**SQLite3 Cheat Sheet**

Basic Commands

1. **Open Database**: **sqlite3 database\_name.db**
2. **Exit SQLite3**: **.exit** or **.quit**
3. **List Tables**: **.tables**
4. **List Schema**: **.schema**
5. **Show Current Database**: **.database**
6. **Show Settings**: **.show**
7. **Show Help**: **.help**

Database Operations

1. **Create Database**: **sqlite3 new\_database.db**
2. **Attach Database**: **ATTACH DATABASE 'other\_database.db' AS alias;**
3. **Detach Database**: **DETACH DATABASE alias;**
4. **Delete Database**: **rm database\_name.db**

Table Operations

1. **Create Table**: **CREATE TABLE table\_name (column1 datatype, column2 datatype, ...);**
2. **Delete Table**: **DROP TABLE table\_name;**
3. **Rename Table**: **ALTER TABLE old\_table\_name RENAME TO new\_table\_name;**
4. **Add Column**: **ALTER TABLE table\_name ADD COLUMN column\_name datatype;**
5. **Delete Column**: **ALTER TABLE table\_name DROP COLUMN column\_name;**

Data Operations

1. **Insert Data**: **INSERT INTO table\_name (column1, column2, ...) VALUES (value1, value2, ...);**
2. **Update Data**: **UPDATE table\_name SET column1 = value1, column2 = value2 WHERE condition;**
3. **Delete Data**: **DELETE FROM table\_name WHERE condition;**
4. **Select Data**: **SELECT column1, column2, ... FROM table\_name WHERE condition;**

Index Operations

1. **Create Index**: **CREATE INDEX index\_name ON table\_name (column1, column2, ...);**
2. **Delete Index**: **DROP INDEX index\_name;**

Transactions

1. **Begin Transaction**: **BEGIN;**
2. **Commit Transaction**: **COMMIT;**
3. **Rollback Transaction**: **ROLLBACK;**

Special Commands

1. **Run Script**: **.read script.sql**
2. **Run Shell Command**: **.shell command**
3. **Run Command from File**: **.read filename**
4. **Run Command from Clipboard**: **.read !pbpaste**

Meta Commands

1. **Set Output Mode**: **.mode mode**
2. **Set Column Separator**: **.separator string**
3. **Set Header Mode**: **.header on|off**
4. **Set Column Width**: **.width column1 column2 ...**

SQLite3 Command Line Options

1. **Open Database**: **sqlite3 database\_name.db**
2. **Open Read-Only**: **sqlite3 -readonly database\_name.db**
3. **Open in Memory**: **sqlite3 :memory:**
4. **Open with Timeout**: **sqlite3 -timeout 5000 database\_name.db**

SQLite3 Environment Variables

1. **Set Database Path**: **export SQLITE3\_DATABASE\_PATH=/path/to/database.db**
2. **Set Timeout**: **export SQLITE3\_TIMEOUT=5000**

SQLite3 Configuration

1. **Set Timeout**: **PRAGMA busy\_timeout = 5000;**
2. **Set Journal Mode**: **PRAGMA journal\_mode = WAL;**
3. **Set Synchronous Mode**: **PRAGMA synchronous = NORMAL;**

SQLite3 Functions

1. **Aggregate Functions**: **AVG(), COUNT(), MAX(), MIN(), SUM()**
2. **String Functions**: **LENGTH(), LOWER(), UPPER(), SUBSTR(), TRIM()**
3. **Date and Time Functions**: **DATE(), TIME(), DATETIME(), STRFTIME()**
4. **Math Functions**: **ABS(), CEIL(), FLOOR(), ROUND(), RANDOM()**

SQLite3 Data Types

1. **NULL**: **NULL**
2. **Integer**: **INTEGER**
3. **Real**: **REAL**
4. **Text**: **TEXT**
5. **Blob**: **BLOB**

SQLite3 Operators

1. **Comparison Operators**: **=, <>, <, >, <=, >=**
2. **Logical Operators**: **AND, OR, NOT**
3. **Arithmetic Operators**: **+, -, \*, /, %**
4. **Concatenation Operator**: **||**

SQLite3 Pragmas

1. **Set Journal Mode**: **PRAGMA journal\_mode = WAL;**
2. **Set Synchronous Mode**: **PRAGMA synchronous = NORMAL;**
3. **Set Foreign Key Constraints**: **PRAGMA foreign\_keys = ON;**
4. **Set Cache Size**: **PRAGMA cache\_size = 10000;**

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