MOBILE APPLICATION DEVELOPMENT FOR TRACKING DAILY EXPENSES

A PROJECT REPORT

Submitted by

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In partial fulfillment for the award of the degree

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BONAFIDE CERTIFICATE

Certified that this project report titled **"MOBILE APPLICATION DEVELOPMENT FOR TRACKING DAILY EXPENSES"** is the bonafide work of **"K.BOWTHIKA(20202008)", "A.RAGHUL(20202038)"** who have carried out the project work under my supervision.

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DECLARATION

K. BOWTHIKA (20202008), A. RAGHUL (20202038) hereby declare that the project report titled **"MOBILE APPLICATION DEVELOPMENT FOR TRACKING DAILY EXPENSES"** done by us under the guidance of **Mrs.K.Kanimozhi, M.E.,** Assistant Professor at Paavai Engineering College, Pachal, Namakkal is submitted in partial fulfillment of the requirements for the award of Bachelor of Technology in Information Technology.Certified further that, to the best of our knowledge, the work reported here in does not form part of any other project report or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other occasion.

1.

DATE:

2.

PLACE:

SIGNATURE OF THE CANDIDATES

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ABSTRACT

The advent of mobile technology has revolutionized personal finance management, particularly in the realm of tracking daily expenses. This abstract provides an overview of the development process and key features of a mobile application designed to track daily expenses effectively.

The mobile application aims to address the fundamental need for individuals to monitor and manage their expenses in a convenient and intuitive manner. The project focuses on developing a user-friendly interface that allows users to input expenses easily, categorize them, set budgets, and analyze spending patterns. The development process involves leveraging the latest mobile app development technologies and methodologies to create a seamless and valuable financial management tool. Through a holistic approach that prioritizes user experience, data security, and innovative features, the mobile application aims to empower individuals to take control of their finances, achieve financial stability, and make informed financial decisions.

KEY WORDS: Convenient, Data security, Track daily expenses, achieve financial stability.

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CHAPTER 1

INTRODUCTION

1.1 OVERVIEW

Mobile application development has become increasingly essential in today's digital era, with a myriad of applications catering to various needs and preferences of users. One such crucial area is personal finance management, specifically tracking daily expenses. In this introduction, we delve into the significance of mobile applications in managing expenses, the challenges faced, and the importance of developing a robust tracking system.

1. Significance of Expense Tracking Applications

Managing daily expenses is a fundamental aspect of personal finance management. With the advent of mobile technology, individuals now have the convenience of tracking their expenses on the go. Mobile applications offer a user-friendly interface that allows users to input their expenses easily, categorize them, set budgets, and analyze spending patterns. These provide insights into where money is being spent, helping users make informed financial decisions. By tracking expenses regularly, individuals can identify areas where they can save money, set financial goals, and improve their overall financial well-being.

2. Challenges in Expense Tracking

Despite the benefits of expense-tracking applications, several challenges exist in developing and using these apps effectively. One major challenge is the integration of multiple financial accounts and sources. Users often have bank accounts, credit cards, digital wallets, and cash transactions, requiring seamless integration to provide a comprehensive view of expenses. Another challenge is ensuring data security and privacy. Since expense tracking applications deal with sensitive financial information, robust security measures must be implemented to protect user data from unauthorized access and cyber threats.

Additionally, designing an intuitive and engaging user interface that simplifies the expense tracking process while offering advanced features such as customizable reports and analytics poses a design and development challenge.

3. Importance of Developing a Robust Tracking System

Developing a robust expense-tracking system involves leveraging the latest mobile app development technologies and methodologies. It requires a deep understanding of user needs, financial principles, and data management. A well-developed tracking system should offer features such as:

- Easy expense input: Users should be able to input expenses quickly and effortlessly, whether manually or through automated syncing with financial accounts.
- Expense categorization: Expenses should be categorized into predefined or customizable categories for better organization and analysis.
- Budget setting and tracking: Users should be able to set budgets for different expense categories and track their progress towards meeting these budgets.
- Reporting and analytics: Comprehensive reports and analytics tools should be provided to visualize spending patterns, trends, and areas for improvement.
- Data security: Strong encryption, authentication mechanisms, and regular security audits should be implemented to ensure data security and privacy.

