

Authentication

User Signup &
Auth Status Management

What's In This Section?

How Authentication Works in Flutter Apps

Signup & Login

Managing User Sessions

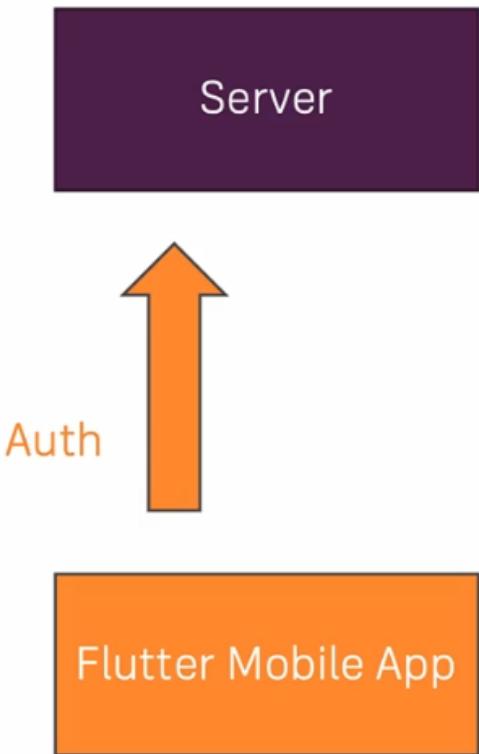
HOW AUTHENTICATION WORKS

How Authentication Works

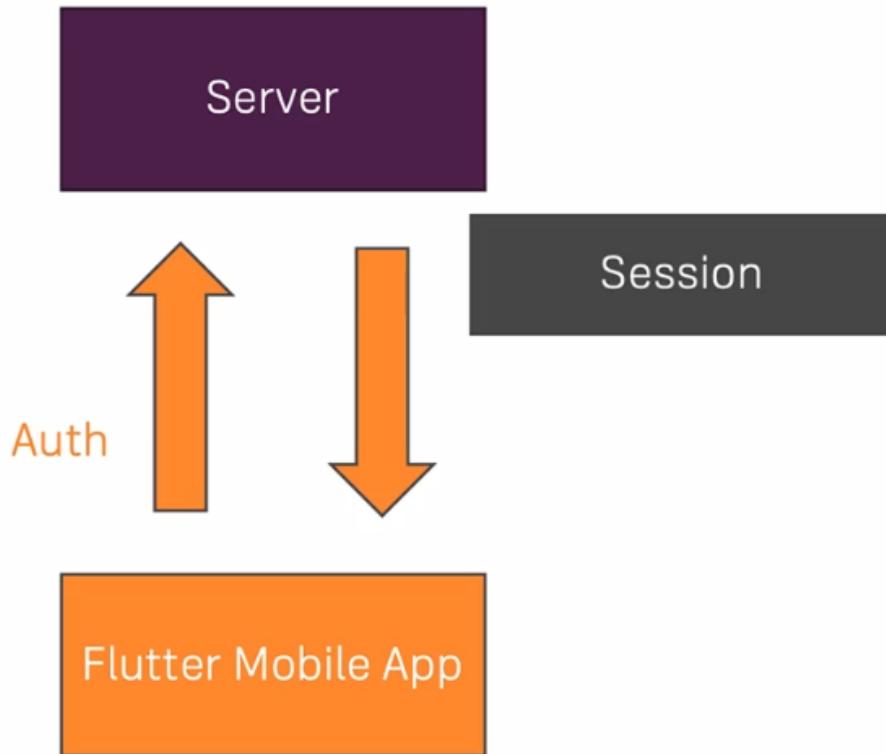
Server

Flutter Mobile App

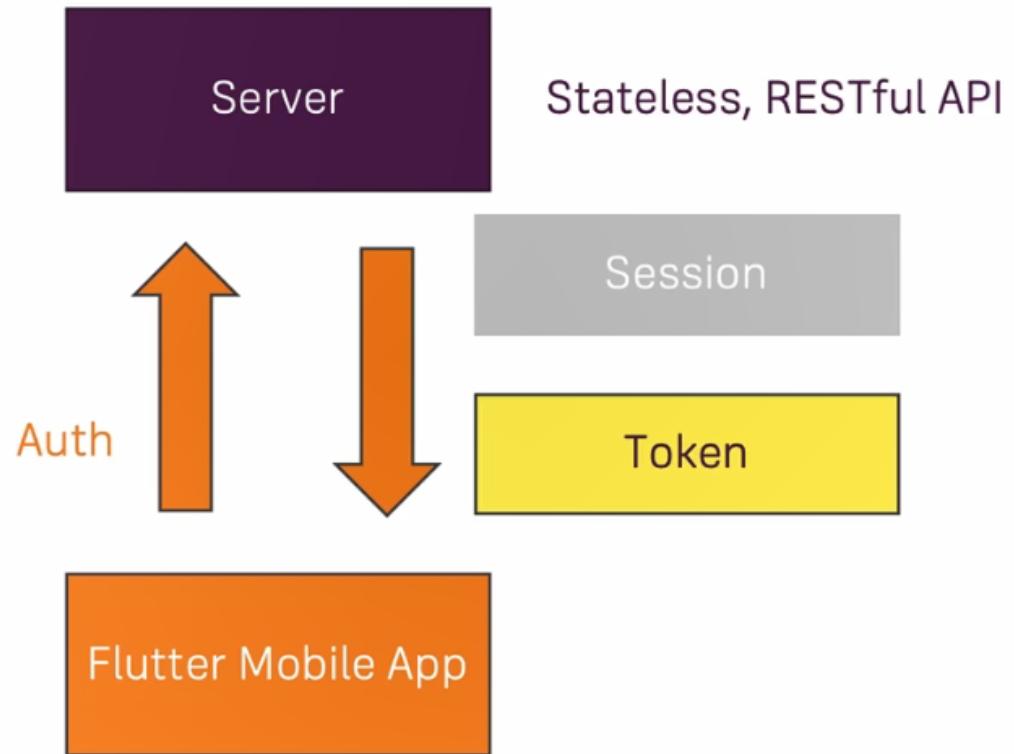
How Authentication Works



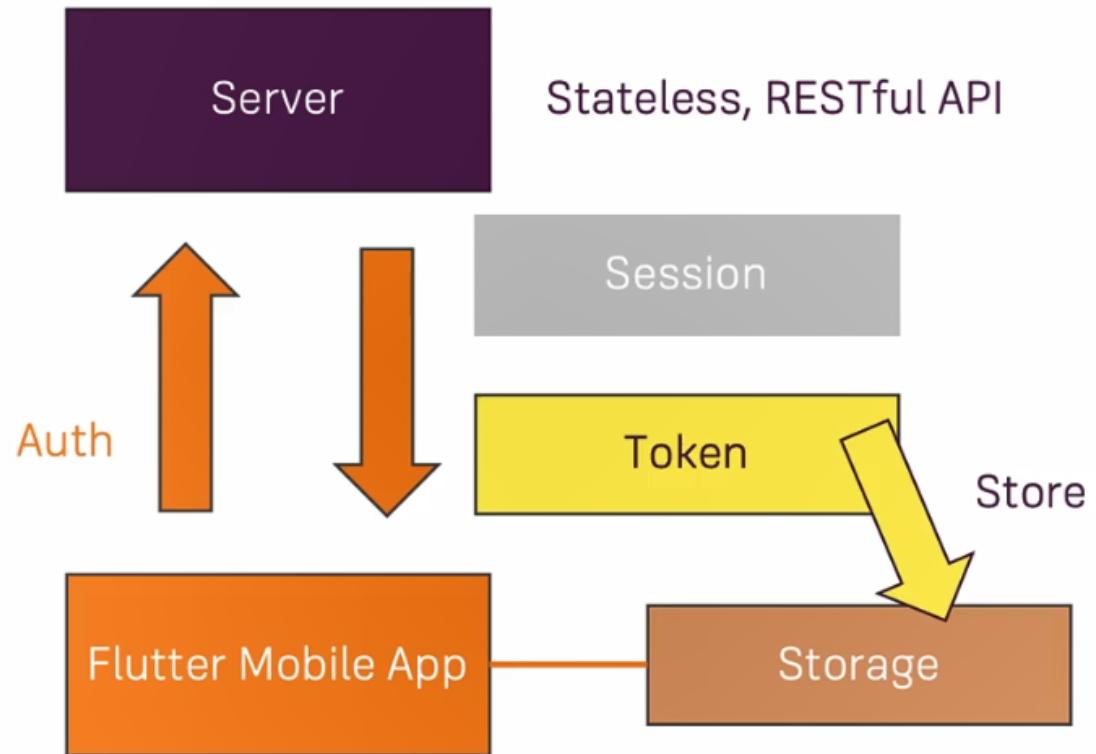
How Authentication Works



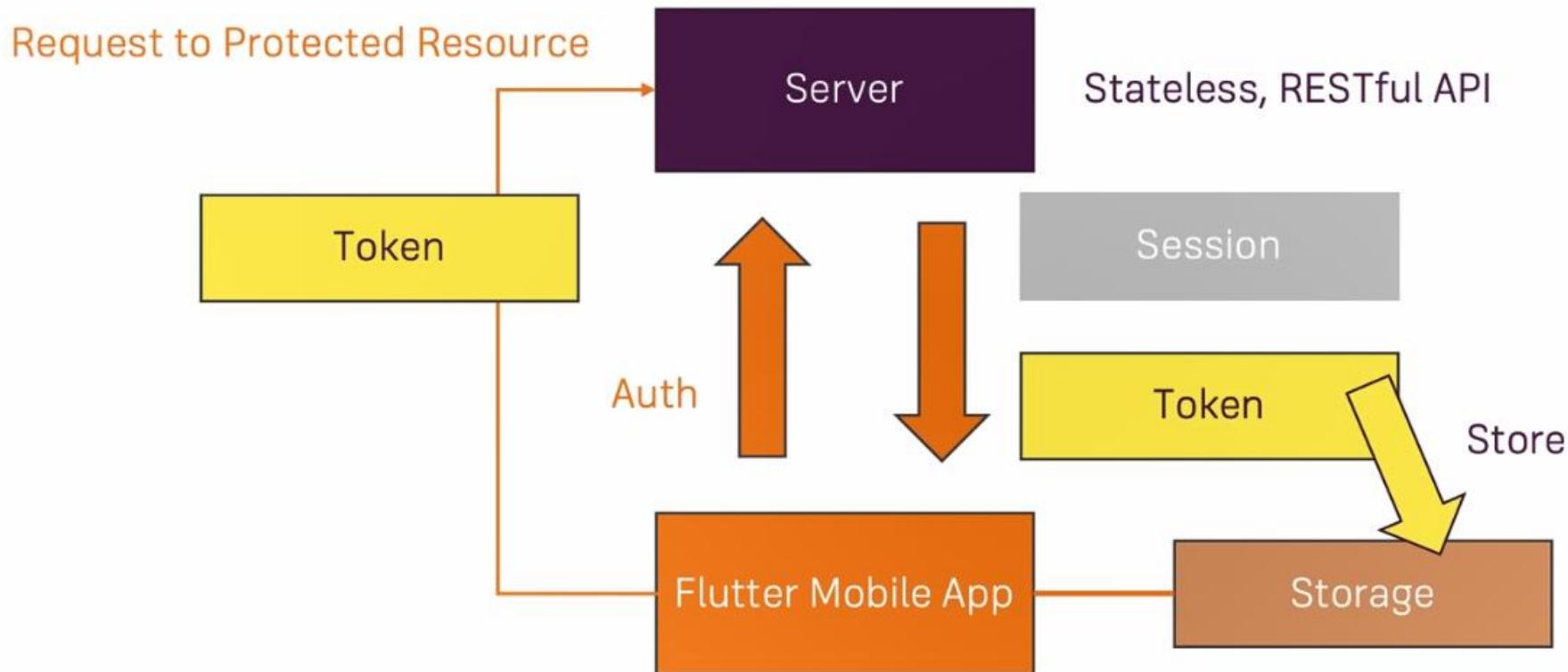
How Authentication Works



How Authentication Works



How Authentication Works



PREPARING THE BACKEND

belajar-flutter - Firebase console +

https://console.firebaseio.google.com/u/0/project/belajar-flutter-61e82/database/belajar-flutter-61e82-default-rtdb/data

Firebase

Project Overview

Build

- Authentication
- Firebase Database
- Realtime Database**
- Storage
- Hosting
- Functions
- Machine Learning

Release & Monitor

Analytics

Engage

Extensions

Spark

Free \$0/month

Upgrade

belajar-flutter ▾

Realtime Database

Data Rules Backups Usage

Protect your Realtime Database resources from abuse, such as billing fraud or phishing [Configure App Check](#)

https://belajar-flutter-61e82-default-rtbd.firebaseio.com/

belajar-flutter-61e82-default-rtbd

- orders
- products

Database location: United States (us-central1)

Go to docs

?

b

The screenshot shows the Firebase Realtime Database console for the project 'belajar-flutter'. The left sidebar includes links for Authentication, Firestore Database, Storage, Hosting, Functions, Machine Learning, Release & Monitor, Analytics, Engage, and Extensions. The main area displays the Realtime Database interface with tabs for Data, Rules, Backups, and Usage. A banner at the top encourages protecting resources from abuse. Below the banner, the database URL is shown as https://belajar-flutter-61e82-default-rtbd.firebaseio.com/. The database structure is displayed under 'belajar-flutter-61e82-default-rtbd' with two child nodes: 'orders' and 'products'. At the bottom, it indicates the database is located in the United States (us-central1).

belajar-flutter – Firebase console

https://console.firebaseio.google.com/u/0/project/belajar-flutter-61e82/database/belajar-flutter-61e82-default-rtdb/rules

Firebase

Project Overview

Build

- Authentication
- Firestore Database
- Realtime Database
- Storage
- Hosting
- Functions
- Machine Learning

Release & Monitor

Crashlytics, Performance, Test La...

Analytics

- Extensions

Spark
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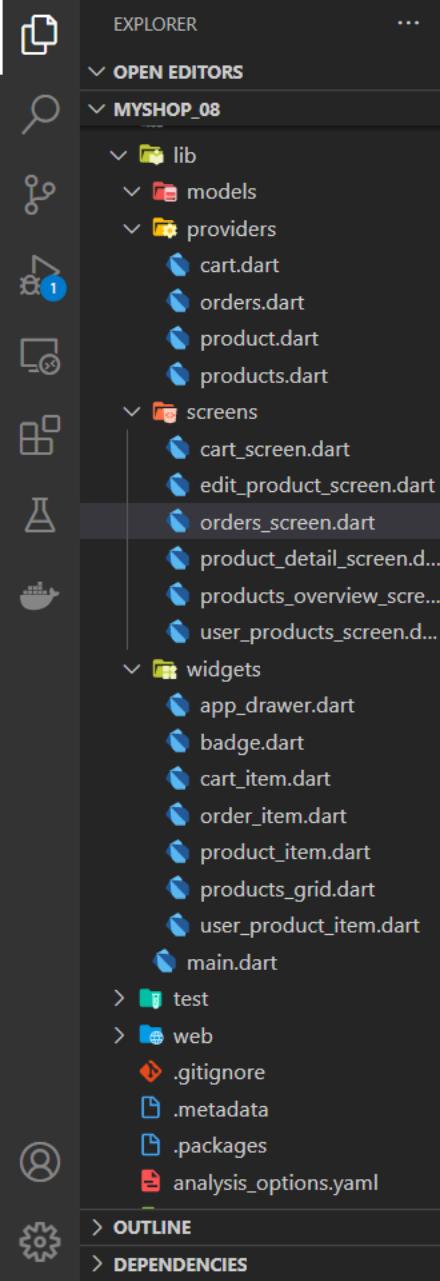
Realtime Database

Data Rules Backups Usage

Edit rules Monitor rules

Unpublished changes Publish Discard Rules Playground

```
1    {
2     "rules": {
3       ".read": "auth != null",
4       ".write": "auth != null",
5     }
6 }
```



PROBLEMS

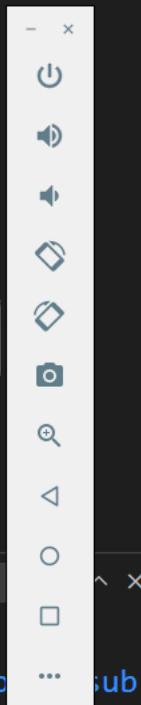
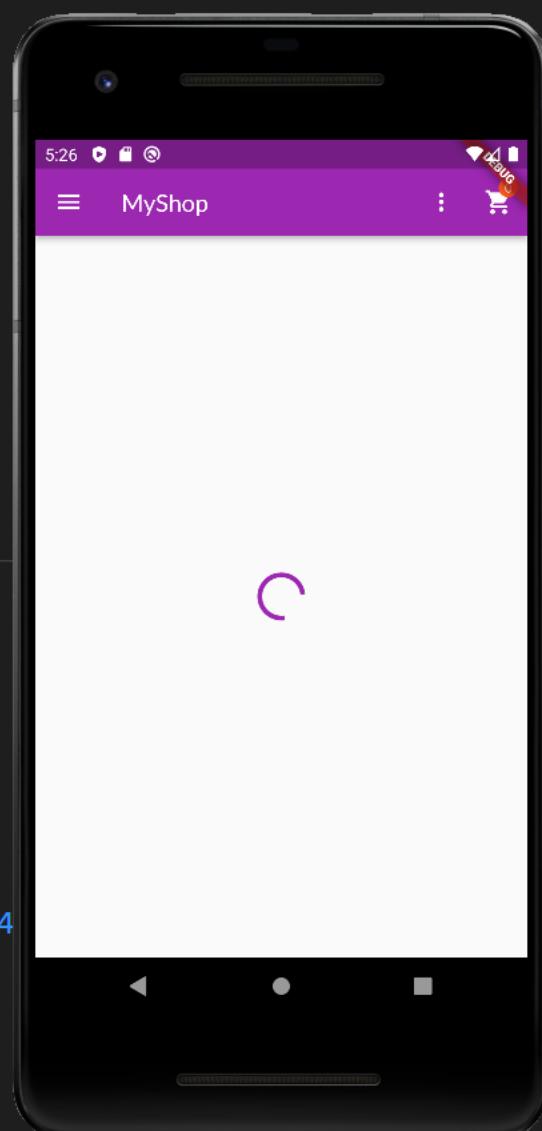
118

OUTPUT

DEBUG CONSOLE

TERMINAL

```
Restarted application in 2,350ms.  
E/flutter ( 5461): [ERROR:flutter/lib/ui/ui_dart_state.cc(209)] Unhandled  
type of type 'int' of 'index'  
E/flutter ( 5461): #0      Products.fetchAndSetProducts  
E/flutter ( 5461): <asynchronous suspension>  
E/flutter ( 5461):  
I/ample.myshop_0( 5461): Background young concurrent copying GC freed 3664  
OS objects, 56% free, 1198KB/2732KB, paused 6.526ms total 28.378ms
```



belajar-flutter - Authentication - +

https://console.firebaseio.google.com/u/0/project/belajar-flutter-61e82/authentication

Firebase

Project Overview

Build

- Authentication
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- Machine Learning

Release & Monitor

Crashlytics, Performance, Test La...

Analytics

Dashboard, Realtime, Events, Conv...

