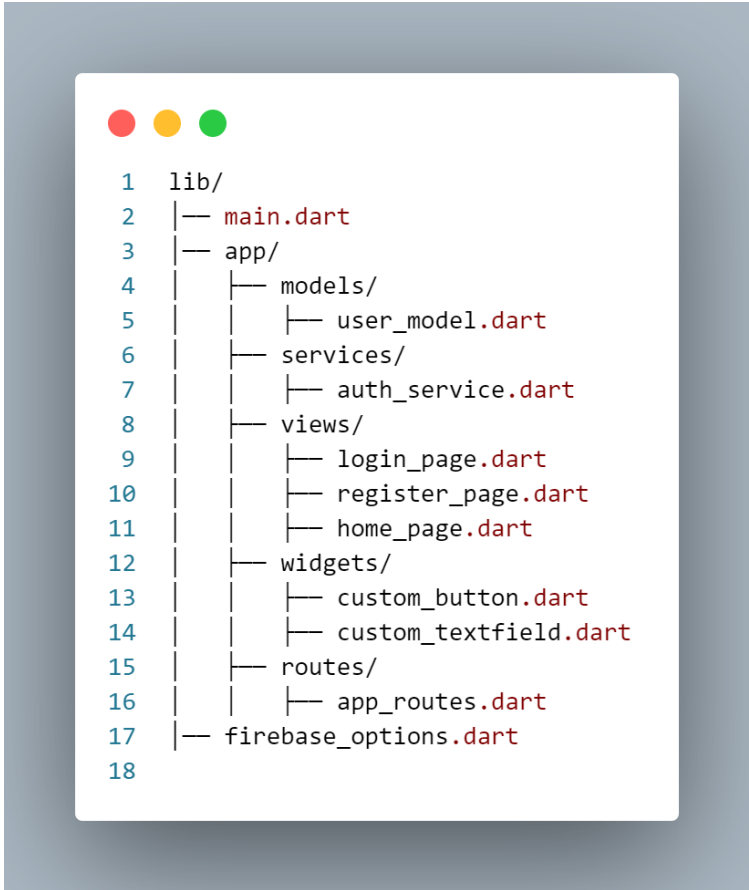


Register dan Login menggunakan Firebase di Flutter

Struktur Folder yang Rapi

Dalam proyek Flutter, penting untuk memiliki struktur folder yang rapi agar kode mudah dikelola. Berikut adalah contoh struktur yang akan kita gunakan:



```
1 lib/
2 |— main.dart
3 |— app/
4 |   |— models/
5 |   |   |— user_model.dart
6 |   |— services/
7 |   |   |— auth_service.dart
8 |   |— views/
9 |   |   |— login_page.dart
10 |   |   |— register_page.dart
11 |   |   |— home_page.dart
12 |   |— widgets/
13 |   |   |— custom_button.dart
14 |   |   |— custom_textfield.dart
15 |   |— routes/
16 |   |   |— app_routes.dart
17 |— firebase_options.dart
18
```

1. Persiapan Firebase

Sebelum mulai coding, pastikan Anda telah menyiapkan Firebase di proyek Flutter Anda.

1.1 Setup Firebase di Flutter

1. Buat project di Firebase Console.
2. Tambahkan aplikasi **Android dan iOS** di Firebase.
3. Unduh file **google-services.json** (Android) dan tempatkan di android/app/.
4. Tambahkan plugin Firebase di pubspec.yaml ([Search results for firebase](#)):



```
1 dependencies:  
2   flutter:  
3     sdk: flutter  
4   firebase_core: latest_version  
5   firebase_auth: latest_version  
6   provider: latest_version  
7
```

5. Jalankan perintah:



```
1 flutter pub get
```

2. Konfigurasi Firebase

Tambahkan Firebase ke proyek Flutter dengan kode berikut di main.dart:



```
1 import 'package:firebase_core/firebase_core.dart';
2 import 'package:flutter/material.dart';
3 import 'app/routes/app_routes.dart';
4
5 void main() async {
6   WidgetsFlutterBinding.ensureInitialized();
7   await Firebase.initializeApp();
8   runApp(const MyApp());
9 }
10
11 class MyApp extends StatelessWidget {
12   const MyApp({super.key});
13
14   @override
15   Widget build(BuildContext context) {
16     return MaterialApp(
17       debugShowCheckedModeBanner: false,
18       title: 'Flutter Firebase Auth',
19       initialRoute: AppRoutes.login,
20       routes: AppRoutes.routes,
21     );
22   }
23 }
```

