Homework10a

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This file was created on 2020-07-14 and last modified on 2020-07-13.

Note: this solution uses R and SQLite. An alternate solution using SAS and Oracle is also available.

1. Pick a database (any database)

- Use one of the approaches shown above to list all the table names.

Note: Some of the names used in this code are arbitrary and you can choose whatever names you want. To emphasize which names can be modified at your discretion, I am using names of famous statisticians.

The statistician being honored in this code is George Box.

Here is the approach using SQL commands.

```
library(sqldf)
```

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

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

```
## Loading required package: RSQLite
```

```
box <- dbConnect(SQLite(),
  dbname="../data/hospital.sqlite")
george1 <- dbGetQuery(conn=box, "
    select tbl_name from sqlite_master
")

george1
```

```
##   tbl_name
## 1 hospital
```

```
dbDisconnect(conn=box)
```

Here is an alternative approach using an R function. You don't have to do your homework both ways; I'm just showing different methods.

```
library(sqldf)
box <- dbConnect(SQLite(),
  dbname="../data/hospital.sqlite")
dbListTables(conn=box)
```

```
## [1] "hospital"
```

```
dbDisconnect(conn=box)
```

2. Pick a table (any table)

- Use one of the approaches shown above to list all the field names.

Here is the approach using SQL commands.

```
library(sqldf)
box <- dbConnect(SQLite(),
  dbname="../data/hospital.sqlite")
george3 <- dbGetQuery(conn=box,  "
    pragma table_info(hospital)
")

george3
```

```
##   cid          name     type notnull dflt_value pk
## 1   0       HOSP_ID  INTEGER       0         NA  0
## 2   1    CENSUS_REG     TEXT       0         NA  0
## 3   2      BED_SIZE     TEXT       0         NA  0
## 4   3  TEACHING_IND  INTEGER       0         NA  0
## 5   4    RURAL_URBAN     TEXT       0         NA  0
## 6   5 ACUTE_NONACUTE    TEXT       0         NA  0
```

```
dbDisconnect(conn=box)
```

Here is an alternative approach using an R function. You don't have to do your homework both ways; I'm just showing different methods.

```
library(sqldf)
box <- dbConnect(SQLite(),
  dbname="../data/hospital.sqlite")
dbListFields(conn=box, name="hospital")
```

```
## [1] "HOSP_ID"        "CENSUS_REG"     "BED_SIZE"        "TEACHING_IND"
## [5] "RURAL_URBAN"    "ACUTE_NONACUTE"
```

```
dbDisconnect(conn=box)
```

3. Do an Internet search on a database other than Oracle and SQLite.

- Document how you get a list of all the table names in that database.

I ran a search on the phrase "msql list all table names" and found a web page

https://stackoverflow.com/questions/8334493/get-table-names-using-select-statement-in-mysql

This talks in a bit more detail than I needed, but the basic answer is to use the SQL statements

```
SELECT table_name FROM information_schema.tables
WHERE table_schema = 'your_database_name';
```