

Experiment No : 8

Aim: To connect flutter UI with firebase database.

Theory:

Create a Firebase project

After setting up & creating a simple Flutter app, navigate to Firebase Official website

1. Click on **Get started**.
2. Create a new project by tapping on the **Add project** box.
3. Enter the **Project name** & select **Analytics location**.
Analytics location represents the country/region of your organization and sets the currency for revenue reporting.
4. Tap on **Create project**. Following this, Firebase will set up a new project for you. This will take just a minute.
5. After the project is created successfully, Firebase will show a prompt saying **Your new project is ready**. Click on **Continue** to complete the flow.

Configure an Android app

1. In the **Add an app to get started** section, click on **Android** Icon to add an Android app to Firebase.
2. On the next screen, enter your **Android package name** & **App nickname** and click on **Register App**. Your package name is generally the **applicationId** in your app-level **build.gradle** file. If specified, the app nickname will be used throughout the Firebase console to represent this app. Nicknames aren't visible to users.
3. Download the **google-services.json** file & place it in your project's **app** root directory. Make sure the config file is not appended with additional characters, like **(2)**.
4. The Google services plugin for [Gradle](#) loads the **google-services.json** file you just downloaded. Modify your **build.gradle** files to use the plugin.
5. Back in the Firebase console-setup workflow, click **Next** to skip the remaining steps.

6. Run `flutter packages get`.

Code:

Main.dart

```
// @dart=2.9
import 'package:flutter/material.dart';
import 'package:firebase_core/firebase_core.dart';
import 'welcome_screen.dart';
import 'home_screen.dart';
import 'signup_screen.dart';
import 'login_screen.dart';

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

class MyApp extends StatelessWidget {
  // This widget is the root of your application.
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      initialRoute: 'welcome_screen',
      routes: {
        'welcome_screen': (context) => WelcomeScreen(),
        'registration_screen': (context) => RegistrationScreen(),
        'login_screen': (context) => LoginScreen(),
        'home_screen': (context) => HomeScreen()
      },
    );
  }
}
```

Welcome_screen.dart

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

class WelcomeScreen extends StatefulWidget {
  @override
  _WelcomeScreenState createState() => _WelcomeScreenState();
}

class _WelcomeScreenState extends State<WelcomeScreen> {
  @override
  Widget build(BuildContext context) {
    return Scaffold(
      backgroundColor: Colors.white,
      body: Padding(
        padding: EdgeInsets.symmetric(horizontal: 24.0),
        child: Column(
          mainAxisAlignment: MainAxisAlignment.center,
          crossAxisAlignment: CrossAxisAlignment.stretch,
          children: <Widget>[
            ElevatedButton(
```

```

        //colour: Colors.lightBlueAccent,
        child: Text('Log In'),
        onPressed: () {
          Navigator.pushNamed(context, 'login_screen');
        },
      ),
      ElevatedButton(
        //colour: Colors.blueAccent,
        child: Text('Register'),
        onPressed: () {
          Navigator.pushNamed(context, 'registration_screen');
        },
      ),
    ]),
  ));
}
}

```

login_screen.dart

```

import 'package:firebase_auth/firebase_auth.dart';

import 'package:modal_progress_hud/modal_progress_hud.dart';
import 'package:flutter/material.dart';

//code for designing the UI of our text field where the user writes his email
id or password

const kTextFieldDecoration = InputDecoration(
  hintText: 'Enter a value',
  hintStyle: TextStyle(color: Colors.grey),
  contentPadding: EdgeInsets.symmetric(vertical: 10.0, horizontal: 20.0),
  border: OutlineInputBorder(
    borderRadius: BorderRadius.all(Radius.circular(32.0)),
  ),
  enabledBorder: OutlineInputBorder(
    borderSide: BorderSide(color: Colors.lightBlueAccent, width: 1.0),
    borderRadius: BorderRadius.all(Radius.circular(32.0)),
  ),
  focusedBorder: OutlineInputBorder(
    borderSide: BorderSide(color: Colors.lightBlueAccent, width: 2.0),
    borderRadius: BorderRadius.all(Radius.circular(32.0)),
  ),
);

class LoginScreen extends StatefulWidget {
  @override
  _LoginScreenState createState() => _LoginScreenState();
}

final _auth = FirebaseAuth.instance;

class _LoginScreenState extends State<LoginScreen> {
  late String email;
  late String password;
  bool showSpinner = false;
  @override
  Widget build(BuildContext context) {
    return Scaffold(
      backgroundColor: Colors.white,
      body: ModalProgressHUD(
        inAsyncCall: showSpinner,
        child: Padding(
          padding: EdgeInsets.symmetric(horizontal: 24.0),
          child: Column(

```