Engage

Extensions

Spark Free \$0/month

Upgrade

belajar-flutter ▾

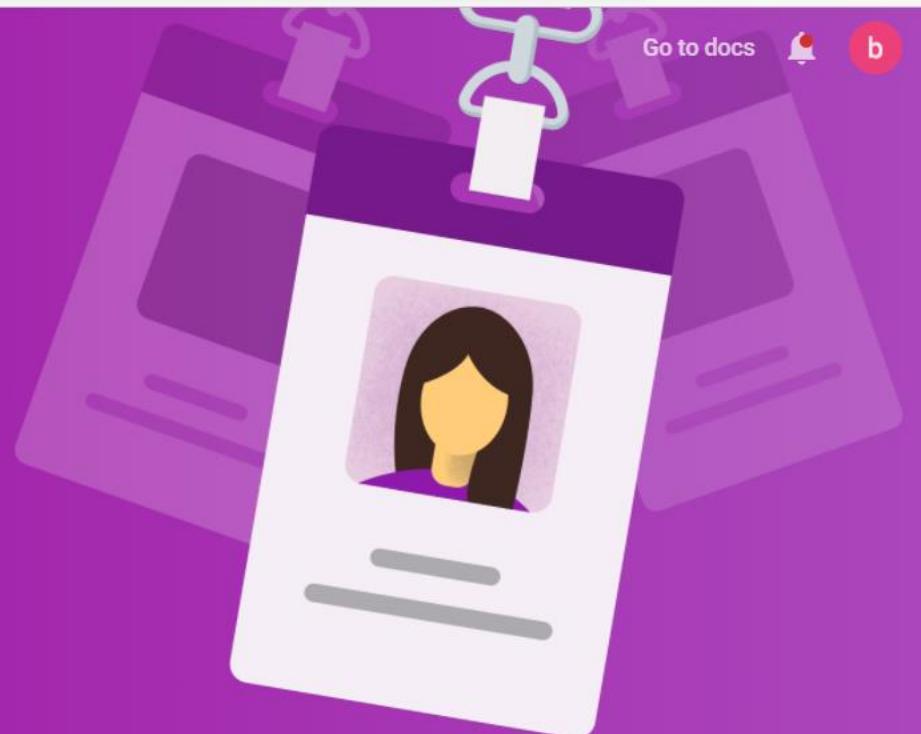
Go to docs

b

Authentication

Authenticate and manage users from a variety of providers without server-side code

Get started

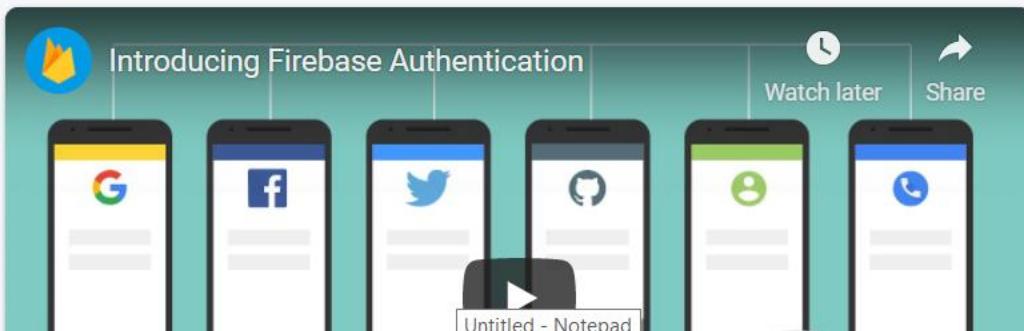


Learn more

How do I get started?
View the docs

How does Authentication work?
View the docs

Introducing Firebase Authentication



Watch later Share

Untitled - Notepad

belajar-flutter - Authentication - +

https://console.firebaseio.google.com/u/0/project/belajar-flutter-61e82/authentication/providers

Firebase

Project Overview

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Release & Monitor

Analytics

Engage

Spark Free \$0/month

Upgrade

belajar-flutter

Authentication

Sign-in method

Users Sign-in method Templates Usage

Sign-in providers

Get started with Firebase Auth by adding your first sign-in method

Native providers

- Email/Password
- Phone
- Anonymous

Additional providers

- Google
- Facebook
- Play Games
- Game Center
- Apple
- Github
- Microsoft
- Twitter
- Yahoo

Authorized domains

Add domain

Authorized domain	Type

belajar-flutter - Authentication - +

https://console.firebaseio.google.com/u/0/project/belajar-flutter-61e82/authentication/providers

Firebase

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Spark

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Upgrade

belajar-flutter

Authentication

Sign-in method

Users Sign-in method Templates Usage

Sign-in providers

Email/Password Enable

Allow users to sign up using their email address and password. Our SDKs also provide email address verification, password recovery, and email address change primitives. [Learn more](#)

Email link (passwordless sign-in) Enable

Cancel Save

Authorized domains

Add domain

belajar-flutter - Authentication - +

https://console.firebaseio.google.com/u/0/project/belajar-flutter-61e82/authentication/providers

Firebase

Project Overview

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Release & Monitor

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Engage

Extensions

Spark

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Upgrade

belajar-flutter

Authentication

Sign-in method

Users Sign-in method Templates Usage

Sign-in providers

Provider	Status
Email/Password	Enabled

Add new provider

Authorized domains

Authorized domain	Type
localhost	Default
belajar-flutter-61e82.firebaseioapp.com	Default
belajar-flutter-61e82.web.app	Default

Add domain

Advanced

ADDING THE AUTH SCREEN



auth_screen.dart X main.dart

lib > screens > auth_screen.dart > AuthScreen

```
1 import 'dart:math';
2
3 import 'package:flutter/material.dart';
4
5 enum AuthMode { Signup, Login }
6
7 class AuthScreen extends StatelessWidget {
8     static const routeName = '/auth';
9
10    @override
11    Widget build(BuildContext context) {
12        final deviceSize = MediaQuery.of(context).size;
13        // final transformConfig = Matrix4.rotationZ(-8 * pi / 180);
14        // transformConfig.translate(-10.0);
15        return Scaffold(
16            // resizeToAvoidBottomInset: false,
17            body: Stack(
18                children: <Widget>[
19                    Container(
20                        decoration: BoxDecoration(
21                            gradient: LinearGradient(
22                                colors: [
```



auth_screen.dart X main.dart

lib > screens > auth_screen.dart > AuthScreen

```
21         gradient: LinearGradient(
22             colors: [
23                 Color.fromRGBO(215, 117, 255, 1).withOpacity(0.5),
24                 Color.fromRGBO(255, 188, 117, 1).withOpacity(0.9),
25             ],
26             begin: Alignment.topLeft,
27             end: Alignment.bottomRight,
28             stops: [0, 1],
29         ), // LinearGradient
30     ), // BoxDecoration
31 ), // Container
32 SingleChildScrollView(
33     child: Container(
34         height: deviceSize.height,
35         width: deviceSize.width,
36         child: Column(
37             mainAxisAlignment: MainAxisAlignment.center,
38             crossAxisAlignment: CrossAxisAlignment.center,
39             children: <Widget>[
40                 Flexible(
41                     child: Container(
42                         margin: EdgeInsets.only(bottom: 20.0),
```



auth_screen.dart X

main.dart

lib > screens > auth_screen.dart > AuthScreen

```
41         child: Container(
42             margin: EdgeInsets.only(bottom: 20.0),
43             padding:
44                 EdgeInsets.symmetric(vertical: 8.0, horizontal: 94.0),
45             transform: Matrix4.rotationZ(-8 * pi / 180)
46                 ..translate(-10.0),
47                 // ..translate(-10.0),
48             decoration: BoxDecoration(
49                 borderRadius: BorderRadius.circular(20),
50                 color: Colors.deepOrange.shade900,
51                 boxShadow: [
52                     BoxShadow(
53                         blurRadius: 8,
54                         color: Colors.black26,
55                         offset: Offset(0, 2),
56                     ) // BoxShadow
57                 ],
58             ), // BoxDecoration
59             child: Text(
60                 'MyShop',
61                 style: TextStyle(
62                     color:
```



auth_screen.dart X

main.dart

lib > screens > auth_screen.dart > AuthScreen

```
61         style: TextStyle(  
62             color:  
63                 Theme.of(context).accentTextTheme.headline1.color,  
64             fontSize: 50,  
65             fontFamily: 'Anton',  
66             fontWeight: FontWeight.normal,  
67         ), // TextStyle  
68     ), // Text  
69 ), // Container  
70 ), // Flexible  
71 Flexible(  
72     flex: deviceSize.width > 600 ? 2 : 1,  
73     child: AuthCard(),  
74 ), // Flexible  
75 ], // <Widget>[]  
76 ), // Column  
77 ), // Container  
78 ), // SingleChildScrollView  
79 ], // <Widget>[]  
80 ), // Stack  
81 ); // Scaffold  
82 }
```



auth_screen.dart X

main.dart

lib > screens > auth_screen.dart > AuthScreen

```
83 }
84
85 class AuthCard extends StatefulWidget {
86     const AuthCard({
87         Key key,
88     }) : super(key: key);
89
90     @override
91     _AuthCardState createState() => _AuthCardState();
92 }
93
94 class _AuthCardState extends State<AuthCard> {
95     final GlobalKey<FormState> _formKey = GlobalKey();
96     AuthMode _authMode = AuthMode.Login;
97     Map<String, String> _authData = {
98         'email': '',
99         'password': '',
100    };
101    var _isLoading = false;
102    final _passwordController = TextEditingController();
103
104    void _submit() {
```

```
auth_screen.dart X main.dart
lib > screens > auth_screen.dart > AuthScreen
104     void _submit() {
105         if (!_formKey.currentState.validate()) {
106             // Invalid!
107             return;
108         }
109         _formKey.currentState.save();
110         setState(() {
111             _isLoading = true;
112         });
113         if (_authMode == AuthMode.Login) {
114             // Log user in
115         } else {
116             // Sign user up
117         }
118         setState(() {
119             _isLoading = false;
120         });
121     }
122
123     void _switchAuthMode() {
124         if (_authMode == AuthMode.Login) {
125             setState(() {
```

The screenshot shows a code editor interface with a dark theme. The top bar displays file tabs for 'auth_screen.dart' and 'main.dart'. The left sidebar contains various icons for navigation and search. The main code area shows the following Dart code:

```
123 void _switchAuthMode() {
124     if (_authMode == AuthMode.Login) {
125         setState(() {
126             _authMode = AuthMode.Signup;
127         });
128     } else {
129         setState(() {
130             _authMode = AuthMode.Login;
131         });
132     }
133 }
134
135 @override
136 Widget build(BuildContext context) {
137     final deviceSize = MediaQuery.of(context).size;
138     return Card(
139         shape: RoundedRectangleBorder(
140             borderRadius: BorderRadius.circular(10.0),
141         ), // RoundedRectangleBorder
142         elevation: 8.0,
143         child: Container(
144             height: _authMode == AuthMode.Signup ? 320 : 260,
```



auth_screen.dart X

main.dart

lib > screens > auth_screen.dart > AuthScreen

```
143     child: Container(
144       height: _authMode == AuthMode.Signup ? 320 : 260,
145       constraints:
146         BoxConstraints(minHeight: _authMode == AuthMode.Signup ? 320 : 260),
147       width: deviceSize.width * 0.75,
148       padding: EdgeInsets.all(16.0),
149       child: Form(
150         key: _formKey,
151         child: SingleChildScrollView(
152           child: Column(
153             children: <Widget>[
154               TextFormField(
155                 decoration: InputDecoration(labelText: 'E-Mail'),
156                 keyboardType: TextInputType.emailAddress,
157                 validator: (value) {
158                   if (value.isEmpty || !value.contains('@')) {
159                     return 'Invalid email!';
160                   }
161                 },
162                 onSaved: (value) {
163                   _authData['email'] = value;
164                 },
165               ),
166             ],
167           ),
168         ),
169       ),
170     ),
171   ),
172 
```

```
162         onSaved: (value) {
163             _authData['email'] = value;
164         },
165     ), // TextFormField
166     TextFormField(
167         decoration: InputDecoration(labelText: 'Password'),
168         obscureText: true,
169         controller: _passwordController,
170         validator: (value) {
171             if (value.isEmpty || value.length < 5) {
172                 return 'Password is too short!';
173             }
174         },
175         onSaved: (value) {
176             _authData['password'] = value;
177         },
178     ), // TextFormField
179     if (_authMode == AuthMode.Signup)
180         TextFormField(
181             enabled: _authMode == AuthMode.Signup,
182             decoration: InputDecoration(labelText: 'Confirm Password'),
183             obscureText: true,
```



auth_screen.dart X

main.dart

lib > screens > auth_screen.dart > AuthScreen

```
180     TextFormField(
181       enabled: _authMode == AuthMode.Signup,
182       decoration: InputDecoration(labelText: 'Confirm Password'),
183       obscureText: true,
184       validator: _authMode == AuthMode.Signup
185           ? (value) {
186               if (value != _passwordController.text) {
187                   return 'Passwords do not match!';
188               }
189           }
190           : null,
191     ), // TextFormField
192     SizedBox(
193       height: 20,
194     ), // SizedBox
195     if (_isLoading)
196       CircularProgressIndicator()
197     else
198       RaisedButton(
199         child:
200           Text(_authMode == AuthMode.Login ? 'LOGIN' : 'SIGN UP'),
201         onPressed: _submit,
```



auth_screen.dart X

main.dart

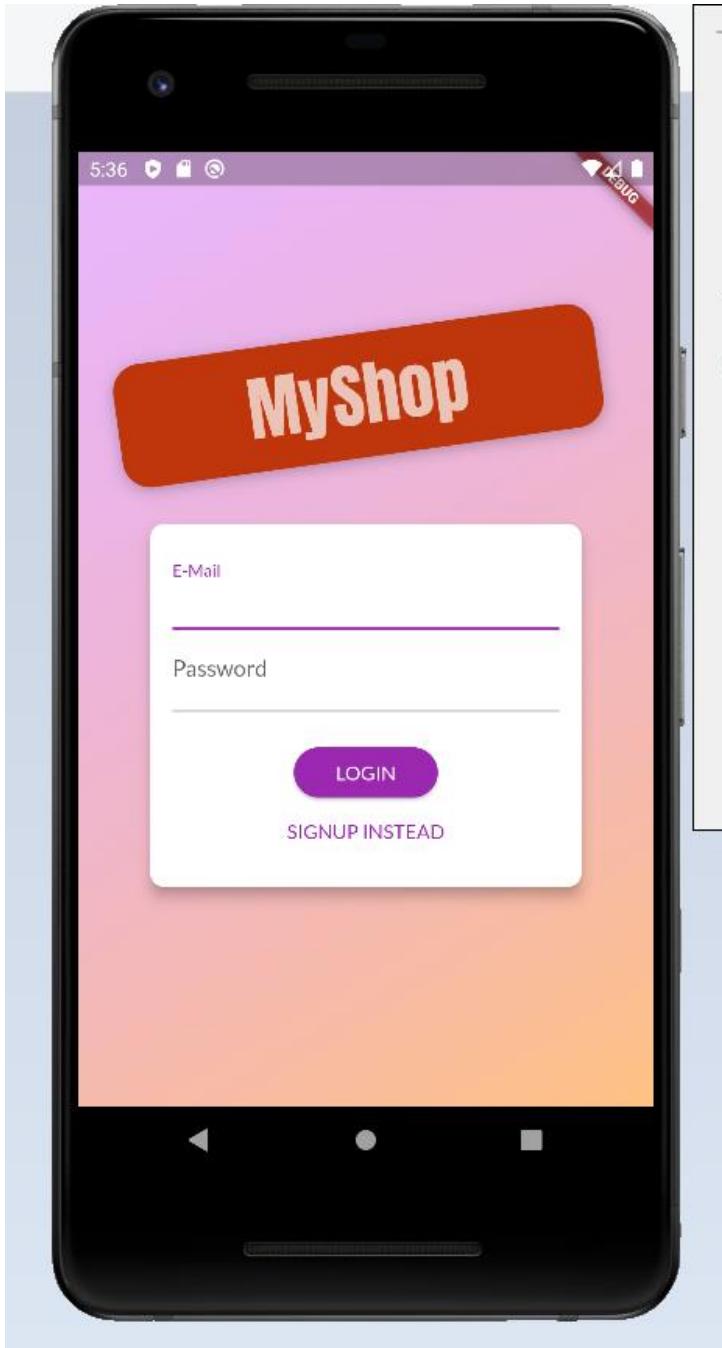
```
lib > screens > auth_screen.dart > _AuthCardState > build
188     }
189     }
190     : null,
191   ), // TextFormField
192   SizedBox(
193     height: 20,
194   ), // SizedBox
195   if (_isLoading)
196     CircularProgressIndicator()
197   else
198     RaisedButton(
199       child:
200         Text(_authMode == AuthMode.Login ? 'LOGIN' : 'SIGN UP'),
201       onPressed: _submit,
202       shape: RoundedRectangleBorder(
203         borderRadius: BorderRadius.circular(30),
204       ), // RoundedRectangleBorder
205       padding:
206         EdgeInsets.symmetric(horizontal: 30.0, vertical: 8.0),
207       color: Theme.of(context).primaryColor,
208       textColor: Theme.of(context).primaryTextTheme.button.color,
209     ), // RaisedButton
```



auth_screen.dart X

main.dart

```
lib > screens > auth_screen.dart > _AuthCardState > build
205     padding:
206         | | EdgeInsets.symmetric(horizontal: 30.0, vertical: 8.0),
207         | | color: Theme.of(context).primaryColor,
208         | | textColor: Theme.of(context).primaryTextTheme.button.color,
209         | | ), // RaisedButton
210     FlatButton(
211         | | child: Text(
212             | | | | '${_authMode == AuthMode.Login ? 'SIGNUP' : 'LOGIN'} INSTEAD'), // Text
213             | | onPressed: _switchAuthMode,
214             | | padding: EdgeInsets.symmetric(horizontal: 30.0, vertical: 4),
215             | | materialTapTargetSize: MaterialTapTargetSize.shrinkWrap,
216             | | textColor: Theme.of(context).primaryColor,
217             | | ), // FlatButton
218     ], // <Widget>[]
219     ), // Column
220     ), // SingleChildScrollView
221     ), // Form
222     ), // Container
223 ); // Card
224 }
225 }
226 }
```



ADDING USER SIGNUP



firebase rest auth api



Rizqi

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Date ▾

How to Make a REST API - Extensive Reference Handbook

<https://serverlesshandbook.dev> ▾

(Ad) Get started with serverless backend technologies. Designed for frontend engineers diving into backend tech for the first time

The REST API accepts the same Firebase ID tokens used by the client SDKs. Google OAuth2 access tokens Any data that's publicly readable or writable according to your Realtime Database Rules is also readable and writable via the REST API without any authentication.

Request Body Payload

Property Name	Type	Description
email	string	The email the user is signing in with.
password	string	The password for the account.
returnSecureToken	boolean	Whether or not to return an ID and refresh token. Should always be true.

Response Payload

Property Name	Type	Description
kind	string	The request type, always "identitytoolkitVerifyPasswordResponse".
idToken	string	A Firebase Auth ID token for the authenticated user.
email	string	The email for the authenticated user.
refreshToken	string	A Firebase Auth refresh token for the authenticated user.
expiresIn	string	The number of seconds in which the ID token expires.
socialId	string	The id of the authenticated user.

Image: medium.com

Authenticate REST Requests | Firebase Documentation

firebase.google.com/docs/database/rest/auth

Was this helpful?

People also ask

Firebase

Platform



Firebase is a platform developed by Google for creating mobile and web applications. It was originally ... +



Wikipedia



Facebook



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Founded: 01 Sep 2011

Founders: James Tamplin · Andrew Lee

Leading companies: Google

Year of invention: 2012–present

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RPC	▼
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FCM App Server Protocols	▼
App Indexing	▼
Gradle	▼

- INVALID_GRANT_TYPE: the grant type specified is invalid.
- MISSING_REFRESH_TOKEN: no refresh token provided.

Sign up with email / password

You can create a new email and password user by issuing an HTTP `POST` request to the Auth `signupNewUser` endpoint.

