

In this lecture, we will discuss...

- ✧ Which **database** is Rails using?
- ✧ How to **view** the database



SQLite

- ✧ Rails uses SQLite for database by default
 - Self-contained, server-less, zero-configuration, transactional, relational SQL database engine



CLAIM: Most widely deployed SQL database engine in the world



Database Setup: config/database.yml

✧ Which database are we using?

The screenshot shows a code editor with a file explorer on the left and a code editor on the right. The file explorer shows a project structure with folders like 'fancy_cars', 'config', and 'db'. The 'config' folder is expanded, showing 'database.yml' selected. The 'db' folder is also expanded, showing 'development.sqlite3'. The code editor shows the contents of 'database.yml', which is configured for SQLite. The code is as follows:

```
database.yml

# SQLite version 3.x
# gem install sqlite3
#
# Ensure the SQLite 3 gem is defined in your Gemfile
# gem 'sqlite3'
#
▼ default: &default
  adapter: sqlite3
  pool: 5
  timeout: 5000
▼ development:
  <<: *default
  database: db/development.sqlite3
```

Two red arrows are present: one points from the 'development.sqlite3' file in the 'db' folder of the file explorer to the 'development' section of the code, and another points from the 'database: db/development.sqlite3' line in the code to the 'development.sqlite3' file in the 'db' folder.

Database Console: rails db

```
~/fancy_cars$ rails db
SQLite version 3.8.5 2014-08-15 22:37:57
Enter ".help" for usage hints.
sqlite> .help
.backup ?DB? FILE      Backup DB (default "main") to FILE
.bail on|off           Stop after hitting an error.  Default OFF
.clone NEWDB           Clone data into NEWDB from the existing database
.databases             List names and files of attached databases
.dump ?TABLE? ...      Dump the database in an SQL text format
                        If TABLE specified, only dump tables matching
                        LIKE pattern TABLE.

.echo on|off           Turn command echo on or off
.exit                 Exit this program
.explain ?on|off?      Turn output mode suitable for EXPLAIN on or off.
                        With no args, it turns EXPLAIN on.

.headers on|off        Turn display of headers on or off
.help                 Show this message
.import FILE TABLE    Import data from FILE into TABLE
.indices ?TABLE?       Show names of all indices
```



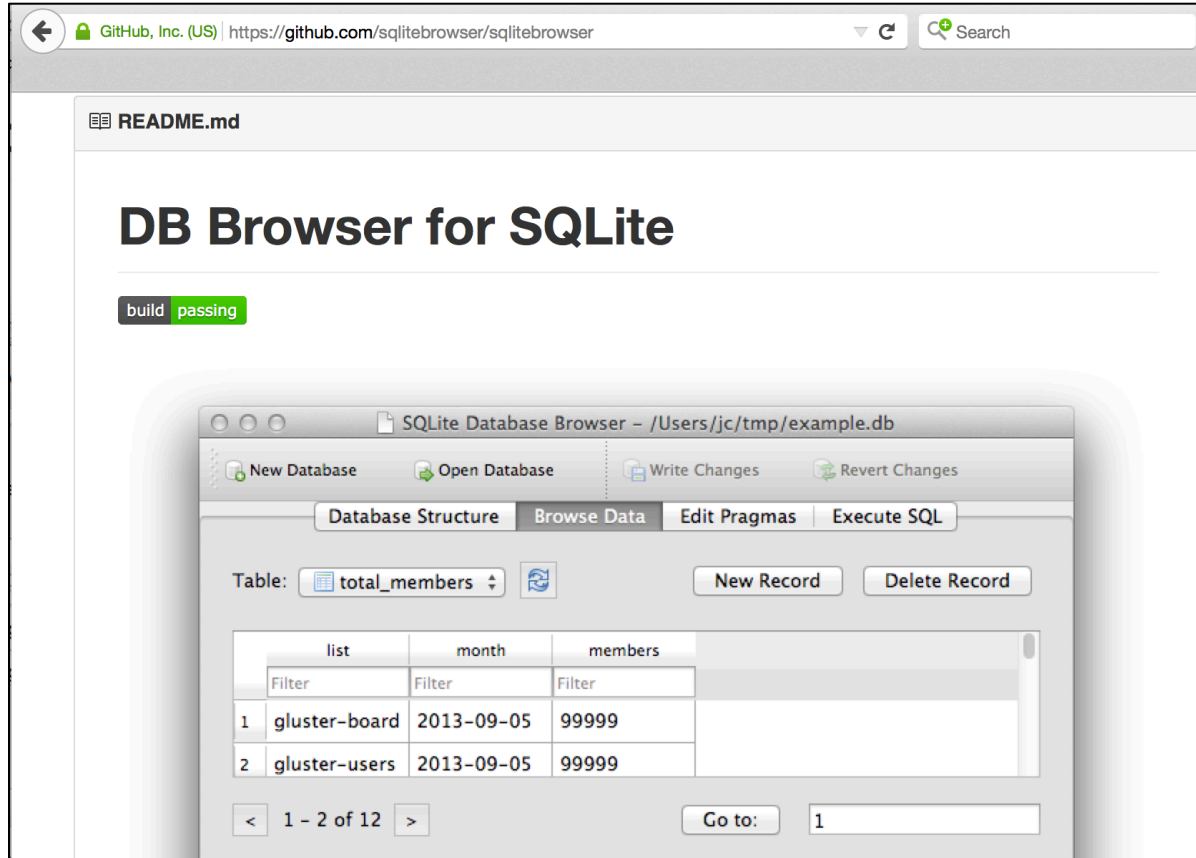
Some useful SQLite options

✧ Good idea: turn **headers on** and **column mode**

```
~/fancy_cars$ rails db
SQLite version 3.8.5 2014-08-15 22:37:57
Enter ".help" for usage hints.
sqlite> .tables
cars                      schema_migrations
sqlite> .headers on
sqlite> .mode columns
sqlite> select * from cars;
id          make      color    year    created_at              updated_at
-----
1          Cadillac  Black   2014    2015-09-07 16:48:07.474368 2015-09-07 16:48:07.474368
2          Infiniti  Silver  2013    2015-09-07 16:48:33.290148 2015-09-07 16:48:33.290148
3          BMW      Blue    2015    2015-09-07 16:48:49.017993 2015-09-07 16:48:49.017993
sqlite> .exit
```



Other Tools for Viewing SQLite



Summary

- ✧ Rails uses **SQLite by default**
- ✧ Built-in command-line DB viewer

What's Next?

- ✧ Introduction to Migrations

