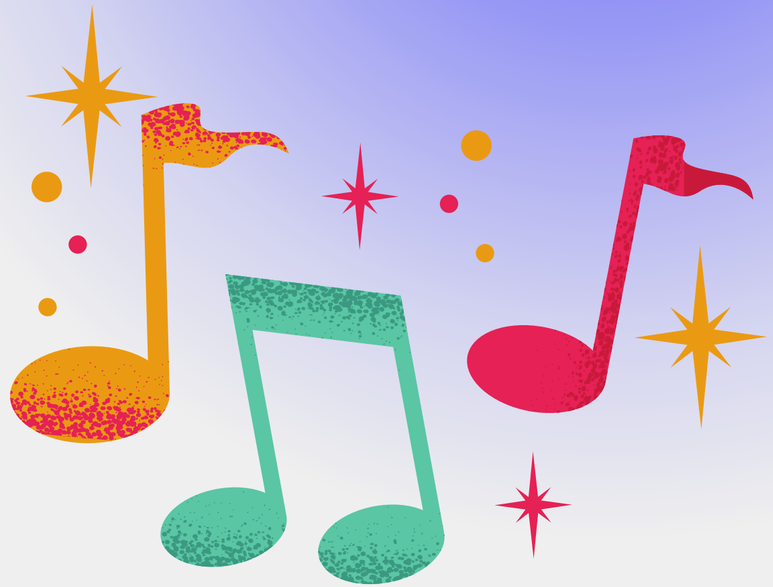
Digital Music Store Analysis



Dataset Overview

It is a music database with ten tables, as detailed below. Table columns are also mentioned.

album2 : It has columns - >*album_id, title, artist_id.*

artist : It has columns -> *artist_id, name.*

playlist_track: It has columns -> *playlist_id, track_id.*

invoice_line: It has columns-> *invoice_line_id, invoice_id, track_id, unit_price, quantity.*

playlist: It has columns -> *playlist_id, name.*

media_type: It has columns -> *media_type_id, name.*

employee: It has columns -> *employee_id, last_name, first_name, title, reports_to, levels, birthdate, hire_date, address, city, state, country, postal_code, phone, fax, email.*

track: It has columns -> *track_id, name, album_id, media_type_id, genre_id, composer, milliseconds, bytes, unit_price.*

genre: It has columns -> *genre_id, name.*

Customer: It has columns -> *customer_id, first_name, last_name, company, address, city, state, country, postal_code, phone, fax, email, support_rep_id.*

- *Who is the senior most employee based on job title?*

```
select * from employee where reports_to=0
```

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

	employee_id	last_name	first_name	title	reports_to	levels	birthdate	hire_date	address
▶	9	Madan	Mohan	Senior General Manager	0	L7	26-01-1961 00:00	14-01-2016 00:00	1008 Vrinda Ave MT

- *Which countries have the most invoices?*

```
select billing_country , count(invoice_id) as invoices from invoice
group by billing_country  order by invoices desc
```

Result Grid | Filter Rows: | Export:

billing_country	invoices
USA	131
Canada	76
Brazil	61
France	50
Germany	41
Czech Republic	30
Portugal	
United Kingdom	
India	
Ireland	
Chile	
Finland	
Spain	

- *What are top 3 values of total invoice?*

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

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

invoice_id	customer_id	invoice_date	billing_address	billing_city	billing_state	billing_country	billing_postal_code	total
183	42	2018-02-09 00:00:00	9, Place Louis Barthou	Bordeaux	None	France	33000	23.759999999999998
31	3	2017-02-21 00:00:00	1498 rue BÃ©langer	MontrÃ©al	QC	Canada	H2G 1A7	19.8
92	32	2017-07-02 00:00:00	696 Osborne Street	Winnipeg	MB	Canada	R3L 2B9	19.8

- *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 and thecity where sum of all invoice totals.*

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

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

invoice_total	billing_city
273.24000000000007	Prague
169.29	Mountain View
166.32	London
158.4	Berlin
151.47	Paris
129.69	SÃ£o Paulo
114.83999999999997	Dublin
111.86999999999999	Delhi
108.89999999999998	SÃ£o JosÃ© dos Campos
106.91999999999999	BrasÃ-lia
102.96000000000001	Lisbon
99.99	Bordeaux
99.99	MontrÃ©al
98.01	Madrid

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

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

customer_id	first_name	last_name	total_sum
5	FrantiÅiek	WichterlovÃ¡	144.54000000000002

- *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;
```

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

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
camille.bernard@yahoo.fr	Camille	Bernard
daan_peeters@apple.be	Daan	Peeters
diego.gutierrez@yahoo.ar	Diego	GutiÃ©rrez
dmiller@comcast.com	Dan	Miller
dominiquelefebvre@gmail.com	Dominique	Lefebvre
edfrancis@yachoo.ca	Edward	Francis
eduardo@woodstock.com.br	Eduardo	Martins

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

