PSTAT 10 Homework 4

Due 7/19/22

For this worksheet, we need the following packages along with a connection to the Chinook database.

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

For full credit, the **field names in your output must match the field names in my output**, whenever the output is given. Remember this can be done by using aliases.

Problem 1

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

```
##   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.

Problem 2

1. What is the title of the highest ranking employee of the store? You may find this by any method.
2. Which employee of the store has acted as the support rep for the most customers? Retturn the EmployeeId, FirstName, LastName, Title, and total number of customers. The result is given.

```
##   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
```

Problem 3

The total length of an album is the sum of the lengths of every track in the album.

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.

```
##    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.

```
##   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. 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.**

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

Problem 5

The following queries explore how much customers have spent at the store.

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**.

```
##   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**.

```
##   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**.

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