# EXPERIMENT NO:- 6

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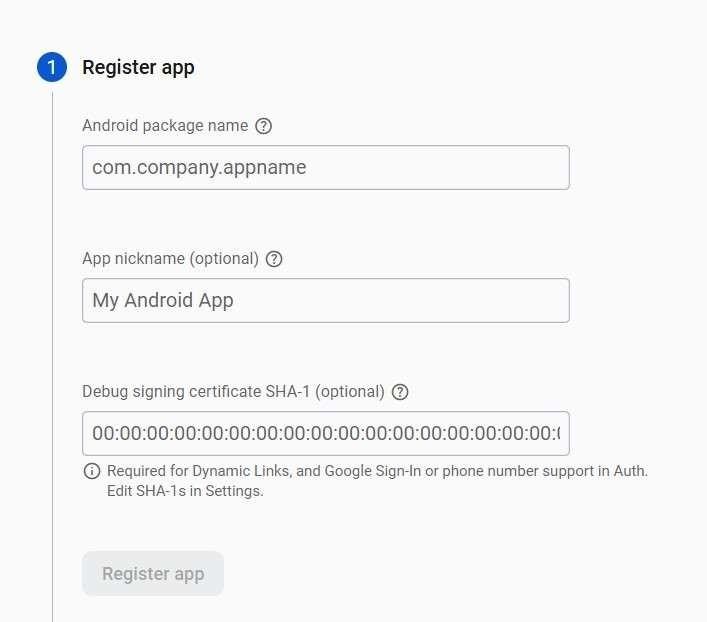
Aim:- To Connect flutter UI with firebase database

# Creating a New Firebase Project

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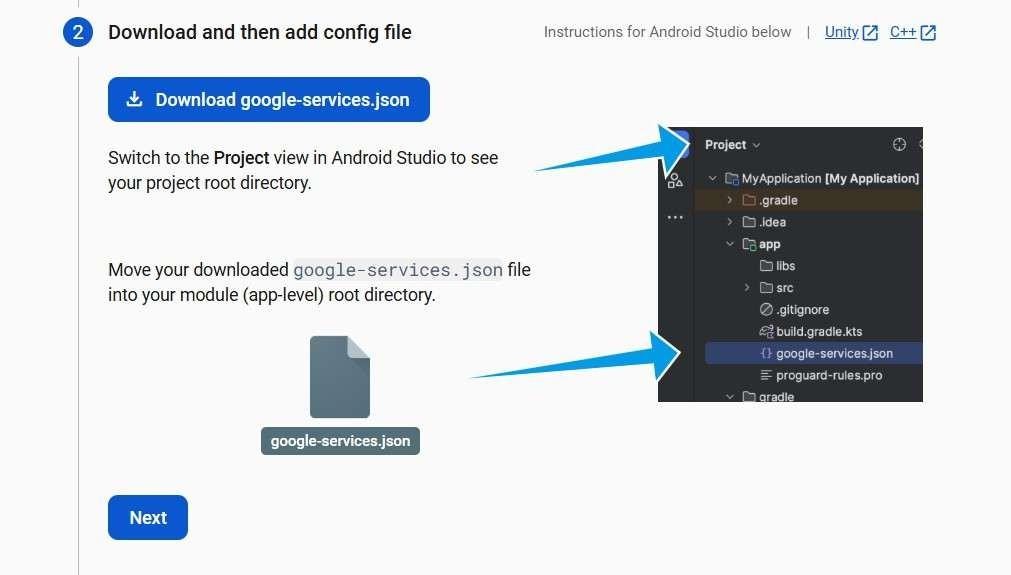
First, log in with your Google account to manage your Firebase projects. From within the Firebase dashboard, select the Create new project button and give it a name

In order to add Android support to our Flutter application, select the Android logo from the dashboard. This brings us to the following screen:



The most important thing here is to match up the Android package name that you choose here with the one inside of our application.

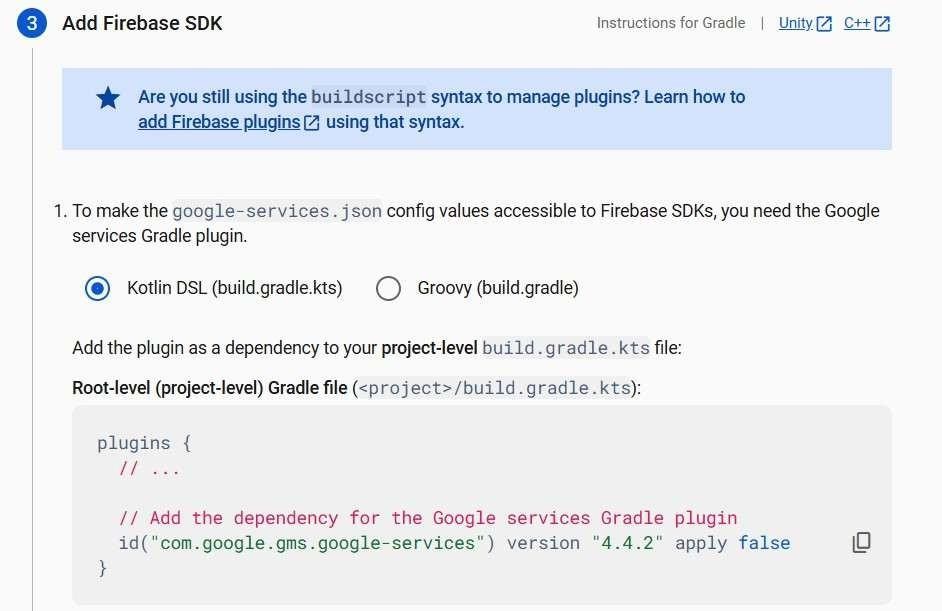
Then download the google-services.json file, that you will get.

