

Chinook Database Analysis Report

1. Introduction

The Chinook Database is a sample dataset that mimics a digital music store. It contains data about customers, invoices, tracks, artists, and employees. This report analyzes key trends in sales, customer behavior, and revenue generation using SQL queries.

2. Data Exploration

The dataset includes:

- Customers: Information on buyers
- Invoices: Details of transactions
- Tracks & Albums: Metadata on music tracks
- Artists: Artists contributing to albums
- Employees: Sales representatives

3. Key Insights & SQL Queries

3.1 Total Revenue Generated

```
SELECT SUM(Total) AS Total_Revenue FROM Invoice;
```

Insight: The total revenue generated by the store is \$2328.6

3.2 Top 5 Best-Selling Albums

```
/*Top 5 Best-Selling Albums*/  
  
SELECT  
  a.Title AS Album,  
  ar.Name AS Artist,  
  COUNT(il.InvoiceLineId) AS Total_Sales  
FROM InvoiceLine il  
JOIN Track t ON il.TrackId = t.TrackId  
JOIN Album a ON t.AlbumId = a.AlbumId  
JOIN Artist ar ON a.ArtistId = ar.ArtistId  
GROUP BY a.AlbumId  
ORDER BY Total_Sales DESC  
LIMIT 5;
```

Insight: The most popular album is **Minha Historia** by **Chico Buarque**, with **27** sales.

3.3 Monthly Revenue Trend

```
/*Monthly Revenue Trend*/  
  
WITH MonthlySales AS (  
  SELECT  
    strftime('%Y-%m', InvoiceDate) AS Month,  
    SUM(Total) AS Revenue  
  FROM Invoice  
  GROUP BY Month  
)  
SELECT * FROM MonthlySales ORDER BY Month;
```

Insight: Revenue peaked in **January, 2009** with total sales of **\$35.64**.

3.4 Top 5 Customers by Lifetime Value

```
/*Customer Lifetime Value */

SELECT
  c.CustomerId,
  c.FirstName || ' ' || c.LastName AS Customer_Name,
  COUNT(i.InvoiceId) AS Total_Purchases,
  SUM(i.Total) AS Lifetime_Value
FROM Customer c
JOIN Invoice i ON c.CustomerId = i.CustomerId
GROUP BY c.CustomerId
ORDER BY Lifetime_Value DESC
LIMIT 5;
```

Insight: The top customer is **Helena Holý**, with lifetime spending of **\$49.62**.

3.5 Best Sales Region

```
/*Top 5 sales by Region*/

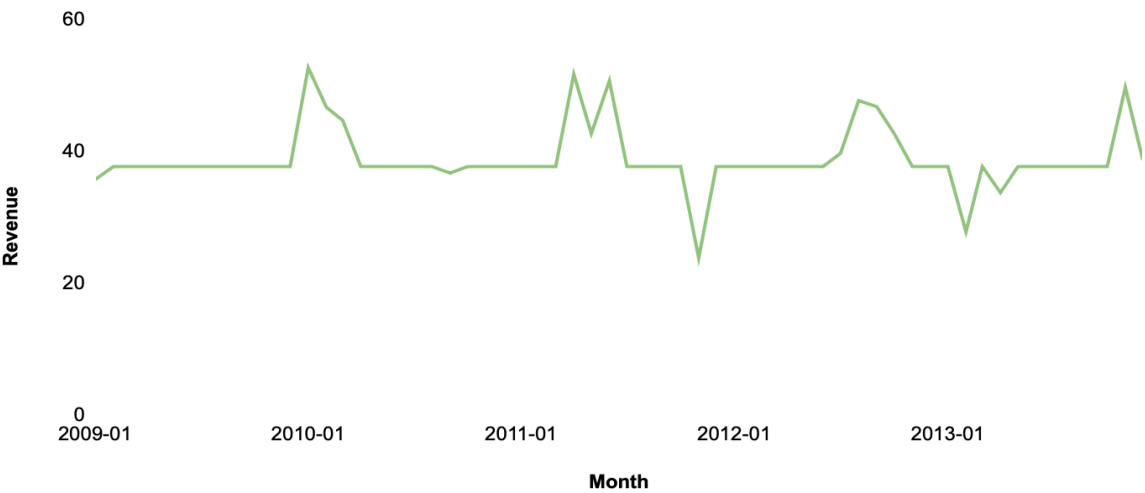
SELECT BillingCountry AS Country, SUM(Total) AS Revenue
FROM Invoice
GROUP BY BillingCountry
ORDER BY Revenue DESC
LIMIT 5;
```

