



CHINOOK DATABASE SQL ANALYSIS

Overview

For this project, I worked with the **Chinook Database**, a sample music store database that contains information about artists, albums, tracks, customers, employees, and invoices.

My goal was simple: **practice SQL on a real-world-style dataset** and see how much insight I could pull out just by writing queries. I started with some easy questions (like listing customers or finding tracks longer than 5 minutes) and gradually moved toward more business-focused problems (like finding the best-selling artist or identifying top-spending customers).

What I Used

- SQL basics → SELECT, WHERE ,ORDER BY
- Joins between multiple tables
- Aggregations → COUNT, SUM, AVG, GROUP BY, HAVING
- Subqueries & nested queries
- Sorting and limiting results

What I Found

Through this analysis, I was able to answer questions like:

- Who are the top customers by spending?
- Which countries generate the highest sales?
- What genres and artists perform best in terms of revenue?

This project was a great way to sharpen my SQL skills while also building something that feels close to what analysts do in real business situations.

Beginner

- List all customers' first name, last name, and email.

```
SELECT first_name, last_name, email FROM customer;
```

first_name	last_name	email
Luis	Goncalves	luisg@embraer.com.br
Leonie	Kohler	leonekohler@surfeu.de
Francois	Tremblay	ftremblay@gmail.com
Bjorn	Hansen	bjorn.hansen@yahoo.no
Frantisek	Wichterlova	frantisekw@jetbrains.com
Helena	Holy	hholy@gmail.com
Astrid	Gruber	astrid.gruber@apple.at
Daan	Peeters	daan_peeters@apple.be
Kara	Nielsen	kara.nielsen@jubii.dk
Eduardo	Martins	eduardo@woodstock.com.br

- Show all tracks that are longer than 5 minutes.

```
SELECT name, milliseconds FROM track
```

```
WHERE milliseconds > 300000
```

name	milliseconds
For Those About To Rock (We Salute You)	343719
Balls to the Wall	342562
Princess of the Dawn	375418
Go Down	331180
Let There Be Rock	366654
Problem Child	325041
Overdose	369319
Whole Lotta Rosie	323761
Love In An Elevator	321828

- Find all albums by the artist AC/DC.

```
SELECT ar.name , al.title FROM artist ar join album al
```

```
ON ar.artist_id=al.artist_id
```

WHERE ar.name='AC/DC';

name	title
AC/DC	For Those About To Rock We Salute You
AC/DC	Let There Be Rock

- Get all invoices from customers in the USA.

SELECT * FROM invoice

WHERE billing_country='USA';

invo ce_id	custo mer_id	invoice_ date	billing_ address	billing_ city	billing_ state	billing_c ountry	billing_pos tal_code	tot al
5	23	1/11/20 21 0:00	69 Salem Street	Boston	MA	USA	2113	13. 86
13	16	2/19/20 21 0:00	1600 Amphitheatre Parkway	Mountai n View	CA	USA	94043- 1351	0.9 9
14	17	3/4/202 1 0:00	1 Microsoft Way	Redmon d	WA	USA	98052- 8300	1.9 8
15	19	3/4/202 1 0:00	1 Infinite Loop	Cuperti no	CA	USA	95014	1.9 8
16	21	3/5/202 1 0:00	801 W 4th Street	Reno	NV	USA	89503	3.9 6
17	25	3/6/202 1 0:00	319 N. Frances Street	Madison	WI	USA	53703	5.9 4
26	19	4/14/20 21 0:00	1 Infinite Loop	Cuperti no	CA	USA	95014	13. 86
37	17	6/6/202 1 0:00	1 Microsoft Way	Redmon d	WA	USA	98052- 8300	3.9 6

- Retrieve the top 10 most expensive tracks.

SELECT track_id, name, unit_price FROM track

ORDER BY unit_price DESC

LIMIT 10;

track_id	name	unit_price
2824	Torn	1.99
2827	Unfinished Business	1.99
2821	Exodus, Pt. 1	1.99
2823	Collaborators	1.99
2825	A Measure of Salvation	1.99
2826	Hero	1.99
2819	Battlestar Galactica: The Story So Far	1.99
2820	Occupation / Precipice	1.99
2822	Exodus, Pt. 2	1.99
2828	The Passage	1.99

◆ Intermediate

- Find the total number of customers in each country.

```
SELECT country, COUNT(*) AS total_customer
```

```
FROM customer
```

```
GROUP BY country
```

```
ORDER BY total_customer DESC;
```

country	total_customer
USA	13
Canada	8
France	5
Brazil	5
Germany	4
United Kingdom	3
Portugal	2
India	2
Czech Republic	2

- Show the total sales (invoice total) grouped by billing country.

```
SELECT billing_country , SUM(total) AS total_sales FROM invoice
```

GROUP BY billing_country

ORDER BY total_sales DESC;

billing_country	total_sales
USA	523.06
Canada	303.96
France	195.1
Brazil	190.1
Germany	156.48
United Kingdom	112.86
Czech Republic	90.24
Portugal	77.24
India	75.26

- List the top 5 customers who spent the most money.

