

Homework 4

Setup

```
setwd('C:/Users/visha/OneDrive/Documents/School/Summer 2024/PSTAT 10/PSTAT10-Worksheets-and-HW')
library(RSQLite)
library(sqldf)
```

```
## Loading required package: gsubfn
```

```
## Loading required package: proto
```

```
library(DBI)
chinook_db <- dbConnect(SQLite(), "Chinook_Sqlite.sqlite")
```

Problem 1

1.

```
dbGetQuery(chinook_db, "SELECT CustomerId, FirstName, LastName
                        FROM Customer
                        WHERE CustomerId = 10")
```

```
##   CustomerId FirstName LastName
## 1          10   Eduardo  Martins
```

2.

```
dbGetQuery(chinook_db, "SELECT InvoiceId, CustomerId, Total
                        FROM Invoice
                        WHERE CustomerId = 10
                        AND Total > 5")
```

```
##   InvoiceId CustomerId Total
## 1         25          10  8.91
## 2        199          10  5.94
## 3        383          10 13.86
```

3.

```
dbGetQuery(chinook_db, "SELECT InvoiceId, Customer.CustomerId, Total, FirstName, LastName
                        FROM Customer JOIN Invoice
                        ON Customer.CustomerId = Invoice.CustomerId
                        WHERE Customer.CustomerId = 10
                        AND Total > 5")
```

```
##   InvoiceId CustomerId Total FirstName LastName
## 1         25          10  8.91   Eduardo  Martins
## 2        199          10  5.94   Eduardo  Martins
## 3        383          10 13.86   Eduardo  Martins
```

Problem 2

1.

```
dbGetQuery(chinook_db, "SELECT Title
                        FROM Employee
                        WHERE ReportsTo IS NULL")
```

```
##           Title
## 1 General Manager
```

The title of the highest ranking employee is General Manager.

2.

```
dbGetQuery(chinook_db, "SELECT Employee.EmployeeId, Employee.FirstName, Employee.LastName, Title, count
                        FROM Employee JOIN Customer
                        ON Employee.EmployeeId = Customer.SupportRepId
                        GROUP BY EmployeeId")
```

```
##  EmployeeId FirstName LastName           Title count(*)
## 1           3      Jane   Peacock Sales Support Agent      21
## 2           4 Margaret    Park Sales Support Agent      20
## 3           5      Steve  Johnson Sales Support Agent      18
```

Jane has acted as the support rep for the most customers.

Problem 3

```
dbGetQuery(chinook_db, "SELECT Album.AlbumId, Title, sum(Milliseconds)/60000 AS TotalLength
                        FROM Album JOIN Track
                        ON Album.AlbumId = Track.AlbumId
                        GROUP BY Album.AlbumId
                        HAVING TotalLength > 100
                        ORDER BY TotalLength DESC")
```

```
##  AlbumId           Title TotalLength
## 1      229      Lost, Season 3      1177
## 2     253 Battlestar Galactica (Classic), Season 1      1170
## 3      230      Lost, Season 1      1080
## 4      231      Lost, Season 2      1054
## 5      228      Heroes, Season 1       996
## 6      227      Battlestar Galactica, Season 3       879
## 7      261      LOST, Season 4       657
## 8      251      The Office, Season 3       638
## 9      250      The Office, Season 2       477
## 10     141      Greatest Hits       251
## 11      73      Unplugged       135
## 12     249      The Office, Season 1       132
## 13      23      Minha Historia       131
```

Problem 4

1.

```
dbGetQuery(chinook_db, "SELECT Track.TrackId, Track.Name AS TrackName, Playlist.PlaylistId, Playlist.Name AS PlaylistName
FROM Track JOIN Playlist JOIN PlaylistTrack
ON Track.TrackId = PlaylistTrack.TrackId AND PlaylistTrack.PlaylistId = Playlist.PlaylistId
ORDER BY Playlist.PlaylistId, Track.TrackId
LIMIT 5")
```

##	TrackId	TrackName	PlaylistId	PlaylistName
## 1	1	For Those About To Rock (We Salute You)	1	Music
## 2	2	Balls to the Wall	1	Music
## 3	3	Fast As a Shark	1	Music
## 4	4	Restless and Wild	1	Music
## 5	5	Princess of the Dawn	1	Music

2.

```
dbGetQuery(chinook_db, "SELECT Playlist.PlaylistId, Playlist.Name AS PlaylistName, count(*)
FROM Track JOIN Playlist JOIN PlaylistTrack
ON Track.TrackId = PlaylistTrack.TrackId AND PlaylistTrack.PlaylistId = Playlist.PlaylistId
GROUP BY Playlist.PlaylistId")
```

##	PlaylistId	PlaylistName	count(*)
## 1	1	Music	3290
## 2	3	TV Shows	213
## 3	5	90's Music	1477
## 4	8	Music	3290
## 5	9	Music Videos	1
## 6	10	TV Shows	213
## 7	11	Brazilian Music	39
## 8	12	Classical	75
## 9	13	Classical 101 - Deep Cuts	25
## 10	14	Classical 101 - Next Steps	25
## 11	15	Classical 101 - The Basics	25
## 12	16	Grunge	15
## 13	17	Heavy Metal Classic	26
## 14	18	On-The-Go 1	1

Problem 5

1.

```
dbGetQuery(chinook_db, "SELECT FirstName, LastName, Total
FROM Customer JOIN Invoice
ON Customer.CustomerId = Invoice.CustomerId
ORDER BY Total DESC
LIMIT 10")
```

##	FirstName	LastName	Total
## 1	Helena	Holý	25.86
## 2	Richard	Cunningham	23.86
## 3	Ladislav	Kovács	21.86
## 4	Hugh	O'Reilly	21.86
## 5	Astrid	Gruber	18.86

```
## 6      Victor      Stevens 18.86
## 7      Luis        Rojas 17.91
## 8      František   Wichterlová 16.86
## 9      Isabelle    Mercier 16.86
## 10     Frank       Ralston 15.86
```

2.

```
dbGetQuery(chinook_db, "SELECT FirstName, LastName, sum(Total)
                        FROM Customer JOIN Invoice
                        ON Customer.CustomerId = Invoice.CustomerId
                        GROUP BY Customer.CustomerId
                        ORDER BY sum(Total) DESC
                        LIMIT 10")
```

```
##      FirstName  LastName sum(Total)
## 1      Helena    Holý      49.62
## 2      Richard   Cunningham 47.62
## 3      Luis      Rojas     46.62
## 4      Ladislav   Kovács    45.62
## 5      Hugh      O'Reilly  45.62
## 6      Frank     Ralston   43.62
## 7      Julia     Barnett   43.62
## 8      Fynn      Zimmermann 43.62
## 9      Astrid    Gruber    42.62
## 10     Victor    Stevens   42.62
```

3.

```
dbGetQuery(chinook_db, "SELECT Country, sum(Total) AS CountryTotal
                        FROM Customer JOIN Invoice
                        ON Customer.CustomerId = Invoice.CustomerId
                        GROUP BY Country
                        ORDER BY sum(Total) DESC
                        LIMIT 10")
```

```
##      Country CountryTotal
## 1      USA      523.06
## 2      Canada   303.96
## 3      France   195.10
## 4      Brazil   190.10
## 5      Germany  156.48
## 6      United Kingdom 112.86
## 7      Czech Republic 90.24
## 8      Portugal 77.24
## 9      India    75.26
## 10     Chile    46.62
```