Connecting_R_to_PostGres

HDS

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Connecting from R to Postgres

The approach is the same as in Python

-connect to the database using a username, password and a port

-pass sql commands from R to the database

-retrieve results, typically to a data frame

-disconnect from the dataframe

This entire process is very standard, connections from other languages or software packages typically works the same way. Once you know SQL, you can use it inside many other tools

```
# Get libraries, you may need to install these

library(DBI)
library(RPostgres)
```

```
#set up the connection to postgres on your local machine - localhost

pw="pwd1"

con <- dbConnect(RPostgres::Postgres(),
                 dbname = "chinook",
                 host = "localhost",
                 port = 5432,
                 user = "bob",
                 password = pw)

# Remove password from environment for security (optional)
rm(pw)
```

```
# list tables, using the R function dbListTables
# we could do this using an SQL command as well

dbListTables(con)
```

```
##  [1] "album"          "artist"         "customer"       "employee"
##  [5] "genre"          "invoice"        "invoice_line"   "media_type"
##  [9] "playlist"       "playlist_track" "track"          "enames"
```

```
customer_df=dbGetQuery(con,"SELECT * FROM customer")
```

```
head(customer_df)
```

```
##   customer_id first_name   last_name
## 1           1       Luís   Gonçalves
## 2           2     Leonie      Köhler
## 3           3   François    Tremblay
## 4           4      Bjørn      Hansen
## 5           5  František Wichterlová
## 6           6     Helena        Holý
##                                       company
## 1 Embraer - Empresa Brasileira de Aeronáutica S.A.
## 2                                          <NA>
## 3                                          <NA>
## 4                                          <NA>
## 5                               JetBrains s.r.o.
## 6                                          <NA>
##                         address               city state        country
## 1 Av. Brigadeiro Faria Lima, 2170 São José dos Campos    SP         Brazil
## 2         Theodor-Heuss-Straße 34          Stuttgart  <NA>        Germany
## 3               1498 rue Bélanger           Montréal    QC         Canada
## 4                Ullevålsveien 14               Oslo  <NA>         Norway
## 5                   Klanova 9/506             Prague  <NA> Czech Republic
## 6                   Rilská 3174/6             Prague  <NA> Czech Republic
##   postal_code              phone                fax                    email
## 1   12227-000 +55 (12) 3923-5555 +55 (12) 3923-5566     luisg@embraer.com.br
## 2       70174   +49 0711 2842222               <NA>    leonekohler@surfeu.de
## 3     H2G 1A7  +1 (514) 721-4711               <NA>      ftremblay@gmail.com
## 4        0171    +47 22 44 22 22               <NA>    bjorn.hansen@yahoo.no
## 5       14700   +420 2 4172 5555   +420 2 4172 5555 frantisekw@jetbrains.com
## 6       14300   +420 2 4177 0449               <NA>          hholy@gmail.com
##   support_rep_id
## 1              3
## 2              5
## 3              3
## 4              4
## 5              4
## 6              5
```

Question/Action

Run some other SELECT command on chinook, and then show the R summary() of the resulting data frame

```
customer_df = dbGetQuery(con, "SELECT first_name, last_name FROM customer")
head(customer_df)
```

```
##   first_name   last_name
## 1       Luís   Gonçalves
## 2     Leonie      Köhler
## 3   François    Tremblay
## 4      Bjørn      Hansen
## 5  František Wichterlová
## 6     Helena        Holý
```

```
# R summary
summary(customer_df)
```

```
##   first_name         last_name
##  Length:59          Length:59
##  Class :character   Class :character
##  Mode  :character   Mode  :character
```

When we are through with the database, we should disconnect

```
dbDisconnect(con)
```