## SQL Structured Query Language

## SQLite is a C-language library that implements a [small](https://www.sqlite.org/footprint.html), [fast](https://www.sqlite.org/fasterthanfs.html), [self-contained](https://www.sqlite.org/selfcontained.html), [high-reliability](https://www.sqlite.org/hirely.html), [full-featured](https://www.sqlite.org/fullsql.html), SQL database engine. SQLite is the [most used](https://www.sqlite.org/mostdeployed.html) database engine in the world. SQLite is built into all mobile phones and most computers and comes bundled inside countless other applications that people use every day

## The SQLite [file format](https://www.sqlite.org/fileformat2.html) is stable, cross-platform, and backwards compatible and the developers pledge to keep it that way through at least the year 2050. SQLite database files are commonly used as containers to transfer rich content between systems [[1]](https://www.sqlite.org/aff_short.html) [[2]](https://www.sqlite.org/sqlar.html) [[3]](https://www.sqlite.org/appfileformat.html) and as a long-term archival format for data [[4]](https://www.sqlite.org/locrsf.html). There are over 1 trillion (1e12) SQLite databases in active use [[5]](https://www.sqlite.org/mostdeployed.html)

## SQLite A Brief History

* 2000 - D. Richard Hipp designed SQLite for the purpose of no administration required for operating a program.
* 2000 - In August, SQLite 1.0 released with GNU Database Manager.
* 2011 - Hipp announced to add UNQl interface to SQLite DB and to develop UNQLite (Document oriented database).

DB Browser for SQLite (DB4S) is a high quality, visual, open source tool to create, design, and edit database files compatible with SQLite.

DB4S is for users and developers who want to create, search, and edit databases. DB4S uses a familiar spreadsheet-like interface, and complicated SQL commands do not have to be learned.

Controls and wizards are available for users to:

* Create and compact database files
* Create, define, modify and delete tables
* Create, define, and delete indexes
* Browse, edit, add, and delete records
* Search records
* Import and export records as text
* Import and export tables from/to CSV files(Comma-separated values) file format
* Import and export databases from/to SQL dump files
* Issue SQL queries and inspect the results
* Examine a log of all SQL commands issued by the application
* Plot simple graphs based on table or query data

**What it is not**

This program is not a visual shell for the sqlite command line tool, and does not require familiarity with SQL commands. It is a tool to be used by both developers and end users, and must remain as simple to use as possible in order to achieve these goals.

## Why SQLite?

* SQLite does not require a separate server process or system to operate (serverless).
* SQLite comes with zero-configuration, which means no setup or administration needed.
* A complete SQLite database is stored in a single cross-platform disk file.
* SQLite is very small and light weight, less than 400KiB fully configured or less than 250KiB with optional features omitted.
* SQLite is self-contained, which means no external dependencies.
* SQLite transactions are fully ACID-compliant, allowing safe access from multiple processes or threads.
* SQLite supports most of the query language features found in SQL92 (SQL2) standard.
* SQLite is written in ANSI-C and provides simple and easy-to-use API.
* SQLite is available on UNIX (Linux, Mac OS-X, Android, iOS) and Windows (Win32, WinCE, WinRT).

## SQLite Commands

The standard SQLite commands to interact with relational databases are similar to SQL. They are CREATE, SELECT, INSERT, UPDATE, DELETE and DROP. These commands can be classified into groups based on their operational nature