Method: POST

Content-Type: application/json

Endpoint

`https://www.googleapis.com/identitytoolkit/v3/relyingparty/signupNewUser?key=[API_KEY]`



Request Body Payload

Property Name	Type	Description
email	string	The email for the user to create.
password	string	The password for the user to create.
returnSecureToken	boolean	Whether or not to return an ID and refresh token. Should always be true.

Response Payload

Property Name	Type	Description
kind	string	The request type, always "identitytoolkit#SignupNewUserResponse".

Contents
API Usage
Exchange custom token for an ID and refresh token
Exchange a refresh token for an ID token
Sign up with email / password
Sign in with email / password
Sign in anonymously
Sign in with OAuth credential
Fetch providers for email
Send password reset email
Verify password reset code
Confirm password reset
Change email
Change password
Update profile
Get user data
Link with email/password
Link with OAuth credential
Unlink provider
Send email verification
Confirm email verification
Delete account
Error Response

C++	▼
Unity	▼
Cloud Functions	▼
Admin SDK	▼
REST	^
Set up and manage a project	B
Realtime Database	
Realtime Database User Auth	
Authentication and User Management	
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Dynamic Links	
Test Lab	
RPC	▼
Security	▼
FCM App Server Protocols	▼
App Indexing	▼
Gradle	▼

https://www.googleapis.com/identitytoolkit/v3/relyingparty/signupNewUser?key=[API_KEY]  

Request Body Payload

Property Name	Type	Description
email	string	The email for the user to create.
password	string	The password for the user to create.
returnSecureToken	boolean	Whether or not to return an ID and refresh token. Should always be true.

Response Payload

Property Name	Type	Description
kind	string	The request type, always "identitytoolkit#SignupNewUserResponse".
idToken	string	A Firebase Auth ID token for the newly created user.
email	string	The email for the newly created user.
refreshToken	string	A Firebase Auth refresh token for the newly created user.
expiresIn	string	The number of seconds in which the ID token expires.
localId	string	The uid of the newly created user.

Sample request

```
curl 'https://www.googleapis.com/identitytoolkit/v3/relyingparty/signupNewUser?key=[API_KEY]' \
-H 'Content-Type: application/json' \
-d '{"email": "user@example.com", "password": "P@SSWORD1", "returnSecureToken": true}'
```

Contents

- API Usage
 - Exchange custom token for an ID and refresh token
 - Exchange a refresh token for an ID token
 - Sign up with email / password
 - Sign in with email / password
 - Sign in anonymously
 - Sign in with OAuth credential
 - Fetch providers for email
 - Send password reset email
 - Verify password reset code
 - Confirm password reset
 - Change email
 - Change password
 - Update profile
 - Get user data
 - Link with email/password
 - Link with OAuth credential
 - Unlink provider
 - Send email verification
 - Confirm email verification
 - Delete account
- Error Response

belajar-flutter - Authentication - +

https://console.firebaseio.google.com/u/0/project/belajar-flutter-61e82/authentication/providers

Firebase belajar-flutter Project settings Go to docs ?

Project Overview Build Authentication Firestore Database Realtime Database Storage Hosting Functions Machine Learning Release & Monitor Analytics Engage Extensions Spark Free \$0/month Upgrade Advanced

Sign-in providers Add new provider

Provider	Status
Email/Password	Enabled

Authorized domains Add domain

Authorized domain	Type
localhost	Default
belajar-flutter-61e82.firebaseio.com	Default
belajar-flutter-61e82.web.app	Default

Project settings

Users and permissions

Usage and billing

Sign-in providers

Add new provider

Provider Status

Email/Password Enabled

Authorized domains

Add domain

Authorized domain Type

localhost Default

belajar-flutter-61e82.firebaseio.com Default

belajar-flutter-61e82.web.app Default

Advanced

belajar-flutter - Project settings + https://console.firebaseio.google.com/u/0/project/belajar-flutter-61e82/settings/general

Go to docs

Project settings

General Cloud Messaging Integrations Service accounts Data privacy Users and permissions App Check (BETA)

Your project

Project name	belajar-flutter
Project ID	belajar-flutter-61e82
Project number	742777624990
Default GCP resource location	Not yet selected
Web API Key	AlzaSyBNe7FYel7WHFG9beoi3G1-VkEtt0uTzxQ

Public settings

These settings control instances of your project shown to the public

Public-facing name	project-742777624990
Support email	Not configured

Your apps

Untitled - Notepad

Project Overview

Build

- Authentication
- Firebase Database
- Realtime Database
- Storage
- Hosting
- Functions
- Machine Learning

Release & Monitor

Crashlytics, Performance, Test Lab...

Analytics

Dashboard, Realtime, Events, Conv...

Engage

Extensions

Spark

Free \$0/month

Upgrade

auth_screen.dart auth.dart main.dart

lib > providers > auth.dart > Auth > signup

```
1 import 'dart:convert';
2
3 import 'package:flutter/widgets.dart';
4 import 'package:http/http.dart' as http;
5
6 class Auth with ChangeNotifier {
7     String _token;
8     DateTime _expiryDate;
9     String _userId;
10
11 Future<void> signup(String email, String password) async {
12     final url = Uri.parse(
13         'https://www.googleapis.com/identitytoolkit/v3/relyingparty/signupNewUser?key=AIzaSyBNe7FYeI7WHFG9
14     final response = await http.post(
15         url,
16         body: json.encode(
17             {
18                 'email': email,
19                 'password': password,
20                 'returnSecureToken': true,
21             },
22         ),
23     );
24 }
```

auth_screen.dart auth.dart main.dart

lib > providers > auth.dart > Auth > signup

```
6  class Auth with ChangeNotifier {  
7      String _token;  
8      DateTime _expiryDate;  
9      String _userId;  
10  
11     Future<void> signup(String email, String password) async {  
12         final url = Uri.parse(  
13             'https://www.googleapis.com/identitytoolkit/v3/relyingparty/signupNewUser?key=AIzaSyBNe7FYeI7WHFG';  
14         final response = await http.post(  
15             url,  
16             body: json.encode(  
17                 {  
18                     'email': email,  
19                     'password': password,  
20                     'returnSecureToken': true,  
21                 },  
22             ),  
23         );  
24         print(json.decode(response.body));  
25     }  
26 }  
27 }
```

auth_screen.dart auth.dart main.dart X

lib > main.dart > MyApp > build

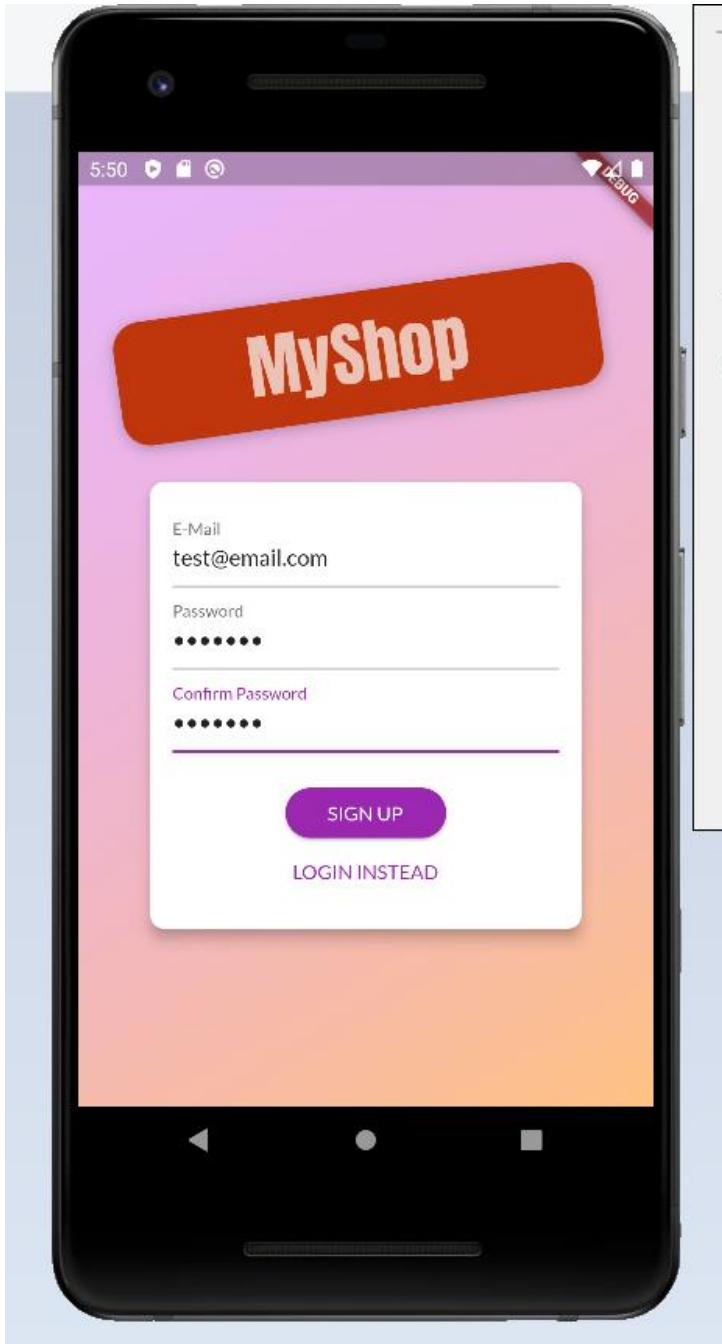
```
16 void main() => runApp(MyApp());  
17  
18 class MyApp extends StatelessWidget {  
19     @override  
20     Widget build(BuildContext context) {  
21         return MultiProvider(  
22             providers: [  
23                 ChangeNotifierProvider(  
24                     create: (ctx) => Auth(),  
25                 ), // ChangeNotifierProvider  
26                 ChangeNotifierProvider(  
27                     create: (ctx) => Products(),  
28                 ), // ChangeNotifierProvider  
29                 ChangeNotifierProvider(  
30                     create: (ctx) => Cart(),  
31                 ), // ChangeNotifierProvider  
32                 ChangeNotifierProvider(  
33                     create: (ctx) => Orders(),  
34                 ), // ChangeNotifierProvider  
35             ],  
36             child: MaterialApp(  
37                 title: 'MyShop',
```

auth_screen.dart auth.dart main.dart

lib > screens > auth_screen.dart > _AuthCardState

```
107     Future<void> _submit() async {
108       if (_formKey.currentState.validate()) {
109         // Invalid!
110         return;
111       }
112       _formKey.currentState.save();
113       setState(() {
114         _isLoading = true;
115       });
116       if (_authMode == AuthMode.Login) {
117         // Log user in
118       } else {
119         // Sign user up
120         await Provider.of<Auth>(context, listen: false).signup(
121           _authData['email'],
122           _authData['password'],
123         );
124       }
125       setState(() {
126         _isLoading = false;
127       });
128     }
```





auth_screen.dart X auth.dart main.dart

```
lib > screens > auth_screen.dart > _AuthCardState  
107   Future<void> _submit() async {  
108     if (_formKey.currentState.validate()) {  
109       // Invalid!  
110       return;  
111     }  
112     _formKey.currentState.save();  
113     setState(() {  
114       _isLoading = true;  
115     });  
116     if (_authMode == AuthMode.Login) {
```

PROBLEMS 151 OUTPUT DEBUG CONSOLE TERMINAL

Restarted application in 1,815ms.

```
I/flutter ( 5461): {kind: identitytoolkit#SignupNewUserResponse, idToken: eyJhbGciOiJSUzI1NiIs  
TlhMzY5NzU2MTc1YWExYjRjZkiLCJ0eXAiOiJKV1QifQ.eyJpc3MiOiJodHRwczovL3N1Y3VyZXRva2VuLmdvb2dsZS5j  
XVkiJoiYmVsYWphci1mbHV0dGVyLTYxZTgyIiwiYXV0aF90aW1lIjoxNjM4NDg1NDc2LCJ1c2VyX2lkIjoiNlNzdHd0QjF  
IjZTc3R3dEIxcHlQYUM3VXFoR2hVbnU3ODJxVDIiLCJpYXQiOjE2Mzg0ODU0NzYsImV4cCI6MTYzODQ4OTA3NiwiZW1haw  
lcmlmaWVkJpmYWxzZSwiZmlyZWJhc2UiOnsiaWRlbnRpdGllcyI6eyJlbWFpbCI6WyJ0ZXN0QGVtYWlsLmNvbSJdfSwic  
19.cs9TodSHs1s-N47wfet0W-JNHP-0BzSJ1H9B6uZgfkDG3gLvzbPIqltrX-QdYwze6eHAJqTPRGN_Vka_N6yGy-u4vB  
ZH2vNdS1o5XJrA8_9yi91jrPr_7jepjMqq7D_1y7fVphsVttUvHNL73omuHoHBwEDUiq6Ypn834BkoFG4KzFLNs9VoBbVs  
pVLGZY0vGktLz01KUNJ-ZsHvnXSi-Ju5d-NrGmwGeT6TeIp0owtZDgRKhuCWUp5vatDQrMwtsE0XThYyjVg, email: te
```



>

belajar-flutter - Authentication - +

https://console.firebaseio.google.com/u/0/project/belajar-flutter-61e82/authentication/users

Firebase

Project Overview

Build

- Authentication
- Firebase Database
- Realtime Database
- Storage
- Hosting
- Functions
- Machine Learning

Release & Monitor

Analytics

Engage

Extensions

Spark

Free \$0/month

Upgrade

belajar-flutter

Authentication

Users Sign-in method Templates Usage

Prototype and test end-to-end with the Local Emulator Suite, now with Firebase Authentication [Get started](#)

Search by email address, phone number, or user UID [Add user](#)

Identifier	Providers	Created	Signed In	User UID
test@email.com	✉	Dec 3, 2021	Dec 3, 2021	6SstwtB1pyPaC7UqhGhUnu782qT2

Rows per page: 50 1 – 1 of 1

ALLOWING USERS TO LOG IN

C++	▼
Unity	▼
Cloud Functions	▼
Admin SDK	▼
REST	^
Set up and manage a project	↳
Realtime Database	
Realtime Database User Auth	
Authentication and User Management	
Cloud Firestore	
Hosting	
Remote Config	
Dynamic Links	
Test Lab	
RPC	▼
Security	▼
FCM App Server Protocols	▼
App Indexing	▼
Gradle	▼

- TOO_MANY_ATTEMPTS_TRY_LATER: We have blocked all requests from this device due to unusual activity. Try again later.

Sign in with email / password

You can sign in a user with an email and password by issuing an HTTP `POST` request to the Auth `verifyPassword` endpoint.

Method: POST

Content-Type: application/json

Endpoint

`https://www.googleapis.com/identitytoolkit/v3/relyingparty/verifyPassword?key=[API_KEY]`

Request Body Payload

Property Name	Type	Description
email	string	The email the user is signing in with.
password	string	The password for the account.
returnSecureToken	boolean	Whether or not to return an ID and refresh token. Should always be true.

Response Payload

Property Name	Type	Description

Contents
API Usage
Exchange custom token for an ID and refresh token
Exchange a refresh token for an ID token
Sign up with email / password
Sign in with email / password
Sign in anonymously
Sign in with OAuth credential
Fetch providers for email
Send password reset email
Verify password reset code
Confirm password reset
Change email
Change password
Update profile
Get user data
Link with email/password
Link with OAuth credential
Unlink provider
Send email verification
Confirm email verification
Delete account
Error Response

C++	▼
Unity	▼
Cloud Functions	▼
Admin SDK	▼
REST	^
Set up and manage a project	B
Realtime Database	
Realtime Database User Auth	
Authentication and User Management	
Cloud Firestore	
Hosting	
Remote Config	
Dynamic Links	
Test Lab	
RPC	▼
Security	▼
FCM App Server Protocols	▼
App Indexing	▼
Gradle	▼

[https://www.googleapis.com/identitytoolkit/v3/relyingparty/verifyPassword?key=\[API_KEY\]](https://www.googleapis.com/identitytoolkit/v3/relyingparty/verifyPassword?key=[API_KEY])

Request Body Payload

Property Name	Type	Description
email	string	The email the user is signing in with.
password	string	The password for the account.
returnSecureToken	boolean	Whether or not to return an ID and refresh token. Should always be true.

Response Payload

Property Name	Type	Description
kind	string	The request type, always "identitytoolkit#VerifyPasswordResponse".
idToken	string	A Firebase Auth ID token for the authenticated user.
email	string	The email for the authenticated user.
refreshToken	string	A Firebase Auth refresh token for the authenticated user.
expiresIn	string	The number of seconds in which the ID token expires.
localId	string	The uid of the authenticated user.
registered	boolean	Whether the email is for an existing account.

Sample request

```
curl 'https://www.googleapis.com/identitytoolkit/v3/relyingparty/verifyPassword?key=[API_KEY]' \
```

Contents

API Usage

Exchange custom token
for an ID and refresh
token

Exchange a refresh token
for an ID token

Sign up with email /
password

[Sign in with email /
password](#)

Sign in anonymously

Sign in with OAuth
credential

Fetch providers for email

Send password reset
email

Verify password reset
code

Confirm password reset

Change email

Change password

Update profile

Get user data

Link with email/password

Link with OAuth credential

Unlink provider

Send email verification

Confirm email verification

Delete account

Error Response

auth_screen.dart auth.dart main.dart

lib > providers > auth.dart > Auth > login

```
1 import 'dart:convert';
2
3 import 'package:flutter/widgets.dart';
4 import 'package:http/http.dart' as http;
5
6 class Auth with ChangeNotifier {
7   String _token;
8   DateTime _expiryDate;
9   String _userId;
10
11   Future<void> _authenticate(
12     String email, String password, String urlSegment) async {
13     final url =
14       'https://www.googleapis.com/identitytoolkit/v3/relyingparty/$urlSegment?key=AIzaSyBNe7FYeI7WHF9be';
15     final response = await http.post(
16       Uri.parse(url),
17       body: json.encode(
18         {
19           'email': email,
20           'password': password,
21           'returnSecureToken': true,
22         },
23       ),
24     );
25     final responseData = json.decode(response.body);
26     if (responseData['error'] == null) {
27       _token = responseData['idToken'];
28       _userId = responseData['localId'];
29       _expiryDate = DateTime.now().add(
30         Duration(
31           seconds: int.parse(responseData['expiresIn']),
32         ),
33       );
34       notifyListeners();
35     }
36   }
37 }
```



auth_screen.dart

auth.dart

main.dart

lib > providers > auth.dart > Auth > login

```
14     ..... 'https://www.googleapis.com/identitytoolkit/v3/relyingparty/$urlSegment?key=AIzaSyBNe7FYeI7WHFG9be
15     final response = await http.post(
16     ..... Uri.parse(url),
17     ..... body: json.encode(
18     ..... {
19     .....   'email': email,
20     .....   'password': password,
21     .....   'returnSecureToken': true,
22     ..... },
23     ..... ),
24   );
25   print(json.decode(response.body));
26 }
27
28 Future<void> signup(String email, String password) async {
29   return _authenticate(email, password, 'signupNewUser');
30 }
31
32 Future<void> login(String email, String password) async {
33   return _authenticate(email, password, 'verifyPassword');
34 }
35 }
```