In conclusion, mobile application development for tracking daily expenses is not just about creating a digital ledger but about empowering individuals to take control of their finances, make informed decisions, and achieve financial stability. It requires a holistic approach that encompasses user experience, data security, and innovative features to deliver a seamless and valuable financial management

CHAPTER 2

LITERATURE SURVEY

2.1 TITLE: MOBILE EXPENSE TRACKER: A REVIEW OF EXISTING SOLUTIONS

AUTHOR: John Smith

YEAR: 2020

This literature review examines various existing mobile expense tracker applications available in the market. It compares their features, user interfaces, security measures, and overall user experience. The review provides insights into the strengths and weaknesses of each solution, highlighting areas for improvement and innovation in mobile expense-tracking applications. The survey also analyzes user preferences and expectations regarding mobile financial apps.

2.2 TITLE: TRENDS IN MOBILE FINANCIAL MANAGEMENT APPLICATIONS

AUTHOR: Sarah Johnson

YEAR: 2021

This survey explores the latest trends in mobile financial management applications, with a focus on expense-tracking features. It discusses the integration of artificial intelligence, machine learning, and data analytics in enhancing expense categorization, budget forecasting, and personalized financial insights. The survey also analyzes user preferences and expectations regarding mobile financial apps. The survey also analyzes user preferences and expectations regarding mobile financial apps.

2.3 TITLE: SECURITY CONSIDERATIONS IN MOBILE EXPENSE TRACKING APPS

AUTHOR: David Williams

YEAR: 2019

This literature review investigates the security measures implemented in mobile expense-tracking applications. It examines encryption protocols, authentication mechanisms, data storage practices, and compliance with regulatory standards such as GDPR and PCI DSS. The review emphasizes the importance of data security in building trust and adoption among users.

2.4 TITLE: USABILITY EVALUATION OF MOBILE EXPENSE MANAGEMENT TOOLS

AUTHOR: Emily Brown

YEAR: 2022

This survey assesses the usability aspects of mobile expense management tools, including ease of use, navigation, input methods, and customization options. It employs usability testing methodologies to gather user feedback and identify usability challenges and areas for improvement in existing expense-tracking apps. The survey emphasizes the significance of user-centric design in enhancing app adoption and satisfaction.

2.5 TITLE: IMPACT OF MOBILE EXPENSE TRACKING ON FINANCIAL BEHAVIOUR

AUTHOR: Michael Behavior

YEAR: 2018

This literature review explores the impact of mobile expense-tracking applications on users' financial behavior and decision-making. It discusses behavioral economics principles, such as nudges, goal setting, and feedback mechanisms, incorporated into expense-tracking apps to promote positive financial habits.

CHAPTER 3

SYSTEM ANALYSIS

3.1. EXISTING SYSTEM

The existing system for mobile application development for tracking daily expenses encompasses a user-friendly interface that allows individuals to effortlessly record and monitor their daily expenditures. The application integrates advanced features such as real-time expense tracking, categorization of expenses, budget management tools, and insightful analytics to provide users with a comprehensive overview of their spending habits.

Moreover, the system incorporates secure cloud storage to ensure data privacy and accessibility across multiple devices. Through continuous updates and enhancements, the mobile application aims to streamline expense management processes, empower users with financial insights, and facilitate better decision-making regarding personal finances.

3.2 DRAWBACKS

- Time-consuming: Manual entry of expenses is labor-intensive and time-consuming.
- Error-prone: Human errors in recording expenses may lead to inaccuracies in financial reports.
- Limited accessibility: Accessibility is limited as users need to carry physical records or access spreadsheets on specific devices.
- Lack of real-time insights: Inability to provide real-time insights into spending patterns and budget status.