```

mainAxisAlignment: MainAxisAlignment.center,
crossAxisAlignment: CrossAxisAlignment.stretch,
children: <Widget>[
  TextField(
    keyboardType: TextInputType.emailAddress,
    textAlign: TextAlign.center,
    onChanged: (value) {
      email = value;
      //Do something with the user input.
    },
    decoration: kTextFieldDecoration.copyWith(
      hintText: 'Enter your email',
    )),
  SizedBox(
    height: 8.0,
  ),
  TextField(
    obscureText: true,
    textAlign: TextAlign.center,
    onChanged: (value) {
      password = value;
      //Do something with the user input.
    },
    decoration: kTextFieldDecoration.copyWith(
      hintText: 'Enter your password.')),
  SizedBox(
    height: 24.0,
  ),
  ElevatedButton(
    //colour: Colors.lightBlueAccent,
    child:Text('Log In'),
    onPressed: () async {
      setState(() {
        showSpinner = true;
      });
      try {
        final user = await _auth.signInWithEmailAndPassword(
          email: email, password: password);
        if (user != null) {
          Navigator.pushNamed(context, 'home_screen');
        }
      } catch (e) {
        print(e);
      }
      setState(() {
        showSpinner = false;
      });
    }
  ),
],
),
),
),
);
}
}

```

signup_screen.dart

```

import 'package:flutter/material.dart';
import 'package:firebase_auth/firebase_auth.dart';
import 'package:modal_progress_hud/modal_progress_hud.dart';

```

```
//code for designing the UI of our text field where the user writes his email
id or password

const kTextFieldDecoration = InputDecoration(
  hintText: 'Enter a value',
  hintStyle: TextStyle(color: Colors.grey),
  contentPadding: EdgeInsets.symmetric(vertical: 10.0, horizontal: 20.0),
  border: OutlineInputBorder(
    borderRadius: BorderRadius.all(Radius.circular(32.0)),
  ),
  enabledBorder: OutlineInputBorder(
    borderSide: BorderSide(color: Colors.lightBlueAccent, width: 1.0),
    borderRadius: BorderRadius.all(Radius.circular(32.0)),
  ),
  focusedBorder: OutlineInputBorder(
    borderSide: BorderSide(color: Colors.lightBlueAccent, width: 2.0),
    borderRadius: BorderRadius.all(Radius.circular(32.0)),
  ),
);

class RegistrationScreen extends StatefulWidget {
  @override
  _RegistrationScreenState createState() => _RegistrationScreenState();
}

class _RegistrationScreenState extends State<RegistrationScreen> {
  final _auth = FirebaseAuth.instance;
  late String email;
  late String password;
  bool showSpinner = false;
  @override
  Widget build(BuildContext context) {
    return Scaffold(
      backgroundColor: Colors.white,
      body: ModalProgressHUD(
        inAsyncCall: showSpinner,
        child: Padding(
          padding: EdgeInsets.symmetric(horizontal: 24.0),
          child: Column(
            mainAxisAlignment: MainAxisAlignment.center,
            crossAxisAlignment: CrossAxisAlignment.stretch,
            children: <Widget>[
              TextField(
                keyboardType: TextInputType.emailAddress,
                textAlign: TextAlign.center,
                onChanged: (value) {
                  email = value;
                },
                decoration: kTextFieldDecoration.copyWith(
                  hintText: 'Enter your email'),
              ),
              SizedBox(
                height: 8.0,
              ),
              TextField(
                obscureText: true,
                textAlign: TextAlign.center,
                onChanged: (value) {
                  password = value;
                },
                decoration: kTextFieldDecoration.copyWith(
                  hintText: 'Enter your Password'),
              ),
              SizedBox(
                height: 24.0,
              ),
              ElevatedButton(
```

```

        //colour: Colors.blueAccent,
        child: Text('Register'),
        onPressed: () async {
          setState(() {
            showSpinner = true;
          });
          try {
            final newUser = await
_auth.createUserWithEmailAndPassword(
              email: email, password: password);
            if (newUser != null) {
              Navigator.pushNamed(context, 'home_screen');
            }
          } catch (e) {
            print(e);
          }
          setState(() {
            showSpinner = false;
          });
        },
      ),
    ],
  ),
),
);
}
}

```

home_screen.dart