```sql
select artist.artist_id, artist.name, count(artist.artist_id) as number_of_songs from track
join album2 on track.album_id=album2.album_id
join artist on artist.artist_id=album2.artist_id
join genre on genre.genre_id=track.genre_id
where genre.name='Rock'
group by artist.artist_id
order by number_of_songs desc
limit 10;
```

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

artist_id	name	number_of_songs
1	AC/DC	18
3	Aerosmith	15
8	Audioslave	14
22	Led Zeppelin	14
4	Alanis Morissette	13
5	Alice In Chains	12
23	Frank Zappa & Captain Beefheart	9
2	Accept	4

- *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 track.name,milliseconds from track
where milliseconds > (select avg(milliseconds) as avg_track_length
from track)
order by milliseconds desc;
```

Result Grid | Filter Rows: | Export:

name	milliseconds
How Many More Times	711836
Advance Romance	677694
Sleeping Village	644571
You Shook Me(2)	619467
Talkin' 'Bout Women Obviously	589531
Stratus	582086
No More Tears	555075
The Alchemist	509413
Wheels Of Confusion / The Straightener	494524
Book Of Thel	494393
You Oughta Know (Alternate)	491885

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

```sql
with best_selling_artist as (
        select artist.artist_id as artist_id, artist.name as artist_name,
        sum(invoice_line.unit_price * invoice_line.quantity) as total_spent
        from invoice_line
        join track on track.track_id=invoice_line.track_id
        join album2 on album2.album_id
        =track.album_id
        join artist on artist.artist_id=album2.artist_id
        group by 1
        order by 3 desc
        limit 1
    )
select c.customer_id, c.first_name,c.last_name, bsa.artist_name, sum(il.unit_price * il.quantity) as amount_splent
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 album2 alb on alb.album_id=t.album_id
join best_selling_artist bsa on bsa.artist_id=alb.artist_id
group by 1,2,3,4
order by 5 desc;
```

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

customer_id	first_name	last_name	artist_name	amount_splent
54	Steve	Murray	AC/DC	17.82
53	Phil	Hughes	AC/DC	10.89
21	Kathy	Chase	AC/DC	10.89
49	StanisÅ‚aw	WÃ³jcik	AC/DC	9.9
1	LuÃ-s	GonÃ§alves	AC/DC	7.920000000000001
24	Frank	Ralston	AC/DC	7.920000000000001
31	Martha	Silk	AC/DC	3.96
16	Frank	Harris	AC/DC	2.9699999999999998
42	Wyatt	Girard	AC/DC	2.9699999999999998
6	Helena	HolÃ½	AC/DC	2.9699999999999998
38	Niklas	SchrÃ¶der	AC/DC	2.9699999999999998
35	Madalena	Sampaio	AC/DC	2.9699999999999998
44	Terhi	HÃ¤mÃ¤lÃ…	AC/DC	2.9699999999999998
9	Kara	Nielsen	AC/DC	1.98
34	JoÃ£o	Fernandes	AC/DC	1.98

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

```sql
with recursive
customer_with_country as (
select customer.customer_id, first_name, last_name, billing_country, sum(total) as total_spending
from invoice
join customer on customer.customer_id = invoice.customer_id
group by 1,2,3,4
order by 1,5 desc),

country_max_spending as(
select billing_country , max(total_spending) as max_spending
from customer_with_country
group by billing_country)
select cc.billing_country, cc.total_spending, cc.first_name, cc.last_name, cc.customer_id
from customer_with_country cc
join country_max_spending ms
on cc.billing_country = ms.billing_country
where cc.total_spending=ms.max_spending
order by 1;
```

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

billing_country	total_spending	first_name	last_name	customer_id
Argentina	39.6	Diego	GutiÃ©rrez	56
Australia	81.18	Mark	Taylor	55
Austria	69.3	Astrid	Gruber	7
Belgium	60.38999999999999	Daan	Peeters	8
Brazil	108.89999999999998	LuÃs	GonÃ§alves	1
Canada	99.99	FranÃ§ois	Tremblay	3
Chile	97.02000000000001	Luis	Rojas	57
Czech Republic	144.54000000000002	FrantiÅ¡ek	WichterlovÃ¡	5
Denmark	37.61999999999999	Kara	Nielsen	9
Finland	79.2	Terhi	HÃ¤mÃ¤lÃ¤inen	44
France	99.99	Wyatt	Girard	42
Germany	94.05000000000001	Fynn	Zimmermann	37
Hungary	78.21	Ladislav	KovÃ¡cs	45
India	111.86999999999999	Manoj	Pareek	58
Ireland	114.83999999999997	Hugh	O'Reilly	46
Italy	50.49	Lucas	Mancini	47
Netherlands	65.34	Johannes	Van der Berg	48
Norway	72.27000000000001	BjÃ¸rn	Hansen	4
Poland	76.22999999999999	StanisÅ‚aw	WÃ³jcik	49
Portugal	102.96000000000001	JoÃ£o	Fernandes	34