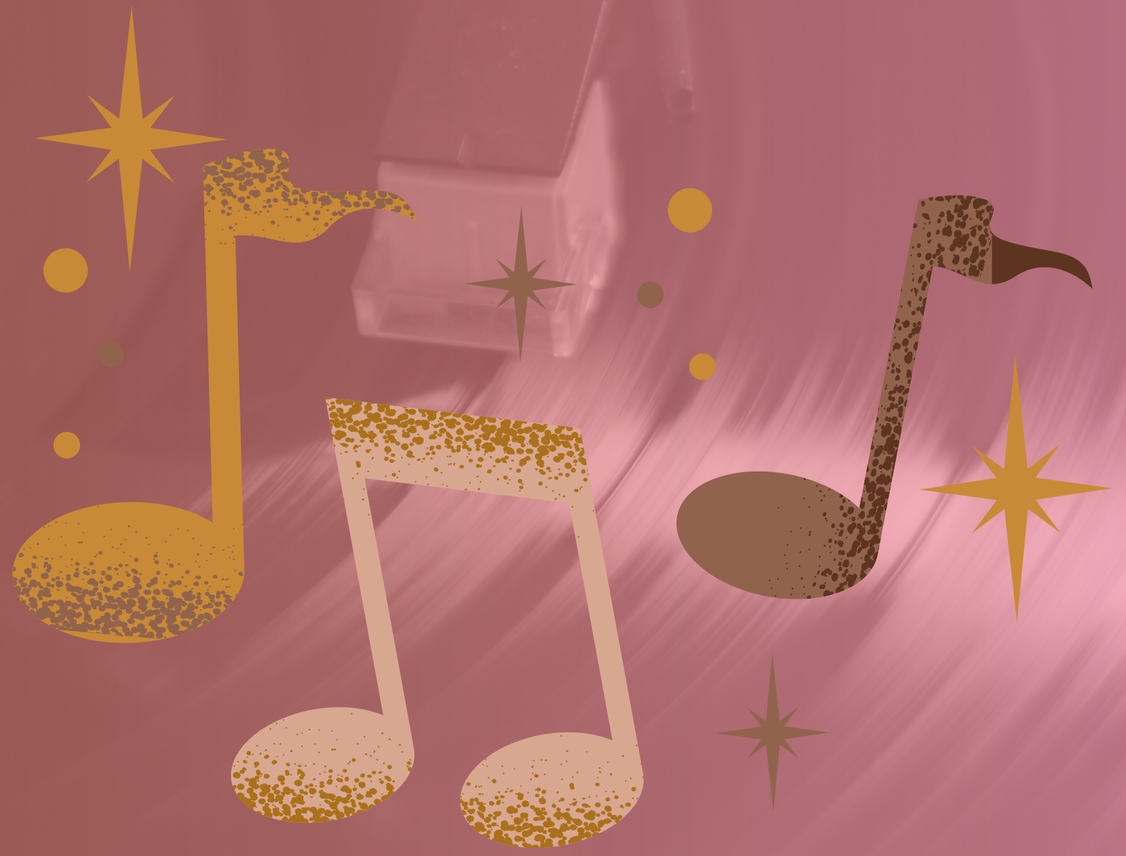
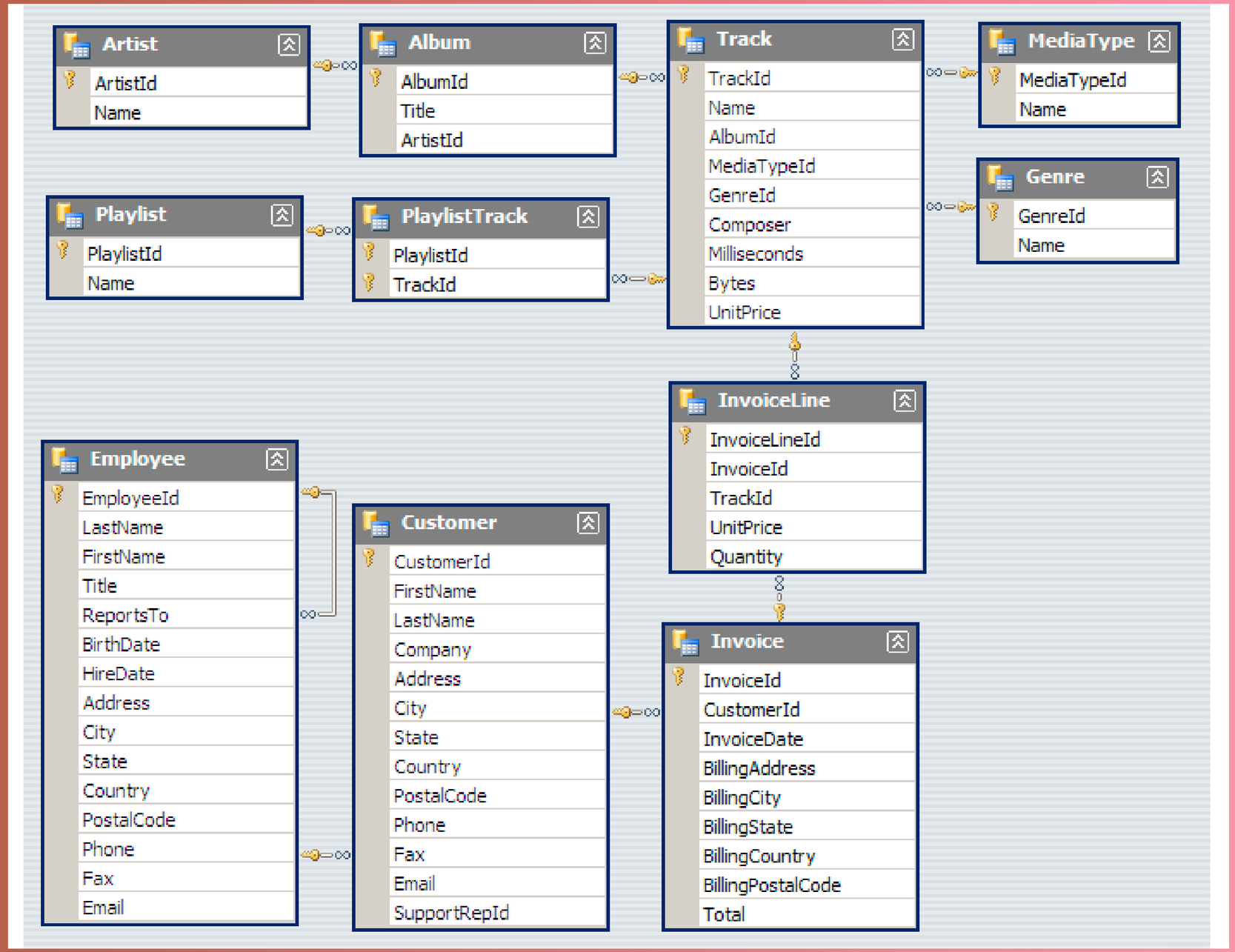
MUSIC STORE ANALYSIS



