

Difference Between Realm and SQLite

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Key Difference - Realm vs SQLite

Modern applications require fast and efficient performance. One common light-weight database management system is SQLite. Even though SQLite is widely used, it has some limitations. SQLite queries can be slow, and it might be harder to manage a huge set of data. It is also harder to do code migrations when the number of data increases. The realm is an alternative to SQLite. The **key difference** between Realm and SQLite is that **Realm is an easy-to-use open source object-centric database management system which is used as a replacement for SQLite while SQLite is a relational database management system which is widely used.**

What is Realm?

The realm is a database for mobile application development. It is a replacement for SQLite. It is written in [C++](#). Realm supports data types such as Boolean, short, int, long, float, double, String, Date and byte. It also uses annotations. Some of them are @Ignore, @Index, @PrimaryKey.

The realm is fast in performance. Realm use [objects](#) for storing data. Realm data models are similar to [Java](#) Classes, and those classes are subclasses of RealmObject. The main advantage of Realm over SQLite is that it is faster and efficient than SQLite. It is easy to use and cross-platform.

What is SQLite?

SQLite is a relational database management system. Data is stored in the form of a table. A table consists of rows and columns. A row is a record. A column is a field. The tables are related to each other. Columns can be joined if necessary. SQLite use queries and the query results are mapped to objects. If the programmer needs to modify the database such as adding columns, [schema](#) migrations have to be done. It also supports many third-party libraries. It is portable. It may be hard to manage a complex database because it is necessary to write Structure Query Language.



Figure 01: SQLite

SQLite is lightweight so it can be used for embedded systems, IOT(Internet of Things) devices rather than using database management systems such as [MySQL](#). SQLite is more suitable for applications which does not have much traffic. It can be used for the [website](#), but if the website is getting a large number of requests, SQLite won't be a good choice. It is also not very suitable for implementing concurrent operations. Mainly SQLite is useful for embedded [software](#) and android application development.

What are the Similarities Between Realm and SQLite?

- Both database management systems are mainly used for mobile application development.
- Both are cross-platform. (Mac, [IOS](#), [Android](#))

What is the Difference Between Realm and SQLite?

Realm vs SQLite	
The realm is easy to use open source, object-centric database management system which is used as a replacement for SQLite.	SQLite is an embedded relation database management system which supports relational database features.
Speed	
The realm is faster than SQLite.	SQLite is slower than Realm.
SQL	
Realm does not use SQL.	SQLite uses SQL for data storing, retrieving and manipulating.

Ease of Integration and Use	
The realm is easier to integrate and use than SQLite.	SQLite is difficult to use than Realm.
Documentation	
Realm does not have much tutorials and documentation comparing to SQLite. The realm is still under active development.	SQLite has more tutorials and documentation.

Summary - Realm vs SQLite

Realm database is a good choice to develop fast and easy to use solutions for mobile applications. The difference between Realm and SQLite is that Realm is an easy to use open source, object-centric database management system which is used as a replacement for SQLite and SQLite is a relational database management system. Realm and SQLite can be used according to the project requirements and ease of use.

Reference:

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