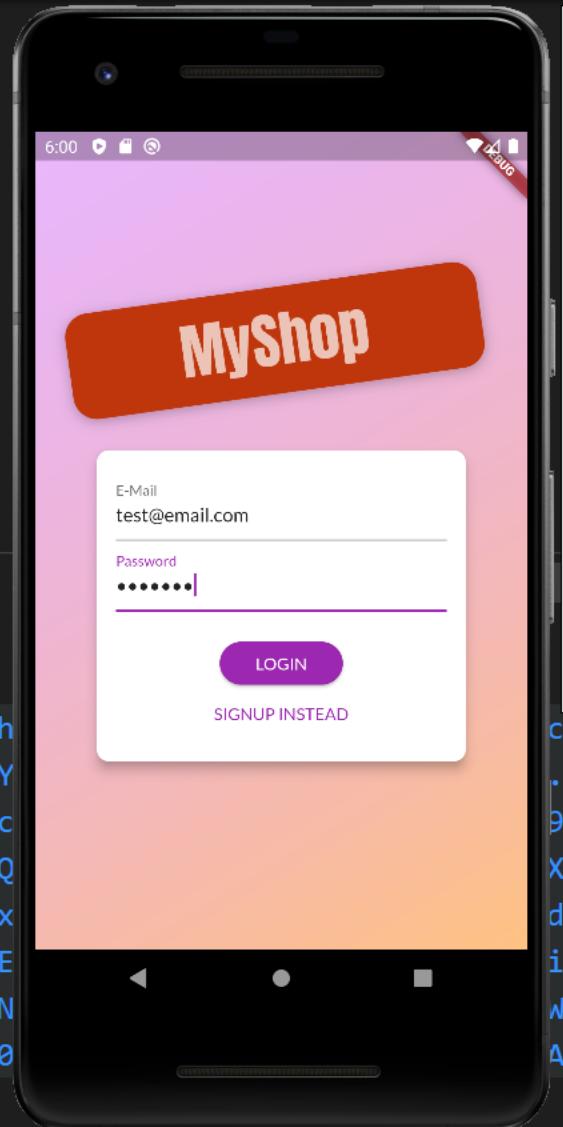
auth_screen.dart X auth.dart main.dart

lib > screens > auth_screen.dart > _AuthCardState > _submit

```
109         // Invalid!
110         return;
111     }
112     _formKey.currentState.save();
113     setState(() {
114         _isLoading = true;
115     });
116     if (_authMode == AuthMode.Login) {
117         // Log user in
118         await Provider.of<Auth>(context, listen: false).login(
119             _authData['email'],
120             _authData['password'],
121         );
122     } else {
123         // Sign user up
124         await Provider.of<Auth>(context, listen: false).signup(
125             _authData['email'],
126             _authData['password'],
127         );
128     }
129     setState(() {
130         _isLoading = false;
```

```
lib > screens > auth_screen.dart > _AuthCardState > _submit
109     // Invalid!
110     return;
111 }
112 _formKey.currentState.save();
113 setState(() {
114     _isLoading = true;
115 });
116 if (_authMode == AuthMode.Login) {
117     // Log user in
118     await Provider.of<Auth>(context, listen: false).login()
```

Restarted application in 1.738ms



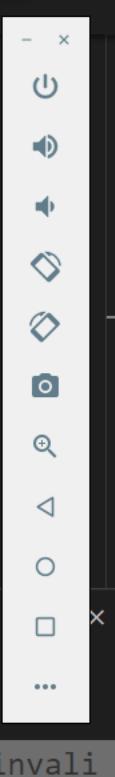
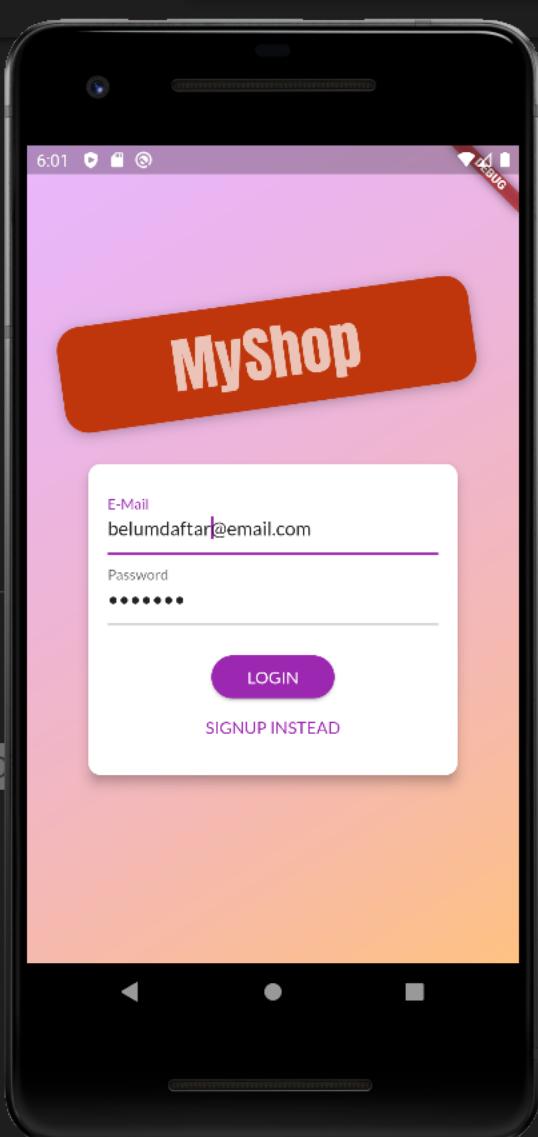


auth_screen.dart X auth.dart main.dart

```
lib > screens > auth_screen.dart > _AuthCardState > _submit
109     // Invalid!
110     return;
111 }
112 _formKey.currentState.save();
113 setState(() {
114     _isLoading = true;
115 });
116 if (_authMode == AuthMode.Login) {
117     // Log user in
118     await Provider.of<Auth>(context, listen: false).login(
```

PROBLEMS 151 OUTPUT DEBUG CONSOLE TERMINAL

```
W/IInputConnectionWrapper( 5461): getSelectedText on inactive InputConnection
W/IInputConnectionWrapper( 5461): getTextAfterCursor on inactive InputConnection
I/flutter ( 5461): {error: {code: 400, message: EMAIL_NOT_FOUND, errors: [{message: EMAIL_NOT_FOUND}]}}
```



HANDLING AUTHENTICATION ERRORS

C++	▼
Unity	▼
Cloud Functions	▼
Admin SDK	▼
REST	^
Set up and manage a project	↳
Realtime Database	
Realtime Database User Auth	
Authentication and User Management	
Cloud Firestore	
Hosting	
Remote Config	
Dynamic Links	
Test Lab	
RPC	▼
Security	▼
FCM App Server Protocols	▼
App Indexing	▼
Gradle	▼

Sample response

```
{  
  "kind": "identitytoolkit#SignupNewUserResponse",  
  "idToken": "[ID_TOKEN]",  
  "email": "[user@example.com]",  
  "refreshToken": "[REFRESH_TOKEN]",  
  "expiresIn": "3600",  
  "localId": "tRcfmLH7..."  
}
```



Common error codes

- **EMAIL_EXISTS:** The email address is already in use by another account.
- **OPERATION_NOT_ALLOWED:** Password sign-in is disabled for this project.
- **TOO_MANY_ATTEMPTS_TRY_LATER:** We have blocked all requests from this device due to unusual activity. Try again later.

Sign in with email / password

You can sign in a user with an email and password by issuing an HTTP `POST` request to the Auth `verifyPassword` endpoint.

Method: POST

Content-Type: application/json

Endpoint

Contents
API Usage
Exchange custom token for an ID and refresh token
Exchange a refresh token for an ID token
Sign up with email / password
Sign in with email / password
Sign in anonymously
Sign in with OAuth credential
Fetch providers for email
Send password reset email
Verify password reset code
Confirm password reset
Change email
Change password
Update profile
Get user data
Link with email/password
Link with OAuth credential
Unlink provider
Send email verification
Confirm email verification
Delete account
Error Response

C++	▼
Unity	▼
Cloud Functions	▼
Admin SDK	▼
REST	^
Set up and manage a project	↳
Realtime Database	
Realtime Database User Auth	
Authentication and User Management	↳
Cloud Firestore	
Hosting	
Remote Config	
Dynamic Links	
Test Lab	
RPC	▼
Security	▼
FCM App Server Protocols	▼
App Indexing	▼
Gradle	▼

Sample response

```
{  
  "kind": "identitytoolkit#VerifyPasswordResponse",  
  "localId": "ZY1rJK0eYLg...",  
  "email": "[user@example.com]",  
  "displayName": "",  
  "idToken": "[ID_TOKEN]",  
  "registered": true,  
  "refreshToken": "[REFRESH_TOKEN]",  
  "expiresIn": "3600"  
}
```

Common error codes

- **EMAIL_NOT_FOUND:** There is no user record corresponding to this identifier. The user may have been deleted.
- **INVALID_PASSWORD:** The password is invalid or the user does not have a password.
- **USER_DISABLED:** The user account has been disabled by an administrator.

Sign in anonymously

You can sign in a user anonymously by issuing an HTTP `POST` request to the Auth `signupNewUser` endpoint.

Method: POST

Content-Type: application/json

Endpoint

`https://www.googleapis.com/identitytoolkit/v3/relyingparty/signupNewUser?key=[API KEY]`

Contents
API Usage
Exchange custom token for an ID and refresh token
Exchange a refresh token for an ID token
Sign up with email / password
Sign in with email / password
Sign in anonymously
Sign in with OAuth credential
Fetch providers for email
Send password reset email
Verify password reset code
Confirm password reset
Change email
Change password
Update profile
Get user data
Link with email/password
Link with OAuth credential
Unlink provider
Send email verification
Confirm email verification
Delete account
Error Response

A screenshot of the Visual Studio Code interface. The title bar shows "http_exception.dart - myshop_08 - Visual Studio Code". The left sidebar contains icons for Explorer, Search, Open Editors, MYSHOP_08, and other project files like auth_screen.dart, auth.dart, http_exception.dart, main.dart, etc. The main area shows the code for "http_exception.dart" in the "lib\models" folder:

```
1 class HttpException implements Exception {  
2     final String message;  
3  
4     HttpException(this.message);  
5  
6     @override  
7     String toString() {  
8         return message;  
9         // return super.toString(); // Instance of HttpException  
10    }  
11 }  
12 }
```

The status bar at the bottom includes "Ln 12, Col 1", "Spaces: 2", "UTF-8", "CRLF", "Dart", "Dart DevTools", "Flutter: 2.5.3", "Flutter Emulator (android-x86 emulator)", "Prettier", and "Debug my code".



EXPLORER

OPEN EDITORS

- auth_screen.dart lib\screens
- auth.dart lib\providers
- http_exception.dart lib\m...
- main.dart lib

MYSHOP_08

- .dart_tool
- .idea
- android
- assets
- build
- ios
- lib
 - models
 - http_exception.dart
 - providers
 - auth.dart
 - cart.dart
 - orders.dart
 - product.dart
 - products.dart
 - screens
 - auth_screen.dart
 - cart_screen.dart
 - edit_product_screen.dart
 - orders_screen.dart
 - product_detail_screen.d...
 - products_overview_scre...
 - user_products_screen.d...
 - widgets
 - app_drawer.dart
 - badge.dart

> OUTLINE

> DEPENDENCIES

auth.dart

lib > providers > auth.dart > Auth > _authenticate

```
String email, String password, String urlSegment) async {
  final url =
    'https://www.googleapis.com/identitytoolkit/v3/relyingparty/$urlSegment?key=AIza...
  try {
    final response = await http.post(
      Uri.parse(url),
      body: json.encode(
        {
          'email': email,
          'password': password,
          'returnSecureToken': true,
        },
      ),
    );
    final responseData = json.decode(response.body);
    if (responseData['error'] != null) {
      throw HttpException(responseData['error']['message']);
    }
  } catch (error) {
    throw error;
  }
}
```

Ln 34, Col 1 (481 selected) Spaces: 2 CRLF Dart Dart DevTools Flutter: 2.5.3 Flutter Emulator (android-x86 emulator) Prettier

File Edit Selection View Go Run Terminal Help auth_screen.dart - myshop_08 - Visual Studio Code

EXPLORER ... auth_screen.dart x auth.dart http_exception.dart main.dart

lib > screens > auth_screen.dart > _AuthCardState

106 final _passwordController = TextEditingController();

107

108 void _showErrorDialog(String message) {

109 showDialog(

110 context: context,

111 builder: (ctx) => AlertDialog(

112 title: Text('An Error Occurred!'),

113 content: Text(message),

114 actions: <Widget>[

115 FlatButton(

116 child: Text('Okay'),

117 onPressed: () {

118 Navigator.of(ctx).pop();

119 },

120) // FlatButton

121], // <Widget>[]

122), // AlertDialog

123);

124 }

125

126 Future<void> _submit() async {

127 if (!_formKey.currentState.validate()) {

128

Ln 125, Col 1 (418 selected) Spaces: 2 CRLF Dart Dart DevTools Flutter: 2.5.3 Flutter Emulator (android-x86 emulator) Prettier

File Edit Selection View Go Run Terminal Help auth_screen.dart - myshop_08 - Visual Studio Code

EXPLORER ... auth_screen.dart X auth.dart http_exception.dart main.dart

lib > screens > auth_screen.dart > _AuthCardState > _submit

125
126 Future<void> _submit() async {
127 if (!_formKey.currentState.validate()) {
128 // Invalid!
129 return;
130 }
131 _formKey.currentState.save();
132 setState(() {
133 _isLoading = true;
134 });
135
136 try {
137 if (_authMode == AuthMode.Login) {
138 // Log user in
139 await Provider.of<Auth>(context, listen: false).login(
140 _authData['email'],
141 _authData['password'],
142);
143 } else {
144 // Sign user up
145 await Provider.of<Auth>(context, listen: false).signup(
146 _authData['email'],
147 _authData['password'],
148);
149 } catch (e) {
150 print(e);
151 }
152 _isLoading = false;
153 Navigator.pop(context);
154 }
155
156
157

Ln 169, Col 1 (1320 selected) Spaces: 2 CRLF Dart Dart DevTools Flutter: 2.5.3 Flutter Emulator (android-x86 emulator) Prettier

File Edit Selection View Go Run Terminal Help auth_screen.dart - myshop_08 - Visual Studio Code

EXPLORER ... auth_screen.dart X auth.dart http_exception.dart main.dart

lib > screens > auth_screen.dart > _AuthCardState > _submit

```
135
136   try {
137     if (_authMode == AuthMode.Login) {
138       // Log user in
139       await Provider.of<Auth>(context, listen: false).login(
140         _authData['email'],
141         _authData['password'],
142       );
143     } else {
144       // Sign user up
145       await Provider.of<Auth>(context, listen: false).signup(
146         _authData['email'],
147         _authData['password'],
148       );
149     }
150   } on HttpException catch (error) {
151     var errorMessage = 'Authentication failed';
152     if (error.toString().contains('EMAIL_EXISTS')) {
153       errorMessage = 'This email address is already in use.';
154     } else if (error.toString().contains('INVALID_EMAIL')) {
155       errorMessage = 'This is not a valid email address';
156     } else if (error.toString().contains('WEAK_PASSWORD')) {
157       errorMessage = 'This password is too weak.';
```

Ln 169, Col 1 (1320 selected) Spaces: 2 CRLF Dart Dart DevTools Flutter: 2.5.3 Flutter Emulator (android-x86 emulator) Prettier

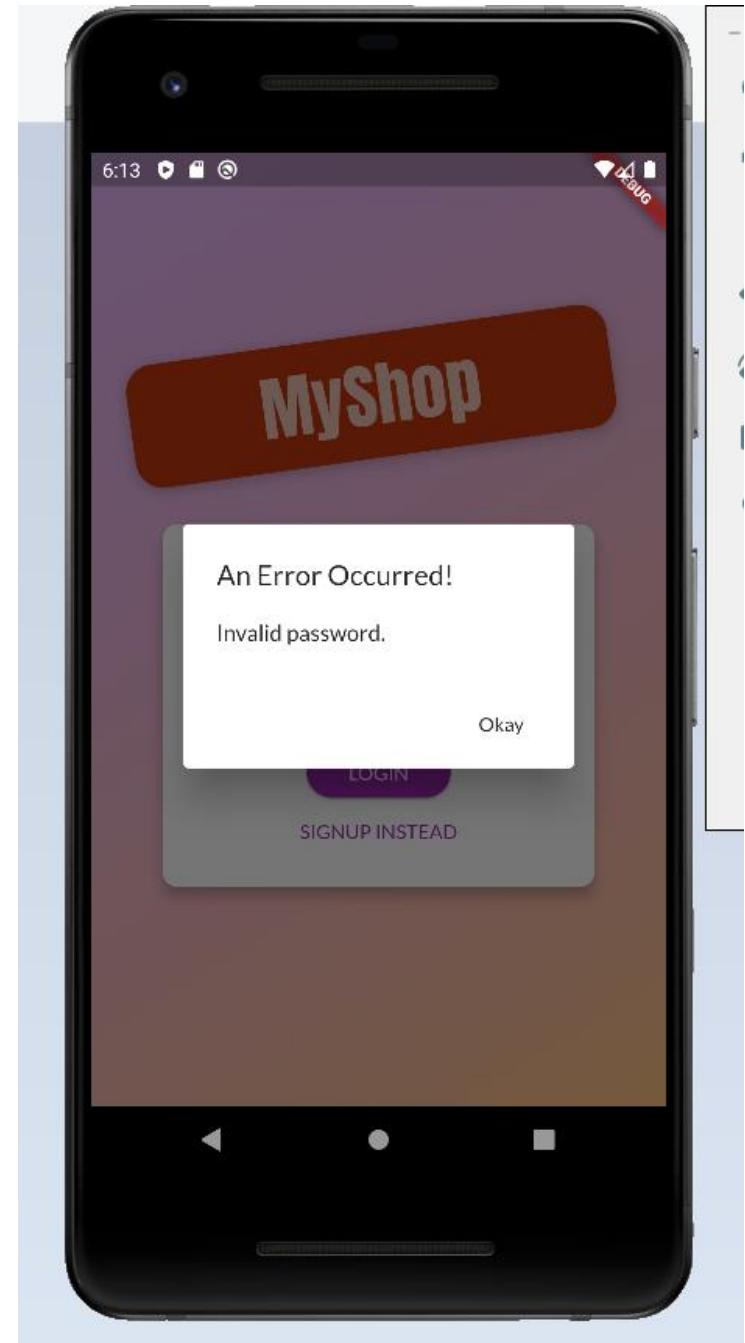
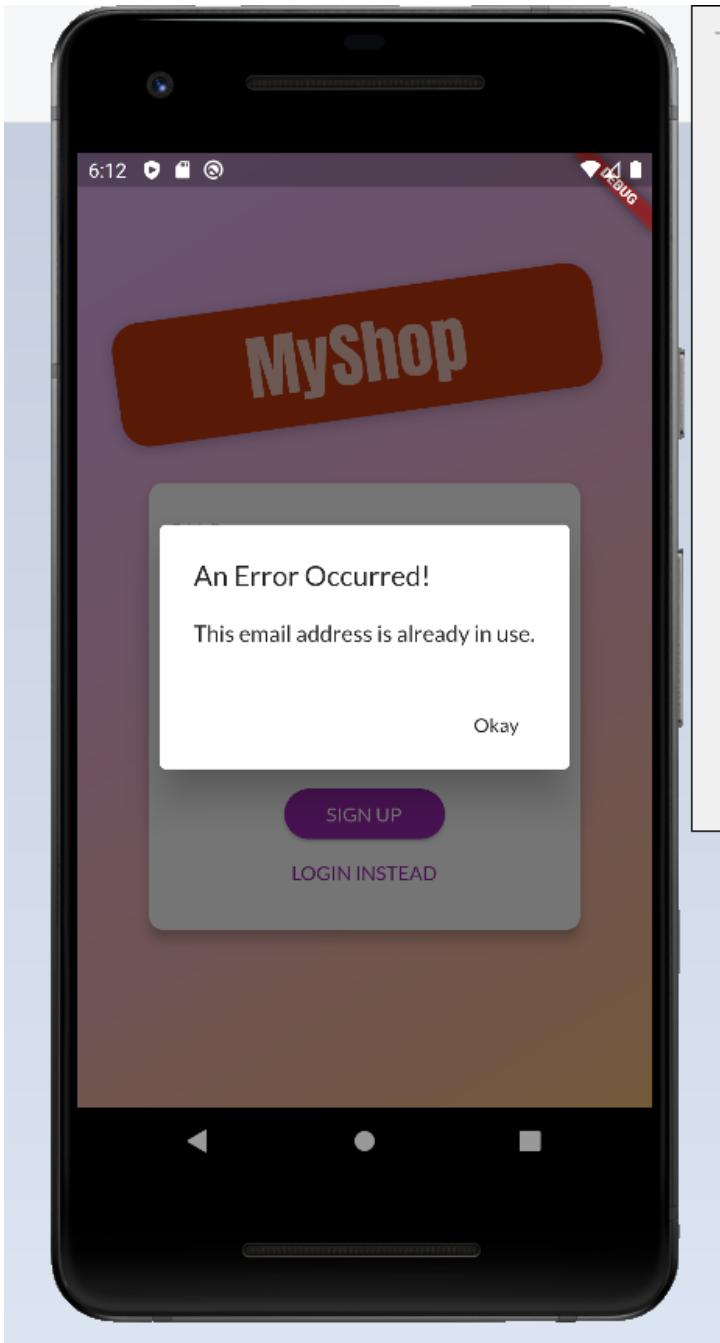
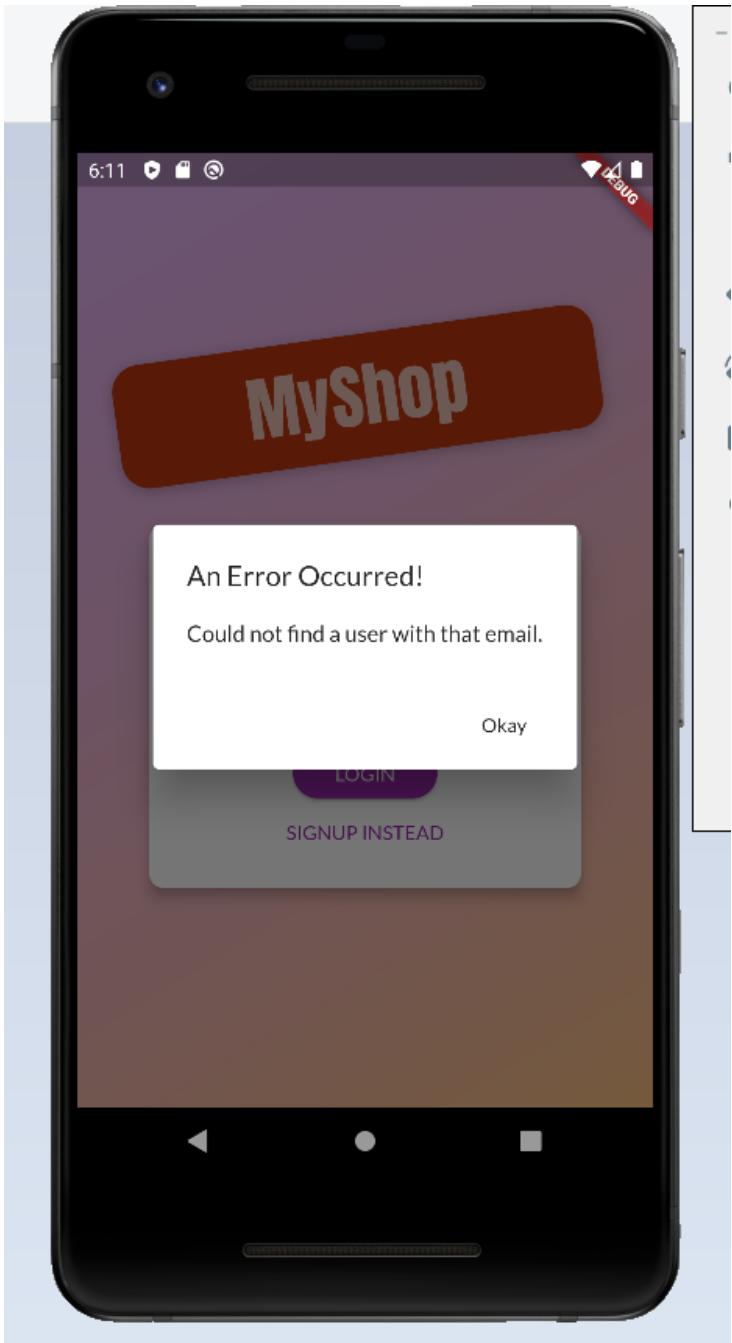
File Edit Selection View Go Run Terminal Help auth_screen.dart - myshop_08 - Visual Studio Code

