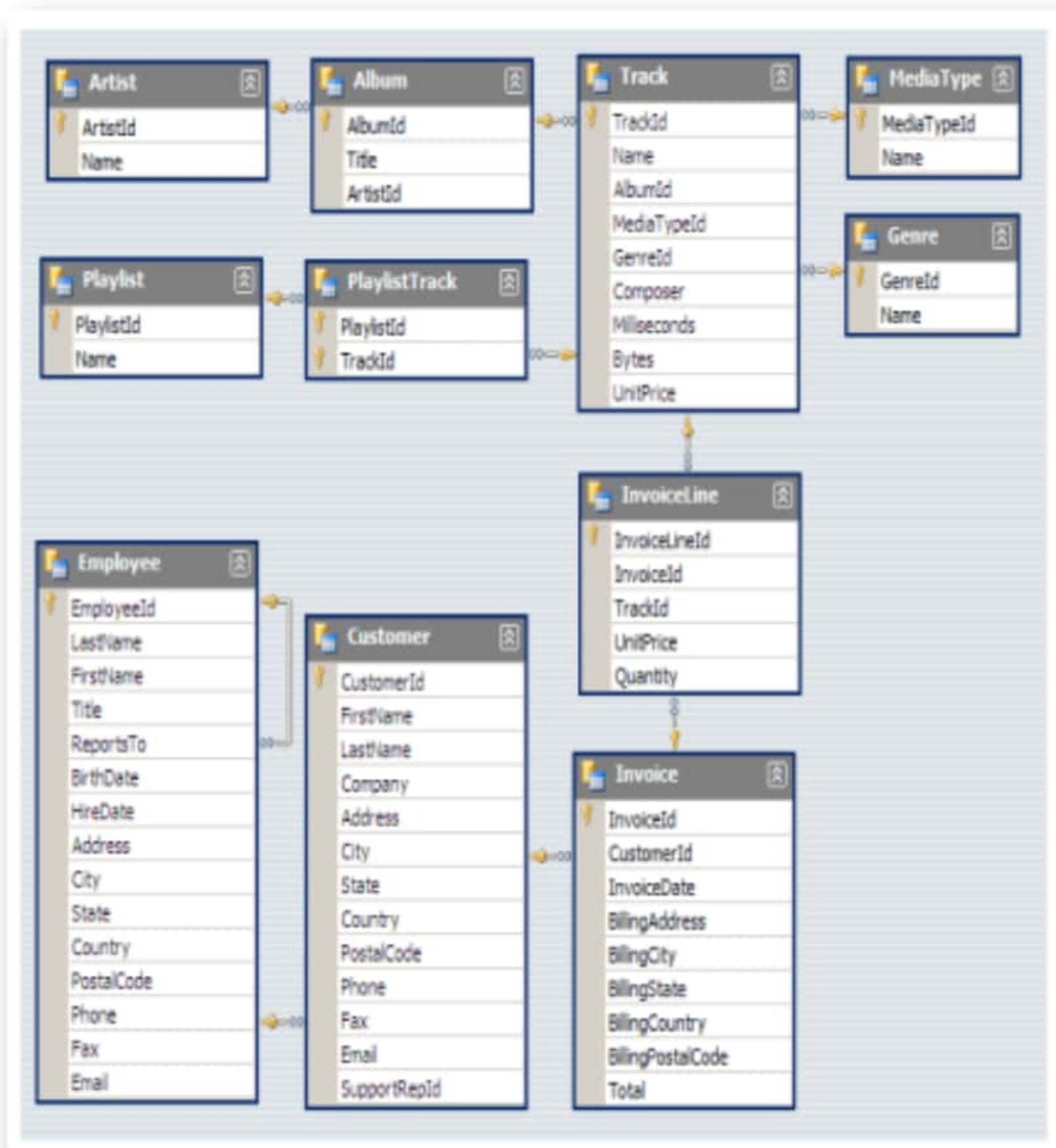


MUSIC STORE ANALYSIS
USING SQL
BY NISHANT BAHAKAR

SCHEMA DIAGRAM



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

Query:

```
select * from employee
order by levels desc
limit 1
```

Data Output Messages Notifications					
	employee_id [PK] character varying (50)	last_name character	first_name character	title character varying (50)	
1	9	Madan	Mohan	...	Senior General Manager

Q2: Which countries have the most Invoices?

Query:

```
Select count (*) as cnt , billing_country
from invoice
group by billing_country
order by cnt desc
```

Data Output Messages Notifications		
	cnt bigint	billing_country character varying (30)
1	131	USA
2	76	Canada
3	61	Brazil
4	50	France
5	41	Germany
6	30	Czech Republic
7	29	Portugal
8	28	United Kingdom

Q3: What are top 3 values of total invoice?

Query:

```
select total
from invoice
order by total desc
limit 3
```

Data Output		Messages	Notifications
	total double precision		
1	23.759999999999998		
2	19.8		
3	19.8		

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

Query:

```
select billing_city , sum(total) as invoice_total
from invoice
group by billing_city
order by invoice_total desc
```

Data Output		Messages	Notifications
	billing_city character varying (30)	invoice_total double precision	
1	Prague	273.240000000000007	
2	Mountain View	169.29	
3	London	166.32	
4	Berlin	158.4	
5	Paris	151.47	
6	São Paulo	129.69	
7	Dublin	114.839999999999997	
8	Delhi	111.869999999999999	
Total rows: 53 of 53		Query complete 00:00:00.107	

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.

