MAD & PWA Lab Journal

Experiment No.	06
Experiment Title.	To apply navigation, routing and gestures in Flutter App
Roll No.	50
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Class	D15A
Subject	MAD & PWA Lab
Lab Outcome	LO3: Analyze and Build production ready Flutter App by incorporating backend services and deploying on Android / iOS
Grade:	

Creating a New Firebase Project

First, log in with your Google account to manage your Firebase projects. From within the Firebase dashboard, select the Create new project button and give it a name

In order to add Android support to our Flutter application, select the Android logo from the dashboard. This brings us to the following screen:

The most important thing here is to match up the Android package name that you choose here with the one inside of our application.
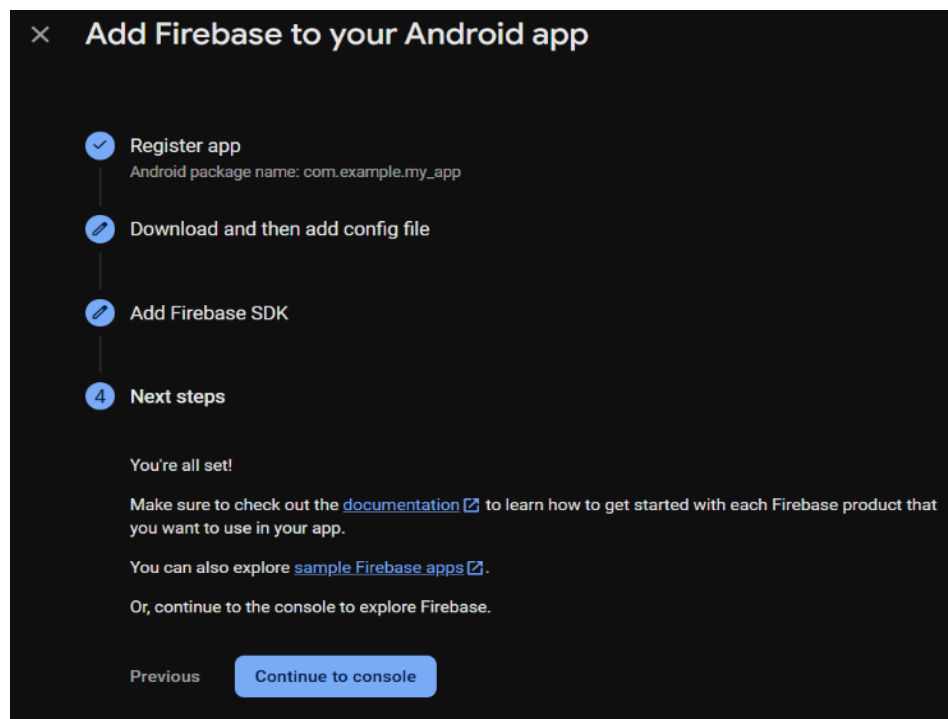
Downloading the Config File

The next step is to add the Firebase configuration file into our Flutter project. This is important as it contains the API keys and other critical information for Firebase to use.Select Download google-services.json from this page

In android/build.gradle add-

dependencies {

classpath 'com.google.gms.google-services:4.4.2'

}

In app/build.gradle add-

dependencies{

implementation platform('com.google.firebase:firebase-bom:33.9.0')

}

Lets setup web app-

(●) npm   (○) CDN   (○) Config

If you're already using NPM ↗ and a module bundler such as webpack ↗ or Rollup ↗, you can
run the following command to install the latest SDK (Learn more ↗):

```
$ npm install firebase
```

Then, initialise Firebase and begin using the SDKs for the products that you'd like to use.

```javascript
// Import the functions you need from the SDKs you need
import { initializeApp } from "firebase/app";
import { getAnalytics } from "firebase/analytics";
// TODO: Add SDKs for Firebase products that you want to use
// https://firebase.google.com/docs/web/setup#available-libraries

// Your web app's Firebase configuration
// For Firebase JS SDK v7.20.0 and later, measurementId is optional
const firebaseConfig = {
  apiKey: "AIzaSyCT3O2go6KflRfwNdpzzBWCB31aZExTjcw",
  authDomain: "stackoverflowclone-d9cdc.firebaseapp.com",
  projectId: "stackoverflowclone-d9cdc",
  storageBucket: "stackoverflowclone-d9cdc.firebasestorage.app",
  messagingSenderId: "492393450219",
  appId: "1:492393450219:web:cbf75886e8a5af23410cae",
  measurementId: "G-HDVVQ2M0WP"
};

// Initialize Firebase
const app = initializeApp(firebaseConfig);
const analytics = getAnalytics(app);
```

In pubspec.yaml:

dependencies:

flutter:

sdk: flutter

The following adds the Cupertino Icons font to your application.