EXPLORER ... auth_screen.dart X auth.dart http_exception.dart main.dart

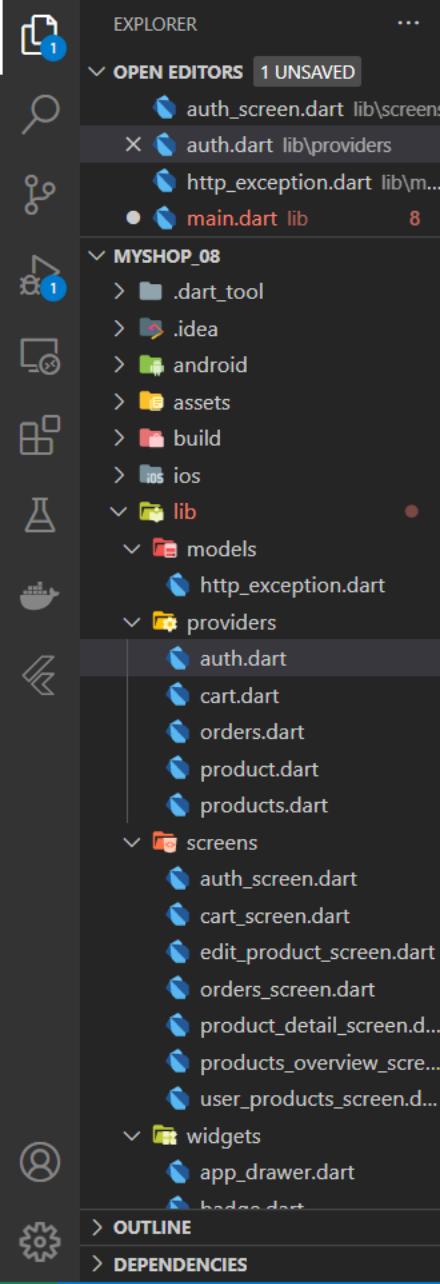
lib > screens > auth_screen.dart > _AuthCardState > _submit

```
155     errorMessage = 'This is not a valid email address';
156 } else if (error.toString().contains('WEAK_PASSWORD')) {
157     errorMessage = 'This password is too weak.';
158 } else if (error.toString().contains('EMAIL_NOT_FOUND')) {
159     errorMessage = 'Could not find a user with that email.';
160 } else if (error.toString().contains('INVALID_PASSWORD')) {
161     errorMessage = 'Invalid password.';
162 }
163     _showErrorDialog(errorMessage);
164 } catch (error) {
165     const errorMessage =
166         'Could not authenticate you. Please try again later.';
167     _showErrorDialog(errorMessage);
168 }
169
170     setState(() {
171         _isLoading = false;
172     });
173 }
174
175     void _switchAuthMode() {
176         if (_authMode == AuthMode.Login) {
```

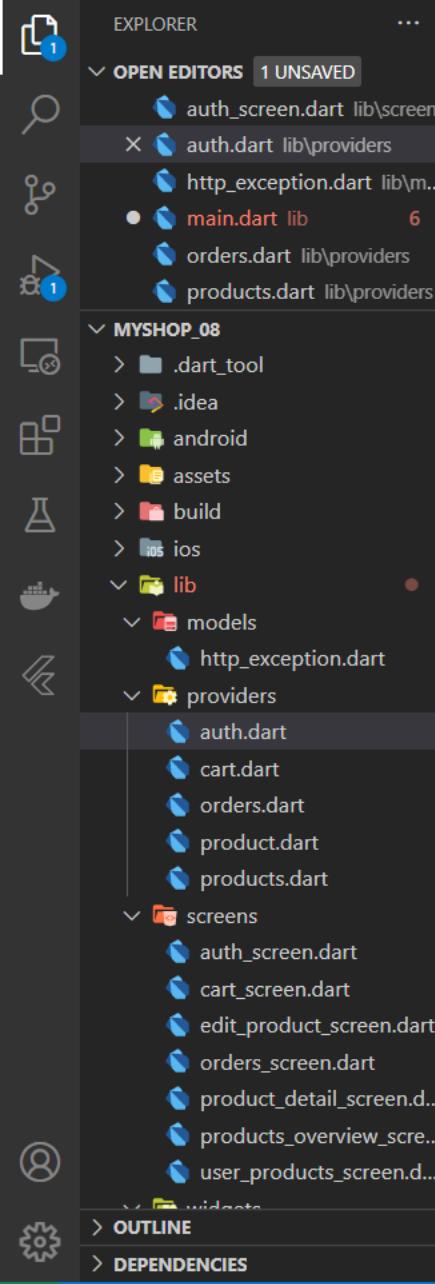
Ln 169, Col 1 (1320 selected) Spaces: 2 CRLF Dart Dart DevTools Flutter: 2.5.3 Flutter Emulator (android-x86 emulator) Prettier



MANAGING THE AUTH TOKEN LOCALLY (IN THE APP)



```
lib > providers > auth.dart > Auth
1 import 'package:flutter_riverpod/flutter_riverpod.dart';
2
3 class Auth with ChangeNotifier {
4   String _token;
5   DateTime _expiryDate;
6   String _userId;
7
8   bool get isAuthenticated {
9     return token != null;
10 }
11
12 String get token {
13   if (_expiryDate != null &&
14     _expiryDate.isAfter(DateTime.now()) &&
15     _token != null) {
16     return _token;
17   }
18   return null;
19 }
20
21 Future<void> authenticate(
22   String email, String password, String urlSegment) async {
```



```
lib > providers > auth.dart > Auth > _authenticate
      password: password,
      'returnSecureToken': true,
    },
  ),
);
final responseData = json.decode(response.body);
if (responseData['error'] != null) {
  throw HttpException(responseData['error']['message']);
}
_token = responseData['idToken'];
_userId = responseData['localId'];
_expiryDate = DateTime.now().add(
  Duration(
    seconds: int.parse(
      responseData['expiresIn'],
    ),
  ),
);
notifyListeners();
} catch (error) {
  throw error;
}
}
```

File Edit Selection View Go Run Terminal Help main.dart - myshop_08 - Visual Studio Code

EXPLORER ... auth_screen.dart auth.dart http_exception.dart main.dart X orders.dart products.dart

OPEN EDITORS lib > main.dart > MyApp > build

auth_screen.dart auth.dart lib\providers http_exception.dart lib\m... main.dart lib orders.dart lib\providers products.dart lib\providers

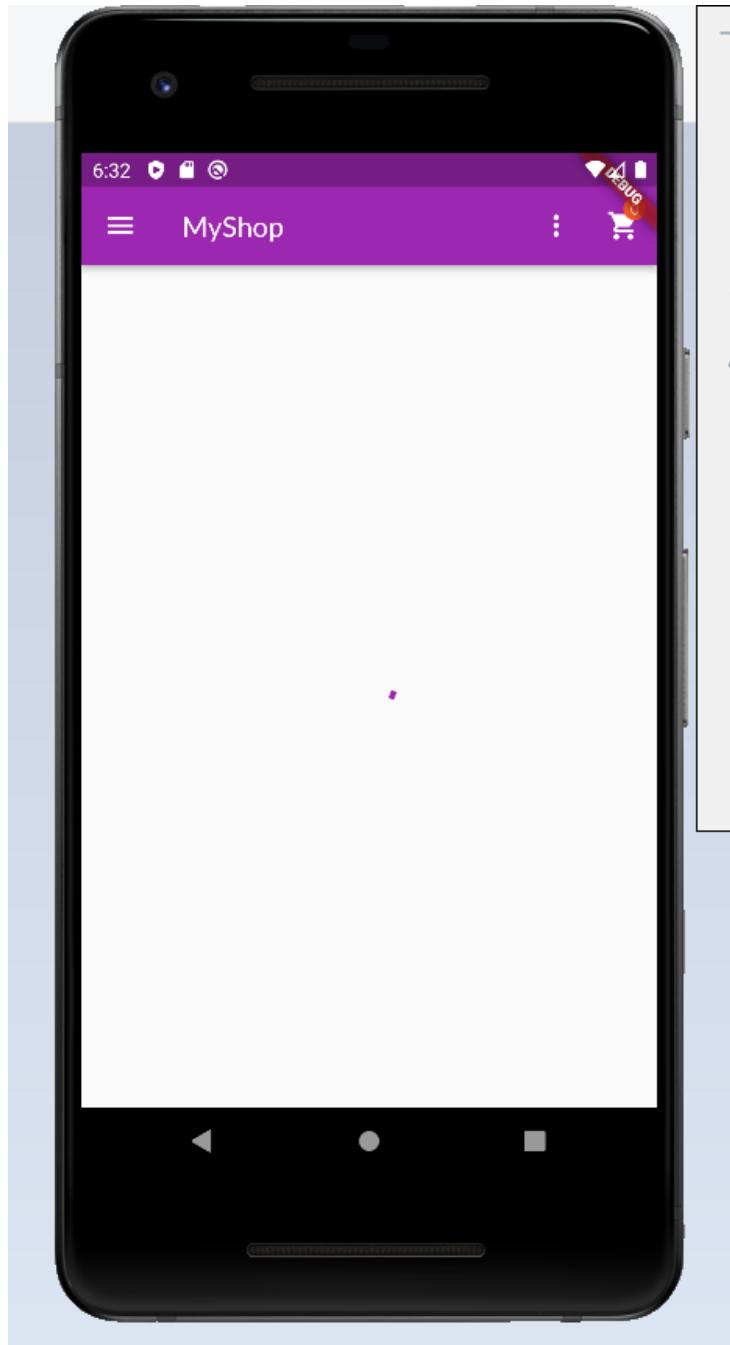
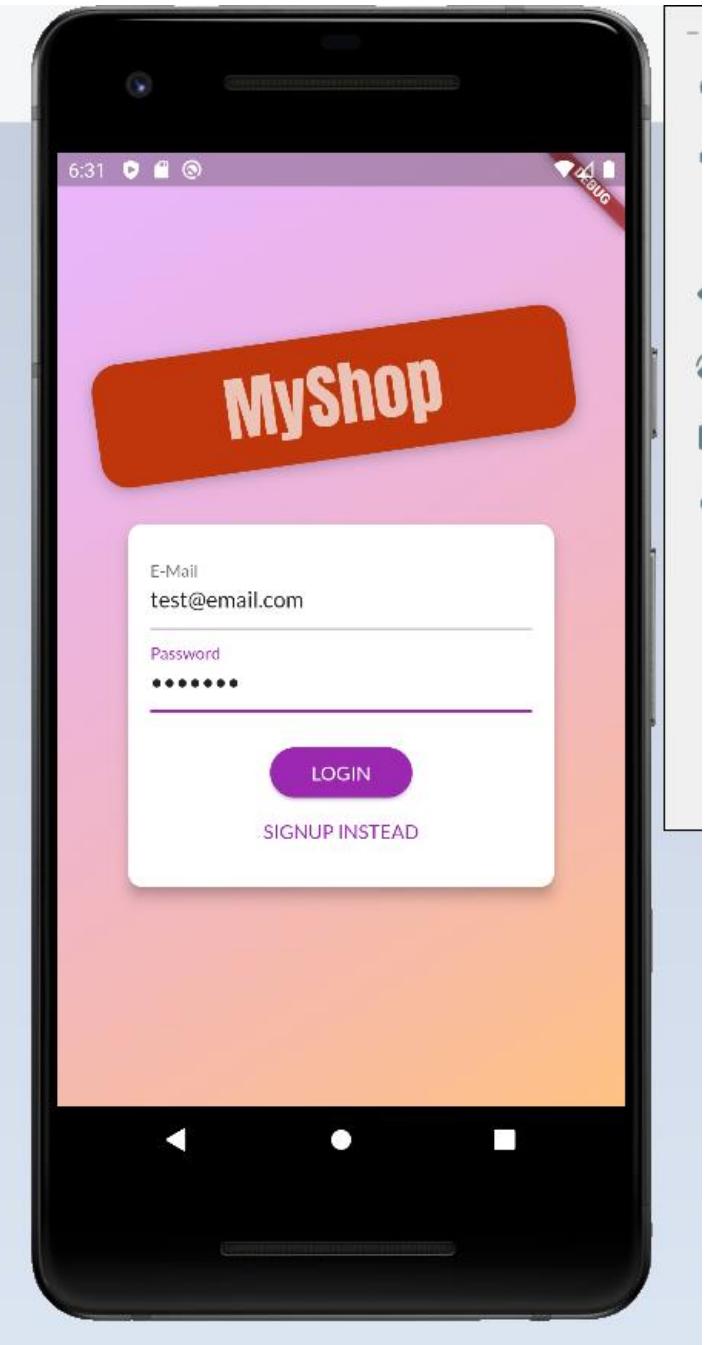
MYSHOP_08 orders_screen.dart product_detail_screen.d... products_overview_scre... user_products_screen.d... widgets app_drawer.dart badge.dart cart_item.dart order_item.dart product_item.dart products_grid.dart user_product_item.dart main.dart

test web .gitignore .metadata .packages analysis_options.yaml myshop_08.iml pubspec.lock pubspec.yaml README.md

OUTLINE DEPENDENCIES

Ln 54, Col 1 (742 selected) Spaces: 2 CRLF Dart Dart DevTools Flutter: 2.5.3 Flutter Emulator (android-x86 emulator) Prettier

```
34     ), // ChangeNotifierProvider
35   ],
36   child: Consumer<Auth>(
37     builder: (ctx, auth, _) => MaterialApp(
38       title: 'MyShop',
39       theme: ThemeData(
40         primarySwatch: Colors.purple,
41         accentColor: Colors.deepOrange,
42         fontFamily: 'Lato',
43       ), // ThemeData
44       home: auth.isAuthenticated ? ProductsOverviewScreen() : AuthScreen(),
45       routes: {
46         ProductDetailScreen.routeName: (ctx) => ProductDetailScreen(),
47         CartScreen.routeName: (ctx) => CartScreen(),
48         OrdersScreen.routeName: (ctx) => OrdersScreen(),
49         UserProductsScreen.routeName: (ctx) => UserProductsScreen(),
50         EditProductScreen.routeName: (ctx) => EditProductScreen(),
51       },
52     ), // MaterialApp
53   ), // Consumer
54 ); // MultiProvider
55 }
```



USING THE PROXYPROVIDER AND ATTACHING THE TOKEN TO OUTGOING

File Edit Selection View Go Run Terminal Help products.dart - myshop_08 - Visual Studio Code

auth_screen.dart auth.dart http_exception.dart main.dart 1 orders.dart products.dart X

lib > providers > products.dart > Products

```
39     //    price: 49.99,
40     //    imageUrl:
41     //        '
42     // \),
43 \];
44 final String authToken;
45
46 Products\(this.authToken, this.\_items\);
47
48 List<Product> get items {
49     return \[...\_items\];
50 }
51
52 List<Product> get favoriteItems {
53     return \_items.where\(\(prodItem\) => prodItem.isFavorite\).toList\(\);
54 }
55
56 Product findById\(String id\) {
57     return \_items.firstWhere\(\(prod\) => prod.id == id\);
58 }
59
60 Future<void> fetchAndSetProducts\(\) async {
```

Debug my code Ln 47, Col 1 (71 selected) Spaces: 2 CRLF Dart Dart DevTools Flutter: 2.5.3 Flutter Emulator (android-x86 emulator) Prettier

