

Navigating an App and Dealing with Data



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Overview



Organizing Code

Using Databases With SQ(F)lite

Asynchronous Programming

Singletons

Plugins

- Sqflite
- Path_provider
- Intl



SQLite

SQLite is an in-process library that implements a self-contained, serverless, zero-configuration, transactional SQL database engine

(sqlite.org)



SQLite Definition

Self Contained

Minimal support from external libraries

Serverless

Reads and writes directly from the database files on disk

Zero-Configuration

No installation, no setup

Transactional

All changes in a transaction occur completely or not at all



SQLite



SQLite plugin for Flutter.

Support transactions and batches

Helpers for insert/query/update/delete queries

DB operation executed in a background thread on iOS and Android

Include in pubspec.yaml

Todos.db

Todos table

id

title

description

priority

date



dependencies:

sqflite: any

path_provider: any

intl: ^0.15.7

◀ The db plugin

◀ Finds commonly used locations on the filesystem

◀ internationalization package. Includes date/number formatting and parsing



Singleton

```
class DbHelper {  
    static final DbHelper _dbhelper = DbHelper._internal();  
  
    //hidden constructor  
    DbHelper._internal();  
  
    //visible constructor  
    factory DbHelper() {  
        return _dbhelper;  
    }  
}
```



Using Raw SQL

```
db.rawQuery("SELECT * FROM yourTable");
```

```
db.rawInsert('INSERT INTO yourTable(name, num)  
VALUES("some name", 1234)');
```

```
db.rawUpdate('UPDATE yourTable SET name = ?,  
WHERE name = ?', ["new name", "old name"]);
```

```
db.rawDelete('DELETE FROM yourTable WHERE id = 1');
```



Using SQL Helpers

```
db.update('yourTable',  
    yourObject.toMap(),  
    where: "$colId = ?",  
    whereArgs: [yourObject.id]);
```



```
static final DbHelper _dbhelper =  
    new DbHelper._internal();
```

```
DbHelper._internal();
```

```
factory DbHelper() {  
    return _dbhelper;  
}
```

◀ Create a private instance of the class

◀ Create an empty private named constructor

◀ Use the **factory** to always return the same instance



ListView

A scrollable list of widgets arranged linearly.

ListView is the most commonly used scrolling widget.



FloatingActionButton

A floating action button is a circular icon button that hovers over content to promote a primary action in the application.

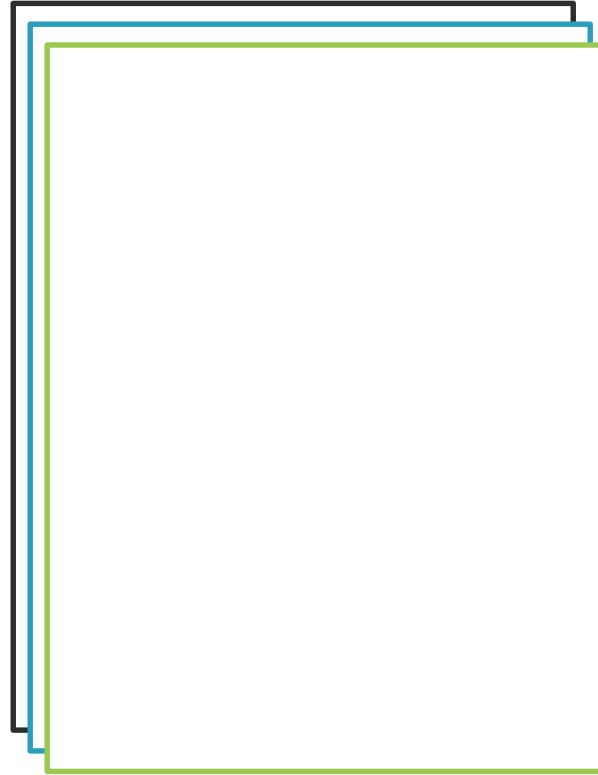


Navigation

push()



pop()



Stack



Summary



Organizing Your Code with Flutter

Singleton

Async

- Future
- Await
- Then

Navigation

- Push
- Pop

Data

- SQFlite
- ListView

