

MES's INSTITUTE OF MANAGEMENT AND CAREER COURSES



“Exlog – Expense Logger”

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Mini Project Index

Activity No.	Description	Page No.
1	Chapter 1 – Introduction 1.1 Project Scope	3 - 4
2	Chapter 2 – Proposed System 2.1 Study of similar systems	3 - 4
3	Chapter 3 – Analysis and Design 3.1 ER diagram 3.2 Use Case diagram 3.3 Activity diagram	5 - 7
4	Chapter 4 – Database design 4.1 Table structure / Data Dictionary	8
5	User Interface and Code	9 - 28
6	Bibliography	29

Introduction

The primary purpose of the Exlog – Expense Logger application is to keep track of all the expenses one pays daily. The main elements of the app are as follows:

1. User Registration
2. User Login
3. User Authentication
4. Dashboard
5. Expense addition
6. View expenses

Project Scope

1. User Registration: Allow users to create accounts using name, email and password.
2. User Login: Allow users to sign-in to their accounts using email and password.
3. User Authentication: Allow users to validate their credentials.

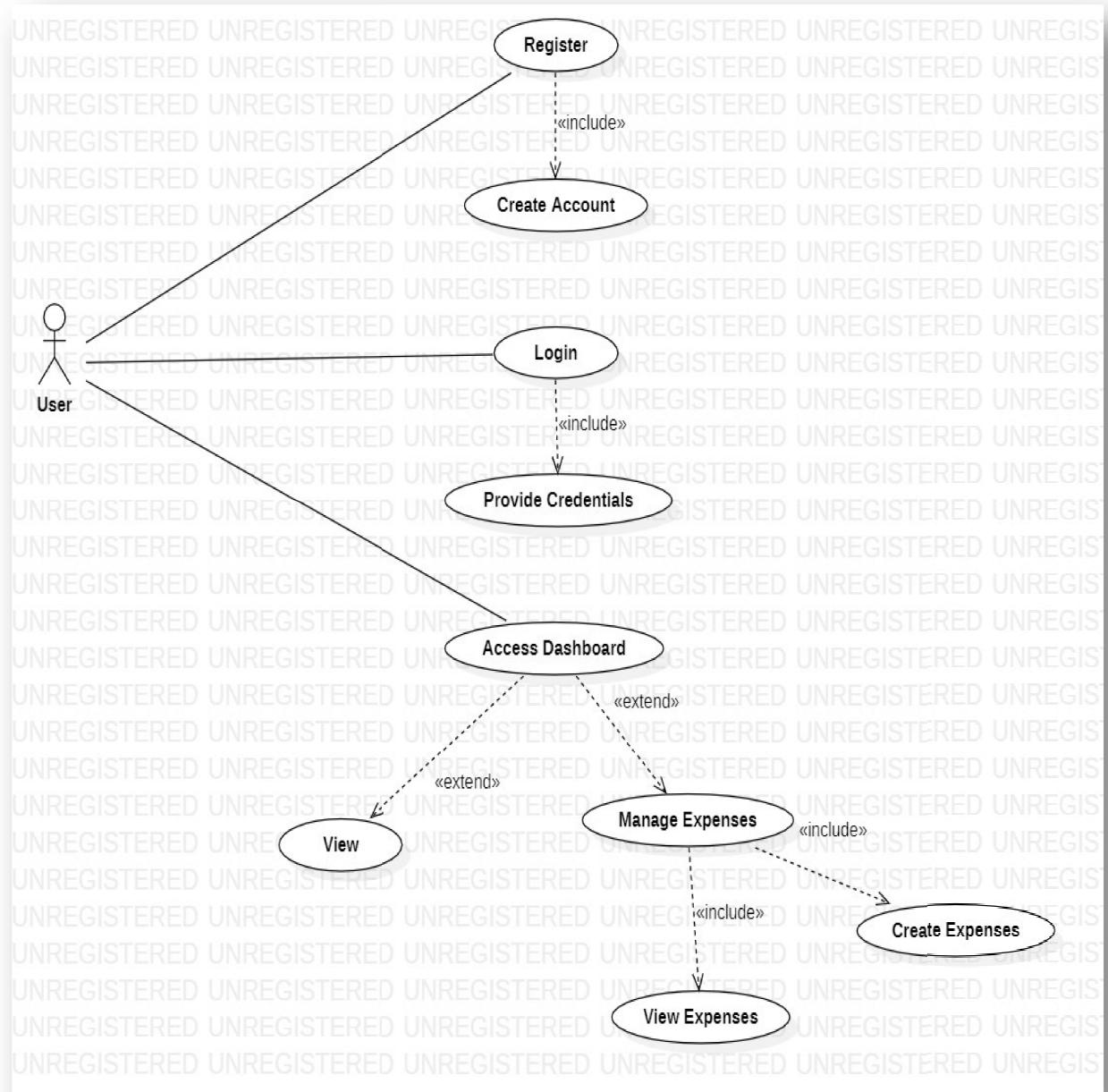
4. Dashboard: Allow users to create a dashboard where amount related information can be viewed along with paths to different pages.
5. Expense Addition: Allow users to add daily expenses using a form.
6. View Expenses: Allow users to view all expenses in a list view.

