# Firebase

+ Synched Application State   
+ Tutorial available for Android app  
+ Tutorial available to set-up Firebase for Android Studio  
+ Easy to set-up, no need to set-up an external server  
+ ‘Simple’  
+ Has some additional features (See: <https://firebase.google.com/use-cases/> )

+ cloud based, needs internet connection to connect to

+/- Relatively “New”  
- Not a relational DB  
- File-based  
- Can only scale up to a certain point (Probably can’t do something big like Whatsapp)  
- Awful querying (i.e. find me all pets over two years old that are Cocker Spaniels or Laboradors)  
- No relational queries  
  
Links for/about Firebase:

<https://www.codementor.io/cultofmetatron/when-you-should-and-shouldn-t-use-firebase-f62bo3gxv>  
(Uses React.js code snippets, but has a lot of relevant information, read this if any)

<https://stackoverflow.com/questions/38423632/firebase-scalability>  
(Information for Firebase scalability)

<https://stackoverflow.com/questions/10564073/what-is-the-difference-between-a-file-based-database-and-a-server-based-database>  
https://stackoverflow.com/questions/37482907/firebase-differences-between-realtime-database-and-file-storage   
(Information for file-based databases)

## Tutorials

<https://codelabs.developers.google.com/codelabs/firebase-android/#0>  
(Using/Developing with Firebase)

<https://developer.android.com/studio/write/firebase>  
(Connecting to Firebase)

# MySQL

+ Relational DB  
+ SQL-Queries  
+ Prior knowledge of it (via school, or Co-op if applicable)  
+ Lots of documentation (At least there should be)  
+ Tutorials for mostly everything available  
+ Good scalability  
+ Server based

+/- Will need to do some web stuff (PHP)  
- Need to set-up a server  
- “Complicated”  
- No additional features compared to Firebase

## Links for MySQL

<https://www.quora.com/What-is-MySQL-used-for-and-what-are-its-advantages-and-disadvantages>

## Tutorials

<https://www.tutorialspoint.com/android/android_php_mysql.htm>

https://www.simplifiedcoding.net/android-sync-sqlite-database-with-server/

# SQLite

Benefits:

* Easy to implement and set up with Android Studio

Cons:

* The database is a file
* Most likely not as scalable as MySql or Firebase
* It doesn’t access a server, it accesses a file on database
* No security for the files that the data is stored in

Tutorials:

<https://www.tutorialspoint.com/android/android_sqlite_database.html>

<https://developer.android.com/training/data-storage/sqlite>

<https://www.sqlite.org/appfileformat.html>

<https://www.quora.com/How-do-SQLite-databases-work>

https://www.quora.com/What-is-the-difference-between-SQLite-Database-and-Firebase-for-Android-development