What is SQLite

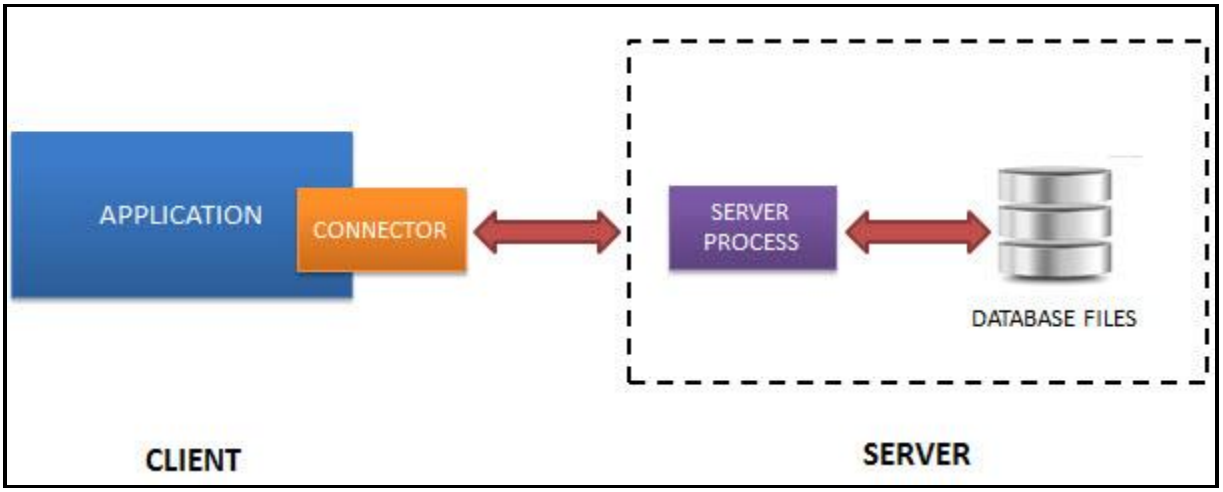
SQLite is a software library that provides a relational database management system. The lite in SQLite means lightweight in terms of setup, database administration, and required resources.

SQLite has the following features: serverless, self-contained, zero-configuration, transactional.

Serverless:

Normally, an RDBMS such as MySQL, PostgreSQL, etc., requires a separate server process to operate. The applications that want to access the database server use TCP/IP protocol to send and receive requests. This is called client/server architecture.

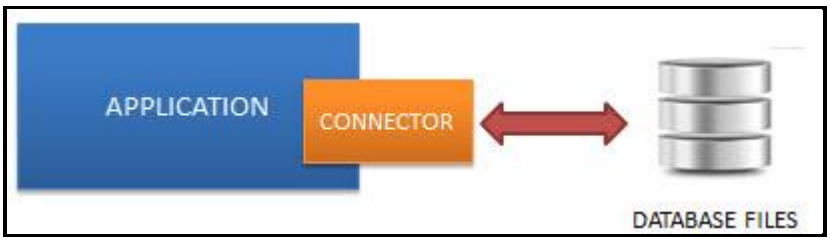
The following diagram illustrates the RDBMS client/server architecture:



SQLite does NOT work this way, it does NOT require a server to run.

SQLite database is integrated with the application that accesses the database. The applications interact with the SQLite database to read and write directly from the database files stored on disk.

The following diagram illustrates the SQLite server-less architecture:



Self-Contained:

SQLite is self-contained means it requires minimal support from the operating system or external library. This makes SQLite usable in any environment especially in embedded devices like iPhones, Android phones, game consoles, handheld media players, etc.

Zero-configuration:

Because of its serverless architecture, you don't need to "install" SQLite before using it. There is no server process that needs to be configured, started, and stopped.

In addition, SQLite does not use any configuration files.

Transactional:

All transactions in SQLite are fully ACID-compliant. It means all queries and changes are Atomic, Consistent, Isolated, and Durable. This means all changes within a transaction will either take place completely or not at all, even when an unexpected situation like application crash, power failure, or operating system crash occurs.

Using the SQLite tools:

To try the SQLite, you can download one of the tools that implement the system and used to create and manage SQLite database file, The following are the most popular:

1- SQLiteStudio: https://github.com/pawelsalawa/sqlitestudio/releases

1- SQLiteBrowser: https://sqlitebrowser.org/