EXPERIMENT NO 6

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CLASS-D15A

ROLL NO-03

AIM-To connect Flutter UI with firebase.

THEORY

Firebase helps developers to manage their mobile app easily. It is a service provided by Google. Firebase has various functionalities available to help developers manage and grow their mobile apps.

Steps to Add firebase to our Flutter app using

Firebase CLI 1.Install the Firebase CLI and log in

(run firebase login)

2.From any directory, run this command:

    🎬 dart pub global activate flutterfire_cli

  3.Then, at the root of your Flutter project directory, run this

  command: 🎬 flutterfire configure --project=questitnextjs

4.This automatically registers your per-platform apps with Firebase and adds a lib/firebase_options.dart configuration file to your Flutter project.

5.To initialise Firebase, call Firebase.initializeApp from the firebase_core package with the configuration from your new firebase_options.dart file:

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

await Firebase.initializeApp(

 options:

DefaultFirebaseOptions.currentPlatform,  );
```

6.Add the dependencies in the

pubspec.yaml file   Firebase_core : ^version

Firebase_auth : ^version

SYNTAX

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


Future<void> signInUser(String email, String password)

async {   try {

 await

FirebaseAuth.instance.signInWithEmailAndPassword(

email: email,

 password: password,

 );

 print("User Signed In Successfully!");

} catch (e) {

 print("Error: $e");
```

}
}
Widget Properties

1)Firebase_Auth

    🎬 currentUser → Returns the currently signed-in user.
    🎬 signInWithEmailAndPassword(email, password) → Logs in a
    user. 🎬 createUserWithEmailAndPassword(email, password) →
    Registers a new user.
    🎬 signOut() → Logs out the current user.

2)FirebaseFirestore

    🎬 collection("name") → Accesses a Firestore collection.
    🎬 doc("id") → Refers to a specific document.
    🎬 set(Map<String, dynamic> data) → Adds or updates
    data. 🎬 get() → Fetches document data.
    🎬 delete() → Deletes a document.

CODE

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

import 'package:cloud_firestore/cloud_firestore.dart';



class AuthService {

  final FirebaseAuth _auth = FirebaseAuth.instance;

  final FirebaseFirestore _firestore = FirebaseFirestore.instance;



  Future<User?> signUp(String email, String password, String name,
String photoUrl) async {

    try {

      UserCredential userCred = await
```

```dart
_auth.createUserWithEmailAndPassword(
        email: email, password: password);


    await
_firestore.collection('users').doc(userCred.user!.uid).set({
      'name': name,

      'email': email,

      'photoUrl': photoUrl,

    });


    return userCred.user;

  } catch (e) {

    print(e);

    return null;

  }

}


Future<User?> login(String email, String password) async {

  try {

    UserCredential userCred = await
_auth.signInWithEmailAndPassword(
        email: email, password: password);

    return userCred.user;

  } catch (e) {

    print(e);
```

```dart
      return null;

    }

  }


  User? getCurrentUser() {

    return _auth.currentUser;

  }


  Future<void> signOut() async {

    await _auth.signOut();

  }
}
```

OUTPUT

🔥 **Firebase**

- 📊 Analytics Dashboard
- 👥 **Authentication**
- 🔥 Firestore Database

What's new

- ⚙️ Genkit `NEW`
- ✦ Vertex AI `NEW`

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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
aryan12@gmail.com	✉️	6 Apr 2025		GA2PUPCE7sY2s0buVP2RjVg...
kartik72@gmail.com	✉️	6 Apr 2025		1ms69KipPJS44oefhrfRusb44...
kartikbhat783@gmail.c...	✉️	6 Apr 2025		c3jUzlmCVxP9mIeFE8MymB2l...

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