Shipra Rathore

ENTITY RELATIONSHIP DIAGRAM



EASY

Q1: Who is the senior most employee based on job title?

```sql
SELECT title, first_name, last_name
FROM employee
ORDER BY levels DESC
LIMIT 1;
```

title	first_name	last_name
General Manager	Andrew	Adams

EASY

Q2: Which countries have the most Invoices?

```sql
SELECT COUNT(*) AS most_invoices, billing_country
FROM invoice
GROUP BY billing_country
ORDER BY most_invoices DESC;
```

most_invoices	billing_country
131	USA
76	Canada
61	Brazil
50	France
41	Germany
30	Czech Republic

EASY

Q3: What are top 3 values of total invoice?

```
SELECT total AS top_3
FROM invoice
ORDER BY total DESC
LIMIT 3;
```

top_3
23.75999999999998
19.8
19.8

EASY

Q4: Which city has the best customers? We would like to throw a promotional Music Festival in the city we made the most money. Write a query that returns one city that has the highest sum of invoice totals. Return both the city name & sum of all invoice totals.

```
SELECT sum(total) AS invoice_total, billing_city
FROM invoice
GROUP BY billing_city
ORDER BY invoice_total DESC
LIMIT 1;
```

invoice_total	billing_city
273.24000000000007	Prague

EASY

Q5: Who is the best customer? The customer who has spent the most money will be declared the best customer. Write a query that returns the person who has spent the most money.

```sql
SELECT c.customer_id, c.first_name, c.last_name, SUM(i.total) as total
FROM customer as c
JOIN invoice as i ON c.customer_id = i.customer_id
GROUP BY c.customer_id, c.first_name, c.last_name
ORDER BY total DESC
LIMIT 1;
```

customer_id	first_name	last_name	total
5	FrantiÅiek	WichterlovÃ¡	144.54000000000002

MODERATE

Q1: 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.

```sql
SELECT DISTINCT email, first_name, last_name
FROM customer
JOIN invoice ON customer.customer_id = invoice.customer_id
JOIN invoice_line ON invoice.invoice_id = invoice_line.invoice_id
WHERE track_id IN(
    SELECT track_id FROM track
    JOIN genre ON track.genre_id = genre.genre_id
    WHERE genre.name LIKE 'Rock'
)
ORDER BY email;
```

email	first_name	last_name
aaronmitchell@yahoo.ca	Aaron	Mitchell
alero@uol.com.br	Alexandre	Rocha
astrid.gruber@apple.at	Astrid	Gruber
bjorn.hansen@yahoo.no	BjÃ rn	Hansen

