



Department of Information Technology

Academic Year: 2024-25

Semester: VI

Class / Branch / Div: TE- IT B

Subject: MAD & PWA Lab

Name of Instructor: Prof. Manjusha Kashilkar

Name of Student: Chirag Malde

Student ID: 22104186

Roll No. 17

Date of Submission: 10/03/25

Experiment No.:7

Aim: To Implement fireBase connectivity to connect with Flutter UI

Prerequisites: Android studio, flutter SDK,

Software: Android studio, flutter SDK,

Problem Statement: Implement firebase connectivity for Email-Password authentication.

Code:

1. Main.dart

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

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

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      debugShowCheckedModeBanner: false,
      home: CounterApp(),
    );
  }
}
```



PARSHVANATH CHARITABLE TRUST'S
A. P. SHAH INSTITUTE OF TECHNOLOGY
(NBA Accredited)



}

}

```
class CounterApp extends StatefulWidget {  
  @override  
  _CounterAppState createState() => _CounterAppState();  
}
```

```
class _CounterAppState extends State<CounterApp> {  
  int _counter = 0;
```

```
  void _incrementCounter() {  
    setState(() {  
      _counter++;  
    });  
  }
```

```
  @override  
  Widget build(BuildContext context) {  
    return Scaffold(  
      appBar: AppBar(title: Text("Counter App")),  
      body: Center(  
        child: Column(  
          mainAxisAlignment: MainAxisAlignment.center,  
          children: <Widget>[  
            Text("You have pushed the button this many times:"),  
            Text("$ _counter", style: Theme.of(context).textTheme.headlineMedium),  
          ],  
        ),  
      ),  
    );  
  }  
}
```



PARSHVANATH CHARITABLE TRUST'S
A. P. SHAH INSTITUTE OF TECHNOLOGY
(NBA Accredited)



```
),  
floatingActionButton: FloatingActionButton(  
  onPressed: _incrementCounter,  
  tooltip: 'Increment',  
  child: Icon(Icons.add),  
),  
);  
}  
}
```

Output:

creating firebase project

×

Create a project

Let's start with a name for your project[?]

Project name

counterapp-exp7-flutter

counterapp-exp7-flutter

☒

I accept the [Firebase terms](#).

☒

I confirm that I will use Firebase exclusively for purposes relating to my trade, business, craft or profession.

Already have a Google Cloud project?
[Add Firebase to Google Cloud project](#)

Continue



created firebase app and added google-services.json to app level and added plugins and dependencies to build.gradle of app and android level

×

Add Firebase to your Android app

✓

Register app

Android package name: com.example.exp7_project, app nickname: Counter App

2

Download and then add config file

Instructions for Android Studio below | [Unity](#) [C++](#)

Download google-services.json

Switch to the **Project** view in Android Studio to see your project root directory.

Move your downloaded `google-services.json` file into your module (app-level) root directory.

google-services.json

Project

MyApplication [My Application]

gradle

idea

app

libs

src

.gitignore

build.gradle.kts

google-services.json

proguard-rules.pro

gradle

Next

✎

Add Firebase SDK

```
Failed to update packages.
• apsit@apsit-HP-ProDesk-600-G4-PCI-MT:~/Desktop/chirag/exp7/exp7_project$ flutter pub add firebase_core firebase_auth cloud_firestore
Resolving dependencies...
Downloading packages...
+ _flutterfire_internals 1.3.53
  async 2.11.0 (2.13.0 available)
  boolean_selector 2.1.1 (2.1.2 available)
  characters 1.3.0 (1.4.0 available)
  ...
14 }
15
16 tasks.register("clean", Delete) {
17 |   delete rootProject.buildDir
18 }
19
20 dependencies { classpath 'com.google.gms:google-services:4.4.0' }
```



Added classpath dependencies in android/graddle

added firebase import and firebase initialized

```
lib > main.dart > _CounterAppState > build
1  import 'package:flutter/material.dart';
2  import 'package:firebase_core/firebase_core.dart';
3
4  void main() async {
5    WidgetsFlutterBinding.ensureInitialized();
6    await Firebase.initializeApp();
7    runApp(MyApp());
8  }
9
10 class MyApp extends StatelessWidget {
11   @override
12   Widget build(BuildContext context) {
13     return MaterialApp(
14       debugShowCheckedModeBanner: false,
15       home: CounterApp(),
16     ); // MaterialApp
17   }
18 }
19
20 class CounterApp extends StatefulWidget {
21   @override
22   _CounterAppState createState() => _CounterAppState();
23 }
```

firebase init

```
? What do you want to use as your public directory? build/web
apsit@apsit-HP-ProDesk-600-G4-PCI-MT:~/Desktop/chirag/exp7/exp7_project$ firebase init

#####
##          ##          ##          ##          ##          ##
##          ##          ##          ##          ##          ##
##          ##          ##          ##          ##          ##
##          ##          ##          ##          ##          ##
##          ##          ##          ##          ##          ##
#####

You're about to initialize a Firebase project in this directory:
```



PARSHVANATH CHARITABLE TRUST'S
A. P. SHAH INSTITUTE OF TECHNOLOGY
(NBA Accredited)



selected hosting and used existing project set the public directory build/web

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
? Which Firebase features do you want to set up for this directory? Press Space to select features, then Enter to confirm your choices. Hosting:
Configure files for Firebase Hosting and (optionally) set up GitHub Action deploys

=== Project Setup

First, let's associate this project directory with a Firebase project.
You can create multiple project aliases by running firebase use --add,
but for now we'll just set up a default project.

? Please select an option: Use an existing project
? Select a default Firebase project for this directory: fir-project-853ab (firebaseproject)
i Using project fir-project-853ab (firebaseproject)

=== Hosting Setup

Your public directory is the folder (relative to your project directory) that
will contain Hosting assets to be uploaded with firebase deploy. If you
have a build process for your assets, use your build's output directory.

? What do you want to use as your public directory? build/web
```

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
have a build process for your assets, use your build's output directory.

