

## MAD and PWA Lab Mini Project

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**Aim:** To connect Flutter UI with Firebase Database

### Theory:

#### Step 1: Create a Firebase Project

1. Go to the [Firebase Console](<https://console.firebase.google.com/>) and create a new project.
2. Follow the on-screen instructions to set up your project.

#### Step 2: Add Firebase to Your Flutter Project

1. Add the `firebase\_core,firebase\_auth,firebase\_storage,cloud\_storage` package to your `pubspec.yaml` file:

```
yaml
dependencies:
  flutter:
    sdk: flutter
  firebase_auth: ^4.14.1
  firebase_core: ^2.23.0
  firebase_storage: ^11.5.2
```

2. Run `flutter pub get` to install the package.

#### Step 3: Initialize Firebase in Your Flutter App

1. Import the `firebase\_core` package in your Dart code:

```
dart
import 'package:firebase_core/firebase_core.dart';
```

2. Initialize Firebase in your app's `main` function:

```
dart
void main() async {
  WidgetsFlutterBinding.ensureInitialized();
  await Firebase.initializeApp();
  runApp(MyApp());
}
```

## CODE:

```
import 'package:firebase_auth/firebase_auth.dart';
import 'package:firebase_core/firebase_core.dart';
import 'package:flutter/foundation.dart';
import 'package:flutter/material.dart';
import 'package:provider/provider.dart';
import 'package:twitch_clone/firebase_options.dart';
import 'package:twitch_clone/providers/user_provider.dart';
import 'package:twitch_clone/resources/auth_methods.dart';
import 'package:twitch_clone/screens/feed_screen.dart';
import 'package:twitch_clone/screens/home_screen.dart';
import 'package:twitch_clone/screens/login_screen.dart';
import 'package:twitch_clone/screens/onboarding_screen.dart';
import 'package:twitch_clone/screens/profile.dart';
import 'package:twitch_clone/screens/signup_screen.dart';
import 'package:twitch_clone/utils/colors.dart';
import 'package:twitch_clone/models/user.dart' as model;
import 'package:twitch_clone/widgets/loading_indicator.dart';
```

```
Future<void> main() async {
  WidgetsFlutterBinding.ensureInitialized();

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

  runApp(MultiProvider(providers: [
    ChangeNotifierProvider(
      create: (_) => UserProvider(),
    ),
  ], child: const MyApp()));
}
```

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

  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      debugShowCheckedModeBanner: false,
      title: 'Twitch Clone',
      theme: ThemeData.light().copyWith(
        scaffoldBackgroundColor: backgroundColor,
        appBarTheme: AppBarTheme.of(context).copyWith(
          backgroundColor: backgroundColor,
```

```

        elevation: 0,
        titleTextStyle: const TextStyle(
          color: primaryColor,
          fontSize: 20,
          fontWeight: FontWeight.w600,
        ),
        iconTheme: const IconThemeData(
          color: primaryColor,
        )),
    routes: {
      OnBoardingScreen.routeName: (context) => const OnBoardingScreen(),
      LoginScreen.routeName: (context) => const LoginScreen(),
      SignupScreen.routeName: (context) => const SignupScreen(),
      HomeScreen.routeName: (context) => const HomeScreen(),
      ProfileScreen.routeName: (context) => ProfileScreen(),
    },
    home: FutureBuilder(
      future: AuthMethods()
        .getCurrentUser(FirebaseAuth.instance.currentUser != null
          ? FirebaseAuth.instance.currentUser!.uid
          : null)
        .then((value) {
          if (value != null) {
            Provider.of<UserProvider>(context, listen: false)
              .setUser(model.User.fromMap(value));
          }
          return value;
        })),
      builder: (context, snapshot) {
        if (snapshot.connectionState == ConnectionState.waiting) {
          return const LoadingIndicator();
        }