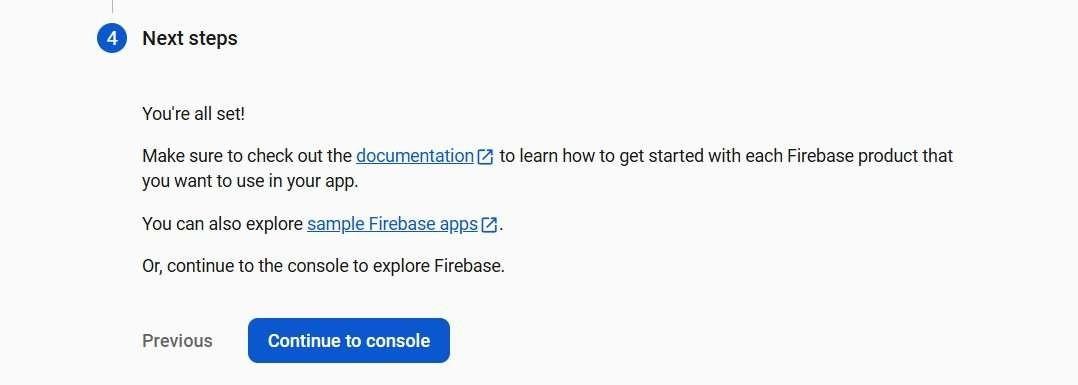


put that file in the android folder (root level)

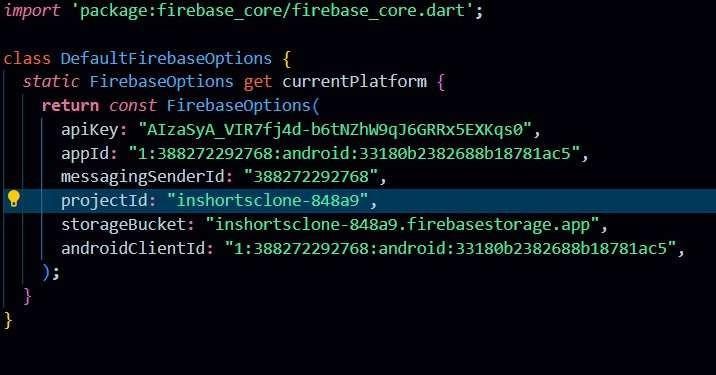


then select the build.gradle.kts (Kotlin DSL) part, and then follow the rest instructions

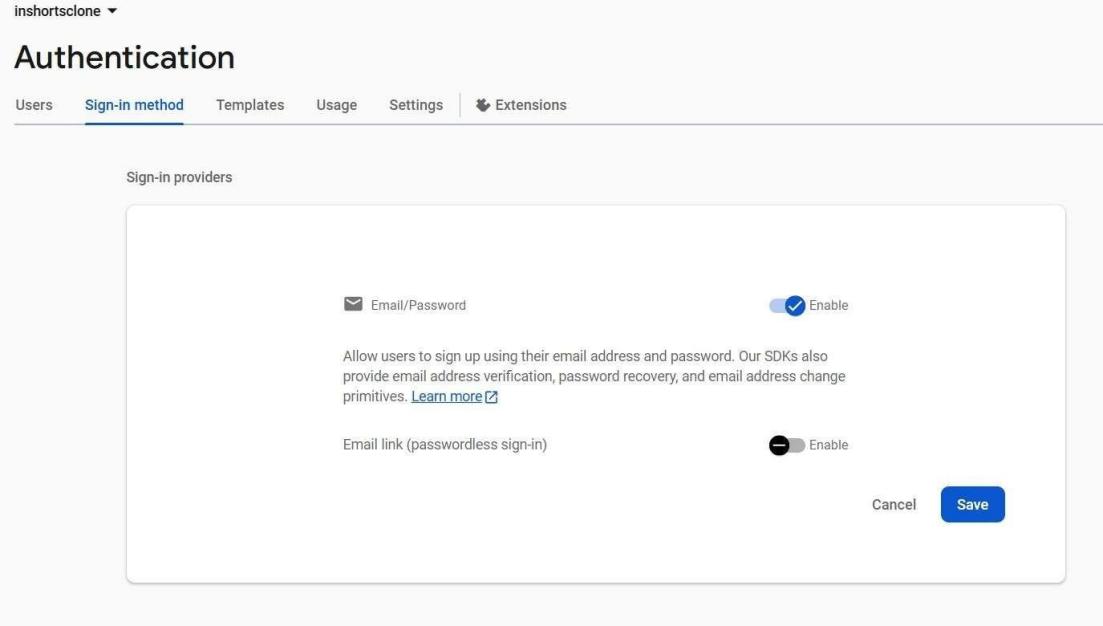




Generate the firebase\_options.dart file, based on the google-services.json file



In your part select the sign-in method and enable it.