Insight: **USA** contributes the highest revenue of **\$523.06**.

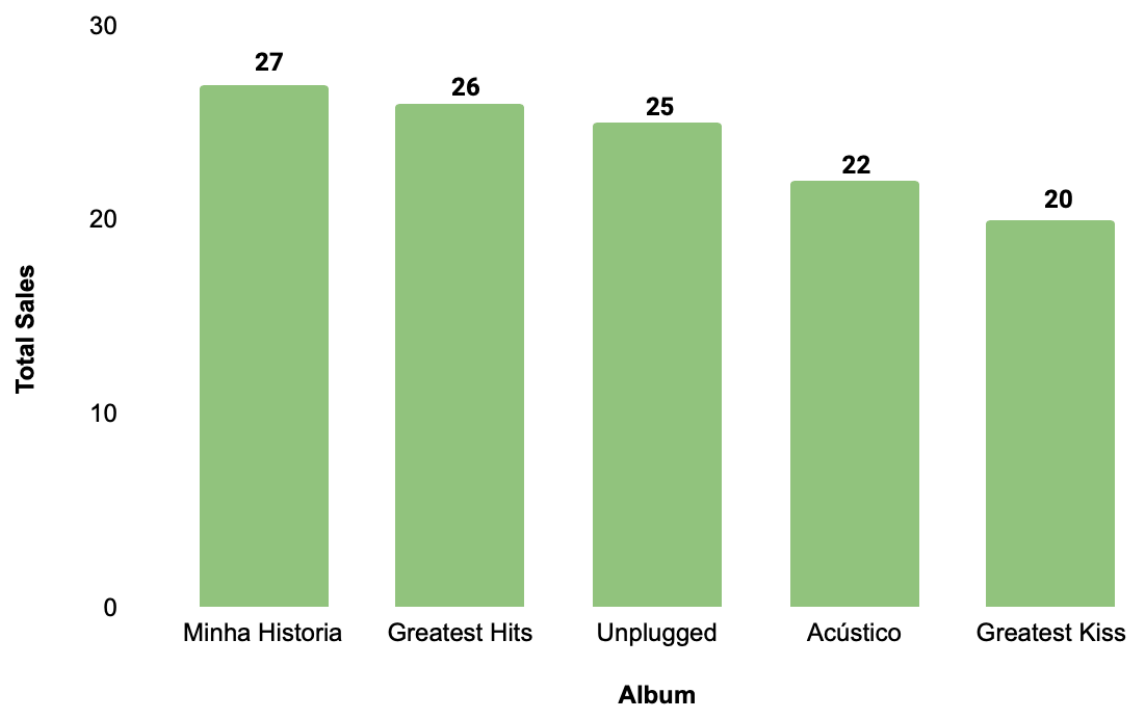
4. Visualizations

- Monthly Sales Trends

Monthly Sales Trends

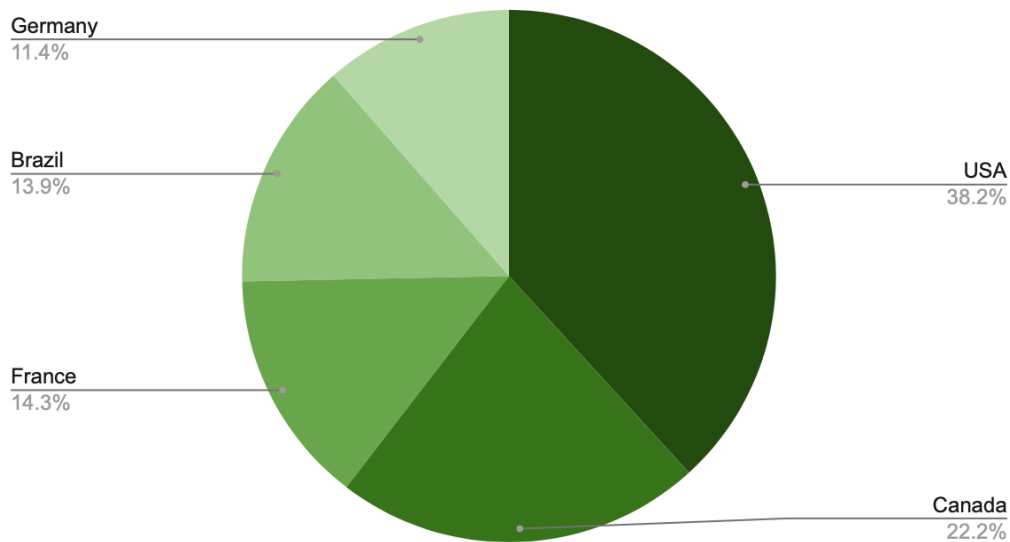


- Top 5 Best-Selling Albums



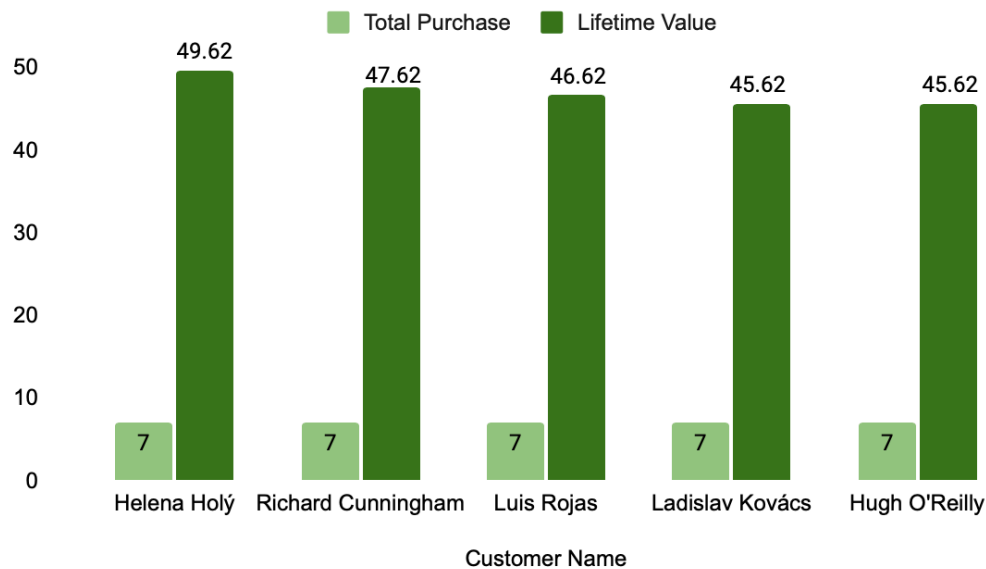
- Revenue by Country

Revenue by Country



- Customer Lifetime Value Distribution

Customer Lifetime Value Distribution



5. Business Recommendations

- ❖ **Invest in Popular Artists:** High-selling albums indicate potential artists for exclusive deals.
- ❖ **Optimize Pricing in Top Countries:** Focus marketing efforts on high-revenue regions.
- ❖ **Loyalty Programs for High-Value Customers:** Reward top spenders to retain them.
- ❖ **Seasonal Promotions:** Revenue trends suggest boosting advertising during peak months.

6. Conclusion

The Chinook Database provides valuable insights into sales and customer behavior. Implementing the above strategies will help optimize revenue and enhance customer retention.