The five data types for SQLite are something we use every day when working with SQLite. They are simple yet have a lot of meaning with how tables work in our databases. Here are the five data types known and considered also as storage classes,

1. Null

2. Integer

3. Real

4. Text

5. Blob

***Null-*** *Null* is a term used when creating and using tables. It defines blank boxes with no information and no value either. Null boxes hold no value or data information for your table.

***Integer-*** *Integer* is considered as a numeric term and can only be whole numbers and can be positive or negative. Integers are also 8 bytes in length and have a length of up to 19 digits. They are only numbers and can not contain text and they do not contain decimals as well.

***Real-*** *Real* values are considered floating point numbers and are real numbers that contain decimal points and exponents.

***Text-*** *Text* values are considered strings of characters. The string values are unlimited as well.

***Blob-*** *Blob* values are what are used when including pictures or raw bytes. Also known as Binary Large Objects and is stored exactly as it is imputed.

***Three valued logic***

Three valued logic is Known in SQLite to be True and False with a third result of logical expressions being Unknown. This logic is a result of the null value being supported to mark absent data. If there’s a null value in a table, then instead of true or false it could be known as unknow because there is no data to fill it in. Some examples given on (<https://modern-sql.com/concept/three-valued-logic#:~:text=SQL%20uses%20a%20three%2Dvalued,true%20nor%20false%20but%20unknown>.) of unknown comparisons include… NULL = 1, NULL <> 1, NULL > 1, NULL = NULL.

***SQLite Operators***

There are four categories of operators when it comes to SQLite. These operators include arithmetic, comparison, logical, and bitwise. Operators are use in a statement where it is needed to perform an operation.

***Arithmetic Operators***- Arithmetic operators are basic math operations this includes…

**(+) Addition** which adds the sums of the values in the operation, **(-) Subtraction** which subtracts the values in the operation, **(\*) Multiplication** which multiplies values in the operation**, (/) Division** which divides given values in the operation, and **(%) Modulus** which divides two values in the operation and gives the remainder.

***Comparison Operators-*** Comparison operators are used in the where clause and is also used math wise including…

**(=) Equal** and **(==) Equal** checks to see if the values are equal or not and if they are that makes the condition true.

**(!=)Not Equal** and **(< >) Not Equal** checks to see if the values are equal or not and if they are not the condition becomes true.

**(>) Greater Than** checks to see if the value on the left is greater than the value on the right. If the value on the left is greater then the condition is true.

**(<) Less Than** checks to see if the value on the left is less than the value on the right and if the right-side value is greater than the condition becomes true.

**(>=) Greater Than or Equal** checks to see if the left value is greater than or equal to the right-side value, if so then the condition is true.

**(<=) Less Than or equal** checks to see if the value on the left is less than or equal to the value on the right, and if the value on the right is greater than the condition is true.

***Logical Operators***

**And-** Allows multiple conditions ins a where clause. **Between-** used to search for values within a set of values. **Exists-** used to search for the presence of a row in a specific table. **In-** used to compare a value to a specified list of literal values. **Not In-** The negation of the in operation. **Like-** used to compare a value to similar values using wildcard operations. **Glob-** used to compare a value to similar values using wildcard operators but is case sensitive. **Not-** reverses the meaning of the logical operator it is used with. **Or-** used to combine multiples conditions ins a SQLite statement. **Is Null-** used to compare a value with a Null value. **Is-** works like = . **Is Not-** works like != . **||-** adds two different strings and makes a new one. **Unique-** searches every row of a specific table for uniqueness or no duplicates.

***Bitwise Operator***

Bitwise operators work with bits and performs bit-by-bit operations and includes…

**(&)** Binary AND operator. **(|)** Binary OR operator. **(~)** Binary Ones complement operator**. (<<)** Binary left shift operator. **(>>)** Binary right shift operator.

***Dot Commands from Appendix B See GitHub for Screenshots***

.backup

.bail

.databases

.dump

.echo

.exit

.explain

.headers

.help

.import

.indices

.iotrace

.load

.log

.mode

.nullvalue

.output

.prompt

.quit

.read

.restore

.schema

.separator

.show

.tables

.timeout

.timer

.width

***Sources***

<https://www.sqlitetutorial.net/sqlite-data-types/>

<https://www.tutlane.com/tutorial/sqlite/sqlite-data-types>

<https://www.tutorialspoint.com/sqlite/sqlite_operators.htm>

<https://www.w3schools.blog/operators-sqlite>

<https://modern-sql.com/concept/three-valued-logic#:~:text=SQL%20uses%20a%20three%2Dvalued,true%20nor%20false%20but%20unknown>.