MODERATE

Q2: 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.

```
SELECT artist.artist_id, artist.name, COUNT( artist.artist_id) as number_of_songs
FROM track
JOIN album ON album.album_id = track.album_id
JOIN artist ON artist.artist_id = album.artist_id
JOIN genre ON genre.genre_id = track.genre_id
WHERE genre.name LIKE 'Rock'
GROUP BY artist.artist_id, artist.name
ORDER BY number_of_songs DESC
LIMIT 10;
```

artist_id	name	number_of_songs
1	AC/DC	18
3	Aerosmith	15
8	Audioslave	14
22	Led Zeppelin	14
4	Alanis Morissette	13

MODERATE

Q3: Return all the track names that have a song length longer than the average song length. Return the Name and Milliseconds for each track. Order by the song length with the longest songs listed first

```
SELECT name, milliseconds
      FROM track
      WHERE milliseconds > (
SELECT AVG(milliseconds) AS avg_track_length
    FROM track )
    ORDER BY milliseconds DESC;
```

name	milliseconds
How Many More Times	711836
Advance Romance	677694
Sleeping Village	644571
You Shook Me(2)	619467

ADVANCED

Q1.:Find how much amount spent by each customer on artists? Write a query to return customer name, artist name and total spent

```sql
SELECT C.first_name, C.last_name, A.name, SUM(IL.unit_price*IL.quantity) AS total_spent
FROM artist AS A
    JOIN album USING (artist_id)
    JOIN track USING (album_id)
    JOIN invoice_line AS IL USING (track_id)
    JOIN invoice AS I USING (invoice_id)
    JOIN customer AS C USING (customer_id)
GROUP BY C.first_name, C.last_name, A.name
ORDER BY SUM(IL.unit_price*IL.quantity) DESC;
```

first_name	last_name	name	total_spent
Steve	Murray	AC/DC	17.82
Jennifer	Peterson	Aerosmith	14.850000000000001
Mark	Taylor	Aerosmith	14.850000000000001
Leonie	KÃ¶hler	Audioslave	13.860000000000001
Fernanda	Ramos	AntÃ´nio Carlos Jobim	13.860000000000001

ADVANCED

Q2: 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 COUNT(invoice_line.quantity) AS purchases, customer.country, genre.name, genre.genre_id,
    ROW_NUMBER() OVER(PARTITION BY customer.country ORDER BY COUNT(invoice_line.quantity) DESC) AS RowNo
    FROM invoice_line
    JOIN invoice ON invoice.invoice_id = invoice_line.invoice_id
    JOIN customer ON customer.customer_id = invoice.customer_id
    JOIN track ON track.track_id = invoice_line.track_id
    JOIN genre ON genre.genre_id = track.genre_id
    GROUP BY 2,3,4
    ORDER BY 2 ASC, 1 DESC
)
SELECT * FROM popular_genre WHERE RowNo <= 1;
```

purchases	country	name	genre_id	RowNo
1	Argentina	Rock	1	1
18	Australia	Rock	1	1
6	Austria	Rock	1	1
5	Belgium	Rock	1	1
26	Brazil	Rock	1	1
57	Canada	Rock	1	1

ADVANCED

Q3: Write a query that determines the customer that has spent the most on music for each country. Write a query that returns the country along with the top customer and how much they spent. For countries where the top amount spent is shared, provide all customers who spent this amount.

```
WITH Customter_with_country AS (
        SELECT customer.customer_id,first_name,last_name,billing_country,SUM(total) AS total_spending,
        ROW_NUMBER() OVER(PARTITION BY billing_country ORDER BY SUM(total) DESC) AS RowNo
        FROM invoice
        JOIN customer ON customer.customer_id = invoice.customer_id
        GROUP BY 1,2,3,4
        ORDER BY 4 ASC,5 DESC)
SELECT * FROM Customter_with_country WHERE RowNo <= 1
```

customer_id	first_name	last_name	billing_country	total_spending	RowNo
56	Diego	GutiÃ©rrez	Argentina	39.6	1
55	Mark	Taylor	Australia	81.18	1
7	Astrid	Gruber	Austria	69.3	1
8	Daan	Peeters	Belgium	60.38999999999999	1
1	LuÃ-s	GonÃ§alves	Brazil	108.89999999999998	1
3	FranÃ§ois	Tremblay	Canada	99.99	1

Thank you!