Elevvo Internship Report on Task 1 (SQL-Based Analysis of Product Sales)

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February 16, 2026

1 Introduction

This report examines product sales data from the Chinook Database on Kaggle [1]. SQL queries will be used to address important business questions about top-selling items, regional revenue distribution, and monthly performance. The combination of product and sales information through JOINs will allow for a complete picture of sales trends. The purpose of this analysis is to offer practical information that can improve sales plans and how the business runs.

2 Problem / Task Details

Task 1 involves conducting an SQL-based analysis of product sales using the recommended Chinook Database from Kaggle. The objective is to utilize SQL queries to explore key business metrics, such as identifying top-selling products, determining revenue by region, and assessing monthly performance. This analysis will require writing JOIN statements to merge product and sales tables effectively. Participants will work with various SQL tools, including SQLite, PostgreSQL, MySQL, or BigQuery, while focusing on essential topics like SQL queries, JOINs, aggregations, and deriving business insights from raw data. Additionally, a bonus challenge includes employing a window function, such as ROW_NUMBER or RANK, to enhance the analysis.

3 Dataset Details

The Chinook database is a substitute for the older Northwind database. It acts as a model of a digital media store, with connected tables for artists, al-

bums, media tracks, invoices, and customers. This design lets people manage and study data about digital media sales. It gives useful information about what customers want, how well sales are doing, and how much inventory is available. The Chinook database helps with SQL training and gives practical experience by showing a real-world example of a digital store [1].

4 SQL Queries

This section has the details of the SQL queries in SQLite along with links to their results on GitHub, and images of the results.

4.1 Albums with more than 20 tracks

The task is to find which albums contain more than 20 tracks.

You can find the query on GitHub: Albums with more than 20 tracks Query Link

Records: 17

AlbumId	Title	num_tracks
141	Greatest Hits	57
23	Minha Historia	34
73	Unplugged	30
229	Lost, Season 3	26
251	The Office, Season 3	25
230	Lost, Season 1	25
83	My Way: The Best Of Frank Sinatra [Disc 1]	24
231	Lost, Season 2	24
253	Battlestar Galactica (Classic), Season 1	24
255	Instant Karma: The Amnesty International Campaign to Save Darfur	23

Figure 1: Result of the Albums more than 20 tracks Query

4.2 Average invoice by country

The task is to find what is the average invoice total for each billing country.

You can find the query on GitHub: Average invoice by country Query Link

Records: 24

BillingCountry	avg_invoice
Chile	6.66
Ireland	6.52
Hungary	6.52
Czech Republic	6.45
Austria	6.09
Finland	5.95
Netherlands	5.8
India	5.79
USA	5.75
Norway	5.66

Figure 2: Result of the Average invoice by country Query

4.3 Average track length per genre

The task is to find what is the average track length (in minutes) for each genre.

You can find the query on GitHub: Average track length by country Query Link

Records: 25

Name	avg_lenght_minutes
Sci Fi & Fantasy	47.88
Science Fiction	43.08
Drama	42.36
TV Shows	35.28
Comedy	26
Metal	4.67
Electronica/Dance	4.53
Heavy Metal	4.5
Classical	4.45
Jazz	4.4

Figure 3: Result of the Average track length per genre Query

4.4 Customers who purchased more than 5 genres

The task is to find which customers have purchased tracks from at least 5 different genres.

You can find the query on GitHub: Customers who purchased more than 5 genres Query Link

Records: 53

customer_name	genre_count
Luis Rojas	12
Ladislav Kovács	11
Fynn Zimmermann	10
João Fernandes	10
Frank Ralston	10
Jack Smith	10
Mark Philips	10
François Tremblay	10
Isabelle Mercier	9

Figure 4: Result of Customers who purchased more than 5 genres the Query

4.5 Customers by country

The task is to find how many customers are there in each country.

You can find the query on GitHub: Customers by country Query Link

Records: 24

Country	Customer_count
USA	13
Canada	8
France	5
Brazil	5
Germany	4
United Kingdom	3
Portugal	2
India	2
Czech Republic	2
Sweden	1

Figure 5: Result of the customers by country Query

4.6 Customers with multiple purchases

The task is to find which customers have made more than 5 invoices.

You can find the query on GitHub: Customers who made more than 5 invoices Query Link

Records: 59

CustomerId	customer_name	Invoice_count
1	Luís Gonçalves	7
2	Leonie Köhler	7
3	François Tremblay	7
4	Bjørn Hansen	7
5	František Wichterlová	7
6	Helena Holý	7
7	Astrid Gruber	7
8	Daan Peeters	7
9	Kara Nielsen	7
10	Eduardo Martins	7

Figure 6: Result of the customers who have made more than 5 invoices Query

4.7 Employee sales performance

The task is to find how much total revenue has each employee generated.

You can find the query on GitHub: Employee sales performance Query Link

Records: 3

employee	total_sales
Jane Peacock	833.04
Margaret Park	775.4
Steve Johnson	720.16

Figure 7: Result of the employee sales performance Query

4.8 Highest invoice values

The task is to list the top 5 invoices with the highest total amounts.

You can find the query on GitHub: Highest invoice values Query Link

Records: 5

InvoiceId	CustomerId	Total
404	6	25.86
299	26	23.86
96	45	21.86
194	46	21.86
89	7	18.86

Figure 8: Result of the highest invoice values Query

4.9 Monthly revenue

The task is to show total revenue per month (YYYY-MM format).
You can find the query on GitHub: Monthly revenue Query Link

Records: 10

Month	Total
2009-01	35.64
2009-02	37.62
2009-03	37.62
2009-04	37.62
2009-05	37.62
2009-06	37.62
2009-07	37.62
2009-08	37.62
2009-09	37.62
2009-10	37.62

Figure 9: Result of the monthly revenue limited to 10 records Query

4.10 Most Sold Tracks

The task is to find which 10 tracks have been sold the most (by quantity).
You can find the query on GitHub: Most sold tracks Query Link

Records: 10

Name	Quantity
The Trooper	5
Untitled	4
The Number Of The Beast	4
Sure Know Something	4
Hallowed Be Thy Name	4
Eruption	4
Where Eagles Dare	3
Welcome Home (Sanitarium)	3
Sweetest Thing	3
Surrender	3

Figure 10: Result of the most sold tracks Query

4.11 Playlist Size

The task is to find how many tracks are in each playlist.

