MUSIC STORE DATA ANALYSIS USING SQL

This project analyzes A digital music store database (chinook) using SQL to uncover business insights related to customers, sales, music genres, artists, and playlists. The analysis demonstrates practical use of SQL for real-world data analysis and decision-making.

Key Insights

- Identified top-spending customers and high-revenue countries
- Analyzed overall and monthly sales performance
- Discovered most popular genres, tracks, and artists
- Examined playlist composition and customer purchasing behavior

```sql
-- Q1. Find the total number of customers by country

SELECT
    country, COUNT(*) AS total_customer
FROM
    customer
GROUP BY country
ORDER BY total_customer DESC;
```

Result Grid | Filter Rows: | Export:

country	total_customer
USA	13
Canada	8
Brazil	5
France	5
Germany	4
United Kingdom	3
Czech Republic	2
Portugal	2
India	2
Norway	1
Austria	1
Belgium	1

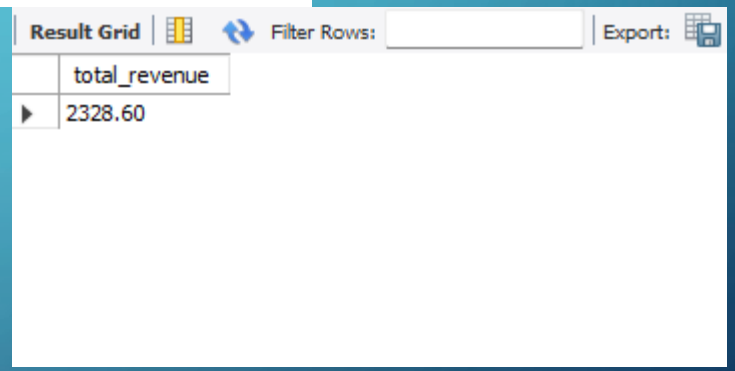
Result 2

```sql
-- Q2. Identify the top 5 customers who spent the most money

SELECT
    customer.FirstName,
    customer.LastName,
    SUM(invoice.Total) AS total_spent
FROM
    customer
        JOIN
    invoice ON customer.CustomerId = invoice.CustomerId
GROUP BY customer.FirstName , customer.LastName
ORDER BY total_spent DESC
LIMIT 5;
```

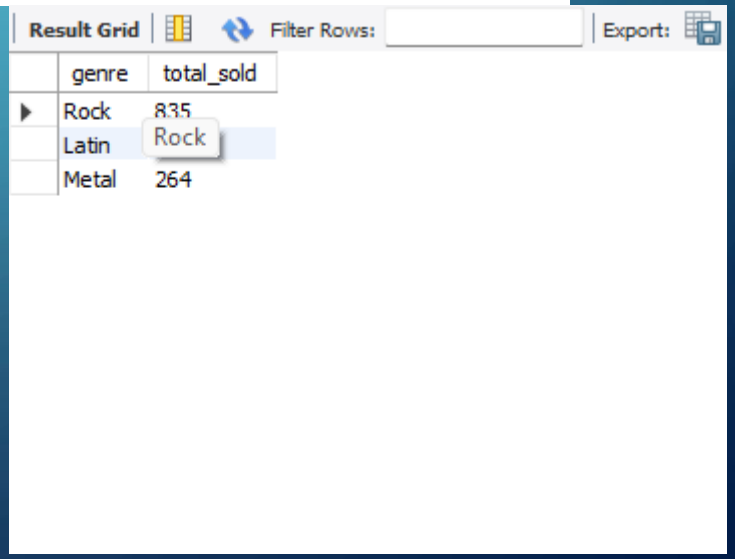
Result Grid | Filter Rows: | Export:

