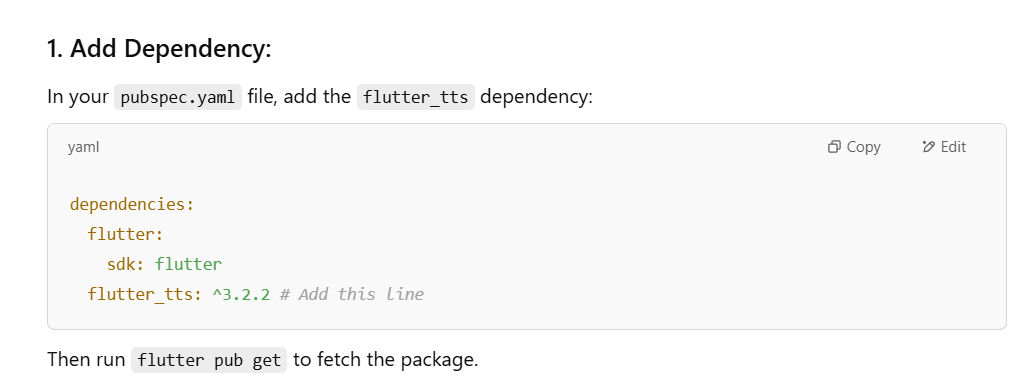
Flutter mode-2:

11) Build an app for reading aloud the text entered by the user using text-to-speech functionality.



import 'package:flutter/material.dart';

import 'package:flutter\_tts/flutter\_tts.dart';

void main() {

runApp(MyApp());

}

class MyApp extends StatelessWidget {

@override

Widget build(BuildContext context) {

return MaterialApp(

home: TextToSpeechApp(),

);

}

}

class TextToSpeechApp extends StatefulWidget {

@override

\_TextToSpeechAppState createState() => \_TextToSpeechAppState();

}

class \_TextToSpeechAppState extends State<TextToSpeechApp> {

TextEditingController \_controller = TextEditingController();

FlutterTts flutterTts = FlutterTts();

// Function to speak the text

void \_speak() async {

String text = \_controller.text;

if (text.isNotEmpty) {

await flutterTts.speak(text);

} else {

print('Please enter some text!');

}

}

@override

Widget build(BuildContext context) {

return Scaffold(

appBar: AppBar(

title: Text('Text to Speech App'),

),

body: Padding(

padding: const EdgeInsets.all(16.0),

child: Column(

mainAxisAlignment: MainAxisAlignment.center,

children: [

// TextField to input text

TextField(

controller: \_controller,

decoration: InputDecoration(

labelText: 'Enter text to speak',

border: OutlineInputBorder(),

),

),

SizedBox(height: 20),

// Button to trigger text-to-speech

ElevatedButton(

onPressed: \_speak,

child: Text('Speak'),

),

],

),

),

);

}

}

12) Develop an app for displaying a welcome screen that shows your college name, a motivational quote, and an image using basic Flutter widgets.

import 'package:flutter/material.dart';

void main() {

runApp(MyApp());

}

class MyApp extends StatelessWidget {

@override

Widget build(BuildContext context) {

return MaterialApp(

home: WelcomeScreen(),

);

}

}

class WelcomeScreen extends StatelessWidget {

@override

Widget build(BuildContext context) {

return Scaffold(

appBar: AppBar(

title: Text('Welcome Screen'),

backgroundColor: Colors.blue,

),

body: Padding(

padding: const EdgeInsets.all(16.0),

child: Column(

mainAxisAlignment: MainAxisAlignment.center,

children: [

// College Name

Text(

'Your College Name', // Replace with your college name

style: TextStyle(

fontSize: 30,

fontWeight: FontWeight.bold,

color: Colors.blue,

),

),

SizedBox(height: 20),

// Motivational Quote

Text(

'"Success is not final, failure is not fatal: It is the courage to continue that counts."',

textAlign: TextAlign.center,

style: TextStyle(

fontSize: 18,

fontStyle: FontStyle.italic,

color: Colors.black,

),

),

SizedBox(height: 20),

// Image

Image.asset('assets/your\_image.png'), // Add an image in the assets folder

],

),

),

);

}

}

13) Develop an app to manage borrowed books, where users can enter the book name and view the list of borrowed books using ListView.