? What do you want to use as your public directory? build/web
? Configure as a single-page app (rewrite all urls to /index.html)? No
? Set up automatic builds and deploys with GitHub? No
✓ Wrote build/web/404.html
✓ Wrote build/web/index.html

i Writing configuration info to firebase.json...
i Writing project information to .firebaserc...

✓ Firebase initialization complete!
```

flutter build web

```
apsit@apsit-HP-ProDesk-600-G4-PCI-MT:~/Desktop/chirag/exp7/exp7_project$ flutter build web
Font asset "CupertinoIcons.ttf" was tree-shaken, reducing it from 257628 to 1172 bytes (99.5% reduction). Tree-shaking can be disabled by providing the
--no-tree-shake-icons flag when building your app.
Font asset "MaterialIcons-Regular.otf" was tree-shaken, reducing it from 1645184 to 7760 bytes (99.5% reduction). Tree-shaking can be disabled by
providing the --no-tree-shake-icons flag when building your app.
Compiling lib/main.dart for the Web... 31.8s
✓ Built build/web
apsit@apsit-HP-ProDesk-600-G4-PCI-MT:~/Desktop/chirag/exp7/exp7_project$
```

firebase deployed

```
apsit@apsit-HP-ProDesk-600-G4-PCI-MT:~/Desktop/chirag/exp7/exp7_project$ firebase deploy

=== Deploying to 'counterapp-exp7-flutter'...

i deploying hosting
i hosting[counterapp-exp7-flutter]: beginning deploy...
i hosting[counterapp-exp7-flutter]: found 31 files in build/web
✓ hosting[counterapp-exp7-flutter]: file upload complete
i hosting[counterapp-exp7-flutter]: finalizing version...
✓ hosting[counterapp-exp7-flutter]: version finalized
i hosting[counterapp-exp7-flutter]: releasing new version...
✓ hosting[counterapp-exp7-flutter]: release complete

✓ Deploy complete!

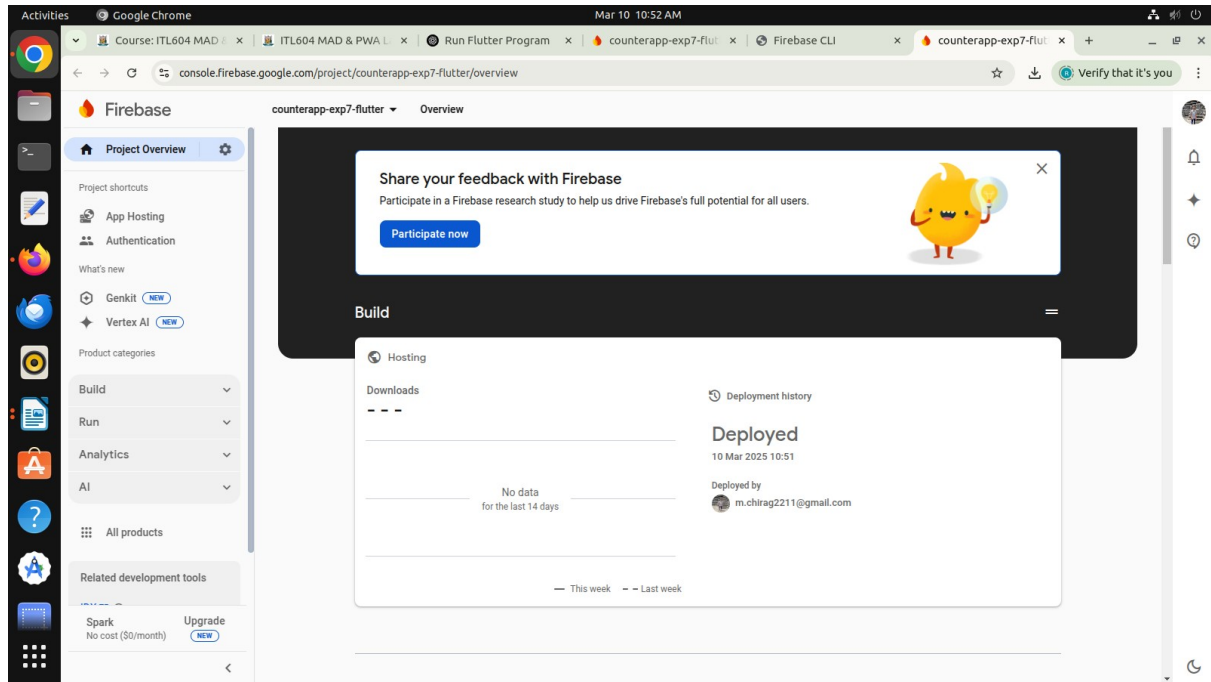
Project Console: https://console.firebase.google.com/project/counterapp-exp7-flutter/overview
Hosting URL: https://counterapp-exp7-flutter.web.app
apsit@apsit-HP-ProDesk-600-G4-PCI-MT:~/Desktop/chirag/exp7/exp7_project$
```




PARSHVANATH CHARITABLE TRUST'S
A. P. SHAH INSTITUTE OF TECHNOLOGY
(NBA Accredited)



firebase deployed



Conclusion: In this experiment, we successfully integrated Firebase with a Flutter application for Email-Password authentication. This implementation enhances app functionality by enabling secure user authentication and real-time data management.