Technologies Used

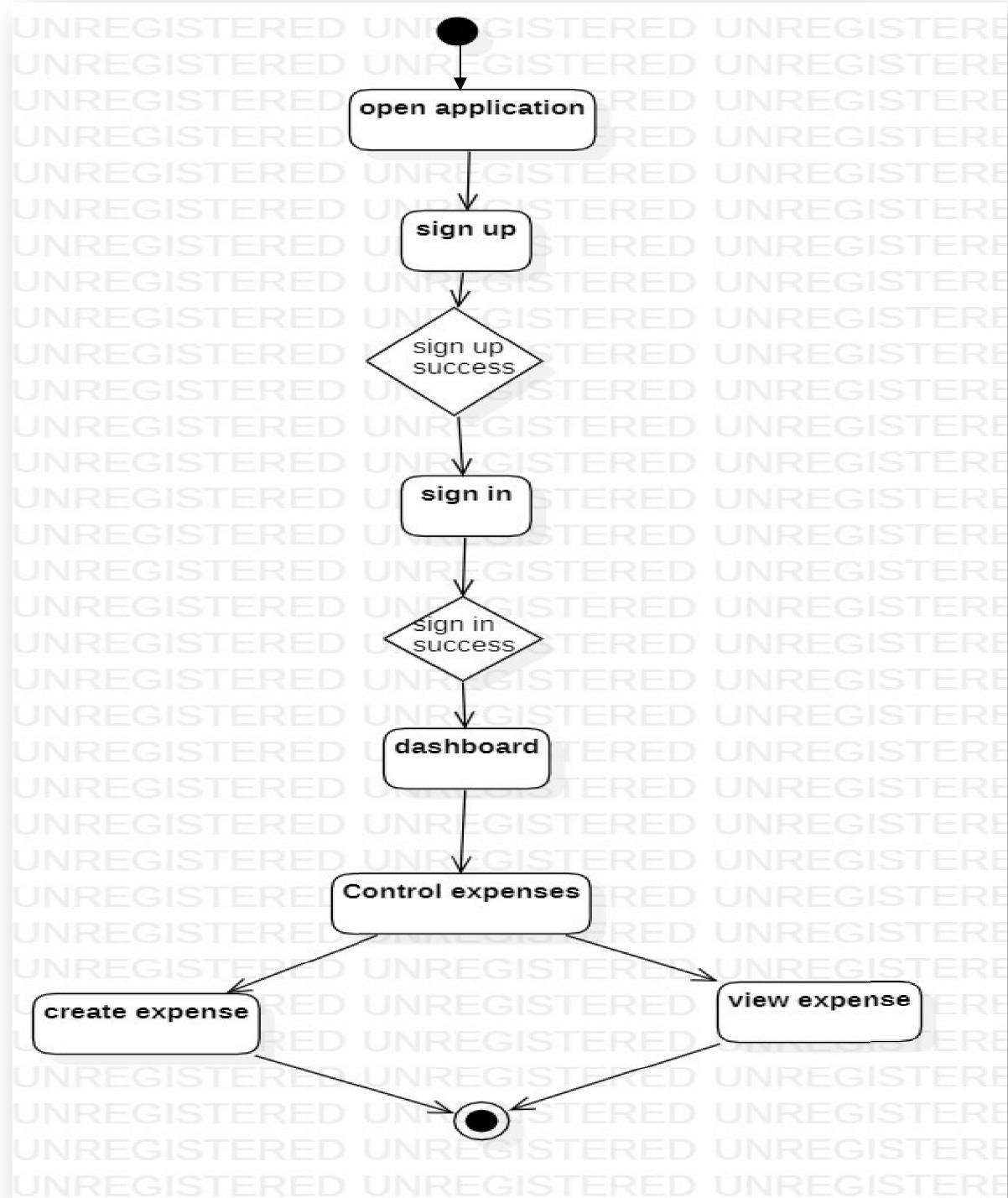
1. Language : Dart
2. Framework: Flutter
3. Tools : VS Code
4. Database : SQLite