import 'package:flutter/material.dart';

void main() {

runApp(MyApp());

}

class MyApp extends StatelessWidget {

@override

Widget build(BuildContext context) {

return MaterialApp(

home: BorrowedBooksApp(),

);

}

}

class BorrowedBooksApp extends StatefulWidget {

@override

\_BorrowedBooksAppState createState() => \_BorrowedBooksAppState();

}

class \_BorrowedBooksAppState extends State<BorrowedBooksApp> {

// Controller for text input

TextEditingController \_bookController = TextEditingController();

// List to store borrowed books

List<String> borrowedBooks = [];

// Function to add the book to the list

void \_addBook() {

setState(() {

if (\_bookController.text.isNotEmpty) {

borrowedBooks.add(\_bookController.text);

\_bookController.clear(); // Clear input field

}

});

}

@override

Widget build(BuildContext context) {

return Scaffold(

appBar: AppBar(

title: Text('Borrowed Books'),

),

body: Padding(

padding: const EdgeInsets.all(16.0),

child: Column(

children: [

// Input field for book name

TextField(

controller: \_bookController,

decoration: InputDecoration(

labelText: 'Enter Book Name',

border: OutlineInputBorder(),

),

),

SizedBox(height: 20),

// Button to add the book

ElevatedButton(

onPressed: \_addBook,

child: Text('Add Book'),

),

SizedBox(height: 20),

// List of borrowed books

Expanded(

child: ListView.builder(

itemCount: borrowedBooks.length,

itemBuilder: (context, index) {

return ListTile(

title: Text(borrowedBooks[index]),

);

},

),

),

],

),

),

);

}

}

14) Build an app for counting the number of items added to a shopping cart using a floating action button.

import 'package:flutter/material.dart';

void main() {

runApp(MyApp());

}

class MyApp extends StatelessWidget {

@override

Widget build(BuildContext context) {

return MaterialApp(

home: ShoppingCartApp(),

);

}

}

class ShoppingCartApp extends StatefulWidget {

@override

\_ShoppingCartAppState createState() => \_ShoppingCartAppState();

}

class \_ShoppingCartAppState extends State<ShoppingCartApp> {

int \_itemCount = 0; // Counter for the number of items in the cart

// Function to increment the item count

void \_addItemToCart() {

setState(() {

\_itemCount++; // Increase the item count

});

}

@override

Widget build(BuildContext context) {

return Scaffold(

appBar: AppBar(

title: Text('Shopping Cart'),

),

body: Center(

child: Text(

'Items in Cart: $\_itemCount',

style: TextStyle(fontSize: 24),

),

),

floatingActionButton: FloatingActionButton(

onPressed: \_addItemToCart, // Add item to cart when pressed

child: Icon(Icons.add), // Icon to indicate adding an item

),

);

}

}

15) Create an app for admin login where a toast message is shown for empty fields and wrong credentials.

Same:

16) Develop an app to manage borrowed books, where users can enter the book name and view the list of borrowed books using ListView.

Same:

17) Develop an app for displaying your personal profile with name, department, and a profile photo using basic Flutter widgets.

import 'package:flutter/material.dart';

void main() {

runApp(MyApp());

}

class MyApp extends StatelessWidget {

@override

Widget build(BuildContext context) {

return MaterialApp(

home: ProfileScreen(),

);

}

}

class ProfileScreen extends StatelessWidget {

@override

Widget build(BuildContext context) {

return Scaffold(

appBar: AppBar(

title: Text('My Profile'),

),

body: Padding(

padding: const EdgeInsets.all(16.0),

child: Column(

mainAxisAlignment: MainAxisAlignment.center,

children: [

// Profile Picture

CircleAvatar(

radius: 70,

backgroundImage: AssetImage('assets/profile.jpg'), // Replace with your image

),

SizedBox(height: 20),

// Name

Text(

'Aathithya',

style: TextStyle(

fontSize: 30,

fontWeight: FontWeight.bold,

color: Colors.blue,

),

),

SizedBox(height: 10),

// Department

Text(

'Department: Computer Science and Engineering',

style: TextStyle(

fontSize: 18,

color: Colors.black54,

),

),

],

),

),

);

}

}

18) Build an app for counting the number of passengers entering a bus using a floating action button to increase the count.

import 'package:flutter/material.dart';

void main() {

runApp(MyApp());