```

import 'package:flutter/material.dart';
import 'package:firebase_auth/firebase_auth.dart';

User loggedInUser= loggedInUser;

class HomeScreen extends StatefulWidget {
  @override
  _HomeScreenState createState() => _HomeScreenState();
}

class _HomeScreenState extends State<HomeScreen> {
  final _auth = FirebaseAuth.instance;

  void initState() {
    super.initState();
    getCurrentUser();
  }

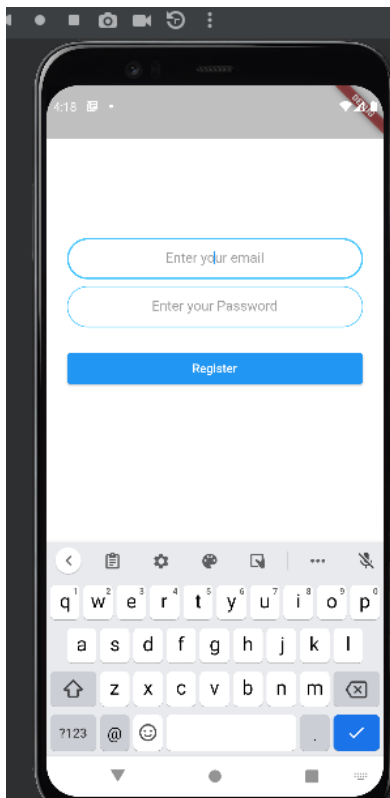
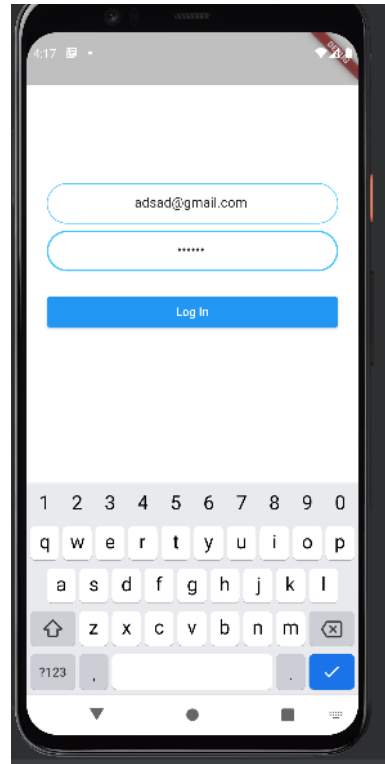
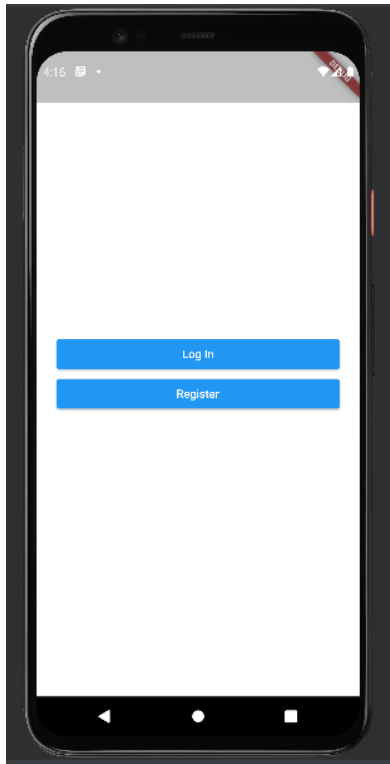
  //using this function you can use the credentials of the user
  void getCurrentUser() async {
    try {
      final user = await _auth.currentUser;
      if (user != null) {
        loggedInUser = user;
      }
    } catch (e) {
      print(e);
    }
  }

  @override
  Widget build(BuildContext context) {

```

```
return Scaffold(  
  appBar: AppBar(  
    leading: null,  
    actions: <Widget>[  
      IconButton(  
        icon: Icon(Icons.close),  
        onPressed: () {  
          _auth.signOut();  
          Navigator.pop(context);  
  
          //Implement logout functionality  
        }  
      ],  
      title: Text('Home Page'),  
      backgroundColor: Colors.lightBlueAccent,  
    ),  
    body: Center(  
      child: Text(  
        "Welcome User",  
        style: TextStyle(fontSize: 20.0, fontWeight: FontWeight.bold),  
      ),  
    ),  
  ),  
);  
}
```

Output:



Conclusion : Hence we have successfully connected flutter UI with firebase database