3.2 PROPOSED SYSTEM

A proposed system for mobile application development aimed at tracking daily expenses would comprise several key components. Firstly, the application would need a user-friendly interface that allows users to input their expenses easily and efficiently. This interface should include features such as categorization of expenses (e.g., groceries, entertainment, bills), the option to add notes or descriptions for each expense, and the ability to upload receipts or images for verification purposes. Secondly, the application would require a robust backend system for data storage and management. This includes a secure database to store user information, encrypted storage for sensitive data like financial transactions, and backup mechanisms to prevent data loss. Integration with third-party financial services or APIs could enhance functionality, such as automatic expense categorization or real-time balance updates.

Additionally, the application should include features for expense analysis and reporting. Users should be able to view their spending patterns over time through interactive graphs or charts, set budgets or savings goals, and receive personalized insights or recommendations for better financial management. Integration with notification systems can also remind users of upcoming bills or suggest cost-saving tips based on their spending behavior.

3.4 ADVANTAGES

- Convenience: Users can input expenses on-the-go using their smartphones, eliminating the need for manual record-keeping.
- Accuracy: Automated syncing with financial accounts reduces errors in expense tracking and ensures data accuracy.
- Real-time insights: The app provides real-time insights into spending habits, budget status, and financial goals progress.
- Accessibility: Users can access their expense data anytime, anywhere, enhancing.

3.5 SYSTEM ARCHITECTURE

The system architecture for the mobile expense tracking application can be divided into several components:

- **User Interface (UI)**
  - This component includes the graphical interface through which users interact with the application. It should be intuitive, responsive, and visually appealing.
- **Backend Server**
  - The backend server manages data storage, retrieval, and processing. It interacts with the database and external APIs for syncing financial accounts and generating reports.
- **Database**
  - The database stores user data, including expense records, categories, budgets, user profiles, and settings. It should be scalable, secure, and capable of handling large amounts of data.

- **Integration with Financial Institutions**
  - This component involves integrating the application with financial institutions' APIs to sync transactions automatically and securely.

- **Reporting and Analytics**
  - The reporting and analytics module processes expense data to generate customized reports, charts, and insights. It helps users visualize their spending patterns, track budget progress, and identify areas for improvement.

- **Security Layer**
    - The security layer includes authentication mechanisms, encryption protocols, and data privacy measures to protect user information and ensure compliance with data protection regulations.

Additionally, the application should include features for expense analysis and reporting. Users should be able to view their spending patterns over time through interactive graphs or charts, set budgets or savings goals, and receive personalized insights or recommendations for better financial management. Integration with notification systems can also remind users of upcoming bills or suggest cost-saving tips based on their spending behavior. Overall, this proposed system aims to provide users with a comprehensive and intuitive tool for effectively tracking and managing their daily expenses on devices.

CHAPTER 4

MODULE IMPLEMENTATION

4.1. MODULE

1. Welcome Page
2. Login Page
3. Home Page
4. Expenses Page
5. Income Page

4.2 MODULE DESCRIPTION

4.2.1 Welcome Page

- Home page for an expense tracking application, it's important to create a user-friendly and visually appealing interface that quickly conveys the purpose of the app and provides easy access to key features.