Design

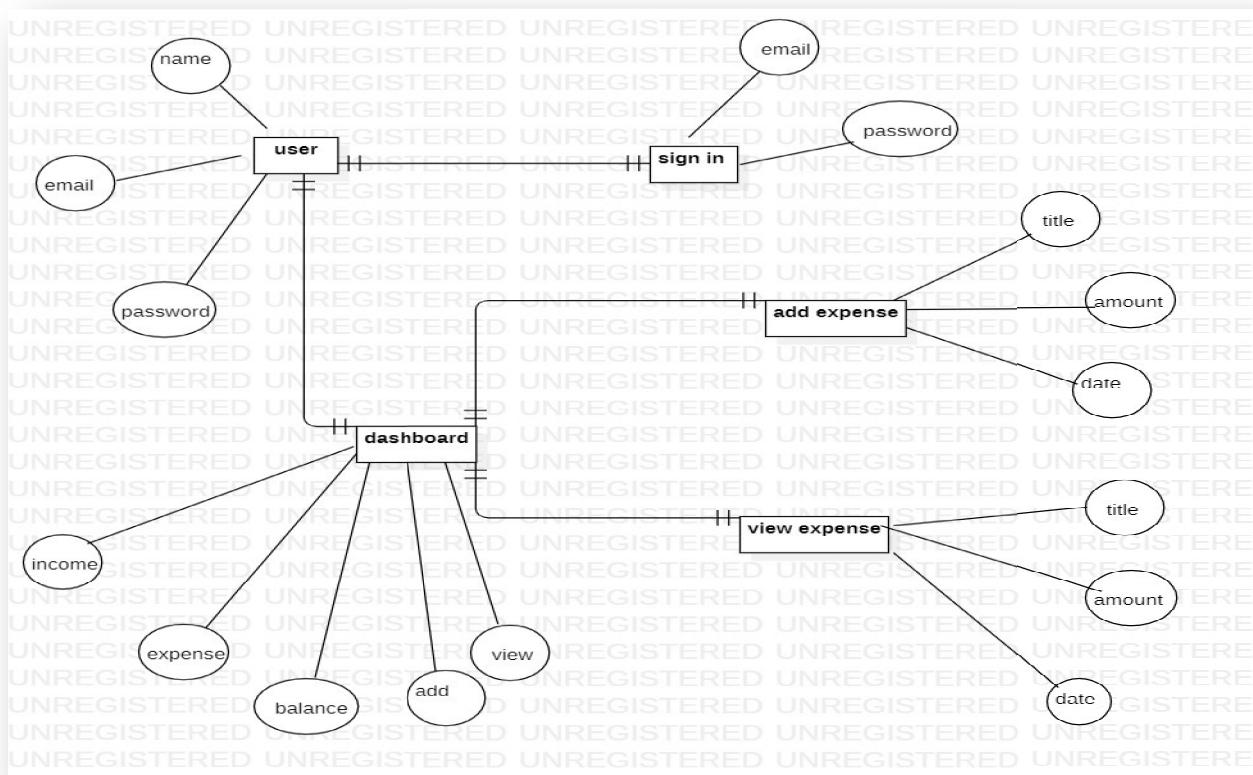
Use Case



Activity diagram



Entity Relationship diagram



Database Design/ Data Dictionary

userstable (2 rows)

```
SELECT * FROM 'userstable' LIMIT 0,30
```

Execute

email	name	password
rahul@gmail.com	Rahul	123456678
r@gmail.com	Roshan Kumar	qwerty1234

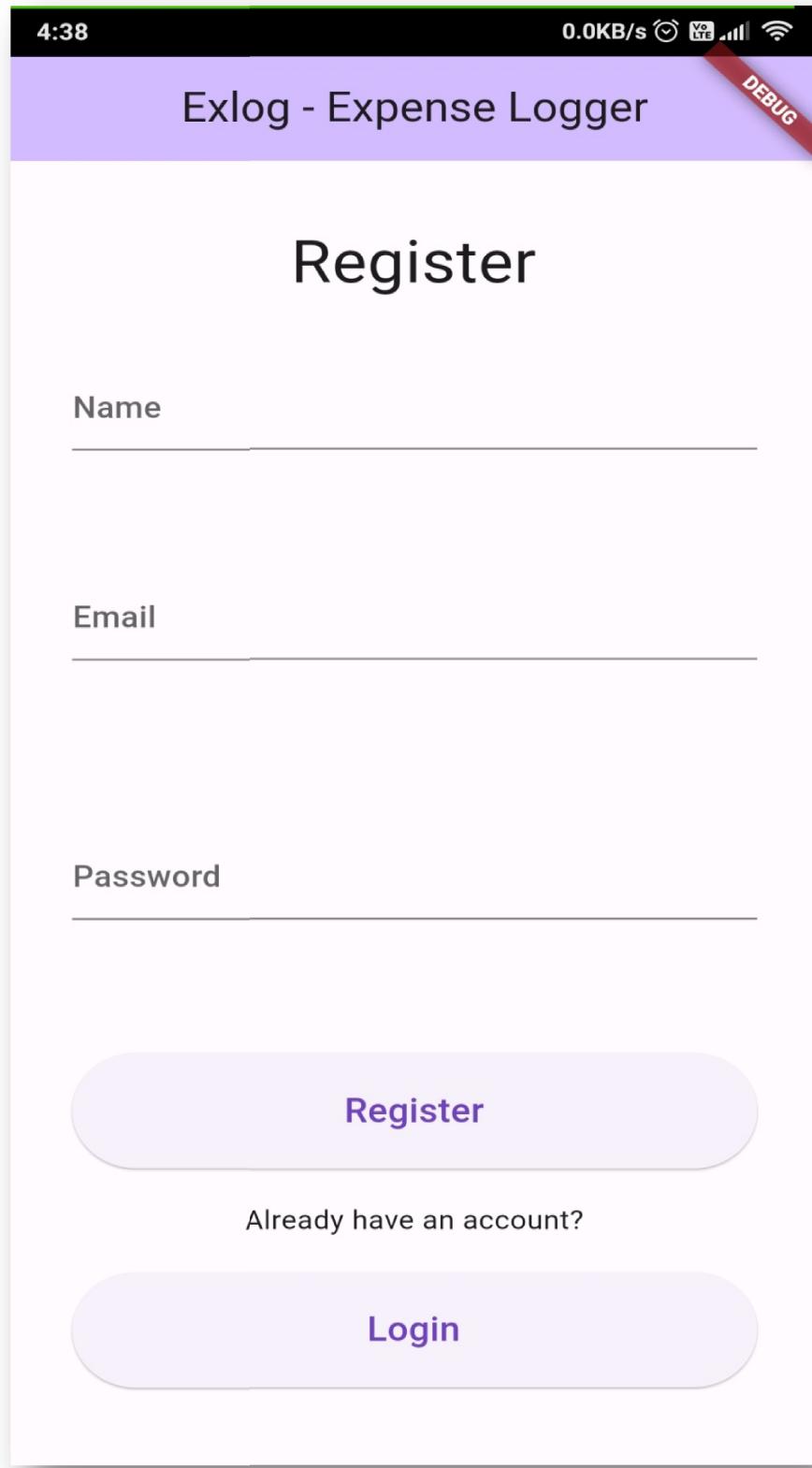
expensetable (12 rows)