# Code:- Authenction\_logic

import 'package:firebase\_auth/firebase\_auth.dart'

;

import 'package:google\_sign\_in/google\_sign\_in.d art';

class AuthService {

final FirebaseAuth \_auth = FirebaseAuth.instance;

// Sign in with Email & Password

Future<User?> signInWithEmail(String email, String password) async {

try {

UserCredential userCredential = await

\_auth.signInWithEmailAndPassword( email: email,

password: password,

);

return userCredential.user;

} catch (e) { print("Error: $e"); return null;

}

}

// Register with Email & Password

Future<User?> registerWithEmail(String email, String password) async {

try {

UserCredential userCredential = await

\_auth.createUserWithEmailAndPassword( email: email,

password: password,

);

return userCredential.user;

} catch (e) { print("Error: $e");

return null;

}

}

// Google Sign-In

Future<User?> signInWithGoogle() async {

try {

final GoogleSignInAccount? googleUser = await GoogleSignIn().signIn();

if (googleUser == null) return null;

final GoogleSignInAuthentication googleAuth = await googleUser.authentication;

final AuthCredential credential = GoogleAuthProvider.credential(

accessToken: googleAuth.accessToken,

idToken: googleAuth.idToken,

);

UserCredential userCredential = await

\_auth.signInWithCredential(credential); return userCredential.user;

} catch (e) {

print("Google Sign-In Error: $e"); return null;

}

}

// Sign Out

Future<void> signOut() async { await \_auth.signOut();

await GoogleSignIn().signOut();

}

// Get current user

User? getCurrentUser() { }

return \_auth.currentUser; }

**Login screen**

import 'package:flutter/material.dart'; import '../services/auth\_service.dart'; import 'home\_screen.dart';

class LoginScreen extends StatefulWidget { @override

\_LoginScreenState createState() =>

\_LoginScreenState();

}

class \_LoginScreenState extends State<LoginScreen> {

final TextEditingController emailController = TextEditingController();

final TextEditingController passwordController

= TextEditingController();

final AuthService \_authService = AuthService();

void \_login() async {

String email = emailController.text.trim(); String password =

passwordController.text.trim(); var user = await

\_authService.signInWithEmail(email, password);

if (user != null) { Navigator.pushReplacement(context,

MaterialPageRoute(builder: (context) => HomeScreen()));

} else {

ScaffoldMessenger.of(context).showSnackBar( SnackBar(content: Text("Login failed!")));

}

child: Column(

mainAxisAlignment: MainAxisAlignment.center,

children: [

TextField(controller: emailController, decoration: InputDecoration(labelText: 'Email')),

TextField(controller: passwordController, decoration: InputDecoration(labelText: 'Password'), obscureText: true),

SizedBox(height: 20), ElevatedButton(onPressed: \_login,

child: Text('Login')),

SizedBox(height: 10), ElevatedButton(onPressed:

\_googleSignIn, child: Text('Sign in with Google')),

],

),

),

);

}

}

}

void \_googleSignIn() async { var user = await

\_authService.signInWithGoogle(); if (user != null) {

Navigator.pushReplacement(context, MaterialPageRoute(builder: (context) => HomeScreen()));

} else {

ScaffoldMessenger.of(context).showSnackBar( SnackBar(content: Text("Google Sign-In failed!")));

}

}

@override

Widget build(BuildContext context) { return Scaffold(

appBar: AppBar(title: Text('Rapido Login')), body: Padding(

padding: EdgeInsets.all(16.0),

**Home\_Screen**

import 'package:flutter/material.dart'; import '../services/auth\_service.dart'; import 'login\_screen.dart';

class HomeScreen extends StatelessWidget { final AuthService \_authService = AuthService();

void \_logout(BuildContext context) async { await \_authService.signOut(); Navigator.pushReplacement(context,

MaterialPageRoute(builder: (context) => LoginScreen()));

}

@override

Widget build(BuildContext context) { return Scaffold(

appBar: AppBar(title: Text('Rapido

Home')),

body: Center( child: Column(

mainAxisAlignment: MainAxisAlignment.center,

children: [

Text('Welcome to Rapido!'), SizedBox(height: 20), ElevatedButton(onPressed: () =>

\_logout(context), child: Text('Logout')),

],

),

**OUTPUT:**