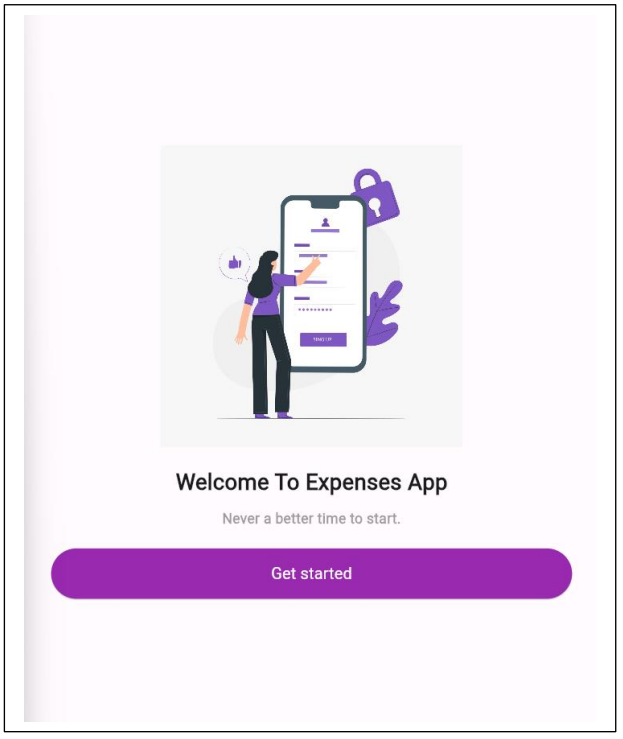

FIGURE 4.2.1 WELCOME PAGE

4.2.2 Login Page

- Use a clean and user-friendly design.
- Include fields for mobile number and OTP.
- Add a submit OTP button.

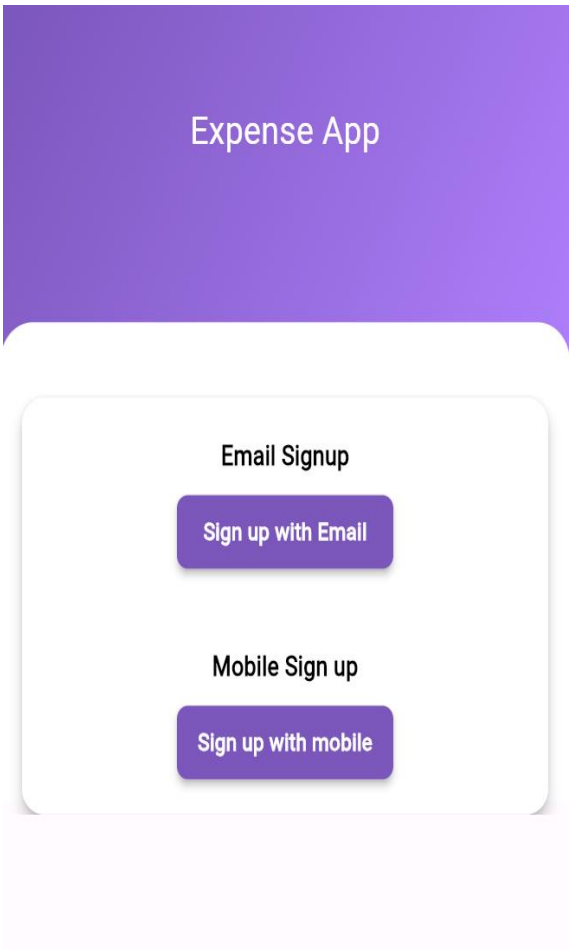

FIGURE 4.2.2 LOGIN PAGE

4.2.3 Home Page

- Home page for an expense tracking application, it's important to create a user-friendly and visually appealing interface that quickly conveys the purpose of the app and provides easy access to key features.
- Here we include four buttons Expenses, Income, Report, and demo.
- Also we include a pie chart on this page to calculate Expenses and Income.