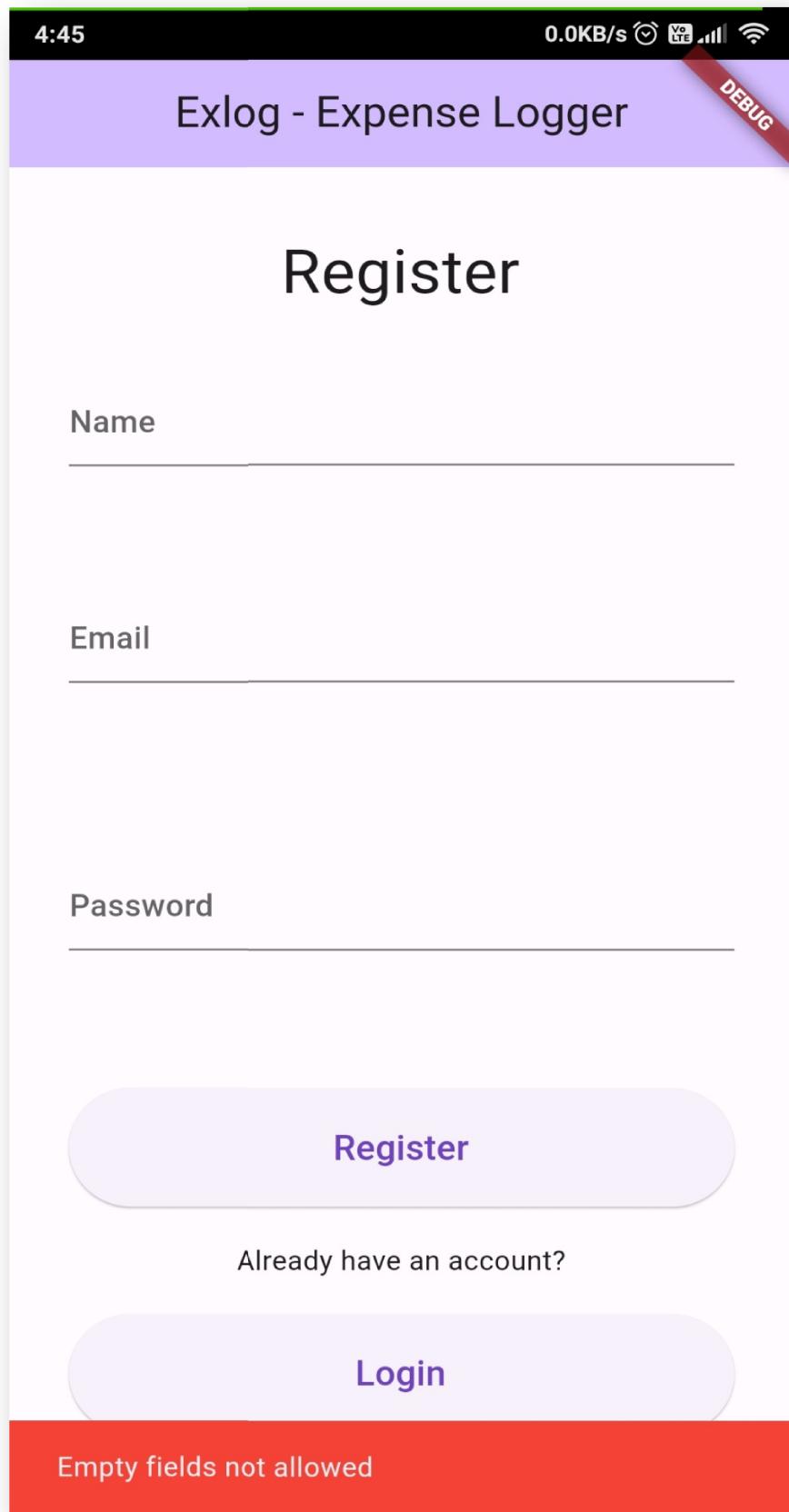
```
SELECT * FROM 'expensetable' LIMIT 0,30
```