Query:

```
select customer.customer_id, customer.first_name , customer.last_name ,
sum(invoice.total)as total
from customer
join invoice
on customer.customer_id = invoice.customer_id
group by customer.customer_id
order by total desc
limit 1
```

Data Output				Messages	Notifications
	customer_id [PK] integer	first_name character	last_name character	total double precision	
1	5	R	...	Madhav	144.54000000000000

Q6: 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.

Query:

```
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
```

Data Output				Messages	Notifications
	email character varying (50)	first_name character	last_name character		
1	aaronmitchell@yahoo.ca	Aaron	Mitchell		
2	alero@uol.com.br	Alexandre	Rocha		
3	astrid.gruber@apple.at	Astrid	Gruber		
4	bjorn.hansen@yahoo.no	Bjorn	Hansen		
5	camille.bernard@yahoo.fr	Camille	Bernard		
6	daan_peeters@apple.be	Daan	Peeters		
7	diego.gutierrez@yahoo.ar	Diego	Gutiérrez		
8	dmiller@comcast.com	Dan	Miller		

**Q7: 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.**

Query:

```
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
order by  number_of_songs desc
limit 10;
```

Data Output Messages Notifications			
	artist_id [PK] character varying (50)	name character varying (120)	number_of_songs bigint
1	22	Led Zeppelin	114
2	150	U2	112
3	58	Deep Purple	92
4	90	Iron Maiden	81
5	118	Pearl Jam	54
6	152	Van Halen	52
7	51	Queen	45
8	142	The Rolling Stones	41
9	76	Creedence Clearwater Revival	40
10	52	Kiss	35

**Q8: 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.**

Query: select name , milliseconds
from track
where milliseconds >(
 select avg(milliseconds) as avg_track_length
 from track
)
order by milliseconds desc;

Data Output Messages Notifications		
	name character varying (150)	milliseconds integer
1	Occupation / Precipice	528695
2	Through a Looking Glass	508838
3	Greetings from Earth, Pt. 1	296029
4	The Man With Nine Lives	295699
5	Battlestar Galactica, Pt. 2	295608
6	Battlestar Galactica, Pt. 1	295270
7	Murder On the Rising Star	293589
8	Battlestar Galactica, Pt. 3	292780
9	Take the Celestra	292767
10	Fire In Space	292659

Q9: Find how much amount spent by each customer on artists? Write a query to return customer name, artist name and total spent

Query:

With best_selling_price AS(

```
select artist.artist_id as artist_id , artist.name as artist_name ,
sum(invoice_line.unit_price * invoice_line.quantity) as total_sales
from invoice_line
join track on track.track_id = invoice_line.track_id
join album on album.album_id = track.album_id
join artist on artist.artist_id = album.artist_id
group by 1
order by 3 desc
limit 1
```

)

```
select c.customer_id as customer_id ,c.first_name ,c.last_name ,bsa.artist_name ,
sum(il.unit_price * il.quantity) as amount_spent
from invoice i
join customer c on c.customer_id = i.customer_id
join invoice_line il on il.invoice_id = i.invoice_id
join track t on t.track_id = il.track_id
join album alb on alb.album_id = t.album_id
join best_selling_price bsa on bsa.artist_id = alb.artist_id
group by 1,2,3,4
order by 5 desc;
```

Data Output Messages Notifications						
	customer_id integer	first_name character	last_name character	artist_name character varying (120)	amount_spent double precision	
1	46	Hugh	O'Reilly	Queen	27.719999999999985	
2	38	Niklas	Schröder	Queen	18.81	
3	3	François	Tremblay	Queen	17.82	
4	34	João	Fernandes	Queen	16.830000000000002	
5	53	Phil	Hughes	Queen	11.88	
6	41	Marc	Dubois	Queen	11.88	
7	47	Lucas	Mancini	Queen	10.89	
8	33	Ellie	Sullivan	Queen	10.89	
9	20	Dan	Miller	Queen	3.96	
10	5	R	Madhav	Queen	3.96	

Q10: 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.

Query:

```
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
```

Data Output Messages Notifications						
	purchases bigint	country character varying (50)	name character varying (120)	genre_id character varying (50)	rowno bigint	
1	17	Argentina	Alternative & Punk	4	1	
2	34	Australia	Rock	1	1	
3	40	Austria	Rock	1	1	
4	26	Belgium	Rock	1	1	
5	205	Brazil	Rock	1	1	
6	333	Canada	Rock	1	1	
7	61	Chile	Rock	1	1	
8	143	Czech Republic	Rock	1	1	
9	24	Denmark	Rock	1	1	
10	46	Finland	Rock	1	1	

Q11: 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.

Query:

```
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
```

Data Output Messages Notifications								
	customer_id integer	first_name character	last_name character	billing_country character varying (30)	total_spending double precision	rowno bigint		
1	56	Diego	Gutiérrez	Argentina	39.6			
2	55	Mark	Taylor	Australia	81.18			
3	7	Astrid	Gruber	Austria	69.3			
4	8	Daan	Peeters	Belgium	60.389999999999999			
5	1	Luis	Gonçalves	Brazil	108.899999999999998			
6	3	François	Tremblay	Canada	99.99			
7	57	Luis	Rojas	Chile	97.020000000000001			
8	5	R	Madhav	Czech Republic	144.540000000000002			
9	9	Kara	Nielsen	Denmark	37.619999999999999			
10	44	Toshi	Uemura	Finland	70.2			