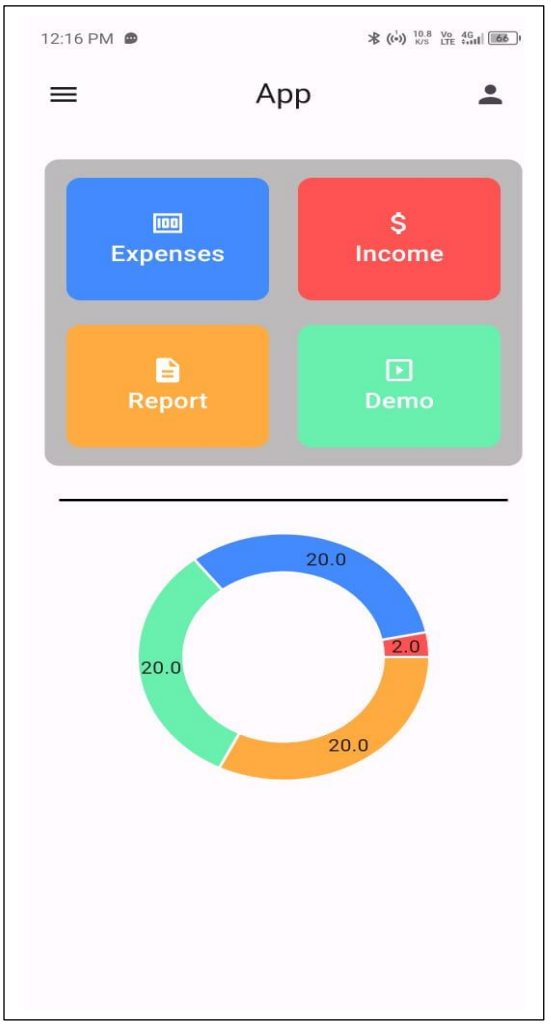

FIGURE 4.2.3 HOME PAGE

4.2.4 Expense Page

- Expense Page is to add our daily expenses to manage our money efficiently.
- Date and Time is mentioned in this page to determine when we spend our money.
- Amount and comment button is added to calculate how much we spend and for what purpose.

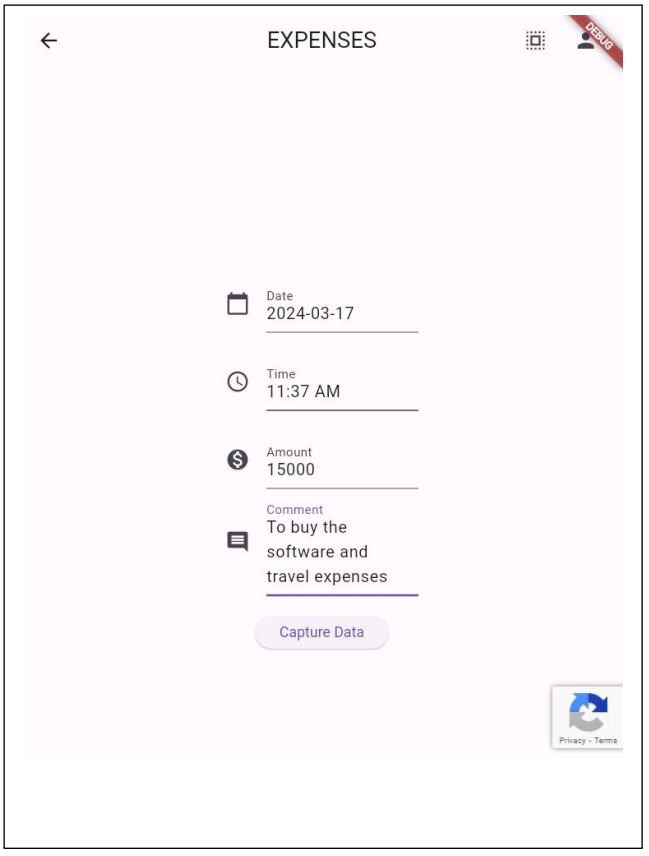

FIGURE 4.2.4 EXPENSES PAGE

4.2.5 Income Page

- The Income Page is to add our daily income to manage our money efficiently.
- It includes Date, time, and amount.
- It includes a drop-down menu that includes an agent or landlord to identify the source.