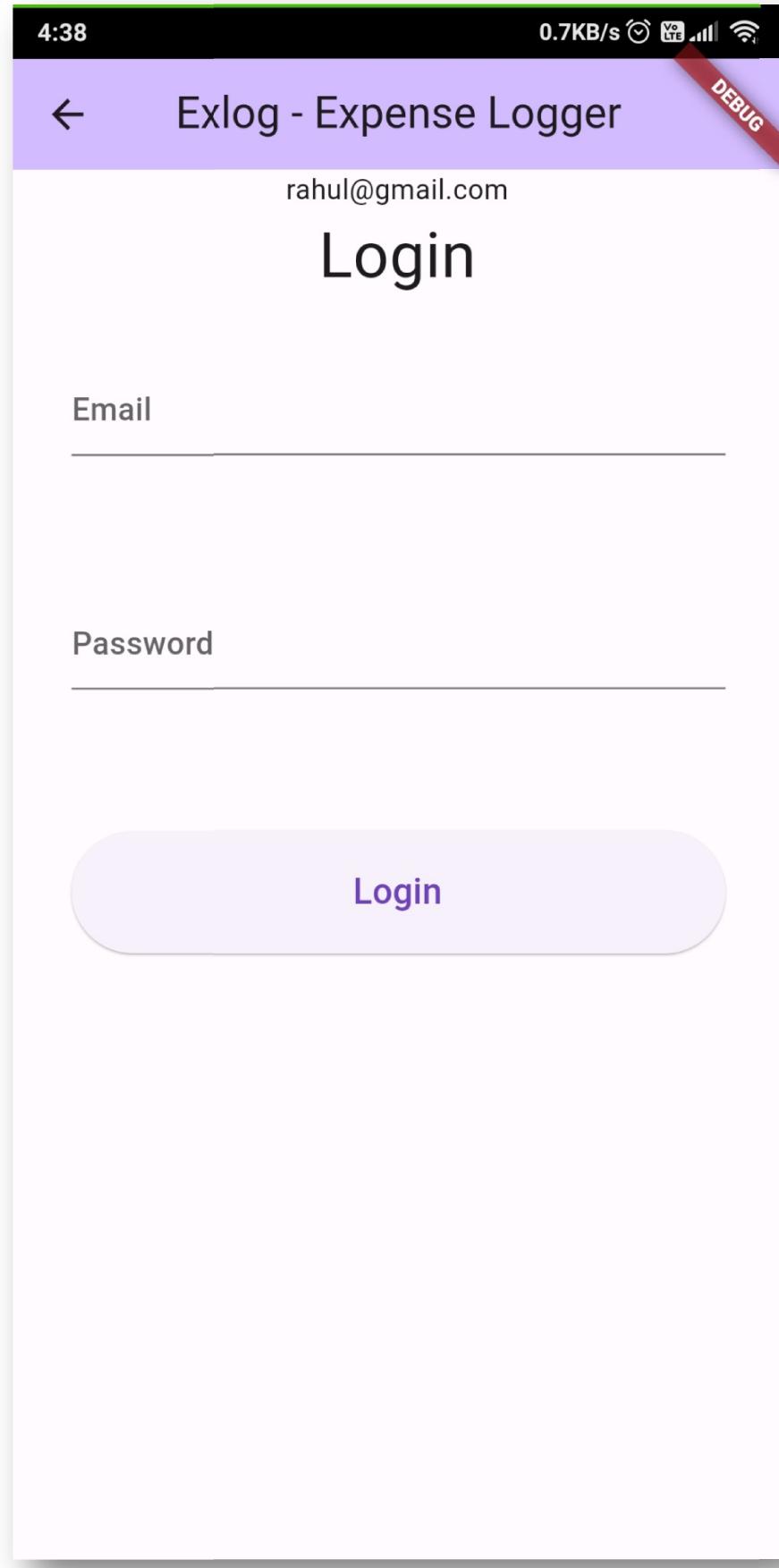
Execute

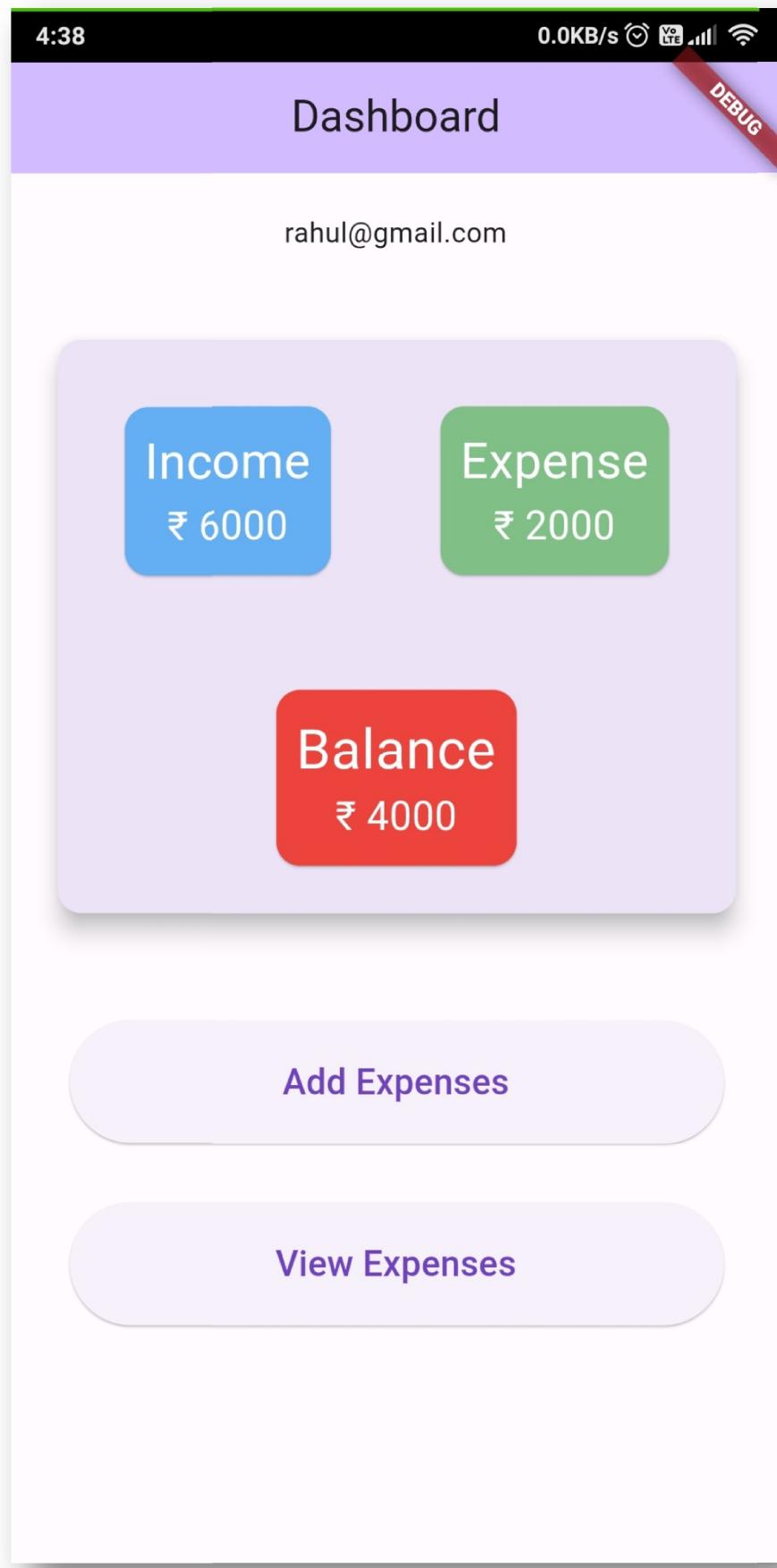
id	date	title	amount
1	17/12/2023	Lunch	60
2	17/12/2023	Breakfast	20
3	16/12/2023	Food	0
4	16/12/2023	Food	60
5	18/12/2023	Dinner	60