SELECT c.first_name, c.last_name, SUM(i.total) AS total_spent

FROM customer JOIN invoice i

ON c.customer_id=i.customer_id

GROUP BY c.customer_id

ORDER BY total_spent DESC

LIMIT 5;

first_name	last_name	total_spent
Helena	Holy	49.62
Richard	Cunningham	47.62
Luis	Rojas	46.62
Hugh	O'Reilly	45.62
Ladislav	Kovics	45.62

- Find all tracks along with their genre name.

SELECT t.name AS track_name, g.name AS genre_name

FROM track t

JOIN genre g

ON t.genre_id=g.genre_id;

track_name	genre_name
For Those About To Rock (We Salute You)	Rock
Balls to the Wall	Rock
Fast As a Shark	Rock
Restless and Wild	Rock
Princess of the Dawn	Rock
Put The Finger On You	Rock
Let's Get It Up	Rock
Inject The Venom	Rock
Snowballed	Rock

- Retrieve all playlists with the total number of tracks in each.

SELECT p.name AS playlist, COUNT(pt.track_id) AS total_track

FROM playlist p

JOIN playlist_track pt

ON p.playlist_id=pt.playlist_id

GROUP BY playlist

ORDER BY total_track DESC;

playlist	total_track
Music	6580
90â€™s Music	1477
TV Shows	426
Classical	75
Brazilian Music	39
Heavy Metal Classic	26
Classical 101 - Deep Cuts	25
Classical 101 - The Basics	25
Classical 101 - Next Steps	25
Grunge	15
Music Videos	1
On-The-Go 1	1

◆ Advanced

- Find the best-selling artist (by total invoice line sales).

```
SELECT ar.name AS artist_name, SUM(il.unit_price * il.quantity) AS total_sales
FROM invoice_line il
JOIN track t ON il.track_id = t.track_id
JOIN album al ON t.album_id = al.album_id
JOIN artist ar ON al.artist_id = ar.artist_id
GROUP BY ar.artist_id
ORDER BY total_sales DESC
LIMIT 1;
```

artist_name	total_sales
Iron Maiden	138.6

- List employees along with the customers they support.

```
SELECT e.first_name || ' ' || e.last_name AS employee_name,
c.first_name || ' ' || c.last_name AS customer_name
FROM employee e
JOIN customer c
ON e.employee_id=c.support_rep_id
ORDER BY employee_name;
```

employee_name	customer_name
Jane Peacock	Puja Srivastava
Jane Peacock	Francois Tremblay
Jane Peacock	Roberto Almeida
Jane Peacock	Jennifer Peterson
Jane Peacock	Michelle Brooks
Jane Peacock	Tim Goyer

Jane Peacock	Frank Ralston
Jane Peacock	Robert Brown
Jane Peacock	Edward Francis

- Find the top 3 countries by total revenue.

```
SELECT billing_country, SUM(total) AS revenue
FROM invoice
GROUP BY billing_country
ORDER BY revenue DESC
LIMIT 3;
```

billing_country	revenue
USA	523.06
Canada	303.96
France	195.1

- Show each customer's name along with the total number of invoices they have.

```
SELECT c.first_name, c.last_name, COUNT(i.invoice_id) AS total_invoice
FROM customer c
LEFT JOIN invoice i
ON c.customer_id=i.customer_id
GROUP BY c.customer_id
ORDER BY total_invoice DESC;
```

first_name	last_name	total_invoice
Daan	Peeters	7
Steve	Murray	7
Björn	Hansen	7
João	Fernandes	7

Joakim	Johansson	7
Emma	Jones	7
Eduardo	Martins	7
Madalena	Sampaio	7
Ladislav	Kovics	7

- Find the average invoice total per billing country.

```
SELECT billing_country, ROUND(AVG(total)) avg_invoice
```

```
FROM invoice
```

```
GROUP BY billing_country
```

```
ORDER BY avg_invoice DESC;
```

billing_country	avg_invoice
Hungary	7
Chile	7
Ireland	7
Germany	6
Norway	6
Finland	6
Portugal	6
France	6
USA	6