FirstName	LastName	total_spent
Helena	Holý	49.62
Richard	Cunningham	47.62
Luis	Rojas	46.62
Ladislav	Kovács	45.62
Hugh	O'Reilly	45.62

```sql
-- Q3. Find the total revenue generated by the music store

SELECT
    SUM(invoice.Total) AS total_revenue
FROM
    invoice;
```



```sql
-- Q4. Identify the most popular genre based on total sales

SELECT
    genre.name AS genre, SUM(invoiceline.Quantity) AS total_sold
FROM
    invoiceline
        JOIN
    track ON invoiceline.TrackId = track.TrackId
        JOIN
    genre ON genre.GenreId = track.GenreId
GROUP BY genre
ORDER BY total_sold DESC
LIMIT 3;
```



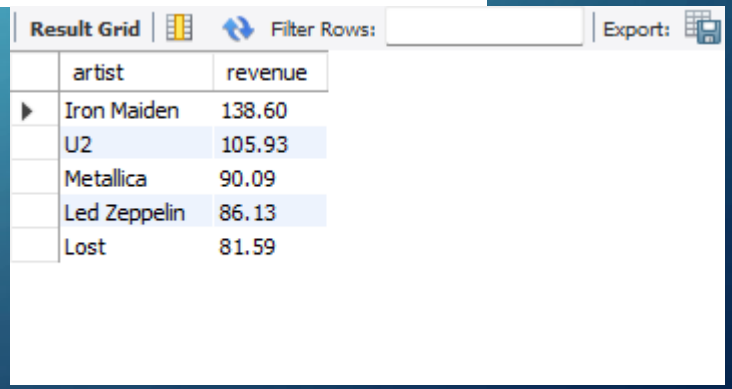
```sql
-- Q5. Find the top 5 most purchased tracks

SELECT
    track.Name, SUM(invoiceline.Quantity) AS total_purchase
FROM
    invoiceline
        JOIN
    track ON invoiceline.TrackId = track.TrackId
GROUP BY track.Name
ORDER BY total_purchase DESC
LIMIT 5;
```

Result Grid | Filter Rows: | Export:

Name	total_purchase
Dazed and Confused	5
The Trooper	5
The Number Of The Beast	4
Sure Know Something	4
Hallowed Be Thy Name	4

The Number Of The Beast

```sql
-- Q6. Find the top 5 artists based on total revenue

SELECT
    artist.Name AS artist,
    SUM(invoiceline.UnitPrice * invoiceline.Quantity) AS revenue
FROM
    invoiceline
        JOIN
    track ON invoiceline.TrackId = track.TrackId
        JOIN
    album ON track.AlbumId = album.AlbumId
        JOIN
    artist ON album.ArtistId = artist.ArtistId
GROUP BY artist
ORDER BY revenue DESC
LIMIT 5;
```



artist	revenue
Iron Maiden	138.60
U2	105.93
Metallica	90.09
Led Zeppelin	86.13
Lost	81.59

```sql
-- Q7. Find how many tracks each playlist contains

SELECT
    playlist.Name AS playlist,
    COUNT(playlisttrack.TrackId) AS total_tracks
FROM
    playlist
        JOIN
    playlisttrack ON playlist.PlaylistId = playlisttrack.PlaylistId
GROUP BY playlist;
```

Result Grid | Filter Rows: | Export:

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

Result 2

```sql
-- Q8. Identify customers who made more than 5 purchases

SELECT
    customer.FirstName,
    customer.LastName,
    COUNT(invoice.InvoiceId) AS total_purchases
FROM
    customer
        JOIN
    invoice ON customer.CustomerId = invoice.CustomerId
GROUP BY customer.CustomerId
HAVING total_purchases > 5;

```

Result Grid | Filter Rows: | Export:

FirstName	LastName	total_purchases
Luís	Gonçalves	7
Leonie	Köhler	7
François	Tremblay	7
Bjørn	Hansen	7
František	Wichterlová	7
Helena	Holý	7
Astrid	Gruber	7
Daan	Peeters	7
Kara	Nielsen	7
Eduardo	Martins	7
Alexandre	Rocha	7
Roberto	Almeida	7
Fernanda	Ramos	7

```sql
-- Q9. Find the average track length (in minutes) by genre

SELECT
    genre.Name AS genre,
    ROUND(AVG(track.Milliseconds / 60000), 2) AS avg_length_minutes
FROM
    genre
        JOIN
    track ON genre.GenreId = track.GenreId
GROUP BY genre;
```