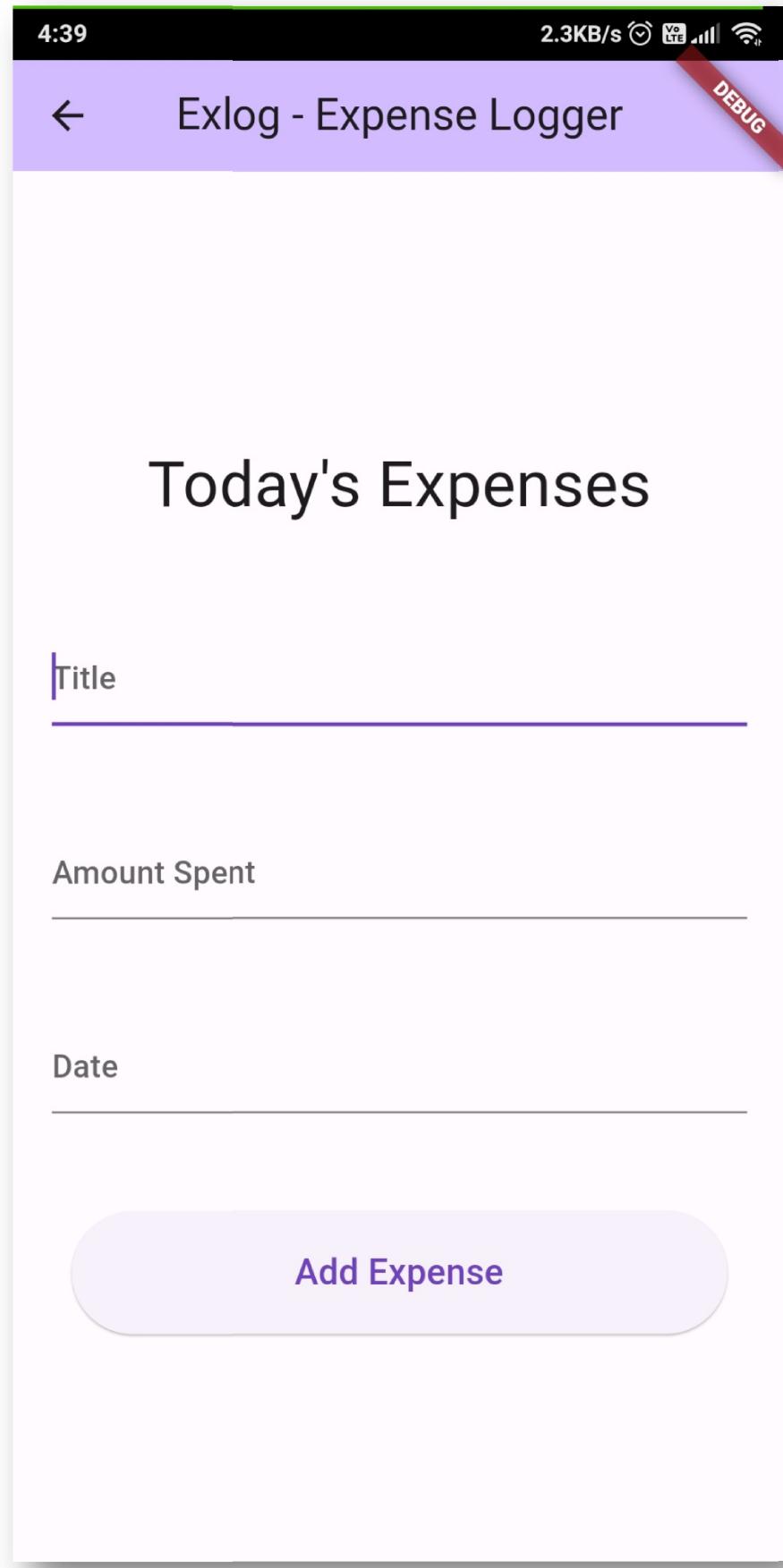
User Interface











A screenshot of a mobile application titled "Exlog - Expense Logger". The top bar shows the time as 2:58 and network status as 0.0KB/s. The main title "Exlog - Expense Logger" is displayed above a large, bold header "All Expenses". Below this is a table with four columns: "S No", "Date", "Title", and "Amount". The table contains four rows of expense data.