        if (snapshot.hasData) {
          return const HomeScreen();
        }
        return const OnBoardingScreen();
      })),
  );
}
}

```

**OUTPUT:**

**1) USER DATA IS STORED IN FIREBASE**

Cloud Firestore

Data

Rules

Indexes

Usage

Extensions

Protect your Cloud Firestore resources from abuse, such as billing fraud or phishing

Configure App Check

Panel view

Query builder

Home

>

users

>

i8ymfCAHwhc9...

Edit

More in Google Cloud

(default)

users

i8ymfCAHwhc9dz4IlckoMtvIEPx2

+ Start collection

users

+ Add document

C3qavaCb9sMncSkqEjq6U7kHuSh1

OKWeoVIHZAg07yL3rGpKFErh9Fq1

PsuCv6MGwNeMnuRXA0c7JkGUK4n2

bjSU1Lh6HThojY6FwC2f3BUz3923

i8ymfCAHwhc9dz4IlckoMtvIEPx2

p5LYo3rSKNPzrvy4f6QUi1RayG12

x1ek3m7bsxg4eNg63zxFmOXQjRN2

yJmifkuJP0UIDX6PipvEtMcGs8j2

+ Start collection

+ Add field

email: "shub@gmail.com"

uid: "i8ymfCAHwhc9dz4IlckoMtvIEPx2"

username: "shub"

**2) LiveStream detail**

twitchapp

Cloud Firestore

Panel view

Query builder

Home

>

livestream

>

yJmifkuJP0UIDX6PipvEtMcGs8j2sus...

>

comments

>

cace1fe0-7138-...

More in Google Cloud

yJmifkuJP0UIDX6PipvEtMcGs8j2sus...

comments

cace1fe0-7138-1ed2-bc10-b1609786ed39

+ Start collection

comments

+ Add field

image: "https://firebasestorage.googleapis.com/v1/b/twitchapp-9ffca.appspot.com/o/livestream-thumbnails%2FyJmifkuJP0UIDX6PipvEtMcGs8j2susmita%2Fart.jpg?alt=media&token=249afc0b-76ac-4372-b296-3b6161d99237"

startedAt: February 23, 2024 at 1:24:12 PM UTC+5:30

title: "art"

uid: "yJmifkuJP0UIDX6PipvEtMcGs8j2"

username: "susmita"

viewers: 0

+ Add document

cace1fe0-7138-1ed2-bc10-b1609786ed39

f6de00f0-7160-1ed2-bc10-b1609786ed39

+ Start collection

+ Add field

commentId: "cace1fe0-7138-1ed2-bc10-b1609786ed39"

createdAt: February 23, 2024 at 1:24:28 PM UTC+5:30

message: "hello"

uid: "yJmifkuJP0UIDX6PipvEtMcGs8j2"

username: "susmita"

**Comment by users**

### 3) Thumbnail of live stream

twitchapp

Storage

FilesRulesUsageExtensions

Protect your Storage resources from abuse, such as billing fraud or phishingConfigure App Check

gs://twitchapp-9ffca.appspot.com > livestream-thum.

Upload file

	Name	Size	Type	Last modified
<input type="checkbox"/>	OKWeoVIHZAg07yL3rGpKFErh9Fq1	431.86 KB	image/jpg	Feb 21, 2024
<input type="checkbox"/>	bjSU1Lh6HThojY6FwC2f3BUz3923	94.35 KB	image/jpg	Feb 21, 2024
<input type="checkbox"/>	i8ymfCAHwhc9dz4llckoMtvIEPx2	4.48 MB	image/jpg	Feb 21, 2024
<input type="checkbox"/>	p5LYo3rSKNPzrvy4f6QUI1RayG12	41.6 KB	image/jpg	Feb 20, 2024
<input type="checkbox"/>	yJmifkuJP0UIDX6PipvEtMcGs8j2	314.77 KB	image/jpg	Feb 23, 2024

yJmifkuJP0UIDX6P...

Name

yJmifkuJP0UIDX6PipvEtMcGs8j2

Size

322,328 bytes

Type

image/jpg

Created

Feb 23, 2024, 1:24:12 PM

Updated