File Edit Selection View Go Run Terminal Help products.dart - myshop_08 - Visual Studio Code

auth_screen.dart auth.dart http_exception.dart main.dart 1 orders.dart products.dart

lib > providers > products.dart > Products > fetchAndSetProducts

```
49     return [..._items];
50 }
51
52 List<Product> get favoriteItems {
53     return _items.where((prodItem) => prodItem.isFavorite).toList();
54 }
55
56 Product findById(String id) {
57     return _items.firstWhere((prod) => prod.id == id);
58 }
59
60 Future<void> fetchAndSetProducts() async {
61     final url =
62         'https://belajar-flutter-61e82-default-firebase.com/products.json?auth=$authToken';
63     try {
64         final response = await http.get(Uri.parse(url));
65         final extractedData = json.decode(response.body) as Map<String, dynamic>;
66         if (extractedData == null) {
67             return;
68         }
69         final List<Product> loadedProducts = [];
70         extractedData.forEach((prodId, prodData) {
```

Ln 63, Col 1 (117 selected) Spaces: 2 CRLF Dart Dart DevTools Flutter: 2.5.3 Flutter Emulator (android-x86 emulator) Prettier

File Edit Selection View Go Run Terminal Help main.dart - myshop_08 - Visual Studio Code

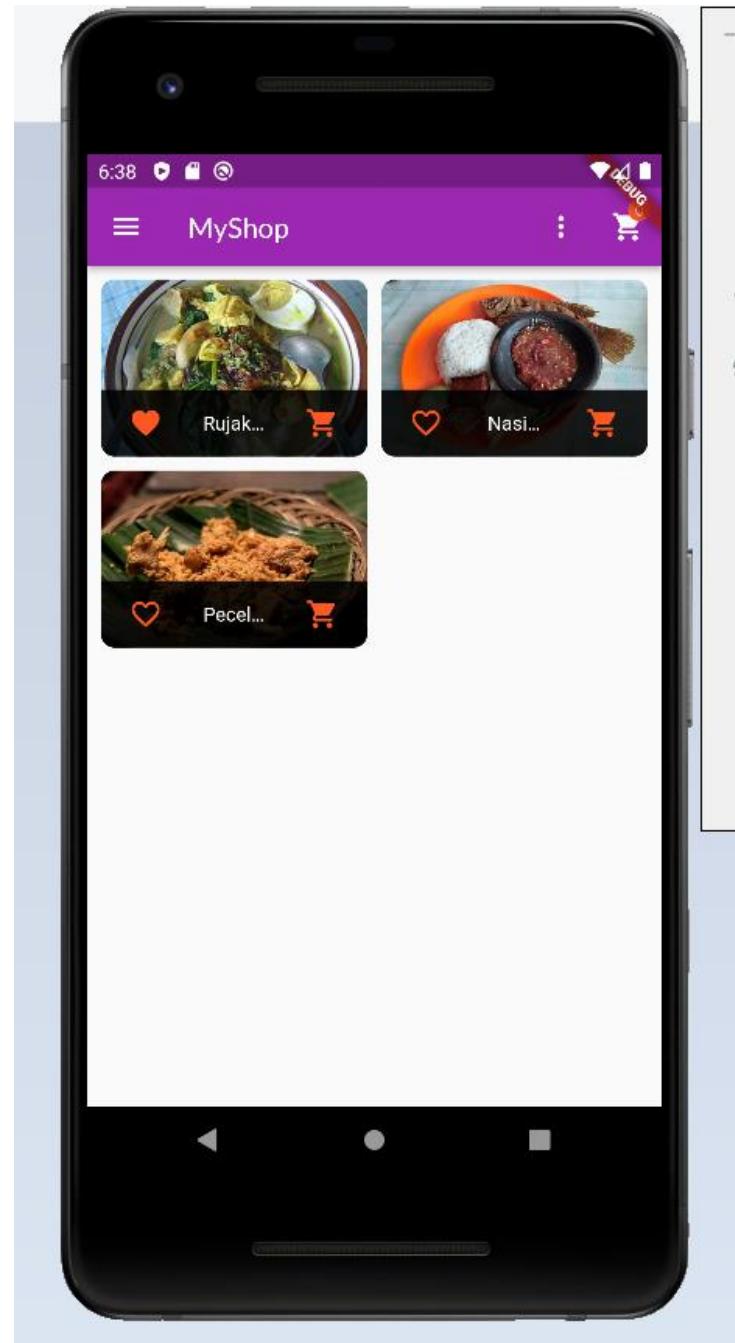
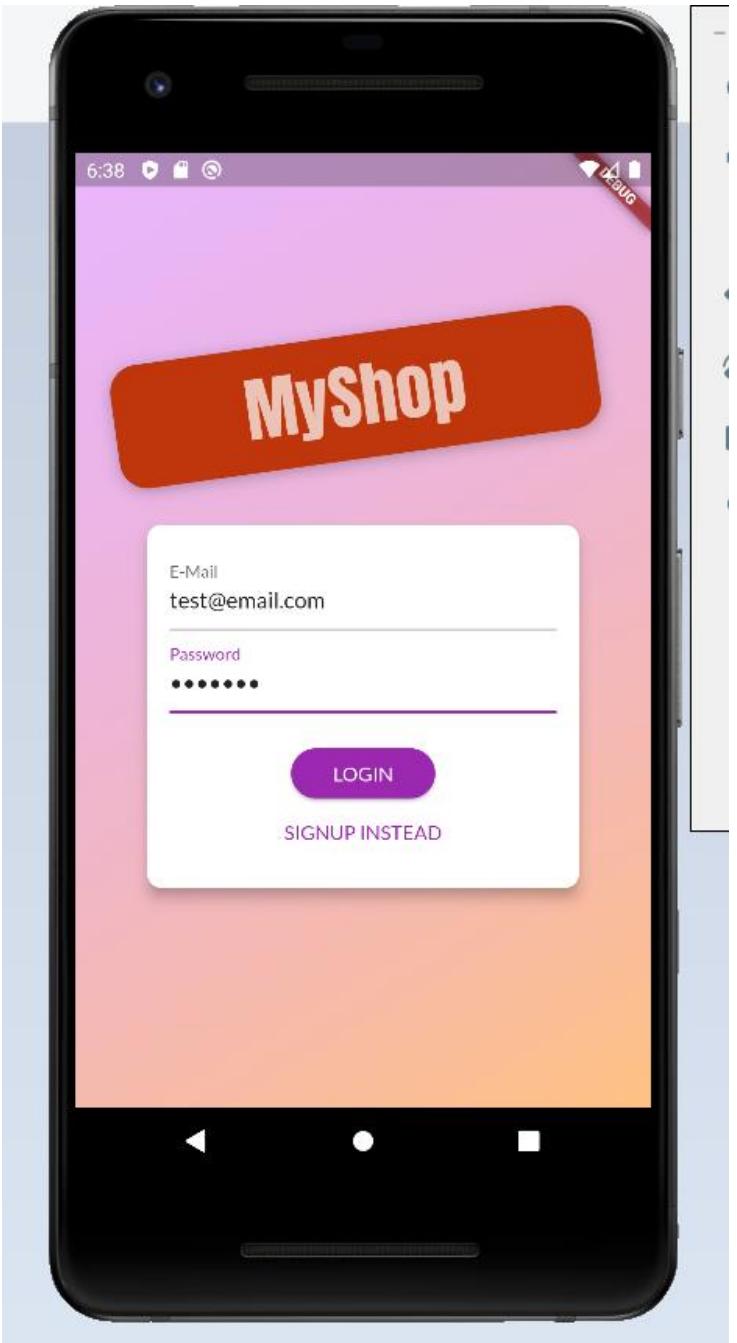
auth_screen.dart auth.dart http_exception.dart main.dart orders.dart products.dart

lib > main.dart > MyApp > build

```
16 void main() => runApp(MyApp());  
17  
18 class MyApp extends StatelessWidget {  
19     @override  
20     Widget build(BuildContext context) {  
21         return MultiProvider(  
22             providers: [  
23                 ChangeNotifierProvider(  
24                     create: (ctx) => Auth(),  
25                 ), // ChangeNotifierProvider  
26                 ChangeNotifierProxyProvider<Auth, Products>(  
27                     update: (ctx, auth, previousProducts) => Products(  
28                         auth.token,  
29                         previousProducts == null ? [] : previousProducts.items,  
30                     ), // Products  
31                 ), // ChangeNotifierProxyProvider  
32                 ChangeNotifierProvider(  
33                     create: (ctx) => Cart(),  
34                 ), // ChangeNotifierProvider  
35                 ChangeNotifierProvider(  
36                     create: (ctx) => Orders(),  
37                 ), // ChangeNotifierProvider
```

Debug my code

Ln 32, Col 1 (236 selected) Spaces: 2 CRLF Dart Dart DevTools Flutter: 2.5.3 Flutter Emulator (android-x86 emulator) Prettier



ADDING TOKEN TO ALL REQUESTS

A screenshot of the Visual Studio Code interface showing a Dart file named `products.dart`. The code implements a `ProductService` class with a `addProduct` method. The method uses `http` to post data to a Firebase Realtime Database endpoint. A yellow warning icon is present on line 88, indicating a potential issue with the URL string.

```
File Edit Selection View Go Run Terminal Help products.dart - myshop_08 - Visual Studio Code
auth_screen.dart auth.dart http_exception.dart main.dart 1 orders.dart products.dart
lib > providers > products.dart > Products > addProduct
82     } catch (error) {
83         throw error;
84     }
85 }
86
87 Future<void> addProduct(Product product) async {
88     final url =
89     'https://belajar-flutter-61e82-default-firebase.com.firebaseio.com/products.json?auth=$authToken';
90     try {
91         final response = await http.post(
92             Uri.parse(url),
93             body: json.encode({
94                 'title': product.title,
95                 'description': product.description,
96                 'imageUrl': product.imageUrl,
97                 'price': product.price,
98                 'isFavorite': product.isFavorite,
99             })),
100    );
101    final newProduct = Product(
102        title: product.title,
103        description: product.description,
```

Bottom status bar: Ln 90, Col 1 (117 selected) Spaces: 2 CRLF Dart Dart DevTools Flutter: 2.5.3 Flutter Emulator (android-x86 emulator) Prettier

File Edit Selection View Go Run Terminal Help products.dart - myshop_08 - Visual Studio Code

auth_screen.dart auth.dart http_exception.dart main.dart 1 orders.dart products.dart

lib > providers > products.dart > Products > updateProduct

```
108     _items.add(newProduct);
109     // _items.insert(0, newProduct); // at the start of the list
110     notifyListeners();
111 } catch (error) {
112     print(error);
113     throw error;
114 }
115 }

116 Future<void> updateProduct(String id, Product newProduct) async {
117     final prodIndex = _items.indexWhere((prod) => prod.id == id);
118     if (prodIndex >= 0) {
119         final url =
120         .... 'https://belajar-flutter-61e82-default-firebase.com/products/$id.json?auth=$authToken';
121         await http.patch(Uri.parse(url),
122             body: json.encode(
123                 {
124                     'title': newProduct.title,
125                     'description': newProduct.description,
126                     'imageUrl': newProduct.imageUrl,
127                     'price': newProduct.price
128                 }));
129         _items[prodIndex] = newProduct;
```

Ln 122, Col 1 (125 selected) Spaces: 2 CRLF Dart Dart DevTools Flutter: 2.5.3 Flutter Emulator (android-x86 emulator) Prettier

File Edit Selection View Go Run Terminal Help products.dart - myshop_08 - Visual Studio Code

auth_screen.dart auth.dart http_exception.dart main.dart 1 orders.dart products.dart

lib > providers > products.dart > Products > deleteProduct

```
125     'description': newProduct.description,
126     'imageUrl': newProduct.imageUrl,
127     'price': newProduct.price
128   }));
129   _items[prodIndex] = newProduct;
130   notifyListeners();
131 } else {
132   print('...');
133 }
134 }

136 Future<void> deleteProduct(String id) async {
137   final url =
138     'https://belajar-flutter-61e82-default-firebase.firebaseio.com/products/$id.json?auth=$authToken';
139   final existingProductIndex = _items.indexWhere((prod) => prod.id == id);
140   var existingProduct = _items[existingProductIndex];
141   _items.removeAt(existingProductIndex);
142   notifyListeners();
143   final response = await http.delete(Uri.parse(url));
144   if (response.statusCode >= 400) {
145     _items.insert(existingProductIndex, existingProduct);
146     notifyListeners();
147     throw HttpException('Could not delete product.');

```

Debug my code

Ln 139, Col 1 (121 selected) Spaces: 2 CRLF Dart Dart DevTools Flutter: 2.5.3 Flutter Emulator (android-x86 emulator) Prettier

auth_screen.dart

auth.dart

http_exception.dart

main.dart 1

orders.dart

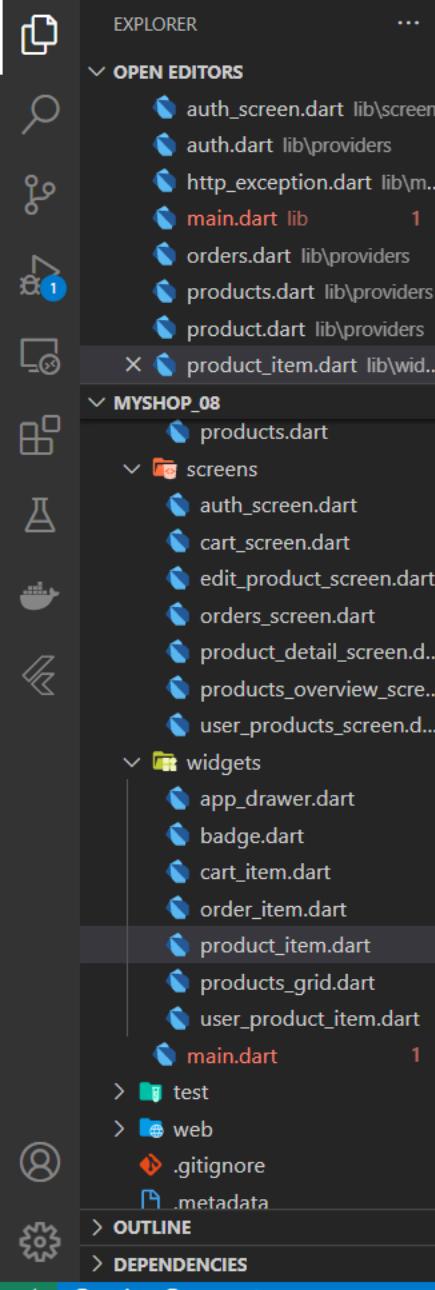
products.dart

product.dart X

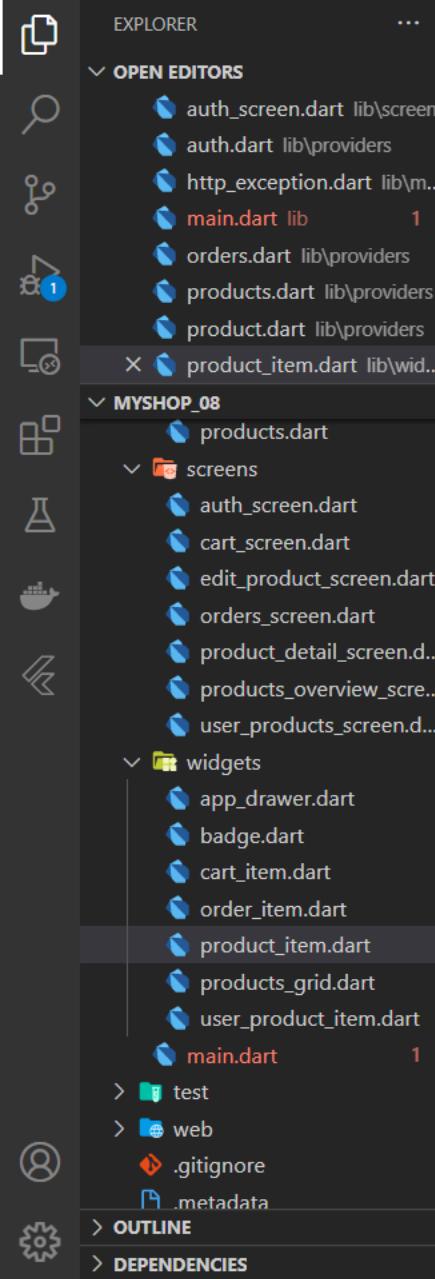


lib > providers > product.dart > Product > toggleFavoriteStatus

```
27
28 Future<void> toggleFavoriteStatus(String token) async {
29   final oldStatus = isFavorite;
30   isFavorite = !isFavorite;
31   notifyListeners();
32   final url =
33     'https://belajar-flutter-61e82-default-firebase.com/products/$id.json?auth=$token';
34   try {
35     final response = await http.patch(
36       Uri.parse(url),
37       body: json.encode({
38         'isFavorite': isFavorite,
39       }),
40     );
41     if (response.statusCode >= 400) {
42       _setFavValue(oldStatus);
43     }
44   } catch (error) {
45     _setFavValue(oldStatus);
46   }
47 }
48 }
```



```
3  
4 import '../providers/auth.dart';  
5 import '../providers/cart.dart';  
6 import '../providers/product.dart';  
7 import '../screens/product_detail_screen.dart';  
8  
9 class ProductItem extends StatelessWidget {  
10    // final String id;  
11    // final String title;  
12    // final String imageUrl;  
13  
14    // ProductItem(this.id, this.title, this.imageUrl);  
15  
16    @override  
17    Widget build(BuildContext context) {  
18        final product = Provider.of<Product>(context, listen: false);  
19        final cart = Provider.of<Cart>(context, listen: false);  
20        final authData = Provider.of<Auth>(context, listen: false);  
21        print('Product rebuild');  
22        return ClipRRect(  
23            borderRadius: BorderRadius.circular(10),  
24            child: GridTile(
```



```
lib > widgets > product_item.dart > ProductItem > build
  ...
  37   footer: GridTileBar(
  38     backgroundColor: Colors.black87,
  39     leading: Consumer<Product>(
  40       builder: (ctx, product, _) => IconButton(
  41         icon: Icon(
  42           product.isFavorite ? Icons.favorite : Icons.favorite_border,
  43         ), // Icon
  44         color: Theme.of(context).accentColor,
  45         onPressed: () {
  46           product.toggleFavoriteStatus(authData.token);
  47         },
  48       ), // IconButton
  49     ), // Consumer
  50     title: Text(
  51       product.title,
  52       textAlign: TextAlign.center,
  53     ), // Text
  54     trailing: IconButton(
  55       icon: Icon(
  56         Icons.shopping_cart,
  57       ), // Icon
  58       onPressed: () {
```

auth_screen.dart

auth.dart

http_exception.dart

main.dart 1

orders.dart 1 X

products.dart

lib > providers > orders.dart > Orders

```
11     final List<CartItem> products;
12     final DateTime dateTime;
13
14     OrderItem({
15         @required this.id,
16         @required this.amount,
17         @required this.products,
18         @required this.dateTime,
19     });
20 }
21
22 class Orders with ChangeNotifier {
23     List<OrderItem> _orders = [];
24     final String authToken;
25
26     Orders(this.authToken, this._orders);
27
28     List<OrderItem> get orders {
29         return [..._orders];
30     }
31
32     Future<void> addOrder(List<CartItem> cartProducts, double total) async {
```

