Chinook:
BI Dashboards & SQL Queries

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BUSINESS
INTELLIGENCE
GUIDEBOOK
From Data Integration to Analytics

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Chinook

Data Model
& Analytical Requirements

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Chinook Database

TableName	Table_Rows
Album	347
Artist	275
Customer	59
Employee	8
Genre	25
Invoice	412
InvoiceLine	2,240
MediaType	5
Playlist	18
PlaylistTrack	8,715
Track	3,503

The Chinook data model represents a digital media store, including tables for artists, albums, media tracks, invoices and customers.
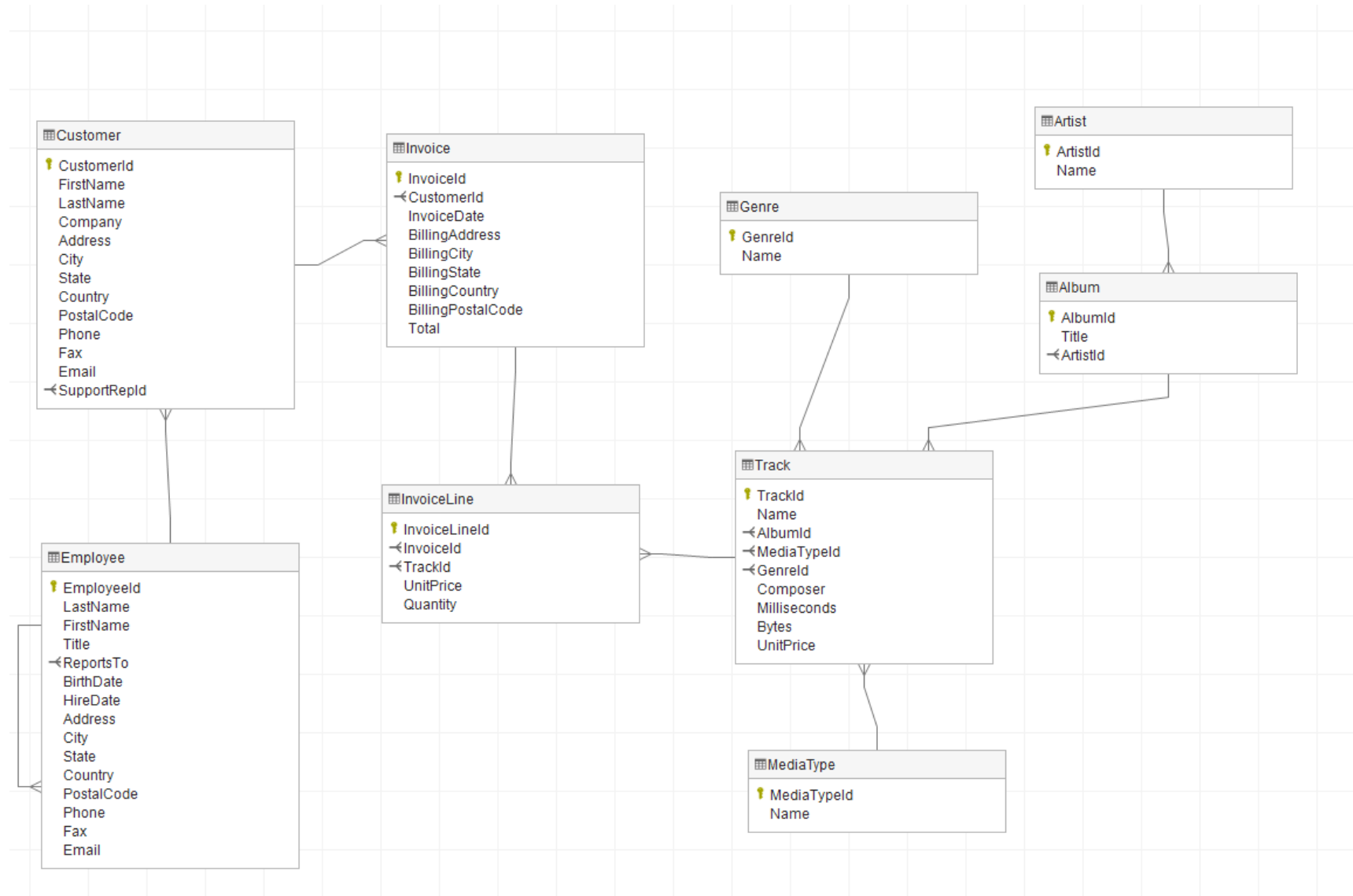
Chinook data model is an ER Model.

