



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



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: Mayank

Student ID: 22104003

Roll No. 25

Date of Submission: 13/3/25

Experiment No.: 7

Aim: To Implement firebase connectivity to connect with Flutter UI

Prerequisites: Android studio, flutter SDK,

Software: Android studio, flutter SDK,

Screenshots:

× Create a project

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

Project name

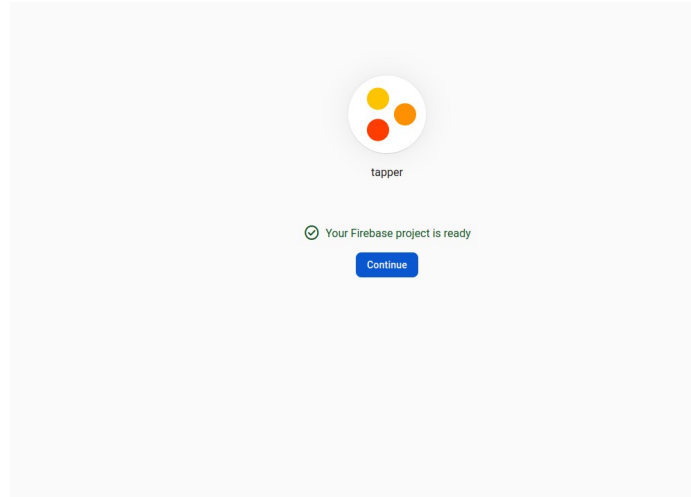
tapper

tapper-cf8fa

☒ I accept the [Firebase terms](#).

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

☒ Join the [Google Developer Programme](#) to enrich your developer journey with access to AI assistance, learning resources, profile badges and more.

Department of Information Technology | AP^SIT



× Add Firebase to your Android app

1 Register app

Android package name

```
com.example.flutter_application_1
```

App nickname(optional) [?](#)

Tapper

Debug signing certificate SHA-1 (optional)

00:00:00:00:00:00:00:00:00:00:00:00:00:00:00:00:

① Required for Dynamic Links and Google Sign-In or phone number support in Auth.
Edit SHA-1s in settings.

Register app

2 Download and then add config file

3 Add Firebase SDK

The screenshot shows an IDE with the following components:

- File Explorer (Left):** Lists files like `.dart_tool`, `.idea`, `android`, `app`, `src`, `build.gradle`, `google-services.js...`, `gradle`, `.gitignore`, `build.gradle`, `flutter_application...`, `gradle.properties`, `gradlew`, `gradlew.bat`, `local.properties`, and `settings.gradle`.
- Editor (Center):** Displays the `main.dart` file with the following content:


```
1 // ignore_for_file: unused_import
2
3 "project_info": {
4   "project_number": "875912971018",
5   "project_id": "tapper-cf8fa",
6   "storage_bucket": "tapper-cf8fa.firebaseio.com"
7 },
8 "client": [
9   {
10    "client_info": {
11      "mobilesdk_app_id": "1:875912971018:android:5c78d7ce3710dc46f6",
12      "android_client_info": {
13        "package_name": "com.example.flutter_application_1"
14      }
15    },
16    "oauth_client": [],
17    "api_key": [
18      {
19        "current_key": "AIzaSyCunDxgYlJ_l10rP-A6ooCEGvnPU"

```
- Terminal (Bottom):** Shows the output of the `flutter run` command:


```
This app is linked to the debug service: ws://127.0.0.1:41881/2ZOAI3A3x0s=ws
Debug service listening on ws://127.0.0.1:41881/2ZOAI3A3x0s=ws

🔥 To hot restart changes while running, press "r" or "R".
For a more detailed help message, press "h". To quit, press "q".

A Dart VM Service on Chrome is available at: http://127.0.0.1:41881/2ZOAI3A3x0s=
The Flutter DevTools debugger and profiler on Chrome is available at:
http://127.0.0.1:9101?uri=http://127.0.0.1:41881/2ZOAI3A3x0s=
Application finished.
```



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```
1 plugins {
2     id "com.android.application"
3     id "kotlin-android"
4     // The Flutter Gradle Plugin must be applied after the Android and Kotlin Gradle plugins.
5     id "dev.flutter.flutter-gradle-plugin"
6 }
7
```

Application finished.