File Edit Selection View Go Run Terminal Help orders.dart - myshop_08 - Visual Studio Code

auth_screen.dart auth.dart http_exception.dart main.dart 1 orders.dart products.dart

lib > providers > orders.dart > Orders > addOrder

```
26     Orders(this.authToken, this._orders),
27
28     List<OrderItem> get orders {
29         return [..._orders];
30     }
31
32     Future<void> addOrder(List<CartItem> cartProducts, double total) async {
33         final url =
34             'https://belajar-flutter-61e82-default-firebase.com/orders.json?auth=$authToken';
35         final timestamp = DateTime.now();
36         final response = await http.post(
37             Uri.parse(url),
38             body: json.encode({
39                 'amount': total,
40                 'dateTime': timestamp.toIso8601String(),
41                 'products': cartProducts
42                     .map((cp) => {
43                         'id': cp.id,
44                         'title': cp.title,
45                         'quantity': cp.quantity,
46                         'price': cp.price,
47                     })
48                     .toList(),
49             }));
50         if (response.statusCode == 200) {
51             final Map<String, dynamic> data = json.decode(response.body);
52             final Map<String, OrderItem> newOrders = data.map((key, value) {
53                 final id = key;
54                 final quantity = value['quantity'];
55                 final title = value['title'];
56                 final price = value['price'];
57                 final id2 = value['id'];
58                 final OrderItem item = OrderItem(id: id, title: title, quantity: quantity, price: price);
59                 return MapEntry(id, item);
60             });
61             _orders = newOrders.values.toList();
62             _notify();
63         } else {
64             throw Exception('Failed to add order');
65         }
66     }
67 }
```

Debug my code

Ln 35, Col 1 (115 selected) Spaces: 2 UTF-8 CRLF Dart Dar Untitled - Notepad 2.5.3 Flutter Emulator (android-x86 emulator) Prettier

File Edit Selection View Go Run Terminal Help orders.dart - myshop_08 - Visual Studio Code

auth_screen.dart auth.dart http_exception.dart main.dart 1 orders.dart products.dart

lib > providers > orders.dart > Orders > fetchAndSetOrders

```
58     ),
59 );
60     notifyListeners();
61 }
62
63 Future<void> fetchAndSetOrders() async {
64     final url =
65     'https://belajar-flutter-61e82-default-firebase.com/orders.json?auth=$authToken';
66     final response = await http.get(Uri.parse(url));
67     final List<OrderItem> loadedOrders = [];
68     final extractedData = json.decode(response.body) as Map<String, dynamic>;
69     if (extractedData == null) {
70         return;
71     }
72     extractedData.forEach((orderId, orderData) {
73         loadedOrders.add(
74             OrderItem(
75                 id: orderId,
76                 amount: orderData['amount'],
77                 dateTime: DateTime.parse(orderData['dateTime']),
78                 products: (orderData['products'] as List<dynamic>)
79                     .map(
80                         (item) =>
```

Ln 66, Col 1 (115 selected) Spaces: 2 CRLF Dart Dart DevTools Flutter: 2.5.3 Flutter Emulator (android-x86 emulator) Prettier

auth_screen.dart

auth.dart

http_exception.dart

main.dart X

orders.dart

products.dart

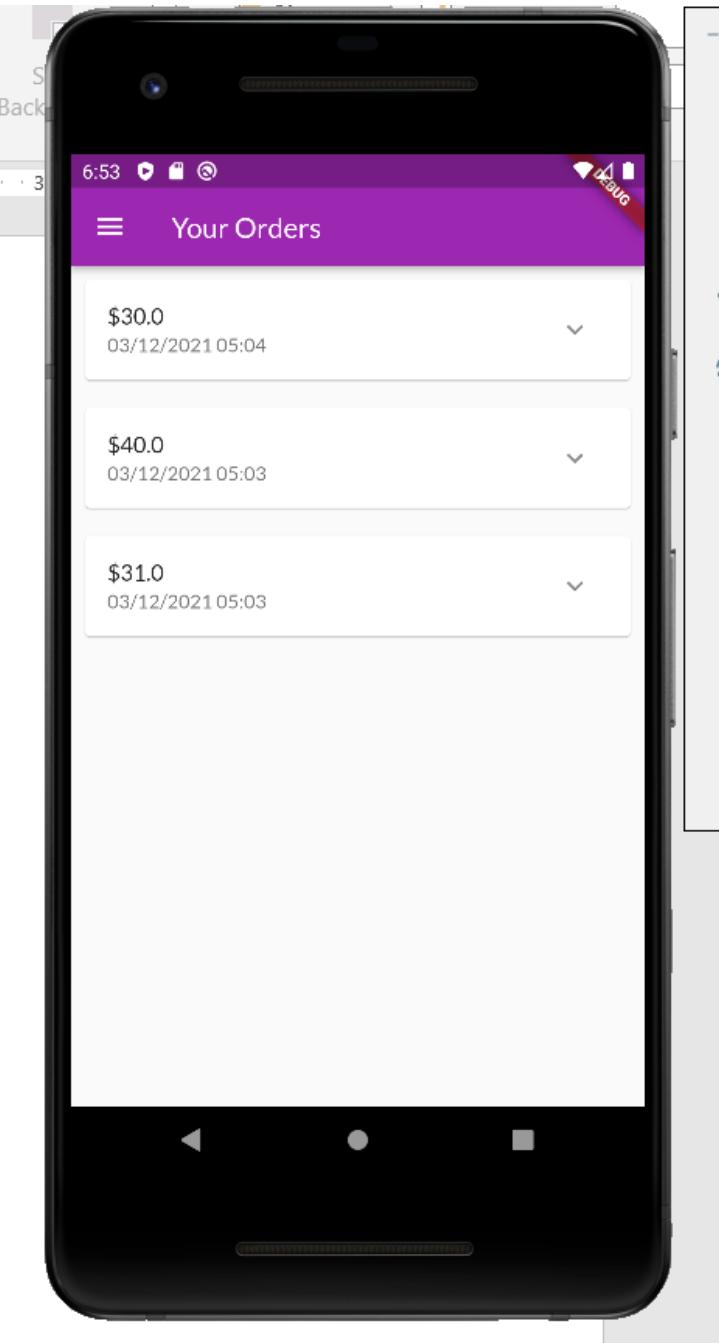
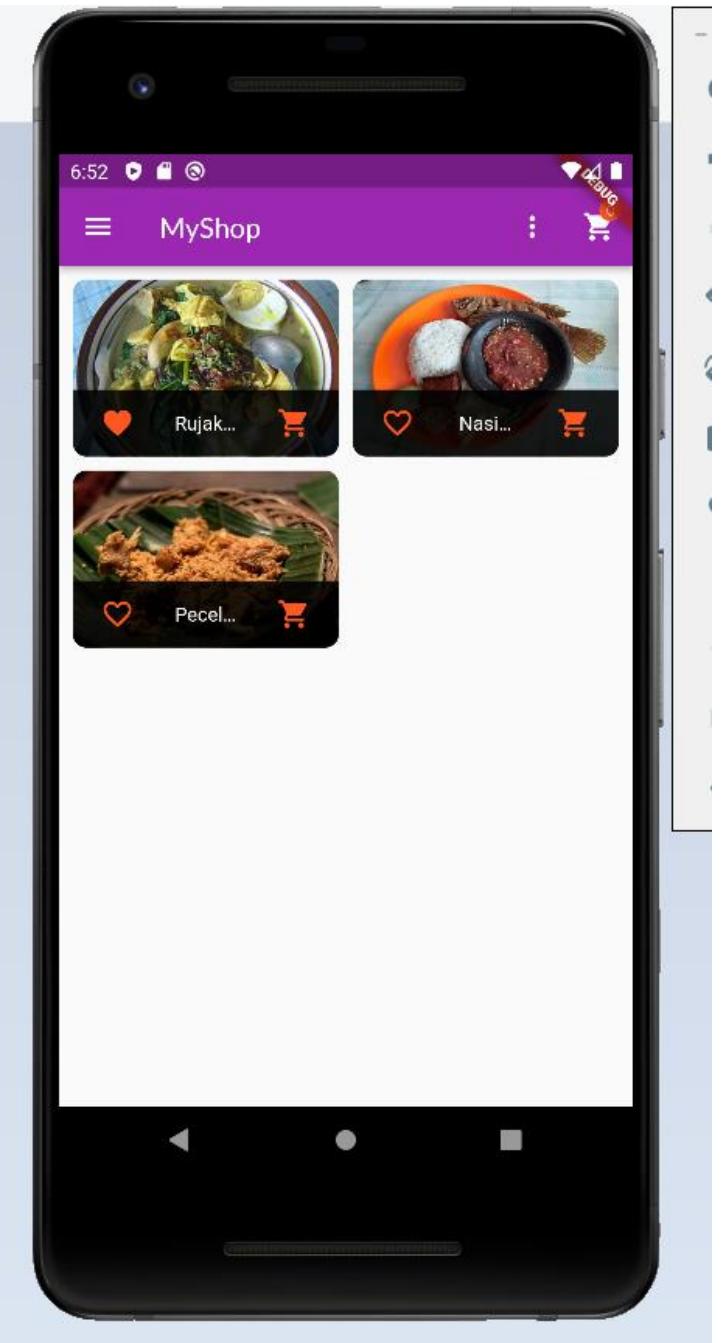
product.dart

product_item.dart



lib > main.dart > MyApp > build

```
24         create: (ctx) => Auth(),
25     ), // ChangeNotifierProvider
26     ChangeNotifierProxyProvider<Auth, Products>(
27         update: (ctx, auth, previousProducts) => Products(
28             auth.token,
29             previousProducts == null ? [] : previousProducts.items,
30         ), // Products
31     ), // ChangeNotifierProxyProvider
32     ChangeNotifierProvider(
33         create: (ctx) => Cart(),
34     ), // ChangeNotifierProvider
35     ChangeNotifierProxyProvider<Auth, Orders>(
36         update: (ctx, auth, previousOrders) => Orders(
37             auth.token,
38             previousOrders == null ? [] : previousOrders.orders,
39         ), // Orders
40     ), // ChangeNotifierProxyProvider
41     ],
42     child: Consumer<Auth>(
43         builder: (ctx, auth, _) => MaterialApp(
44             title: 'MyShop',
45             theme: ThemeData(
```



CONNECTING THE FAVORITE STATUS TO USERS

auth_screen.dart

auth.dart

http_exception.dart

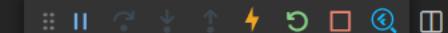
main.dart

orders.dart

products.dart

product.dart

product_item.dart



lib > providers > auth.dart > Auth

```
10  String _userId;
11
12  bool get isAuth {
13    return token != null;
14  }
15
16  String get token {
17    if (_expiryDate != null &&
18        _expiryDate.isAfter(DateTime.now()) &&
19        _token != null) {
20      return _token;
21    }
22    return null;
23  }
24
25  String get userId {
26    return _userId;
27  }
28
29  Future<void> _authenticate(
30    String email, String password, String urlSegment) async {
31    final url =
```

auth_screen.dart

auth.dart

http_exception.dart

main.dart

orders.dart

products.dart

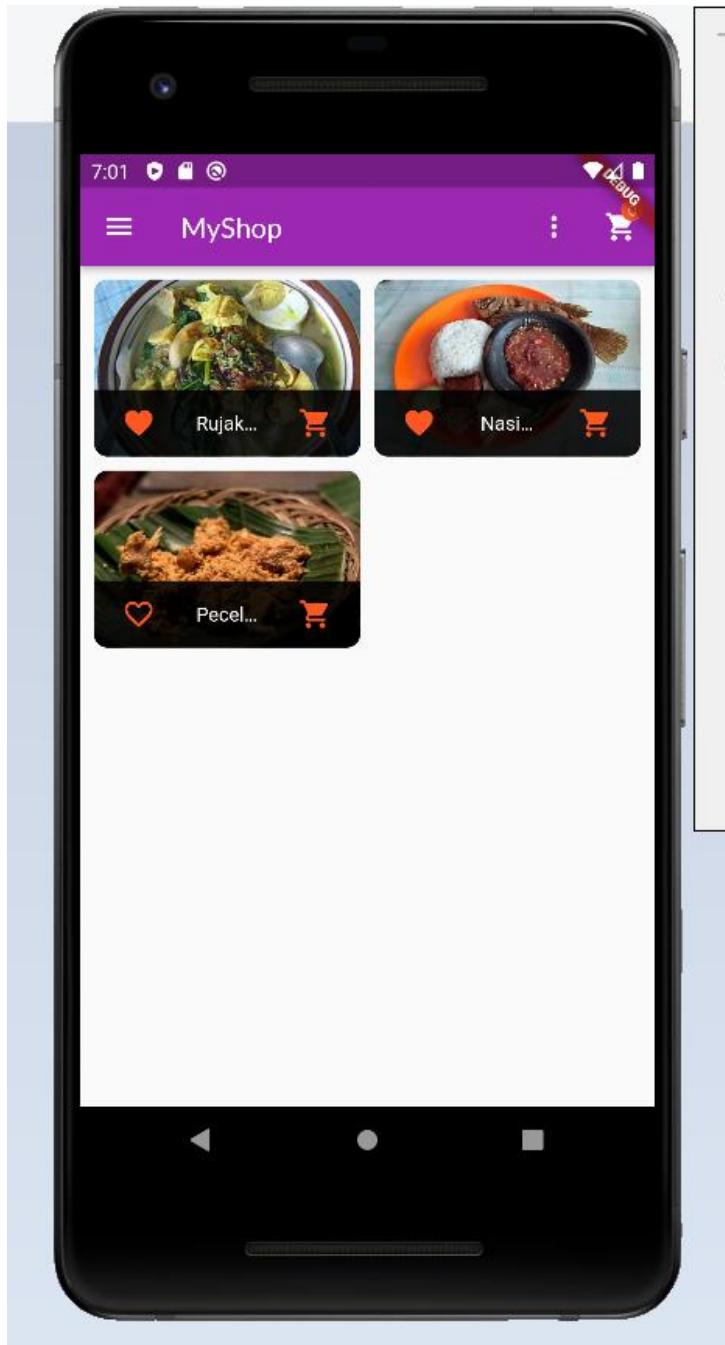
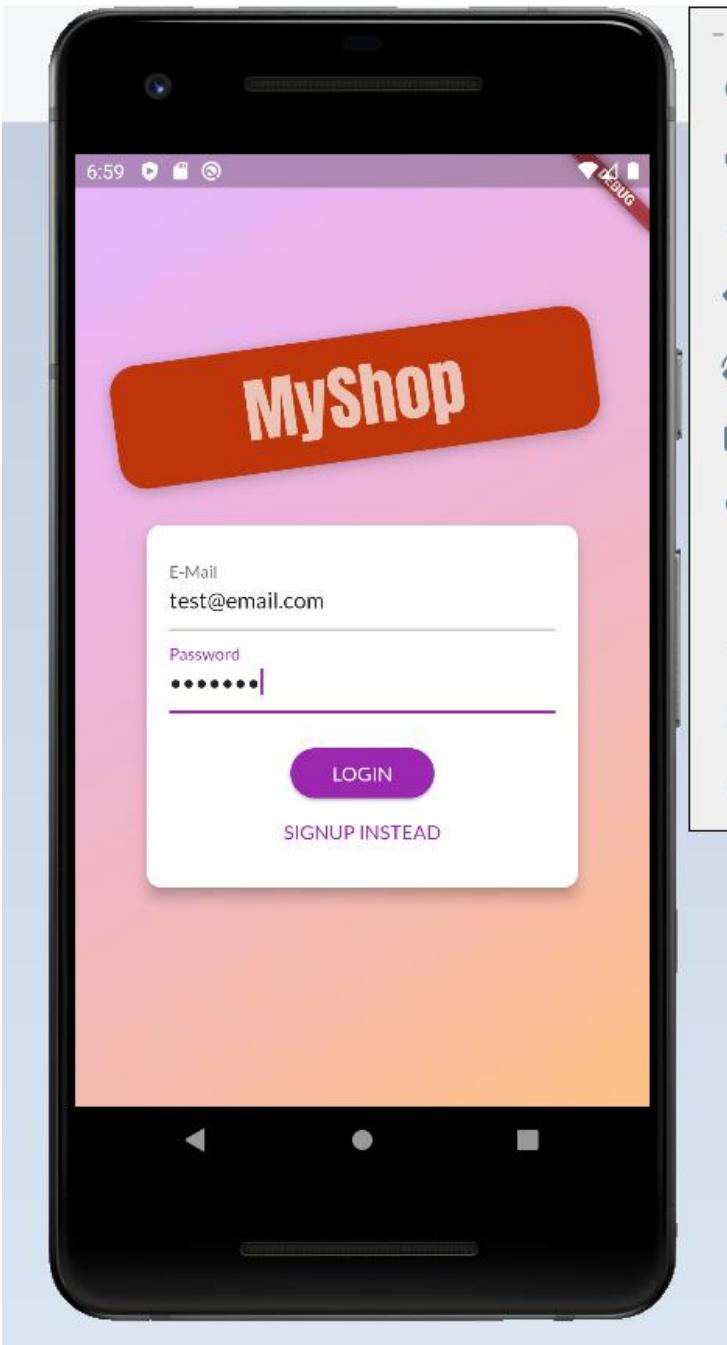
product.dart X

product_item.dart



lib > providers > product.dart > Product > toggleFavoriteStatus

```
26  
27  
28 <void> toggleFavoriteStatus(String token, String userId) async {  
29   l.oldStatus = isFavorite;  
30   vorite = !isFavorite;  
31   fyListeners();  
32   l.url =  
33   'https://belajar-flutter-61e82-default-firebase.com/userFavorites/\$userId/\$id.json?auth=\$token';  
34   {  
35     nal response = await http.patch(  
36       Uri.parse(url),  
37       body: json.encode(  
38         {'isFavorite': isFavorite,  
39       }),  
40     );  
41     if (response.statusCode >= 400) {  
42       _setFavValue(oldStatus);  
43     }  
44     catch (error) {  
45       etFavValue(oldStatus);  
46     }  
47   }
```

belajar-flutter - Firebase console +

https://console.firebaseio.google.com/u/0/project/belajar-flutter-61e82/database/belajar-flutter-61e82-default-rtdb/data

Firebase

Project Overview

Build

- Authentication
- Firebase Database
- Realtime Database
- Storage
- Hosting
- Functions
- Machine Learning

Release & Monitor

Analytics

Engage

Spark

Free \$0/month

Upgrade

belajar-flutter ▾

Realtime Database

Data Rules Backups Usage

Protect your Realtime Database resources from abuse, such as billing fraud or phishing Configure App Check

https://belajar-flutter-61e82-default-rtbd.firebaseio.com/ + - ⋮

belajar-flutter-61e82-default-rtbd

- orders
- products
- userFavorites
 - 6SstwtB1pyPaC7UqhGhUnu782qT2
 - MpsNya6SuJLvayJbw35
 - isFavorite: true
 - MpsQmKiMhZfw6iWngOm + x
 - isFavorite: true

Database location: United States (us-central1)

auth_screen.dart

auth.dart

http_exception.dart

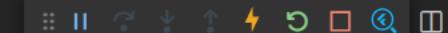
main.dart

orders.dart

products.dart X

product.dart

product_item.dart



lib > providers > products.dart > Products > addProduct

```
84     }
85   }
86
87   Future<void> addProduct(Product product) async {
88     final url =
89       'https://belajar-flutter-61e82-default-firebase.com.firebaseio.com/products.json?auth=$authToken';
90     try {
91       final response = await http.post(
92         Uri.parse(url),
93         body: json.encode({
94           'title': product.title,
95           'description': product.description,
96           'imageUrl': product.imageUrl,
97           'price': product.price,
98         )),
99     );
100    final newProduct = Product(
101      title: product.title,
102      description: product.description,
103      price: product.price,
104      imageUrl: product.imageUrl,
105      id: json.decode(response.body)[ 'name' ],
```

A screenshot of the Visual Studio Code interface showing a Dart file named `products.dart`. The code defines a class `Products` with methods for getting items, favorite items, and finding a product by ID. A specific URL is highlighted in the code.

```
// products.dart - myshop_08 - Visual Studio Code
File Edit Selection View Go Run Terminal Help
lib > providers > products.dart > Products
39     //    price: 49.99,
40     //    imageUrl:
41     //        'https://upload.wikimedia.org/wikipedia/commons/thumb/1/14/Cast-Iron-Pan.jpg/1024px-Cast-Iron
42     // ),
43 ];
44 final String authToken;
45 final String userId;
46
47 Products(this.authToken, this.userId, this._items);
48
49 List<Product> get items {
50   return [..._items];
51 }
52
53 List<Product> get favoriteItems {
54   return _items.where((prodItem) => prodItem.isFavorite).toList();
55 }
56
57 Product findById(String id) {
58   return _items.firstWhere((prod) => prod.id == id);
59 }
60
```

The status bar at the bottom shows the following information: Line 45, Column 1 (81 selected), Spaces: 2, CRLF, Dart, Dart DevTools, Flutter: 2.5.3, Flutter Emulator (android-x86 emulator), Prettier, and a few other icons.

