

Dealing with database

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Introduction

Nowadays, most companies use database to store information. There are different kind of database but in this workshop we will handle Structured Query Language (SQL) type: SQLite. To start download these datasets

- SQLite file

Install Rstudio (*download*) or update version

```
#install.packages("installr")  
#library(installr)  
#updateR()
```

Content

- Import different database types
- Modify database

1. Import different database types

SQLite

Install sqlite in computer download file.

```
library(RSQLite)  
conn <- dbConnect(SQLite(),'GeneratorRefilling.sqlite')  
dtables<-dbListTables(conn) # list tables in db  
query <- 'SELECT * From RefillingGen2018'  
dGenR<- dbGetQuery(conn,query)  
#tail(dGenR,3)
```

Dat files

```
tab<-read.delim('3055.dat')  
#head(tab,3)
```

2 Modify database

Create new table

```
#query<- 'CREATE TABLE Workshop (id integer PRIMARYKEY, name char(25), time Date)'  
#dbSendQuery(conn, query)
```

Create new table of an existing dataframe

```

dbCreateTable(conn,'Tab3055',tab)
dtables<-dbListTables(conn)
dtables

## [1] "RefillingGen2018" "Tab3055"          "Workshop"

Add rows in new table

query<-"INSERT INTO Workshop(id, name, time) VALUES ('1','Penina','12/01/2019')"
dbSendQuery(conn,query)

## <SQLiteResult>
##  SQL  INSERT INTO Workshop(id, name, time) VALUES ('1','Penina','12/01/2019')
##  ROWS Fetched: 0 [complete]
##      Changed: 1

Delete rows in table

query<-"DELETE FROM Tab3055 WHERE Jared=='Mary'"
dbExecute(conn,query)

## Warning: Closing open result set, pending rows
## [1] 0

Change a value in the table

query<-"UPDATE Workshop SET name='Angela' WHERE id='1'"
dbExecute(conn,query)

## [1] 12

Check values of table

query<-"SELECT * FROM Workshop"
dbtab<-dbGetQuery(conn, query)
#dbtab

close the database

dbDisconnect(conn)

```

Challenge

1. Import “GeneratorRefilling.sqlite” and “3057.dat” and view
2. Create a table in the database for “3057.dat” called Tab3057
3. Delete the “Tab3055” table
4. Add a row to Tab3057 table
5. Delete the 3rd row of Tab3057
6. Add column ‘Time’ to Tab3057