```
apsit@apsit-HP-ProDesk-600-G4-PCI-MT:~/Desktop/mayank_25/flutter_application_1$ flutter pub add firebase_core fire
h 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)
+ clock 1.1.1 (1.1.2 available)
+ cloud_firestore 5.6.5
+ cloud_firestore_platform_interface 6.6.5
+ cloud_firestore_web 4.4.5
+ collection 1.19.0 (1.19.1 available)
+ fake_async 1.3.1 (1.3.3 available)
+ firebase_auth 5.5.1
+ firebase_auth_platform_interface 7.6.1
+ firebase_auth_web 5.14.1
+ firebase_core 3.12.1
+ firebase_core_platform_interface 5.4.0
+ firebase_core_web 2.21.1
+ flutter_web_plugins 0.0.0 from sdk flutter
+ http_parser 4.1.2
```

```
android > build.gradle
1 allprojects {
2     ...
6 }
7
8 rootProject.buildDir = "../build"
9 subprojects {
10     project.buildDir = "${rootProject.buildDir}/${project.name}"
11 }
12 subprojects {
13     project.evaluationDependsOn(":app")
14 }
15
16 tasks.register("clean", Delete) {
17     delete rootProject.buildDir
18 }
19
20 dependencies {
21     ...classpath 'com.google.gms:google-services:4.4.0'
22 }
```

+ web 1.1.1
Changed 15 dependencies!



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```
android > app > build.gradle
1  plugins {
2      id "com.android.application"
3      id "kotlin-android"
4      // The Flutter Gradle Plugin must be applied after the Android and Kotlin
5      id "dev.flutter.flutter-gradle-plugin"
6      apply plugin:"com.google.gms.google-services"
7  }
8
9  android {
10     namespace = "com.example.flutter_application_1"
11     compileSdk = flutter.compileSdkVersion
12     ndkVersion = flutter.ndkVersion
13
14     compileOptions {
15         sourceCompatibility = JavaVersion.VERSION_1_8
16         targetCompatibility = JavaVersion.VERSION_1_8
17     }
18 }
```

PROBLEMS OUTPUT DEBUG CONSOLE **TERMINAL** PORTS

```
stream_channel 2.1.2 (2.1.4 available)
string_scanner 1.3.0 (1.4.1 available)
term_glyph 1.2.1 (1.2.2 available)
test_api 0.7.3 (0.7.4 available)
+ typed_data 1.4.0
vm_service 14.3.0 (15.0.0 available)
+ web 1.1.1
Changed 15 dependencies!
```

```
lib > main.dart > CounterApp
1  import 'package:flutter/material.dart';
2  import 'package:firebase_core/firebase_core.dart';
3
4  Run | Debug | Profile
5  void main() async {
6      WidgetsFlutterBinding.ensureInitialized();
7      await Firebase.initializeApp();
8      runApp(MyApp());
9  }
10 class MyApp extends StatelessWidget { Constructors for public widgets start here
11     @override
12     Widget build(BuildContext context) {
13         return MaterialApp(
14             debugShowCheckedModeBanner: false,
15             home: CounterApp(),
16         ); // MaterialApp
17     }
18 }
```

PROBLEMS **3** OUTPUT DEBUG CONSOLE **TERMINAL** PORTS GITLENS

```
stream_channel 2.1.2 (2.1.4 available)
string_scanner 1.3.0 (1.4.1 available)
term_glyph 1.2.1 (1.2.2 available)
test_api 0.7.3 (0.7.4 available)
+ typed_data 1.4.0
vm_service 14.3.0 (15.0.0 available)
+ web 1.1.1
Changed 15 dependencies!
```




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```
V18.20.7
apsit@apsit-HP-ProDesk-600-G4-PCI-MT:~/Desktop/mayank_25/flutter_application_1$ npm install -g firebase-tools

changed 630 packages in 40s

71 packages are looking for funding
  run `npm fund` for details
```

```
apsit@apsit-HP-ProDesk-600-G4-PCI-MT:~/Desktop/mayank_25/flutter_application_1$ firebase login
i Firebase optionally collects CLI and Emulator Suite usage and error reporting information to help improve our products.
Data is collected in accordance with Google's privacy policy (https://policies.google.com/privacy) and is not used to identify you.

? Allow Firebase to collect CLI and Emulator Suite usage and error reporting information? Yes
i To change your data collection preference at any time, run `firebase logout` and log in again.

Visit this URL on this device to log in:
https://accounts.google.com/o/oauth2/auth?client_id=563584335869-fgrhgm47bqnekij5i8b5pr03ho849e6.apps.googleusercontent.com&scope=email%20openid%20https%3A%2F%2Fwww.googleapis.com%2Fauth%2Fcloudplatformprojects.readonly%20https%3A%2F%2Fwww.googleapis.com%2Fauth%2Ffirebase%20https%3A%2F%2Fwww.googleapis.com%2Fauth%2Fcloud-platform&response_type=code&state=367012525&redirect_uri=http%3A%2F%2Flocalhost%3A9005

Waiting for authentication...

✓ Success! Logged in as 71104mayank007@gmail.com
```

```
PROBLEMS 3 OUTPUT DEBUG CONSOLE TERMINAL PORTS GITLENS
gleapis.com%2Fauth%2Ffirebase%20https%3A%2F%2Fwww.googleapis.com%2Fauth%2Fcloud-platform&response_type=code&state=367012525&redirect_uri=http%3A%2F%2Flocalhost%3A9005

Waiting for authentication...