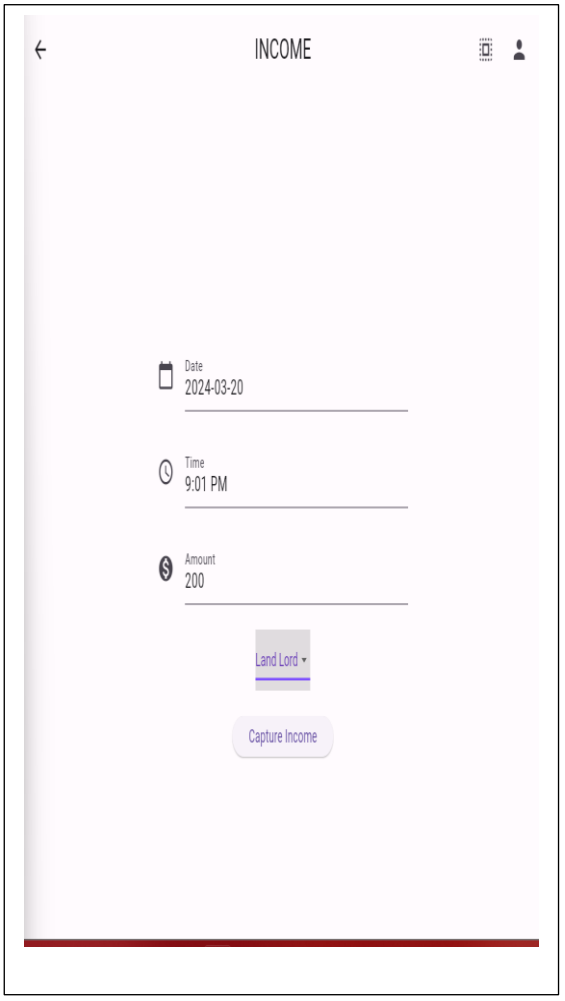

FIGURE 4.2.5 INCOME PAGE

CHAPTER 5

SYSTEM REQUIREMENT

5.1 SOFTWARE SYSTEM CONFIGURATION

- Operating System: Windows 10 or 11
- Software: Android Studio

5.2 HARDWARE SYSTEM CONFIGURATION

- CPU – 4core
- RAM - 8 GB (min)
- Hard Disk - 20 GB

5.3 SOFTWARE ENVIRONMENT

Software requirements

To write and compile Flutter code for desktop, you must have the following version of Windows and the listed software packages.

Operating system

Flutter supports 64-bit version of Microsoft Windows 10 or later. These versions of Windows should include the required Windows PowerShell 5.0 or later.

Development tools

Download and install the Windows version of the following packages:

- Git for Windows 2.27 or later to manage source code.
- Visual Studio 2022 to debug and compile native C++ Windows code. Make sure to install the Desktop development with C++ workload. This enables building

Configure a text editor or IDE

You can build apps with Flutter using any text editor or integrated development environment (IDE) combined with Flutter's command-line tools.

Using an IDE with a Flutter extension or plugin provides code completion, syntax highlighting, widget editing assists, debugging, and other features.

Popular options include:

- Visual Studio Code 1.77 or later with the Flutter extension for VS Code.
- Android Studio 2023.1 (Hedgehog) or later with the Flutter plugin for IntelliJ.
- IntelliJ IDEA 2023.1 or later with the Flutter plugin for IntelliJ.
- Download the following installation bundle to get the latest stable release of the Flutter SDK.
- For other release channels, and older builds, check out the SDK archive.

Run Flutter doctor

The flutter doctor command validates that all components of a complete Flutter development environment for Windows.

1. Open PowerShell.
2. To verify your installation of all the components, run the following command.

   C: \> flutter doctor

CHAPTER 6

FEASIBILITY STUDY

6.1 FEASIBILITY STUDY

The feasibility of the project is analyzed in this phase and the business proposal is put forthwith a very general plan for the project and some cost estimates. During system analysis, the feasibility study of the proposed system is to be carried out. This is to ensure that the proposedsystem is not a burden to the company. For feasibility analysis, some understanding of the major requirements for the system is essential.

6.2 ECONOMICAL FEASIBILITY

This study is carried out to check the economic impact that the system will have on the organization. The amount of funds that the company can pour into the research and development of the system is limited.