Use with the CupertinoIcons class for iOS style icons.

cupertino_icons: ^1.0.8

firebase_core: ^3.11.0

firebase_auth: ^5.4.2

cloud_firestore: ^5.6.3

firebase_storage: ^12.4.2

firebase_messaging: ^15.2.2

Firebase connection in code:

import 'package:firebase_core/firebase_core.dart';

```dart
import 'package:flutter/material.dart';
import 'screens/login_page.dart';

void main() async {
  WidgetsFlutterBinding.ensureInitialized();
  try {
        await Firebase.initializeApp(
        options: FirebaseOptions(
        apiKey: "AIzaSyCT3O2go6KflRfwNdpzzBWCB31aZExTjcw",
        authDomain: "stackoverflowclone-d9cdc.firebaseapp.com",
        projectId: "stackoverflowclone-d9cdc",
        storageBucket: "stackoverflowclone-d9cdc.appspot.com", // Fixed typo
        messagingSenderId: "492393450219",
        appId: "1:492393450219:web:cbf75886e8a5af23410cae",
        measurementId: "G-HDVVQ2M0WP",
        databaseURL: "https://stackoverflowclone-d9cdc.firebaseio.com",
        ),
        );
        debugPrint('🔥 Firebase initialized successfully!');
  } catch (e) {
        debugPrint('❌ Firebase initialization failed: $e');
  }

  runApp(const MyApp());
}

class MyApp extends StatelessWidget {
  const MyApp({super.key});

  @override
  Widget build(BuildContext context) {
```

```
    return MaterialApp(

    title: 'Stack Overflow Sign In',

    theme: ThemeData(

    fontFamily: 'Arial',

    colorScheme: ColorScheme.fromSeed(seedColor: const Color(0xFFF2F2F2)),

    ),

    home: LoginPage(),

    debugShowCheckedModeBanner: false,

    );

  }

}
```

Enable the firestore API-

Cloud Firestore API

Accesses the NoSQL document database built for automatic scaling, high performance, and ease of application development.

By Google Enterprise API

Service name	Type	Status	Documentation	Explore
firestore.googleapis.com	Public API	Enabled	📄 LEARN MORE ☑	🔘 TRY IN API EXPLORER ☑

Authentication

Users   Sign-in method   Templates   Usage   Settings   🐝 Extensions

ⓘ The following authentication features will stop working when Firebase Dynamic Links shuts down on 25 August 2025: email link authentication for mobile apps, as well as Cordova OAuth support for web apps.   ⌄

🔍 Search by email address, phone number or user UID   Add user   ↻   ⋮

Identifier	Providers	Created ↓	Signed in	User UID	
sathesiddhant21@gmai...	✉	15 Feb 2025	17 Feb 2025	p0EJuWDMMFVjpMFNfqM9nk...	...
2004.sapp@gmail.com	✉	15 Feb 2025	17 Feb 2025	Ynzx4OWT6zciY5YO9Ptd2Et1...	...

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Connecting Realtime Database: Firestore

☁ More in Google Cloud ⌄

⌃ (default)	▢ question_answers ▽ ⋮	▤ bKRAdfobLzVsU52L35o4 ⋮
+ **Start collection**	+ **Add document**	+ **Start collection**
question_answers ⟩	⋮ bKRAdfobLzVsU52L35o4 ⟩	+ **Add field**
	jdsf	details: "feels amazing to be part of stack overflow"
	jpoTGIkUs7r7baY0TNVn	timestamp: 17 February 2025 at 20:13:48 UTC+5:30
	1jXnPSDzkU43yzwmMsY7	title: "this is my first question"
	this is my first question	