3. Membuat Model User

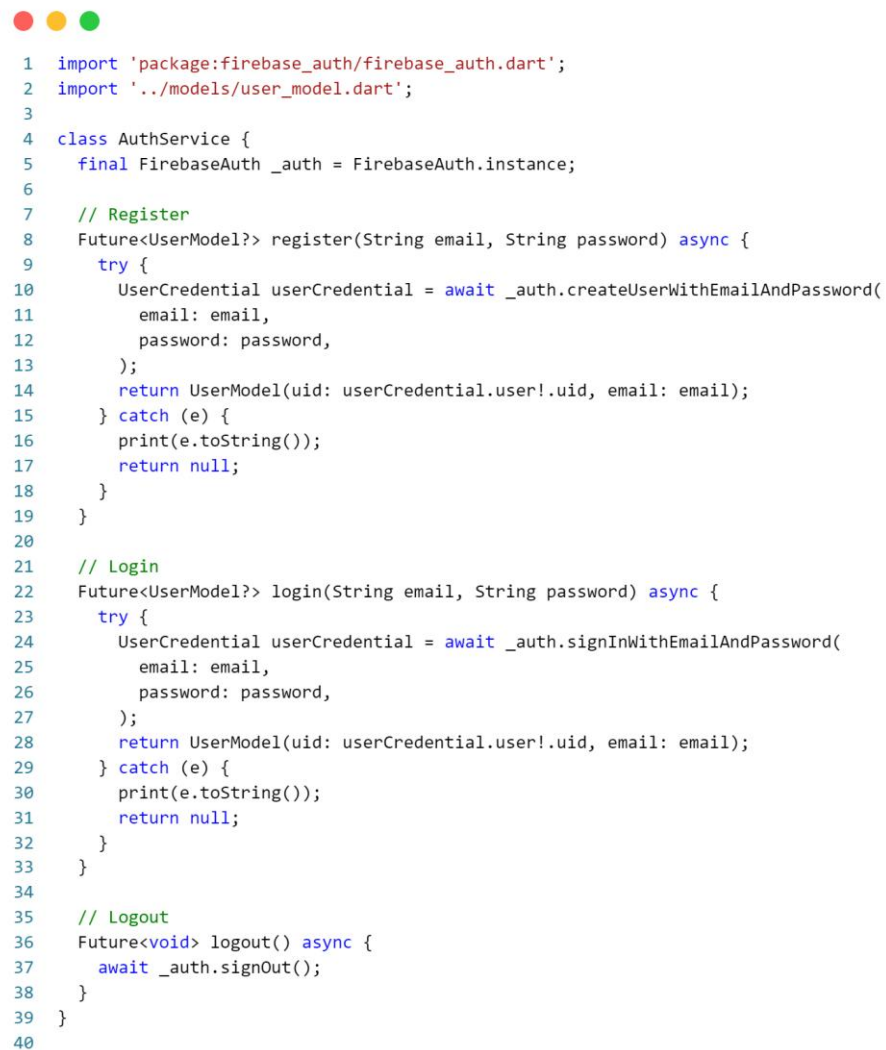
Buat file lib/app/models/user_model.dart:



```
1 class UserModel {
2   final String uid;
3   final String email;
4
5   UserModel({required this.uid, required this.email});
6 }
7
```

4. Membuat Auth Service

Buat file lib/app/services/auth_service.dart untuk menangani register, login, dan logout:



```

1 import 'package:firebase_auth/firebase_auth.dart';
2 import '../models/user_model.dart';
3
4 class AuthService {
5   final FirebaseAuth _auth = FirebaseAuth.instance;
6
7   // Register
8   Future<UserModel?> register(String email, String password) async {
9     try {
10       UserCredential userCredential = await _auth.createUserWithEmailAndPassword(
11         email: email,
12         password: password,
13       );
14       return UserModel(uid: userCredential.user!.uid, email: email);
15     } catch (e) {
16       print(e.toString());
17       return null;
18     }
19   }
20
21   // Login
22   Future<UserModel?> login(String email, String password) async {
23     try {
24       UserCredential userCredential = await _auth.signInWithEmailAndPassword(
25         email: email,
26         password: password,
27       );
28       return UserModel(uid: userCredential.user!.uid, email: email);
29     } catch (e) {
30       print(e.toString());
31       return null;
32     }
33   }
34
35   // Logout
36   Future<void> logout() async {
37     await _auth.signOut();
38   }
39 }
40