File Edit Selection View Go Run Terminal Help products.dart - myshop_08 - Visual Studio Code

auth_screen.dart auth.dart http_exception.dart main.dart 2 orders.dart products.dart X product.dart product_item.dart

lib > providers > products.dart > Products

```
60
61 Future<void> fetchAndSetProducts([bool filterByUser = false]) async {
62   final filterString =
63     filterByUser ? 'orderBy="creatorId"&equalTo="$userId"' : '';
64   var url =
65     'https://belajar-flutter-61e82-default-firebase.com/products.json?auth=$authToken&$filterString';
66   try {
67     final response = await http.get(Uri.parse(url));
68     final extractedData = json.decode(response.body) as Map<String, dynamic>;
69     if (extractedData == null) {
70       return;
71     }
72     url =
73       'https://flutter-update.firebaseio.com/userFavorites/$userId.json?auth=$authToken';
74     final favoriteResponse = await http.get(Uri.parse(url));
75     final favoriteData = json.decode(favoriteResponse.body);
76     final List<Product> loadedProducts = [];
77     extractedData.forEach((prodId, prodData) {
78       loadedProducts.add(Product(
79         id: prodId,
80         title: prodData['title'],
81         description: prodData['description'],
82       );
83     });
84     setState(() {
85       products = loadedProducts;
86     });
87   } catch (e) {
88     print(e);
89   }
90 }
```

Ln 94, Col 1 (1307 selected) Spaces: 2 UTF-8 CRLF Dart Dar Untitled - Notepad 2.5.3 Flutter Emulator (android-x86 emulator) Prettier



auth_screen.dart auth.dart http_exception.dart main.dart 2 orders.dart products.dart X product.dart product_item.dart

```
lib > providers > products.dart > Products
    final favoritedData = jsonDecode(response.body);
    final List<Product> loadedProducts = [];
    extractedData.forEach((prodId, prodData) {
        loadedProducts.add(Product(
            id: prodId,
            title: prodData['title'],
            description: prodData['description'],
            price: prodData['price'],
            isFavorite:
                favoriteData == null ? false : favoriteData[prodId] ?? false,
            imageUrl: prodData['imageUrl'],
        ));
    });
    _items = loadedProducts;
    notifyListeners();
} catch (error) {
    throw error;
}
}

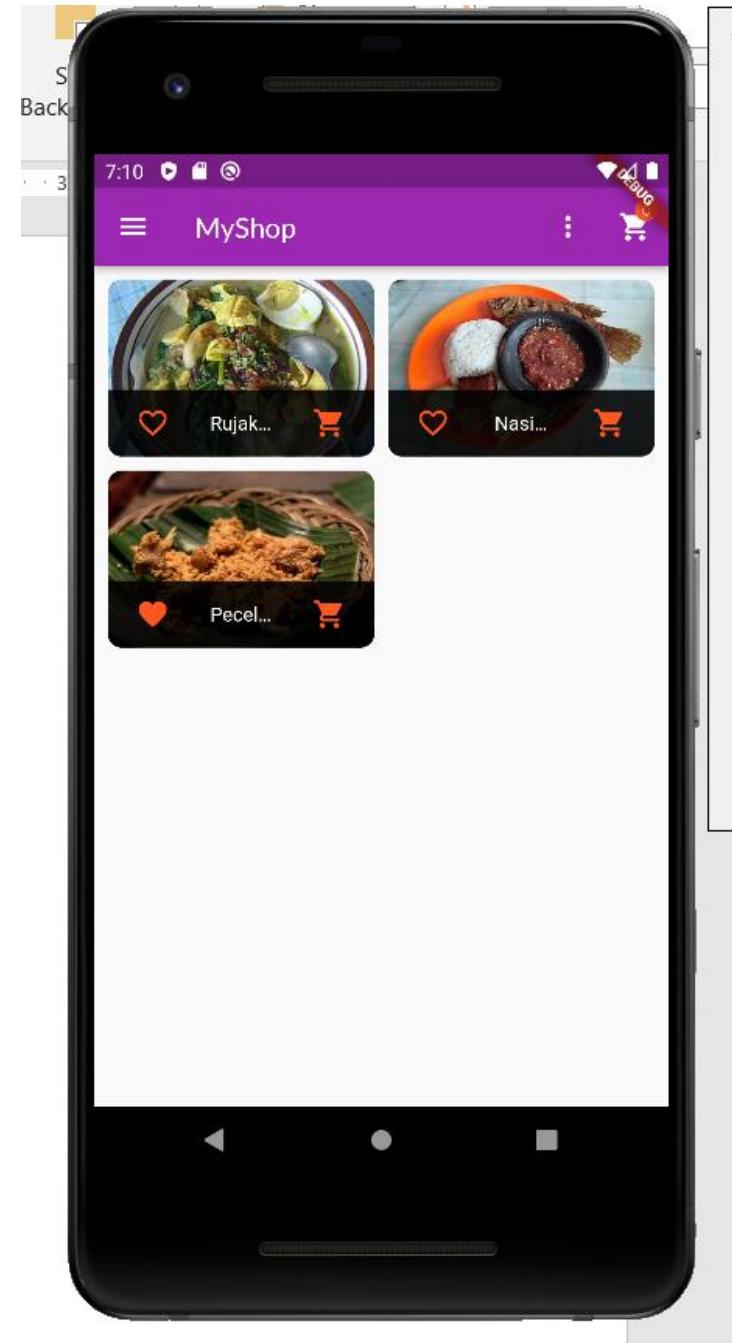
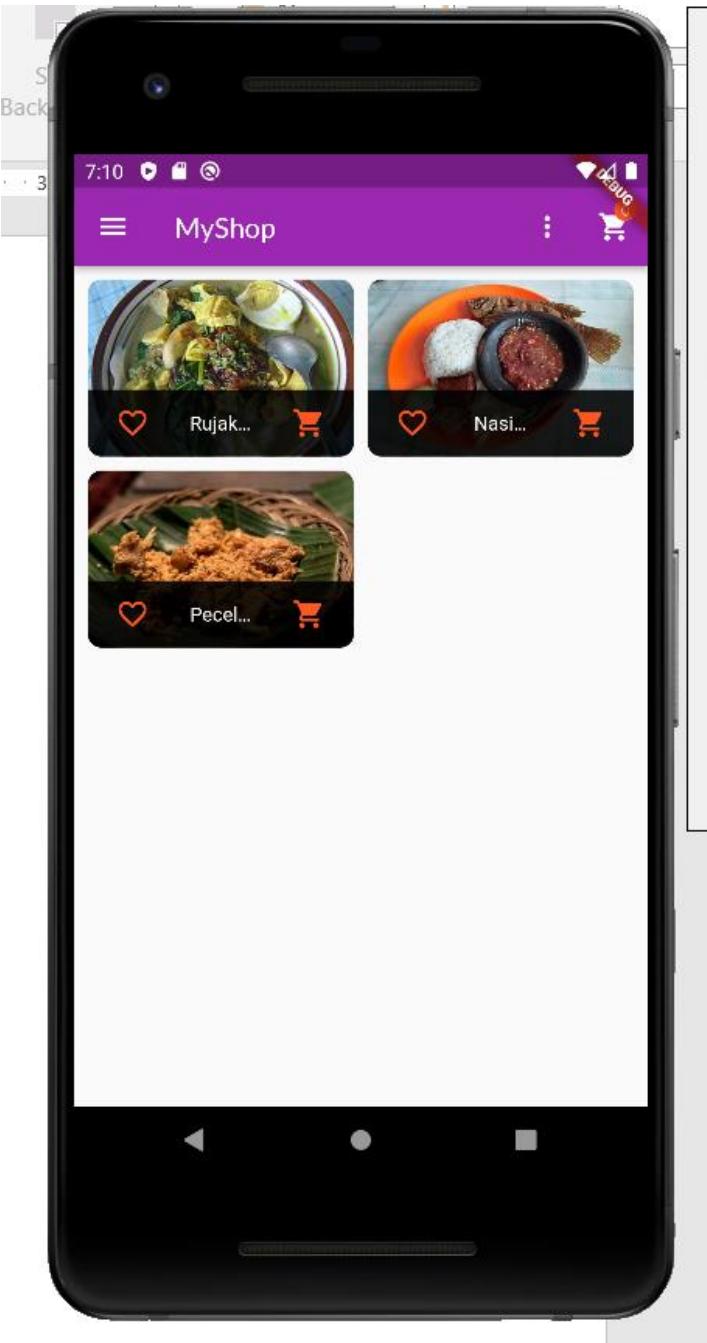
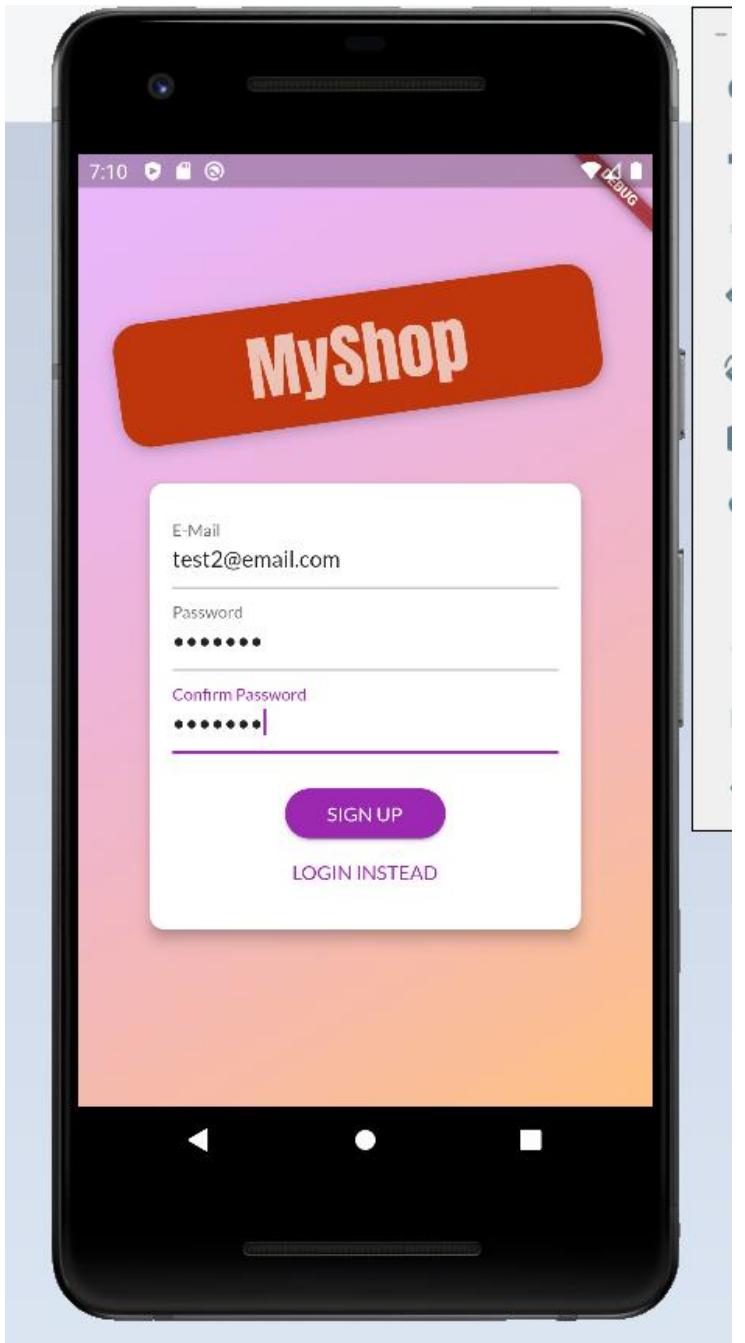
Future<void> addProduct(Product product) async {
    final url =
        'https://belajar-flutter-61e82-default-firebase.com/products.json?auth=$authToken';
```



```
auth_screen.dart auth.dart http_exception.dart main.dart orders.dart products.dart product.dart product_item.dart
```

lib > main.dart > MyApp > build

```
22     providers: [
23         ChangeNotifierProvider(
24             create: (ctx) => Auth(),
25         ), // ChangeNotifierProvider
26         ChangeNotifierProxyProvider<Auth, Products>(
27             update: (ctx, auth, previousProducts) => Products(
28                 auth.token,
29                 auth.userId,
30                 previousProducts == null ? [] : previousProducts.items,
31             ), // Products
32         ), // ChangeNotifierProxyProvider
33         ChangeNotifierProvider(
34             create: (ctx) => Cart(),
35         ), // ChangeNotifierProvider
36         ChangeNotifierProxyProvider<Auth, Orders>(
37             update: (ctx, auth, previousOrders) => Orders(
38                 auth.token,
39                 previousOrders == null ? [] : previousOrders.orders,
40             ), // Orders
41         ), // ChangeNotifierProxyProvider
42     ],
43     child: Consumer<Auth>(  
...
```



belajar-flutter - Firebase console +

https://console.firebaseio.google.com/u/0/project/belajar-flutter-61e82/database/belajar-flutter-61e82-default-rtbd/data

Firebase belajar-flutter Data Rules Backups usage Go to docs

Project Overview

Build

- Authentication
- Firestore Database
- Realtime Database
- Storage
- Hosting
- Functions
- Machine Learning

Release & Monitor

Analytics

Engage

Extensions

Spark Free \$0/month Upgrade

Protect your Realtime Database resources from abuse, such as billing fraud or phishing Configure App Check

https://belajar-flutter-61e82-default-rtbd.firebaseio.com/

```
title: "Nasi Tempong"
  -MpsWpFOzOTliRAtp46i
    description: "Pecel pitik adalah hidangan ayam khas suku Osin..."
    imageUrl: "https://cdn.idntimes.com/content-images/communi..."
    isFavorite: false
    price: 16
    title: "Pecel Pitik"

  userFavorites
    6SstwtB1pyPaC7UqhGhUnu782qT2
      -MpsNya6SuJLvayJbw35
        isFavorite: true
      -MpsQmKiMhZfw6iWngOm
        isFavorite: true
        ×
    kCmrTtYVMQPYsBOLnRZJy3fwldn2
      -MpsWpFOzOTliRAtp46i
        isFavorite: true
```

Database location: United States (us-central1)

The screenshot shows the Firebase Realtime Database interface. On the left, there's a sidebar with various project management sections like Authentication, Firestore Database, and Storage. The main area displays a hierarchical database structure under the root. At the top, there's a header with tabs for Data, Rules, Backups, and usage, along with links for Go to docs and a notification bell. Below the header, a banner encourages protecting against abuse. The database structure itself contains a node for 'title: "Nasi Tempong"' and a child node '-MpsWpFOzOTliRAtp46i' which contains several data fields. Underneath this, there's a 'userFavorites' node with two children: '6SstwtB1pyPaC7UqhGhUnu782qT2' and 'kCmrTtYVMQPYsBOLnRZJy3fwldn2'. Each of these children has a child node '-MpsNya6SuJLvayJbw35' and another child node '-MpsQmKiMhZfw6iWngOm', both of which have an 'isFavorite' field set to 'true'. A delete button is visible next to the second child node under 'userFavorites'. At the bottom of the database view, it says 'Database location: United States (us-central1)'.

ATTACHING PRODUCTS TO USERS AND FILTERING BY CREATOR

auth_screen.dart

auth.dart

http_exception.dart

main.dart

orders.dart

products.dart X

product.dart

product_item.dart

```
lib > providers > products.dart > Products > addProduct
93     }
94
95     Future<void> addProduct(Product product) async {
96         final url =
97             'https://belajar-flutter-61e82-default-firebase.com.firebaseio.com/products.json?auth=$authToken';
98         try {
99             final response = await http.post(
100                 Uri.parse(url),
101                 body: json.encode({
102                     'title': product.title,
103                     'description': product.description,
104                     'imageUrl': product.imageUrl,
105                     'price': product.price,
106                     'creatorId': userId,
107                 }),
108             );
109             final newProduct = Product(
110                 title: product.title,
111                 description: product.description,
112                 price: product.price,
113                 imageUrl: product.imageUrl,
114                 id: json.decode(response.body)[ 'name' ],
115             );
}
```

belajar-flutter – Firebase console +

https://console.firebaseio.google.com/u/0/project/belajar-flutter-61e82/database/belajar-flutter-61e82-default-rtdb/rules

Firebase

Project Overview

Build

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- Realtime Database
- Storage
- Hosting
- Functions
- Machine Learning

Release & Monitor

Analytics

Engage

Extensions

Spark

Free \$0/month

Upgrade

belajar-flutter ▾

Realtime Database

Data Rules Backups Usage

Edit rules Monitor rules

Rules Playground

```
1  {
2    "rules": {
3      ".read": "auth != null",
4      ".write": "auth != null",
5      "products" : {
6        ".indexOn": [ "creatorId" ],
7      }
8    }
9 }
```

File Edit Selection View Go Run Terminal Help products.dart - myshop_08 - Visual Studio Code

auth_screen.dart auth.dart http_exception.dart main.dart orders.dart products.dart X product.dart product_item.dart

lib > providers > products.dart > Products

```
60
61 Future<void> fetchAndSetProducts([bool filterByUser = false]) async {
62   final urlString =
63     filterByUser ? 'orderBy="creatorId"&equalTo="$userId"' : '';
64   var url =
65     'https://belajar-flutter-61e82-default-firebase.com/products.json?auth=$authToken$filterString';
66   try {
67     final response = await http.get(Uri.parse(url));
68     final extractedData = json.decode(response.body) as Map<String, dynamic>;
69     if (extractedData == null) {
70       return;
71     }
72     url =
73       'https://flutter-update.firebaseio.com/userFavorites/$userId.json?auth=$authToken';
74     final favoriteResponse = await http.get(Uri.parse(url));
75     final favoriteData = json.decode(favoriteResponse.body);
76     final List<Product> loadedProducts = [];
77     extractedData.forEach((prodId, prodData) {
78       loadedProducts.add(Product(
79         id: prodId,
80         title: prodData['title'],
81         description: prodData['description'],
82       );
83     });
84     setState(() {
85       products = loadedProducts;
86     });
87   } catch (e) {
88     print(e);
89   }
90 }
```

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```
lib > providers > products.dart > Products
    final List<Product> loadedProducts = [];
    extractedData.forEach((prodId, prodData) {
        loadedProducts.add(Product(
            id: prodId,
            title: prodData['title'],
            description: prodData['description'],
            price: prodData['price'],
            isFavorite:
                favoriteData == null ? false : favoriteData[prodId] ?? false,
            imageUrl: prodData['imageUrl'],
        ));
    });
    _items = loadedProducts;
    notifyListeners();
} catch (error) {
    throw error;
}
}

Future<void> addProduct(Product product) async {
    final url =
        'https://belajar-flutter-61e82-default-firebaseio.com/products.json?auth=$authToken';
```

