PSTAT 10 Homework 4

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```
library(RSQLite)
library(sqldf)
```

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

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

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

Problem 1

1. Write a single query that returns the CustomerId, FirstName, LastName of the customer with CustomerId = 10.

```
dbGetQuery(chinook_db, "select CustomerId, FirstName, LastName from Customer
           where CustomerId = 10")
```

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

2. Write a single query that returns the InvoiceId, CustomerId, and Total for invoices billed to the customer with CustomerId = 10 with the total bill exceeding 5.

```
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.Write a single query that combines the previous results, returning the InvoiceId, CustomerId, Total, FirstName, LastName of invoices billed to the customer with CustomerId = 10 with total bill exceeding 5.

```
dbGetQuery(chinook_db, "select Invoice.InvoiceId, Invoice.CustomerId, Invoice.Total, Customer.FirstName
                            inner join Invoice on Customer.CustomerId = Invoice.CustomerId
           where Customer.CustomerId = 10 AND Invoice.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. What is the title of the highest ranking employee of the store? You may find this by any method.

```
dbGetQuery(chinook_db, 'select FirstName, LastName, Title, ReportsTo from Employee')
```

```
##   FirstName LastName               Title ReportsTo
## 1    Andrew    Adams     General Manager        NA
## 2     Nancy  Edwards       Sales Manager         1
## 3      Jane  Peacock Sales Support Agent         2
## 4  Margaret     Park Sales Support Agent         2
## 5     Steve  Johnson Sales Support Agent         2
## 6   Michael Mitchell          IT Manager         1
## 7    Robert     King            IT Staff         6
## 8     Laura Callahan            IT Staff         6
```

```
#The highest ranking employee is Andrew Adams because he has the title of General Manager and does not
```

2. Which employee of the store has acted as the support rep for the most customers? Return the EmployeeId, FirstName, LastName, Title, and total number of customers. The result is given.

```
dbGetQuery(chinook_db, "select Employee.EmployeeId, Employee.FirstName, Employee.LastName, Title, count
            inner join Customer on Customer.SupportRepID = Employee.EmployeeId
           group by Employee.EmployeeId, Employee.FirstName, Employee.LastName, Employee.Title")
```

```
##   EmployeeId FirstName LastName               Title TotalCustomers
## 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 Peacock acted as the support rep for the most customers with 21 total customers.
```

Problem 3

Write a single SQL query to retrieve the AlbumId, Title, and total length in minutes of albums whose total length exceeds 100 minutes. Order by decreasing total length. The output is provided.

```
dbGetQuery(chinook_db, "select Album.AlbumId, Album.Title, sum(Track.Milliseconds)/60000 as TotalLength
           inner join Album on Album.AlbumId = Track.AlbumId
           group by Album.AlbumId, Album.Title
           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. Write a single query to retrieve the TrackId, TrackName, PlaylistId, and PlaylistName, ordered by increasing PlaylistId, then by increasing TrackId. Limit the result to 5 records. The result is provided. For full credit, alias the field names to match my output.

```
dbGetQuery(chinook_db, "select Track.TrackId, Track.Name, PlaylistTrack.PlaylistId, Playlist.Name from
                        inner join PlaylistTrack on Playlist.PlaylistId = PlaylistTrack.PlaylistId
                        inner join Track on PlaylistTrack.TrackId = Track.TrackId
            order by Playlist.PlaylistId ASC, Track.TrackId ASC
            limit 5")
```

```
##   TrackId                                    Name PlaylistId  Name
## 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. Write a single query to retrieve the PlaylistId, PlaylistName, and count of all tracks (TrackCount) within the playlist. The first 3 results of the query are provided, but your query should return all of the results.

```
dbGetQuery(chinook_db, "select Playlist.PlaylistId, Playlist.Name, count(PlaylistTrack.TrackId) as Trac
            inner join PlaylistTrack on Playlist.PlaylistId = PlaylistTrack.PlaylistId
            group by Playlist.PlaylistId, Playlist.Name
            limit 3")
```

```
##   PlaylistId       Name TrackCount
## 1          1      Music       3290
## 2          3   TV Shows        213
## 3          5 90's Music       1477
```

Problem 5

1. Which customers have spent the most in a single order? To answer this, retrieve the FirstName, LastName, and Total for each invoice, ordered by decreasing total. The first 3 rows of the result are given, but limit your answer to the first 10 rows.

```
dbGetQuery(chinook_db, "select Customer.FirstName, Customer.LastName, Invoice.Total as Total from Custo
           inner join Invoice on Invoice.CustomerId = Customer.CustomerId
           order by Total DESC
           limit 3")
```

```
##   FirstName   LastName Total
## 1    Helena       Holý 25.86
## 2   Richard Cunningham 23.86
## 3  Ladislav     Kovács 21.86
```

2. Which customers have spent the most across all orders? Order the result by decreasing sum total. The first 3 results are shown, but limit your results to 10 rows.

```
dbGetQuery(chinook_db, "select Customer.FirstName, Customer.LastName, sum(total) from Invoice
           inner join Customer on Invoice.CustomerId = Customer.CustomerId
           group by Customer.FirstName, Customer.LastName
           order by sum(total) DESC
           limit 3")
```

```
##   FirstName   LastName sum(total)
## 1    Helena       Holý      49.62
## 2   Richard Cunningham      47.62
## 3      Luis      Rojas      46.62
```

3. Which country has spent the most across all invoices by all people from that country? Order the result by decreasing CountryTotal. The first three rows are given, but limit your result to 10.

```
dbGetQuery(chinook_db, "select Customer.Country, sum(total) as CountryTotal from Invoice
           inner join Customer on Invoice.CustomerId = Customer.CustomerId
           group by Customer.Country
           order by CountryTotal DESC
           limit 3")
```

```
##   Country CountryTotal
## 1     USA       523.06
## 2  Canada       303.96
## 3  France       195.10
```