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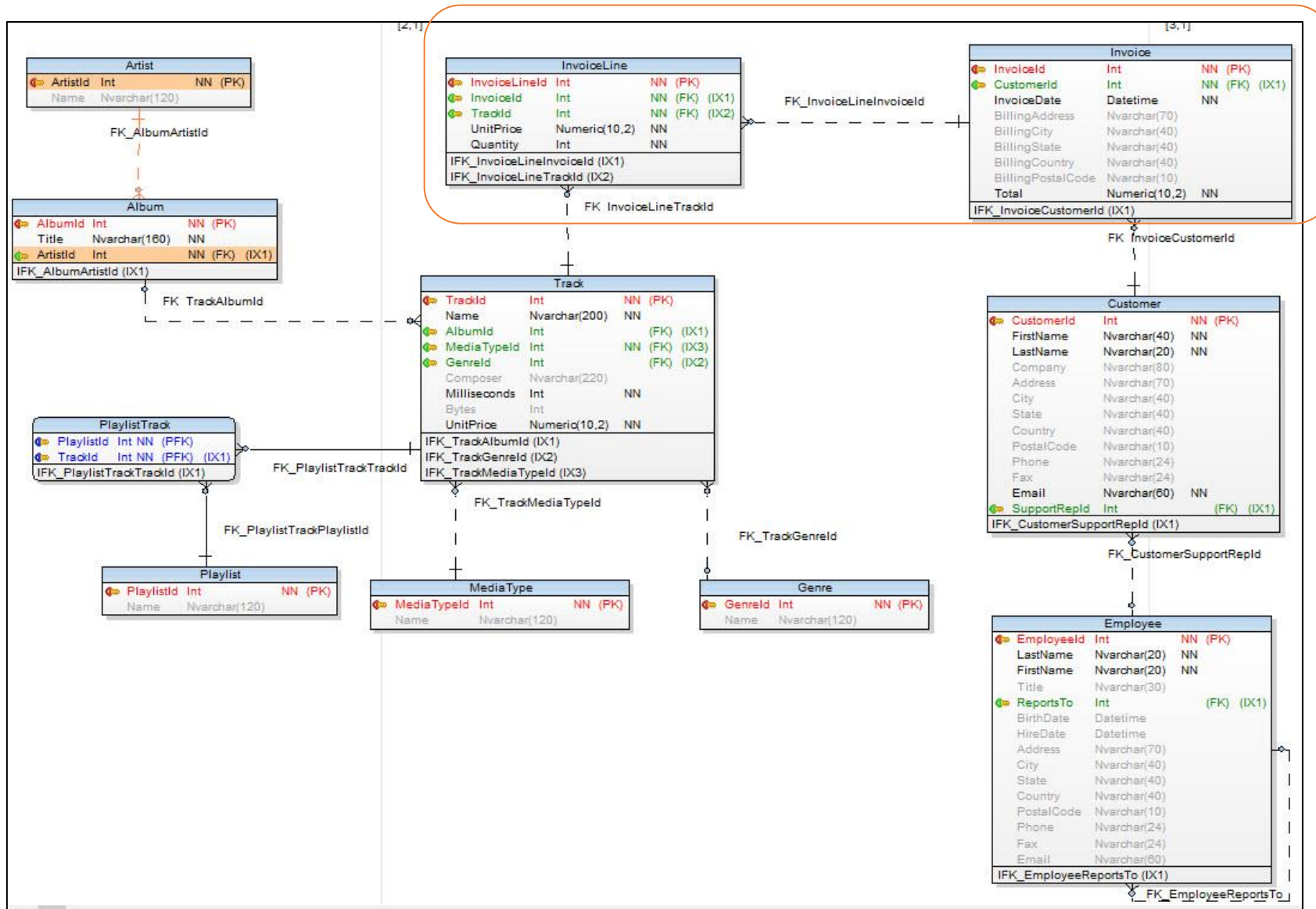
Chinook Database

This is a classic parent & child relationship. Orders and Invoices are examples of a header row with one or many children line items.

Chinook Database

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Chinook Database - Tables

- employees table stores employee data such as employee id, last name, first name, etc. It also has a field named ReportsTo to specify who reports to whom.