Result Grid | Filter Rows: | Export:

genre	avg_length_minutes
Rock	4.73
Jazz	4.86
Metal	5.16
Alternative & Punk	3.91
Rock And Roll	2.24
Blues	4.51
Latin	3.88
Reggae	4.12
Pop	3.82
Soundtrack	4.07
Bossa Nova	3.66
Easy Listening	3.15
Heavy Metal	4.96

```sql
-- Q10. Identify the best month for sales

SELECT
    MONTH(invoice.invoiceDate) AS month,
    SUM(invoice.total) AS monthly_Sale
FROM
    invoice
GROUP BY month
ORDER BY monthly_Sale DESC
LIMIT 3;
```

Result Grid | Filter Rows: | Export:

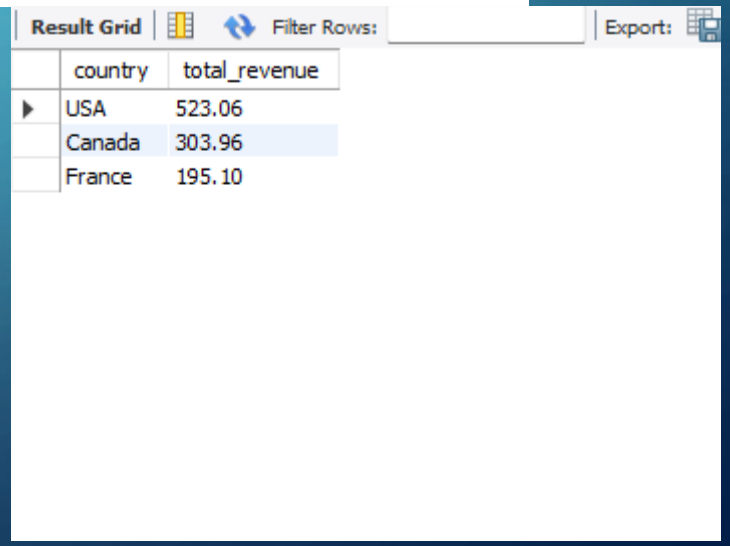
month	monthly_Sale
1	201.12
6	201.10
4	198.14

```sql
-- Q11. Find customers who purchased Rock music

SELECT
    customer.FirstName, customer.LastName
FROM
    customer
        JOIN
    invoice ON customer.CustomerId = invoice.CustomerId
        JOIN
    invoiceline ON invoice.InvoiceId = invoiceline.InvoiceId
        JOIN
    track ON invoiceline.TrackId = track.TrackId
        JOIN
    genre ON track.GenreId = genre.GenreId
WHERE
    genre.Name = 'Rock';
```

Result Grid | Filter Rows: | Export:

FirstName	LastName
Lucas	Mancini
Leonie	Köhler
Ellie	Sullivan
Fernanda	Ramos
Leonie	Köhler
Lucas	Mancini
Bjørn	Hansen
Bjørn	Hansen
Ellie	Sullivan
Lucas	Mancini
Fernanda	Ramos
Bjørn	Hansen
Bjørn	Hansen
Lucas	Mancini
Ellie	Sullivan
Fernanda	Ramos
Daan	Peeters

```sql
-- Q12. Find the top 3 countries by total revenue

SELECT
    invoice.BillingCountry AS country,
    SUM(invoice.Total) AS total_revenue
FROM
    invoice
GROUP BY country
ORDER BY total_revenue DESC
LIMIT 3;
```



Skills Covered in This Project

- SQL Query Writing & Optimization
- Joins (INNER JOIN) across multiple tables
- Data Aggregation (GROUP BY, HAVING)
- Filtering & Sorting (WHERE, ORDER BY, LIMIT)
- Sales & Revenue Analysis
- Customer & Genre Analysis
- Relational Database Understanding (MySQL)
- Business Insight Generation using Data