S No	Date	Title	Amount
1	17/12/2023	Lunch	60.0
2	17/12/2023	Dinner	50.0
3	16/12/2023	Fare Camp	40.0
4	16/12/2023	Lunch Burger	125.0

Code

Main.dart

```
// import 'dart:math';

import 'package:flutter/material.dart';
import 'package:sqflite/sqlite3.dart';
import 'login.dart';

void main() {
  runApp(const MyApp());
}

class MyApp extends StatelessWidget {
  const MyApp({super.key});
  @override
  Widget build(BuildContext context) {
    return SafeArea(
      child: MaterialApp(
        title: 'Exlog',
        theme: ThemeData(
          colorScheme: ColorScheme.fromSeed(seedColor: Colors.deepPurple),
          useMaterial3: true,
        ),
        home: const RegistrationPage(title: 'Exlog - Expense Logger'),
      ),
    );
  }
}

class RegistrationPage extends StatefulWidget {
  const RegistrationPage({super.key, required this.title});

  final String title;

  @override
  State<RegistrationPage> createState() => _RegistrationPageState();
}

class _RegistrationPageState extends State<RegistrationPage> {
  // Database helper

  final _formKey = GlobalKey<FormState>();
```

```

TextEditingController nameController = TextEditingController();
TextEditingController emailController = TextEditingController();
TextEditingController passwordController = TextEditingController();

_registrationPageState() {
  initDb();
}

late Database _db;

Future<void> initDb() async {
  _db = await openDatabase('registration.db');
  await _db.execute(
    "CREATE TABLE IF NOT EXISTS users (id INTEGER PRIMARY KEY, name TEXT, email TEXT)");
}

// Insert a new user record
void _registerUser(String name, String email) async {
  await _db.insert('users', {'name': name, 'email': email});
}

@Override
Widget build(BuildContext context) {
  return Scaffold(
    appBar: AppBar(
      backgroundColor: Theme.of(context).colorScheme.inversePrimary,
      title: Text(widget.title),
      centerTitle: true,
    ),
    body: Center(
      child: SingleChildScrollView(
        child: Form(
          key: _formKey,
          child: Column(
            mainAxisAlignment: MainAxisAlignment.center,
            children: [
              const Text(
                'Register',
                style: TextStyle(fontSize: 32.0),
              ),
              Padding(
                padding: const EdgeInsets.all(30.0),
                child: TextField(
                  controller: nameController,
                  decoration: const InputDecoration(hintText: 'Name'),
                ),
              ),
              const SizedBox(height: 5.0),
            ],
          ),
        ),
      ),
    ),
  );
}

```

```

Padding(
  padding: const EdgeInsets.all(30.0),
  child: TextField(
    controller: emailController,
    decoration: const InputDecoration(hintText: 'Email'),
    keyboardType: TextInputType.emailAddress,
  ),
),
const SizedBox(height: 32.0),
Padding(
  padding: const EdgeInsets.all(30.0),
  child: TextField(
    controller: passwordController,
    obscureText: true,
    decoration: const InputDecoration(hintText: 'Password'),
    keyboardType: TextInputType.visiblePassword,
  ),
),
const SizedBox(height: 32.0),
Column(
  mainAxisAlignment: MainAxisAlignment.spaceEvenly,
  children: [
    Padding(
      padding: const EdgeInsets.symmetric(horizontal: 30, vertical: 10),
      child: ElevatedButton(
        onPressed: () {
          // Validate form for empty fields
          if (nameController.text.isEmpty ||
              emailController.text.isEmpty ||
              passwordController.text.isEmpty) {
            ScaffoldMessenger.of(context).showSnackBar(
              const SnackBar(
                content: Text('Empty fields not allowed'),
                backgroundColor: Colors.red,
              ),
            );
          } else {
            // navigate to login page
            Navigator.push(
              context,
              MaterialPageRoute(
                builder: (context) => LoginPage(
                  email: emailController.text,
                  password: passwordController.text,
                ),
              ),
            );
          }
        },
      ),
    ),
  ],
)
}

```

```

        },
        child: const Padding(
            padding: EdgeInsets.all(18.0),
            child: Text(
                "Register",
                style: TextStyle(
                    fontSize: 18,
                ),
            ),
        ),
    ],
),
const SizedBox(height: 8.0),
const Text('Already have an account?'),
const SizedBox(height: 8.0),
Column(
    crossAxisAlignment: CrossAxisAlignment.stretch,
    children: [
        Padding(
            padding: const EdgeInsets.symmetric(horizontal: 30, vertical: 10),
            child: ElevatedButton(
                onPressed: () {
                    // Navigate to login page
                    String email = 'rahul@gmail.com';
                    String password = '1234';
                    Navigator.push(
                        context,
                        MaterialPageRoute(
                            builder: (context) => LoginPage(
                                email: email,
                                password: password,
                            ),
                        ),
                    );
                },
            ),
        ),
        child: const Padding(
            padding: EdgeInsets.all(18.0),
            child: Text(
                "Login",
                style: TextStyle(
                    fontSize: 18,
                ),
            ),
        ),
    ],
),
),

```

```
        ],
        )
    ],
),
),
),
),
),
);
}
}
```

Login.dart

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

class LoginPage extends StatefulWidget {
    final String email;
    final String password;
    const LoginPage({super.key, required this.email, required this.password});

    @override
    State<LoginPage> createState() => _LoginPageState();
}

class _LoginPageState extends State<LoginPage> {
    final _formKey = GlobalKey<FormState>();
    TextEditingController emailController = TextEditingController();
    TextEditingController passwordController = TextEditingController();
    @override
    Widget build(BuildContext context) {
        return SafeArea(
            child: Scaffold(
                appBar: AppBar(
                    backgroundColor: Theme.of(context).colorScheme.inversePrimary,
                    title: const Text('Exlog - Expense Logger'),
                    centerTitle: true,
                ),
                body: Center(
                    child: Column(
```

