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**What is SQLite?**

SQLite is a lightweight relational database engine. SQLite is fast and has a small footprint, making it perfect for Android devices. Instead of the heavyweight server-based databases like Oracle and Microsoft SQL Server, each SQLite database is stored within a single file on disk. Android applications can choose to store private application data in a SQLite database.

**When to use SQLite?**

* If you are developing embedded software for devices like televisions, Mobile phones, cameras, home electronic devices, etc., then SQLite is a good choice.
* SQLite can handle low to medium traffic HTTP requests and manage complex session information for a website
* When you need to store an archive of files, SQLite can produce smaller size archives and with lesser metadata included than regular ZIP archives.

**1. Simple query:**

Select – query data from a single table using SELECT statement.

**2. Sorting rows:**

Order By – sort the result set in ascending or descending order.

**3. Filtering data:**

> Select Distinct – query unique rows from a table using the DISTINCT clause.

> Where – filter rows of a result set using various conditions.

> Limit – constrain the number of rows returned by a query and how to get only the necessary data from a table.

> Between – test whether a value is in a range of values.

> Like – query data based on pattern matching using wildcard characters: percent sign (%) and underscore (\_).

> Glob – determine whether a string matches a specific UNIX-pattern.

**4. Joining tables**

> SQLite join – learn the overview of joins including inner join, left join, and cross join.

> Inner Join – query data from multiple tables using the inner join clause.

> Left Join – combine data from multiple tables using the left join clause.

> Cross Join – show you how to use the cross join clause to produce a cartesian product of result sets of the tables involved in the join.

> Self Join – join a table to itself to create a result set that joins rows with other rows within the same table.

> Full Outer Join – show you how to emulate the full outer join in the SQLite using left join and union clauses.

**5. Grouping data**

> Group By – combine a set of rows into groups based on specified criteria. The GROUP BY clause helps you summarize data for reporting purposes.

> Having – specify the conditions to filter the groups summarized by the GROUP BY clause.

**7. Subquery**

> Subquery – introduce you to the SQLite subquery and correlated subquery.

> Exists operator – test for the existence of rows returned by a subquery.

**8. Changing data**

How to update data in the table using insert, update, delete, and replace statements.

Insert – insert rows into a table

Update – update existing rows in a table.

Delete – delete rows from a table.

Replace – insert a new row or replace the existing row in a table.

**10. Transactions**

Transaction – show you how to handle transactions in SQLite.

**11. Constraints**

> Primary Key – show you how to define the primary key for a table.

> NOT NULL constraint – learn how to enforce values in a column are not NULL.

> UNIQUE constraint – ensure values in a column or a group of columns are unique.

> CHECK constraint – ensure the values in a column meet a specified condition defined by an expression.

> AUTOINCREMENT – explain how the

> AUTOINCREMENT column attribute works and why you should avoid using it.

**13. Views**

> Create View – introduce you to the view concept and show you how to create a new view in the database.

> Drop View – show you how to drop a view from its database schema.

**14. SQLite tools**

> SQLite Commands – show you the most commonly used command in the sqlite3 program.

> SQLite Show Tables – list all tables in a database.

> SQLite Describe Table – show the structure of a table.

> SQLite Dump – how to use dump command to backup and restore a database.

> SQLite Import CSV – import CSV files into a table.

> SQLite Export CSV – export an SQLite database to CSV files.