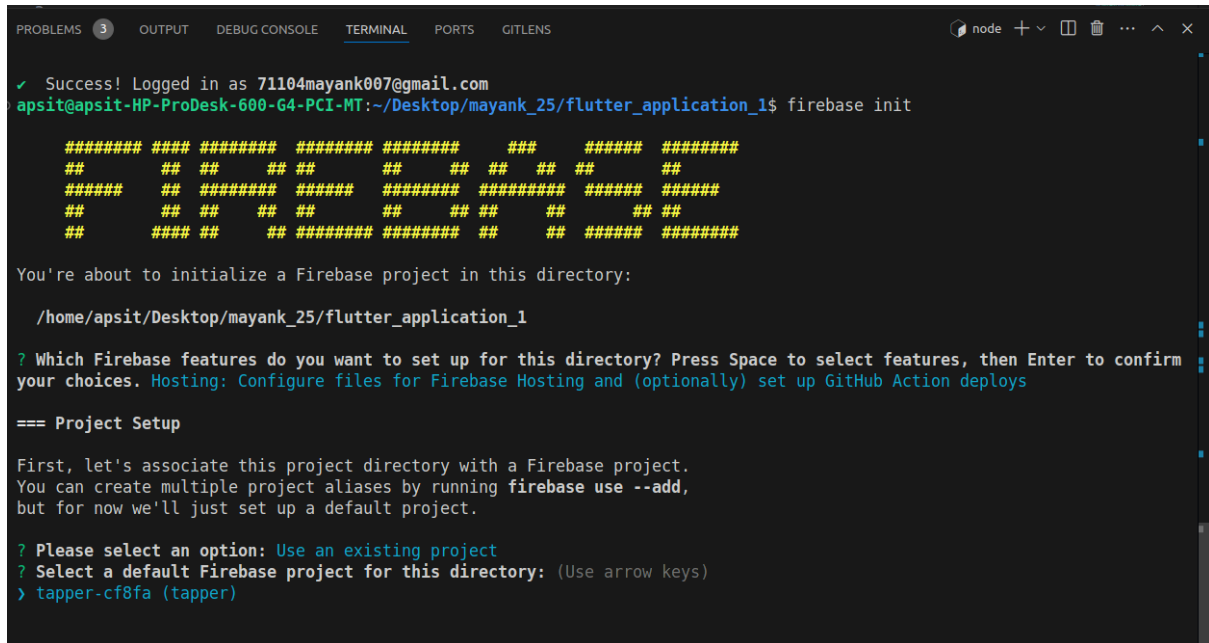
✓ Success! Logged in as 71104mayank007@gmail.com
apsit@apsit-HP-ProDesk-600-G4-PCI-MT:~/Desktop/mayank_25/flutter_application_1$ firebase init

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

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

/home/apsit/Desktop/mayank_25/flutter_application_1

? Which Firebase features do you want to set up for this directory? Press Space to select features, then Enter to confirm
your choices. (Press <space> to select, <a> to toggle all, <i> to invert selection, and <enter> to proceed)
  o Genkit: Setup a new Genkit project with Firebase
  o Functions: Configure a Cloud Functions directory and its files
  o App Hosting: Configure an apphosting.yaml file for App Hosting
  x Hosting: Configure files for Firebase Hosting and (optionally) set up GitHub Action deploys
  o Storage: Configure a security rules file for Cloud Storage
  o Emulators: Set up local emulators for Firebase products
  o Remote Config: Configure a template file for Remote Config
(Move up and down to reveal more choices)
```





```

PROBLEMS 3 OUTPUT DEBUG CONSOLE TERMINAL PORTS GITLENS
node + - [ ] [ ] ... ^ x

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: tapper-cf8fa (tapper)
i Using project tapper-cf8fa (tapper)

=== 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
? Configure as a single-page app (rewrite all urls to /index.html)? Yes
? Set up automatic builds and deploys with GitHub? No
✓ Wrote build/web/index.html

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

✓ Firebase initialization complete!

```

```
apsit@apsit-HP-ProDesk-600-G4-PCI-MT:~/Desktop/mayank_25/flutter_application_1$ 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... 30.4s
✓ Built build/web

apsit@apsit-HP-ProDesk-600-G4-PCI-MT:~/Desktop/mayank_25/flutter_application_1$ flutter deploy
Could not find a command named "deploy".

Run 'flutter -h' (or 'flutter <command> -h') for available flutter commands and options.

apsit@apsit-HP-ProDesk-600-G4-PCI-MT:~/Desktop/mayank_25/flutter_application_1$ firebase deploy
```

Conclusion: In this experiment we have Implemented fireBase connectivity to connect with Flutter UI