

Flutter & Dart Complete Guide

Prepared by Eng. Yousef Salah Kassem

DAFL 2
Firebase

Lecture 7



Table Of Content

- Firebase Integration
- Models
- Routes



Firestore Integration

The FlutterFire CLI depends on the underlying Firestore CLI. If you haven't already done so, make sure you have the Firestore CLI installed on your machine. If not, make sure you have node.js on your machine and Install the Firestore CLI via npm by running the following command:

```
npm install -g firestore-tools
```



Firestore Integration

Next, install the FlutterFire CLI by running the following command:

```
dart pub global activate flutterfire_cli
```

Once installed, the `flutterfire` command will be globally available.



Firestore Integration

NOTE

If you initialize your Firestore app from Dart, you may receive warning logs from the native iOS Firestore SDK indicating no Firestore app has been configured (i.e. GoogleService-Info.plist). You can safely ignore these logs if you're initializing your Firestore app from Dart.



Firestore Integration

FlutterFire can be initialized from Dart on all platforms using `Firebase.initializeApp`, however the options for different platforms can vary. The FlutterFire CLI can help, by generating a file (by default called `firebase_options.dart`) which can be used when calling the initialization method.

The FlutterFire CLI extracts information from your Firebase project and selected project applications to generate all the configuration for a specific platform.



Firebase Integration

In the root of your application, run the `configure` command: **flutterfire configure**

The configuration command will guide you through a number of processes:

1. Selecting a Firebase project (based on the `.firebase` file or from the Firebase Console).
2. Prompt what platforms (e.g. Android, iOS, macOS & web) you would like configuration for.
3. Identify which Firebase applications for the chosen platforms should be used to extract configuration for. By default, the CLI will attempt to automatically match Firebase apps based on your current project configuration.
4. Generate a `firebase_options.dart` file in your project.



Firestore Integration

Once complete, you can now import the generated file and provide it to the `initializeApp` method:

```
// Import the generated file  
import 'firebase_options.dart';
```

Then, provide the current platform options via the `currentPlatform` getter from the `DefaultFirebaseOptions` class:

```
await Firebase.initializeApp(  
  options: DefaultFirebaseOptions.currentPlatform,  
);
```



Models

- Models represent data structures used in Flutter applications.
- Models encapsulate data and provide methods for serialization.
- Example: Category model (from category.dart)
- Used to structure and manipulate data efficiently.



Models

```
class Category {  
    final int id;  
    final String name;  
    const Category({required this.id, required this.name});  
    static fromMap(Map<String, dynamic> map) {  
        return Category(id: map['id'], name: map['name']);  
    }  
    static List<Category> fromList(List<dynamic> list) {  
        return list.map((item) => Category.fromMap(item)).toList();  
    }  
}
```



Routes

- Routing helps in navigation between screens in a Flutter app.
- Flutter uses Navigator and GoRouter for handling navigation.
- The GoRouter package provides declarative routing.
- Example: GoRouter configuration (routes.dart).



Routing

```
final GoRouter appRouter = GoRouter(  
  initialLocation: '/',  
  routes: [  
    GoRoute(  
      path: '/',  
      builder: (context, state) => const NewsScreen(),  
      routes: [  
        GoRoute(  
          path: 'details/:id',  
          builder: (context, state) => DetailsScreen(  
            id: int.parse(state.pathParameters['id']!),  
          ),  
        ),  
      ],  
    ),  
  ],  
);
```



Create Account

5:21



NOTELY

Create a free account

Join Notely for free. Create and share unlimited notes with your friends.

Full Name

Salman Khan

Email Address

mesalmanwap@gmail.com

Password

#####

Create Account

[Already have an account?](#)

Login

5:21



NOTELY

Login

Welcome back to Notely

Email Address

mesalmanwap@gmail.com

Password

#####

[Forgot Password ?](#)

Login

[Don't have an account?](#)

Forgot Password

5:21



NOTELY

Forgot Password

We will send mail to reset your
password

Email Address

mesalmanwap@gmail.com

Reset

[Back to login](#)

[https://www.figma.com/design/VYJ3Mk36c8C7SjN076yoc3/Note-Taking-Mobile-App-\(Community\)?node-id=343-116&p=f&t=dAOt1bOa93mbgoeW-0](https://www.figma.com/design/VYJ3Mk36c8C7SjN076yoc3/Note-Taking-Mobile-App-(Community)?node-id=343-116&p=f&t=dAOt1bOa93mbgoeW-0)

Live Coding

What is Next ?



Thank You