

ASSIGNMENT 3(ER to Dimensional Modelling)

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

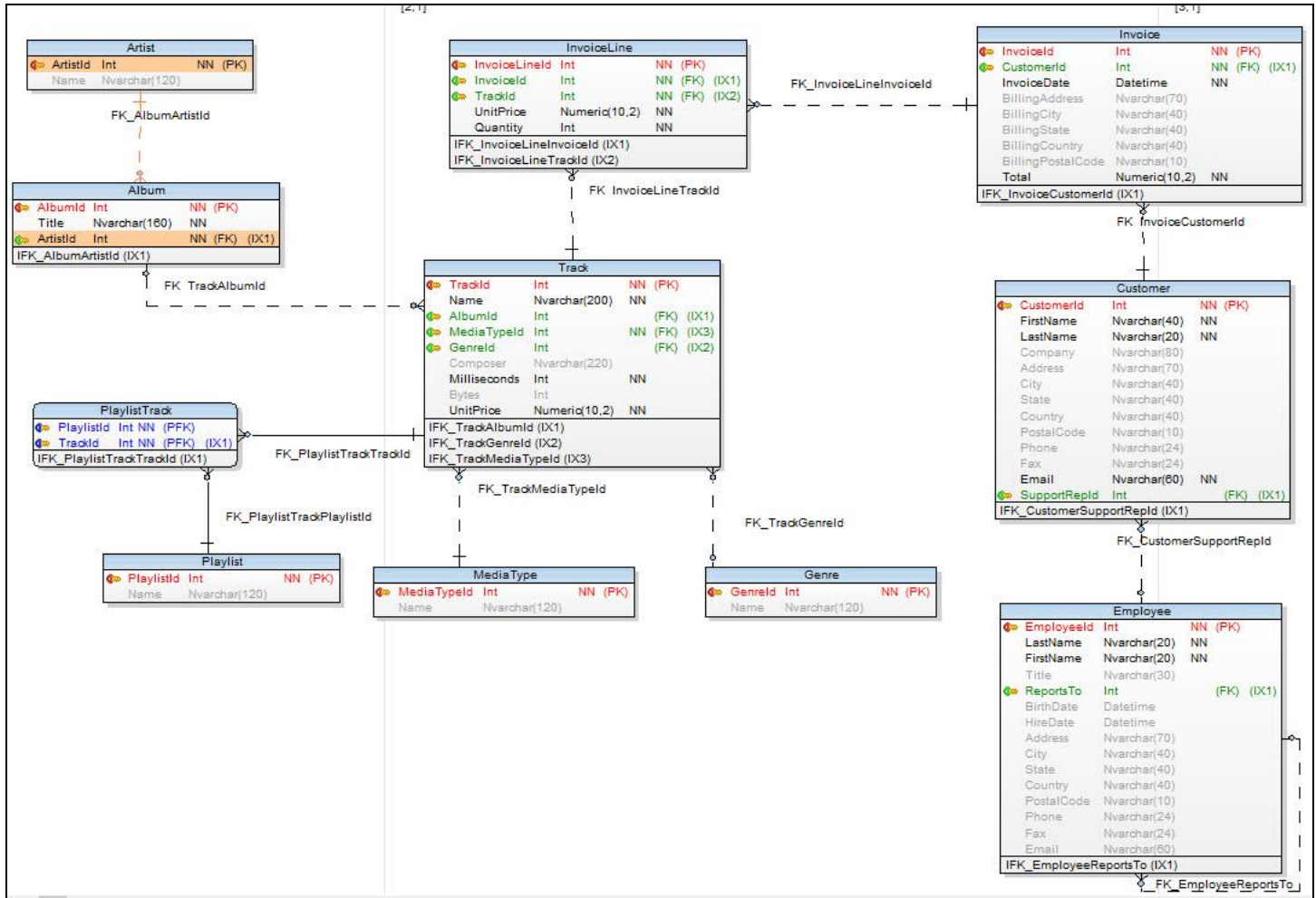


Figure 1: Chinook - System of record (SOR)

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

Figure 2: Chinook SOR - Tables with row counts

- Convert ER Model to Dimensional Model

- List fact(s) & dimensions

Facts:

