

Visualization of a dataset - Practice 8

9 December 2020

Objectives

1. Understand and analyze a complex dataset
2. Create visualizations starting from questions

Tool

- Docker
- Tableau Desktop

Exercise

A dataset about the Formula One championship is available in the Docker image `diegmonti/f1db` as MySQL database. Data are provided by Ergast (<http://ergast.com/mrd/db/>).

Install Docker and run the following command: `docker run --rm -p 3346:3306 -e MYSQL_ROOT_PASSWORD=f1db -e MYSQL_DATABASE=f1db diegmonti/f1db --default-authentication-plugin=mysql_native_password`

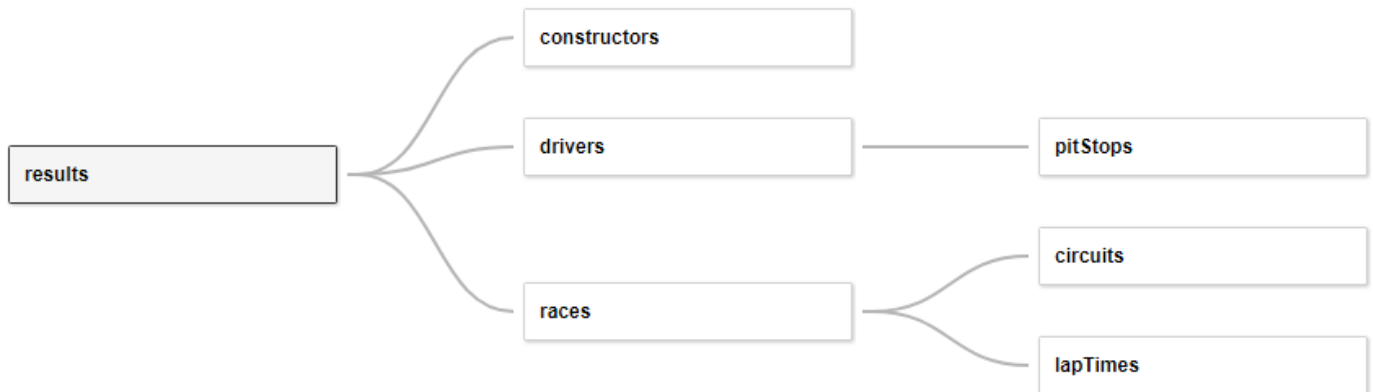
After a few moments, a MySQL server with the `f1db` database should be running on port 3346 of your device.

Install the MySQL drivers from <https://dev.mysql.com/downloads/connector/odbc/>.

Open Tableau Desktop and connect the MySQL database:

Field	Value
Server	localhost
Port	3346
Database	f1db
Username	root
Password	f1db

Drag the tables so that you create the following relationships:



Visualization 1

- How many circuits are available per Country?

Visualization 2

- What is the number of races per season?

Visualization 3

- What is the number of constructors per nationality?

Visualization 4

- What is the number of drivers per nationality?

Visualization 5

- How many points has each constructor scored?
- In how many races do each constructor participate?

Visualization 6

- How many points has each driver scored?
- How many poles has each driver achieved?

The number of poles can be computed with the following formula: `IF [Grid] == 1 THEN 1 ELSE 0 END.`

Visualization 7

- What is the trend of fastest lap times over the years per circuit?

Please consider a reasonable number of circuits only.

Visualization 8

- What is the trend of pit stop times over the years per constructor in a given circuit?

Please consider a reasonable number of constructors only.