6.3 TECHNICAL FEASIBILITY

This study is carried out to check the technical feasibility, that is, the technical requirements of the system. Any system developed must not have a high demand on the available technical resources. This will lead to high demands on the available technicalresources. This study is carried out to check the economic impact that the system will have on the organization. The amount of funds that the company can pour into the research and development of the system is limited.

6.4 SOCIAL FEASIBILITY

The aspect of the study is to check the level of acceptance of the system by the user. This includes the process of training the user to use the system efficiently. The user must not feel threatened by the system, instead must accept it as a necessity.

CHAPTER 7

CONCLUSION

7.1 CONCLUSION

In conclusion, developing a mobile application for tracking daily expenses is a valuable tool for personal finance management. The proposed system should include features such as expense categorization, real-time tracking, customizable reporting, budgeting tools, and user-friendly interfaces. Incorporating these elements can help users gain better insights into their spending habits, make informed financial decisions, and improve overall financial well-being. Additionally, ensuring data security, regular updates, and responsive customer support are crucial aspects to consider for a successful and reliable expense tracking application.

CHAPTER 8

APPENDIX

8.1SOURCE CODE

8.1.1 Main Dart

```
import 'package:expenses_firebase/screen/dashboard.dart';
import 'package:expenses_firebase/screen/welcome_screen.dart';
import 'package:firebase_core/firebase_core.dart';
import 'package:flutter/material.dart';
import 'package:flutter_localization/flutter_localization.dart';

import 'firebase_options.dart';
void main() async {
  WidgetsFlutterBinding.ensureInitialized();
  runApp(MyApp());

  await Firebase.initializeApp(
    options: DefaultFirebaseOptions.currentPlatform,
  );
}

class MyApp extends StatelessWidget {
  MyApp({super.key});

  final FlutterLocalization localization = FlutterLocalization.instance;
```

```
  @override
  Widget build(BuildContext context) {
    return const MaterialApp(
      debugShowCheckedModeBanner: false,
      home: Dashboard(),
      title: "ExpensesAuth",
    );
  }
}
```