}

class MyApp extends StatelessWidget {

@override

Widget build(BuildContext context) {

return MaterialApp(

home: PassengerCounterApp(),

);

}

}

class PassengerCounterApp extends StatefulWidget {

@override

\_PassengerCounterAppState createState() => \_PassengerCounterAppState();

}

class \_PassengerCounterAppState extends State<PassengerCounterApp> {

int \_passengerCount = 0; // Counter for passengers entering the bus

// Function to increment the passenger count

void \_addPassenger() {

setState(() {

\_passengerCount++; // Increase the passenger count

});

}

@override

Widget build(BuildContext context) {

return Scaffold(

appBar: AppBar(

title: Text('Passenger Counter'),

),

body: Center(

child: Text(

'Passengers Entered: $\_passengerCount',

style: TextStyle(fontSize: 24),

),

),

floatingActionButton: FloatingActionButton(

onPressed: \_addPassenger, // Add passenger when pressed

child: Icon(Icons.person\_add), // Icon to indicate adding a passenger

),

);

}

}

19) Create an app for login authentication that shows a toast message for both successful and failed login attempts.

Same:

20)database question

Main.dart:

import 'package:flutter/material.dart';

import 'package:firebase\_core/firebase\_core.dart';

import 'student\_registration.dart';

void main() async {

WidgetsFlutterBinding.ensureInitialized();

await Firebase.initializeApp(); // Initialize Firebase

runApp(MyApp());

}

class MyApp extends StatelessWidget {

@override

Widget build(BuildContext context) {

return MaterialApp(

title: 'Student Registration',

theme: ThemeData(

primarySwatch: Colors.blue,

),

home: StudentRegistrationScreen(),

);

}

}

student\_registration.dart:

import 'package:flutter/material.dart';

import 'package:cloud\_firestore/cloud\_firestore.dart';

class StudentRegistrationScreen extends StatefulWidget {

@override

\_StudentRegistrationScreenState createState() =>

\_StudentRegistrationScreenState();

}

class \_StudentRegistrationScreenState extends State<StudentRegistrationScreen> {

// Controllers for the form fields

TextEditingController nameController = TextEditingController();

TextEditingController emailController = TextEditingController();

TextEditingController departmentController = TextEditingController();

// Function to store student data in Firestore

Future<void> registerStudent() async {

// Validate if fields are not empty

if (nameController.text.isEmpty ||

emailController.text.isEmpty ||

departmentController.text.isEmpty) {

return;

}

// Store student data in Firestore

await FirebaseFirestore.instance.collection('students').add({

'name': nameController.text,

'email': emailController.text,

'department': departmentController.text,

});

// Show a message after saving data

ScaffoldMessenger.of(context).showSnackBar(

SnackBar(content: Text('Student Registered Successfully')));

// Clear the text fields after submission

nameController.clear();

emailController.clear();

departmentController.clear();

}

@override

Widget build(BuildContext context) {

return Scaffold(

appBar: AppBar(

title: Text('Student Registration'),

),

body: Padding(

padding: const EdgeInsets.all(16.0),

child: Column(

children: [

TextField(

controller: nameController,

decoration: InputDecoration(labelText: 'Name'),

),

TextField(

controller: emailController,

decoration: InputDecoration(labelText: 'Email'),

),

TextField(

controller: departmentController,

decoration: InputDecoration(labelText: 'Department'),

),

SizedBox(height: 20),

ElevatedButton(

onPressed: registerStudent,

child: Text('Register Student'),

),

SizedBox(height: 20),

// Display the registered students

Expanded(child: StudentList()),

],

),

),

);

}

}

class StudentList extends StatelessWidget {

@override

Widget build(BuildContext context) {

return StreamBuilder<QuerySnapshot>(

stream: FirebaseFirestore.instance.collection('students').snapshots(),

builder: (context, snapshot) {

if (snapshot.connectionState == ConnectionState.waiting) {

return Center(child: CircularProgressIndicator());

}

if (!snapshot.hasData) {

return Center(child: Text('No students registered.'));

}

var students = snapshot.data!.docs;

return ListView.builder(

itemCount: students.length,

itemBuilder: (context, index) {

var student = students[index];

return ListTile(

title: Text(student['name']),

subtitle: Text('${student['email']} - ${student['department']}'),

);

},

);

},

);

}

}