
        SUM(invoice_line.quantity) quantity,
        genre.name as genre,

ROW_NUMBER()
over(PARTITION BY invoice.billing_country
      ORDER BY SUM(invoice_line.quantity) DESC) AS row_num

FROM music_database.customer
    JOIN invoice
    ON customer.customer_id=invoice.customer_id
    JOIN invoice_line
    ON invoice.invoice_id=invoice_line.invoice_id
    JOIN track
    ON invoice_line.track_id=track.track_id
    JOIN genre
    ON genre.genre_id=track.genre_id
GROUP BY 1,3
ORDER BY 2 DESC)
SELECT * FROM popular_genre
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

| billing_country | quantity | genre | row_num |
|---|---|---|---|
| USA | 70 | Rock | 1 |
| Canada | 57 | Rock | 1 |
| United Kingdom | 47 | Rock | 1 |
| Germany | 28 | Rock | 1 |

Result 36

**9.Determine which customer has spent the most on music for each country.**

**OR**

**Write a query that returns the country along with the top customer and how**

```
1  WITH customer_with_country AS
2  (SELECT customer.customer_id,
3         first_name,
4         last_name,
5         email,
6         billing_country as country,
7         SUM(total) AS purchased,
8  ROW_NUMBER()
9  OVER(partition by billing_country order by SUM(total)desc) as row_num
10 FROM music_database.customer
11 JOIN invoice
12 ON customer.customer_id=invoice.customer_id
13 GROUP BY 1,2,3,4,5)
14 SELECT * FROM customer_with_country
15 WHERE row_num<=1
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

| customer_id | first_name | last_name | email | country | purchased | row_nu |
|---|---|---|---|---|---|---|
| 56 | Diego | GutiÃ©rrez | diego.gutierrez@yahoo.ar | Argentina | 39.6 | 1 |
| 55 | Mark | Taylor | mark.taylor@yahoo.au | Australia | 81.18 | 1 |
| 7 | Astrid | Gruber | astrid.gruber@apple.at | Austria | 69.3 | 1 |
| 8 | Daan | Peeters | daan_peeters@apple.be | Belgium | 60.38999999999999 | 1 |
| 1 | LuÃ-s | GonÃ§alves | luisg@embraer.com.br | Brazil | 108.89999999999998 | 1 |
| 3 | FranÃ§ois | Tremblay | ftremblay@gmail.com | Canada | 99.99 | 1 |
| 57 | Luis | Rojas | luisrojas@yahoo.cl | Chile | 97.02000000000001 | 1 |
| 5 | FrantiÅ¡ek | WichterlovÃ¡ | frantisekw@jetbrains.com | Czech Republic | 144.54000000000002 | 1 |