- FactInvoiceLine
- FactInvoice

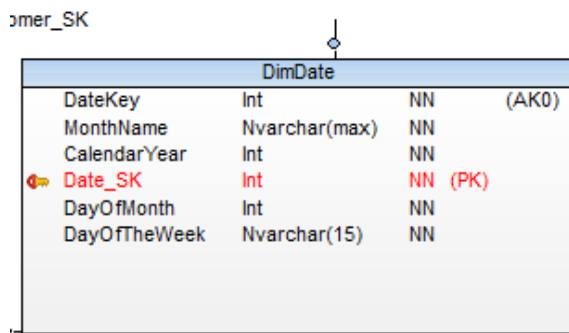
Dimensions:

- DimEmployee
- DimDate
- Customer
- DimTrack
- DimAlbum
- DimPlaylist
- PlaylistTrack
- DimGeography

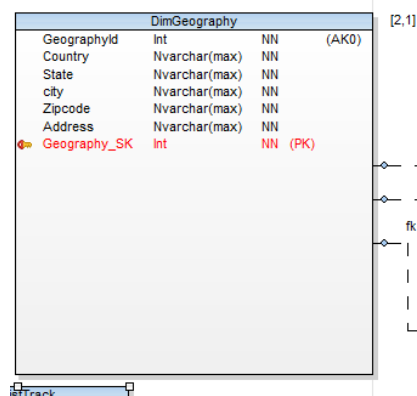
- What tables will be combined?

The tables Artist, MediaType, Playlist and Genre contained only primary keys. Therefore, We can combine them with the tables which were referenced by the keys resulted into merging Playlist with PlaylistTrack, MediaType and Genre with the DimTrack and Artist with the DimAlbum.

- Create date/calendar dimension



- Create geography table



- Determine table attributes

Table	Column	Keys
DimGeography	GeographyId	AK
DimGeography	Country	
DimGeography	State	
DimGeography	city	
DimGeography	Zipcode	
DimGeography	Address	
DimGeography	Geography_SK	PK
FactInvoiceLine	InvoiceLineId	PK
FactInvoiceLine	InvoiceId	FK
FactInvoiceLine	UnitPrice	
FactInvoiceLine	Quantity	
FactInvoiceLine	Track_SK	FK
FactInvoice	InvoiceId	PK
FactInvoice	Total	
FactInvoice	Customer_SK	FK
FactInvoice	Date_SK	FK
FactInvoice	Geography_SK	FK
PlaylistTrack	Track_SK	FK
PlaylistTrack	Playlist_SK	FK
DimAlbum	AlbumID	AK
DimAlbum	Title	
DimAlbum	ArtistID	
DimAlbum	Album_SK	PK
DimPlaylist	PlaylistID	AK
DimPlaylist	Name	
DimPlaylist	Playlist_SK	PK
DimTrack	Trackid	AK
DimTrack	Name	
DimTrack	Composer	
DimTrack	Milliseconds	
DimTrack	Bytes	
DimTrack	UnitPrice	
DimTrack	MediaType	
DimTrack	GemreID	
DimTrack	Track_SK	PK
DimTrack	Album_SK	FK
Customer	CustomerID	AK
Customer	FirstName	
Customer	LastName	
Customer	Company	
Customer	Phone	

Customer	Fax	
Customer	Email	
Customer	Customer_SK	PK
Customer	Date_SK	FK
Customer	Employee_SK	FK
Customer	Geography_SK	FK
DimEmployee	EmployeeID	AK
DimEmployee	LastName	
DimEmployee	FirstName	
DimEmployee	Title	
DimEmployee	ReportsTo	FK
DimEmployee	Phone	
DimEmployee	Fax	
DimEmployee	Email	
DimEmployee	GeographyId	FK
DimEmployee	Employee_SK	PK
DimDate	DateKey	PK
DimDate	MonthName	
DimDate	CalenderYear	
DimDate	Date_SK	AK
DimDate	DayOfMonth	
DimDate	DayOfTheWeek	

- Map source table(s) to target table

Target Table is the FactInvoice Table since all the dimensions and FactInvoiceLine is connected to the FactInvoice Table. The Source tables are all the dimensions from where all the values are passed to the Fact Table.

- Create data model in Toad Data Modeler