```

5. Membuat Halaman Register

Buat file lib/app/views/register_page.dart:

```

1 import 'package:flutter/material.dart';
2 import '../services/auth_service.dart';
3
4 class RegisterPage extends StatefulWidget {
5   const RegisterPage({super.key});
6
7   @override
8   State<RegisterPage> createState() => _RegisterPageState();
9 }
10
11 class _RegisterPageState extends State<RegisterPage> {
12   final TextEditingController emailController = TextEditingController();
13   final TextEditingController passwordController = TextEditingController();
14   final AuthService _authService = AuthService();
15
16   void register() async {
17     var user = await _authService.register(emailController.text, passwordController.text);
18     if (user != null) {
19       Navigator.pushReplacementNamed(context, '/home');
20     }
21   }
22
23   @override
24   Widget build(BuildContext context) {
25     return Scaffold(
26       appBar: AppBar(title: const Text('Register')),
27       body: Padding(
28         padding: const EdgeInsets.all(16.0),
29         child: Column(
30           children: [
31             TextField(controller: emailController, decoration: const InputDecoration(labelText: 'Email')),
32             TextField(controller: passwordController, obscureText: true, decoration: const InputDecoration(labelText: 'Password')),
33             const SizedBox(height: 20),
34             ElevatedButton(onPressed: register, child: const Text('Register')),
35           ],
36         ),
37       ),
38     );
39   }
40 }
41

```

6. Membuat Halaman Login

Buat file lib/app/views/login_page.dart:

```

1 import 'package:flutter/material.dart';
2 import '../services/auth_service.dart';
3
4 class LoginPage extends StatefulWidget {
5   const LoginPage({super.key});
6
7   @override
8   State<LoginPage> createState() => _LoginPageState();
9 }
10
11 class _LoginPageState extends State<LoginPage> {
12   final TextEditingController emailController = TextEditingController();
13   final TextEditingController passwordController = TextEditingController();
14   final AuthService _authService = AuthService();
15
16   void login() async {
17     var user = await _authService.login(emailController.text, passwordController.text);
18     if (user != null) {
19       Navigator.pushReplacementNamed(context, '/home');
20     }
21   }
22
23   @override
24   Widget build(BuildContext context) {
25     return Scaffold(
26       appBar: AppBar(title: const Text('Login')),
27       body: Padding(
28         padding: const EdgeInsets.all(16.0),
29         child: Column(
30           children: [
31             TextField(controller: emailController, decoration: const InputDecoration(labelText: 'Email')),
32             TextField(controller: passwordController, obscureText: true, decoration: const InputDecoration(labelText: 'Password')),
33             const SizedBox(height: 20),
34             ElevatedButton(onPressed: login, child: const Text('Login')),
35           ],
36         ),
37       ),
38     );
39   }
40 }
41

```

7. Membuat Halaman Home

Buat file lib/app/views/home_page.dart:



```
1 import 'package:flutter/material.dart';
2 import '../services/auth_service.dart';
3
4 class HomePage extends StatelessWidget {
5   const HomePage({super.key});
6
7   @override
8   Widget build(BuildContext context) {
9     return Scaffold(
10       appBar: AppBar(
11         title: const Text('Home'),
12         actions: [
13           IconButton(
14             icon: const Icon(Icons.logout),
15             onPressed: () {
16               AuthService().logout();
17               Navigator.pushReplacementNamed(context, '/login');
18             },
19           ),
20         ],
21       ),
22       body: const Center(child: Text('Welcome to Home!')),
23     );
24   }
25 }
```

8. Menambahkan Routing

Buat file lib/app/routes/app_routes.dart:



```
1  import 'package:flutter/material.dart';
2  import '../views/home_page.dart';
3  import '../views/login_page.dart';
4  import '../views/register_page.dart';
5
6  class AppRoutes {
7      static const String login = '/login';
8      static const String register = '/register';
9      static const String home = '/home';
10
11     static Map<String, WidgetBuilder> routes = {
12         login: (context) => const LoginPage(),
13         register: (context) => const RegisterPage(),
14         home: (context) => const HomePage(),
15     };
16 }
```