- customers table stores customers data.

- invoices & invoice_items tables: these two tables store invoice data. The invoices table stores invoice header data and the invoice_items table stores the invoice line items data.

- artists table stores artists data. It is a simple table that contains only the artist id and name.

- albums table stores data about a list of tracks. Each album belongs to one artist. However, one artist may have multiple albums.

- media_types table stores media types such as MPEG audio and AAC audio files.

- genres table stores music types such as rock, jazz, metal, etc.

- tracks table stores the data of songs. Each track belongs to one album.

- playlists & playlist_track tables: playlists table store data about playlists. Each playlist contains a list of tracks. Each track may belong to multiple playlists. The relationship between the playlists table and tracks table is many-to-many. The playlist_track table is used to reflect this relationship.

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Chinook: Business Questions

Analytical requirements – answer these business questions

1. Total sales $
2. Total sales $ by customer's country – ranked (sorted largest to smallest)
3. Total sales $ by customer's geo (country, state & city)
4. Total sales $ by customer (a person with last name & first name) – ranked (sorted largest to smallest)
5. Total sales $ by company
6. Total sales $ by artist – ranked (sorted largest to smallest)
7. Total sales $ by album
8. Total sales $ by salesperson (employee)
9. Total sales $ by media type
10. Total sales $ by genre

Business Questions: SQL & Data Viz to answer

1. Total sales $ via Invoice
2. Total sales $ via Invoiceline
3. Total tracks (songs) sold
4. Total sales $ by customer's country – ranked (sorted largest to smallest)
   a) In data viz: provide comparison
   b) In data viz: provide composition
   c) In data viz: show sales on map
5. Total sales $ by customer's geo (country, state & city)
   a) In data viz: need to drill down from country to city
6. Total sales $ by customer (a person with last name & first name) – ranked (sorted largest to smallest)
7. Total sales $ by company – ranked (sorted largest to smallest)
8. Total sales $ by artist – ranked (sorted largest to smallest)
   a) In data diz: All artists with sales
   b) In data viz: Top 20 artists
9. Total sales $ by album – ranked (sorted largest to smallest)
10. Total sales $ by salesperson (employee)
    a) In data viz: provide comparison
    b) In data viz: provide composition

11. Total sales $ by media type
    a) In data viz: provide comparison
    b) In data viz: provide composition
12. Total sales $ by genre
    a) In data viz: provide comparison
    b) In data viz: provide composition
13. What are the total sales $ by year
14. What are the total sales $ by year-month
    a) In data viz: provide comparison over time
15. What are the employees' name, birthday, hiredate, years of working with company (assume as of 2013-12-31), address, city, state, country, title, manager and manager's title
16. What are the total sales $ by employee age at the time of the invoice date
17. What are the total sales $ by employees who are in their 30s, 40s, 50s and 60s (employee age at the time of the invoice date)

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Business Questions: Use Dashboards to answer

18. For the artist "Led Zeppelin" what are the:
    1. Total sales
    2. Sales by Country
    3. Sales by Customer
    4. Sales by Employee
    5. Sales by Album
    6. ~~Sales by Artist~~
    7. Sales by Genre
    8. Sales by Media Type
    9. Sales Over Time

19. For the genre "TV Shows" what are the:
    1. Total sales
    2. Sales by Country
    3. Sales by Customer
    4. Sales by Employee
    5. Sales by Album
    6. Sales by Artist
    7. ~~Sales by Genre~~
    8. Sales by Media Type
    9. Sales Over Time

20. For the employee "Peacock, Jane" what are the:
    1. Total sales
    2. Sales by Country
    3. Sales by Customer
    4. ~~Sales by Employee~~
    5. Sales by Album
    6. Sales by Artist
    7. Sales by Genre
    8. Sales by Media Type
    9. Sales Over Time

21. For the country "France" what are the:
    1. Total sales
    2. ~~Sales by Country~~
    3. Sales by Customer
    4. Sales by Employee
    5. Sales by Album
    6. Sales by Artist
    7. Sales by Genre
    8. Sales by Media Type
    9. Sales Over Time

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- Create customer geo hierarchy
- Create a customer full name column (last name, first name)
- Create employee geo hierarchy
- Create a employee full name column (last name, first name)

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Deliverables

- Upload SQL queries and results for questions 1-17
- Upload Power BI & Tableau files with extracts (not live connections) for all questions

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