You can find the query on GitHub: Playlist size Query Link

Records: 14

playlist	track_count
Music	3290
Music	3290
90's Music	1477
TV Shows	213
TV Shows	213
Classical	75
Brazilian Music	39
Heavy Metal Classic	26
Classical 101 - Deep Cuts	25
Classical 101 - Next Steps	25
Classical 101 - The Basics	25
Grunge	15
Music Videos	1
On-The-Go 1	1

Figure 11: Result of the playlist size Query

4.12 Products with Artist Names

The task to find products with artist names.

You can find the query on GitHub: Products with artist names Query Link

Records: 10

Track	Artist	Album	Genre	UnitPrice
For Those About To Rock (We Salute You)	AC/DC	For Those About To Rock We Salute You	Rock	0.99
Balls to the Wall	Accept	Balls to the Wall	Rock	0.99
Fast As a Shark	Accept	Restless and Wild	Rock	0.99
Restless and Wild	Accept	Restless and Wild	Rock	0.99
Princess of the Dawn	Accept	Restless and Wild	Rock	0.99
Put The Finger On You	AC/DC	For Those About To Rock We Salute You	Rock	0.99
Let's Get It Up	AC/DC	For Those About To Rock We Salute You	Rock	0.99
Inject The Venom	AC/DC	For Those About To Rock We Salute You	Rock	0.99
Snowballed	AC/DC	For Those About To Rock We Salute You	Rock	0.99
Evil Walks	AC/DC	For Those About To Rock We Salute You	Rock	0.99

Figure 12: Result of the products with artist names Query

4.13 Revenue by Country

The task is to find the revenue by country.

You can find the query on GitHub: Revenue by country Query Link

Records: 24

Country	TotalRevenue
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
Chile	46.62

Figure 13: Result of the revenue by country Query

4.14 Top Artist by Sales

The task is to find who are the top 5 artists by total revenue.

You can find the query on GitHub: Top artist by sales Query Link

Records: 5

artist	revenue
Iron Maiden	138.6
U2	105.93
Metallica	90.09
Led Zeppelin	86.13
Lost	81.59

Figure 14: Result of the top artist by sales Query

4.15 Top Genres by Revenue

The task is to find which music genres generate the most revenue.

You can find the query on GitHub: Top genres by revenue Query Link

Records: 24

Name	Revenue
Rock	835
Latin	386
Metal	264
Alternative & Punk	244
TV Shows	94
Jazz	80
Blues	61
Drama	58
R&B/Soul	41
Classical	41

Figure 15: Result of the top genres by revenue Query

4.16 Top Selling Products

The task is to find which are the top 10 selling products.

You can find the query on GitHub: Top selling products Query Link

Records: 10

TrackName	Genre	TotalUnitsSold	TotalRevenue
The Woman King	Science Fiction	2	3.98
The Fix	Drama	2	3.98
Walkabout	TV Shows	2	3.98
Hot Girl	TV Shows	2	3.98
Gay Witch Hunt	TV Shows	2	3.98
Phyllis's Wedding	Comedy	2	3.98
How to Stop an Exploding Man	Drama	2	3.98
Pilot	TV Shows	2	3.98
Occupation / Precipice	TV Shows	1	1.99
Exodus, Pt. 1	TV Shows	1	1.99

Figure 16: Result of the top selling products Query

4.17 Top Spending Customers

The task is to find who are the top 10 customers by total spending.

You can find the query on GitHub: Top spending customers Query Link

Records: 10

CustomerId	Full Name	Total
6	Helena Holý	50
26	Richard Cunningham	48
57	Luis Rojas	47
45	Ladislav Kovács	46
46	Hugh O'Reilly	46
24	Frank Ralston	44
28	Julia Barnett	44
37	Fynn Zimmermann	44
7	Astrid Gruber	43
25	Victor Stevens	43

Figure 17: Result of the top spending customers Query

4.18 Top Track per Genre

The task is to find what's the top best selling track for each genre.

You can find the query on GitHub: Top track per genre Query Link

Records: 24

genre	track	units_sold
Rock	Sure Know Something	4
Alternative & Punk	Release	3
Latin	Selvagem	3
Metal	Where Eagles Dare	3
Blues	When My Left Eye Jumps	2
Bossa Nova	Onde Anda Você	2
Classical	Symphonie Fantastique, Op. 14: V. Songe d'une nuit du sabbat	2
Comedy	Phyllis's Wedding	2
Drama	The Fix	2
Electronica/Dance	Light Years	2

Figure 18: Result of the top track per genre Query

5 Conclusion

This internship task used SQL analysis on the Chinook Database to find key insights about product sales. I ran queries to find top sellers, look at revenue by area, chart monthly patterns, and many more. The results showed customer behavior and typical invoice structures, giving a broad look at sales activity. This method, based on data, can help make smarter choices to boost sales and make operations better in the digital media space. Later studies might look at more specific groups of customers.

Bibliography

[1] R. Sabrii, "Chinook Database," Kaggle. [Online]. Available: https://www.kaggle.com/datasets/ranasabrii/chinook [Accessed: Feb. 4, 2026].