

SQLite

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<http://www.sqlite.org/>
<http://www.sqlite.org/docs.html>

What is it?

SQLite is a software library that implements a self-contained, serverless, zero-configuration, transactional SQL database engine. SQLite is the most widely deployed SQL database engine in the world. The source code for SQLite is in the public domain.

from <http://www.sqlite.org/>

- What does all that mean?

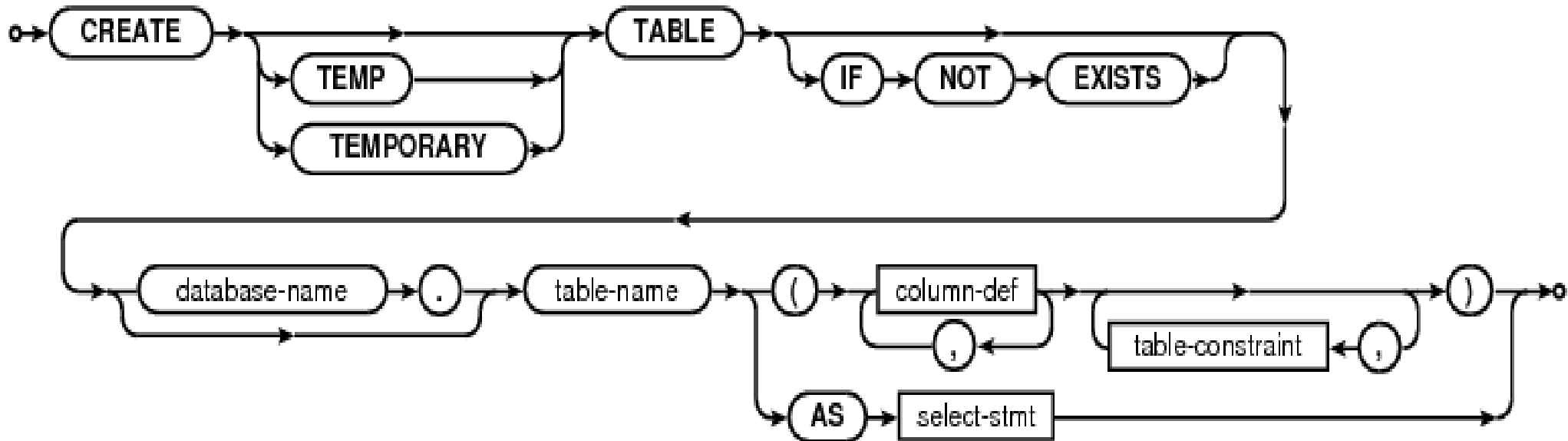
MySQL vs SQLite

Server vs Serverless

- When to use each?
- Strengths of MySQL
- Strengths of SQLite

SQL

- <http://www.sqlite.org/syntaxdiagrams.html>
- create-table-stmt



- column-def:



Command Line

```
chadd@zeus:~> sqlite3 movies.db
```

```
SQLite version 3.6.14
```

```
Enter ".help" for instructions
```

```
Enter SQL statements terminated with a ";"
```

```
sqlite> CREATE TABLE Movies
```

```
...> (MovieID INTEGER NOT NULL,
```

```
...> Title TEXT(512) NOT NULL,
```

```
...> PRIMARY KEY(MovieID) ) ;
```

```
sqlite> insert into Movies Values (1, "Star Wars");
```

```
sqlite> insert into Movies Values (2, "Empire");
```

```
sqlite> select * from Movies;
```

```
1|Star Wars
```

```
2|Empire
```

```
sqlite> .quit
```

PHP!

```
<?php
    if ($db = sqlite_open('database')) {

        $query = sqlite_query($db,
            'SELECT ZoneName, ZoneID FROM
            ZoneTypes
            WHERE CommissionRate > .7');

        while( $row = $q->sqlite_fetch_array($query) )
        {
            print $row['ZoneName'] . " " . $row['ZoneID'];
        }
        sqlite_close($db);
    }
?>
```

<http://www.php.net/manual/en/book.sqlite.php>
<http://www.php.net/manual/en/function.sqlite-fetch-array.php>

C/C++ interface

```
#include <sqlite3.h>

sqlite3 *psDB;
sqlite3_stmt *psStmt;

sqlite3_open_v2(..., &psDB, ...); // open the DB

sqlite3_prepare_v2(..., &psStmt, ...); // build a Query

sqlite3_bind_int(psStmt, ...); // set a parameter

while ( sqlite3_step(psStmt) == SQLITE_ROW ) // retrieve one row
{
    sqlite3_column_int(psStmt, ...); //retrieve one column
    sqlite3_column_text(psStmt, ...); //retrieve one column

    // do something useful
}

sqlite3_finalize(psStmt);
sqlite3_close(psDB);
```

Java/Android

<http://developer.android.com/reference/android/database/sqlite/package-summary.html>

package

android.database.sqlite

Classes | [Description](#)

Contains the SQLite database management classes that an application would use to manage its own private database.

[more...](#)

Interfaces

SQLiteCursorDriver	A driver for SQLiteCursors that is used to create them and gets notified by the cursors it c
SQLiteDatabase.CursorFactory	Used to allow returning sub-classes of Cursor when calling query.
SQLiteTransactionListener	A listener for transaction events.

Classes

SQLiteClosable	An object create from a SQLiteDatabase that can be closed.
SQLiteCursor	A Cursor implementation that exposes results from a query on a SQLiteDatabase .
SQLiteDatabase	Exposes methods to manage a SQLite database.
SQLiteOpenHelper	A helper class to manage database creation and version management.
SQLiteProgram	A base class for compiled SQLite programs.
SQLiteQuery	A SQLite program that represents a query that reads the resulting rows into a CursorWindow .
SQLiteQueryBuilder	This is a convience class that helps build SQL queries to be sent to SQLiteDatabase objects.

Other DB connection techniques

- Open Database Connectivity
 - ODBC
 - JDBC
 - Each database may have their own set of connectors
 - <http://dev.mysql.com/downloads/#drivers-connectors>