```
children: [
    Text(widget.email),
    SingleChildScrollView(
        child: Form(
            key: _formKey,
            child: Column(
                mainAxisAlignment: MainAxisAlignment.center,
                children: [
                    const Text(
                        'Login',
                        style: TextStyle(fontSize: 32.0),
                    ),
                    Padding(
                        padding: const EdgeInsets.all(30.0),
                        child: TextField(
                            controller: emailController,
                            decoration: const InputDecoration(hintText: 'Email'),
                            keyboardType: TextInputType.emailAddress,
                        ),
                    ),
                    const SizedBox(height: 10.0),
                    Padding(
                        padding: const EdgeInsets.all(30.0),
                        child: TextField(
                            controller: passwordController,
                            obscureText: true,
                            decoration:
                                const InputDecoration(hintText: 'Password'),
                        ),
                    ),
                    const SizedBox(height: 32.0),
                    Column(
                        crossAxisAlignment: CrossAxisAlignment.stretch,
                        children: [
                            Padding(
                                padding: const EdgeInsets.symmetric(horizontal: 30, vertical: 10),
```

```
        child: ElevatedButton(
            onPressed: () {
                // Validate form for empty fields

                if (emailController.text.isEmpty || passwordController.text.isEmpty) {
                    ScaffoldMessenger.of(context).showSnackBar(
                        const SnackBar(
                            content: Text('Empty fields not allowed'),
                            backgroundColor: Colors.red,
                        ),
                    );
                } else if (_formKey.currentState!.validate()) {
                    if (emailController.text == widget.email && passwordController.text == widget.password) {
                        Navigator.push(
                            context,
                            MaterialPageRoute(
                                builder: (context) => DashboardPage(
                                    email: emailController.text,
                                    password: passwordController.text,
                                ),
                            ),
                        );
                    } else {
                        ScaffoldMessenger.of(context).showSnackBar(
                            const SnackBar(
                                content: Text('Invalid Data'),
                                backgroundColor: Colors.red,
                            ),
                        );
                    }
                },
            },
            child: const Padding(
                padding: EdgeInsets.all(18.0),
                child: Text(

```

Dashboard.dart

```
import 'package:exlog/add_expenses.dart';
import 'package:exlog/view_expenses.dart';
import 'package:flutter/material.dart';

class DashboardPage extends StatelessWidget {
  final String email;
  final String password;
  const DashboardPage({super.key, required this.email, required this.password});

  @override
  Widget build(BuildContext context) {
    return WillPopScope(
      onWillPop: () async => false,
```

```
child: SafeArea(  
    child: Scaffold(  
        appBar: AppBar(  
            automaticallyImplyLeading: false,  
            backgroundColor: Theme.of(context).colorScheme.inversePrimary,  
            title: const Text('Dashboard'),  
            centerTitle: true,  
        ),  
        body: Center(  
            child: Column(  
                children: [  
                    Padding(  
                        padding: const EdgeInsets.all(20.0),  
                        child: Text(email),  
                    ),  
                    Padding(  
                        padding: const EdgeInsets.all(20.0),  
                        child: Card(  
                            elevation: 10,  
                            child: Column(  
                                children: [  
                                    Padding(  
                                        padding: const EdgeInsets.all(30.0),  
                                        child: Row(  
                                            mainAxisAlignment: MainAxisAlignment.spaceBetween,  
                                            children: [  
                                                Column(  
                                                    children: [  
                                                        Card(  
                                                            color: Colors.blue[300],  
                                                            child: const Padding(  
                                                                padding: EdgeInsets.all(10.0),  
                                                                child: Column(  
                                                                    children: [  
                                                                        Row(  
                                                                            children: [  
                                                                                Text(  

```

```
"Income",
style: TextStyle(
  fontSize: 25,
  color: Colors.white,
),
),
],
),
Row(
  children: [
    Text(
      "₹ 6000",
      style: TextStyle(
        fontSize: 20,
        color: Colors.white,
      ),
),
],
),
],
),
),
),
],
),
],
),
),
Column(
  children: [
    Card(
      color: Colors.green[300],
      child: const Padding(
        padding: EdgeInsets.all(10.0),
        child: Column(
          children: [
            Row(
              children: [
                Text(
                  "Expense",

```



```
mainAxisAlignment: MainAxisAlignment.center,
crossAxisAlignment: CrossAxisAlignment.stretch,
children: [
  ElevatedButton(
    onPressed: () {
      Navigator.push(
        context,
        MaterialPageRoute(
          builder: (context) => const AddExpenses(),
        ),
      );
    },
    child: const Padding(
      padding: EdgeInsets.all(18.0),
      child: Text(
        "Add Expenses",
        style: TextStyle(
          fontSize: 18,
        ),
        ),
      ),
    ),
  ),
  const SizedBox(
    height: 30,
  ),
  ElevatedButton(
    onPressed: () {
      Navigator.push(
        context,
        MaterialPageRoute(
          builder: (context) => const ViewExpenses(),
        ),
      );
    },
    child: const Padding(
      padding: EdgeInsets.all(18.0),
      child: Text(
```

```
"View Expenses",
style: TextStyle(
    fontSize: 18,
),
),
),
),
],
),
),
],
),
),
),
),
);
}
}
```

Bibliography

1. Dart Official Documentation
2. Flutter Official Documentation
3. Sqlite Official Documentation
4. Sqflite Official Documentation
5. Dartpad.io
6. Github.com
7. Google bard
8. Youtube.com