# SQL challenge problem

For this challenge, instead of using cloud-based resources, we'll use the free LibreOffice suite of software, which includes word processing, spreadsheet, and presentation software, as well as a personal database program called LibreOffice Base. Download LibreOffice from this [link](https://www.libreoffice.org/download/download/), then install the software on your computer.

Next, download [this database](https://drive.google.com/file/d/1ATFwjKE35NDiczm5hIADcd0cUaYATmZt/view?usp=sharing), which is a small subset of the data from the Internet Movie Database (IMDb) site. In particular, this database contains data for movies that were made in 1966.

There are three tables in the database:

NAMES, with two columns: KEY and NAME. This table contains the names of actors that appeared in movies during 1966.

TITLES, with four columns: KEY, TITLE, YEAR, and RUNTIME. This table contains the name, year, and runtime for movies made in 1966.

PRINCIPALS, with three columns: KEY, TITLE\_KEY, and NAME\_KEY. This table associates actors with the movies they appeared in.

In LibreOffice Base, click on the Queries icon, then click the "Create Query in SQL View…" option. This will open a new window in which you can type your SQL. Click on the "Run Query" toolbar option to execute your SQL and see the results.

Create SQL queries to do the following tasks. Each should be accomplished with a single SQL query.

1. Find the title names of all of the movies whose names start with 'F'.
2. Find the title name and runtime of the movies with the 10 longest runtimes.
3. Find the average runtime of all the movies.
4. Find the title name and runtime of all the movies with runtimes shorter than the average. Use a subquery to accomplish this task.
5. Use a JOIN to find the NAME\_KEYs form the PRINCIPALS table for the actors that appeared in the movie "Hawaii".
6. Find the names of the actors who appeared in the movie "Fantastic Voyage". This will require two JOIN statements in the same SQL query. Look at [this site](https://eeperry.wordpress.com/2014/09/28/libreoffice-base-sql-joining-tables/) for some help on making complicated queries.

The SoloLearn lesson mentions that SQL is not standard from one implementation to another, so there are a few differences between what appears in the lesson and how SQL works in LibreOffice Base:

* SHOW DATABASES and SHOW TABLES will not work in LibreOffice Base -- you can only have one database open, and you can see the tables via the Tables view in the application.
* You cannot execute multiple SQL queries at once in LibreOffice Base.
* Enclose the names of tables and columns in double quotations in LibreOffice Base, as in SELECT "TITLES"."YEAR" FROM "TITLES"