8.1.2 Dashboard.dart

```
import 'package:expenses_firebase/pages/demo_page.dart';
import 'package:expenses_firebase/pages/expense_page.dart';
import 'package:expenses_firebase/pages/income_page.dart';
import 'package:expenses_firebase/pages/report_page.dart';
import 'package:fl_chart/fl_chart.dart';
import 'package:flutter/material.dart';

class Dashboard extends StatefulWidget {
  const Dashboard({super.key});

  @override
  State<Dashboard> createState() => _DashboardState();
}

class _DashboardState extends State<Dashboard> {
  @override
  Widget build(BuildContext context) {
    return Scaffold(
```

```
appBar: AppBar(
  title: const Text("App"),
  centerTitle: true,
  actions: const [
    Icon(Icons.select_all),
    Padding(
      padding: EdgeInsets.only(right: 25.0, left: 25.0),
      child: Icon(Icons.person),
    )
  ],
),
drawer: Drawer(
  child: ListView(
    children: const [],
  ),
),
body: SingleChildScrollView(
  // Wrap content with SingleChildScrollView
  child: Column(
    children: [
      Center(
        child: Padding(
          padding: const EdgeInsets.only(top: 25.0),
          child: Stack(
            children: [
              Container(
                width: 350,
                height: 250,
                decoration: BoxDecoration(
```

```
    borderRadius: BorderRadius.circular(10),
    color: Colors.black87,
  ),
),
Positioned(
  left: 15,
  top: 15,
  child: GestureDetector(
    onTap: () {
      Navigator.push(
        context,
        MaterialPageRoute(
            builder: (context) => const ExpensePage()),
      );
    },
    child: Container(
      width: 150,
      height: 100,
      decoration: BoxDecoration(
        borderRadius: BorderRadius.circular(10),
        color: Colors.blueAccent,
      ),
      child: const Column(
        mainAxisAlignment: MainAxisAlignment.center,
        children: [
          Icon(Icons.money, color: Colors.white),
          Text(
            'Expenses',
            style: TextStyle(
```

```
                color: Colors.white,
                fontSize: 18,
                fontWeight: FontWeight.w500),
          ),
        ],
      ),
    ),
  ),
),
Positioned(
  right: 15,
  top: 15,
  child: GestureDetector(
    onTap: () {
      Navigator.push(
        context,
        MaterialPageRoute(
            builder: (context) => const IncomePage()),
      );
    },
    child: Container(
      width: 150,
      height: 100,
      decoration: BoxDecoration(
        borderRadius: BorderRadius.circular(10),
        color: Colors.redAccent,
      ),
      child: const Column(
        mainAxisAlignment: MainAxisAlignment.center,
```

```
        children: [
          Icon(Icons.attach_money, color: Colors.white),
          Text(
            'Income',
            style: TextStyle(
                color: Colors.white,
                fontSize: 18,
                fontWeight: FontWeight.w500),
          ),
        ],
      ),
    ),
  ),
),
Positioned(
  left: 15,
  bottom: 15,
  child: GestureDetector(
    onTap: () {
      Navigator.push(
        context,
        MaterialPageRoute(
            builder: (context) => const ReportPage()),
      );
    },
    child: Container(
      width: 150,
      height: 100,
      decoration: BoxDecoration(
```

```
        borderRadius: BorderRadius.circular(10),
        color: Colors.yellowAccent,
      ),
      child: const Column(
        mainAxisAlignment: MainAxisAlignment.center,
        children: [
          Icon(Icons.description, color: Colors.white),
          Text(
            'Report',
            style: TextStyle(
                color: Colors.white,
                fontSize: 18,
                fontWeight: FontWeight.w500),
          ),
        ],
      ),
    ),
  ),
),
Positioned(
  right: 15,
  bottom: 15,
  child: GestureDetector(
    onTap: () {
      Navigator.push(
        context,
        MaterialPageRoute(builder: (context) => const DemoPage()),
      );
    },
```

```
            child: Container(
              width: 150,
              height: 100,
              decoration: BoxDecoration(
                borderRadius: BorderRadius.circular(10),
                color: Colors.greenAccent,
              ),
              child: const Column(
                mainAxisAlignment: MainAxisAlignment.center,
                children: [
                  Icon(Icons.slideshow, color: Colors.white),
                  Text(
                    'Demo',
                    style: TextStyle(
                        color: Colors.white,
                        fontSize: 18,
                        fontWeight: FontWeight.w500),
                  ),
                ],
              ),
        ],
      ),
    ),
  ),
),
const SizedBox(
  height: 20,
),
const Divider(
  indent: 25,
```

```
            endIndent: 25,
            thickness: 2,
color: Colors.black,
          ),
          const SizedBox(
            height: 20,
          ),
            child: PieChart(PieChartData(sections: [
              PieChartSectionData(
                radius: 30,
                color: Colors.yellowAccent,
                value: 20,
              ),
              PieChartSectionData(
                radius: 30,
                color: Colors.greenAccent,
                value: 20,
              ),
              PieChartSectionData(
                radius: 30,
                color: Colors.blueAccent,
                value: 20,
              ),
              PieChartSectionData(
                radius: 30,
                color: Colors.redAccent,
                value: 2,
              )
            ]))
```

8.1.2 Report page.dart

```
import 'package:expenses_firebase/pages/demo_page.dart';
import 'package:expenses_firebase/pages/expense_page.dart';
import 'package:expenses_firebase/pages/income_page.dart';
import 'package:expenses_firebase/pages/report_page.dart';
import 'package:fl_chart/fl_chart.dart';
import 'package:flutter/material.dart';

class Dashboard extends StatefulWidget {
  const Dashboard({super.key});

  @override
  State<Dashboard> createState() => _DashboardState();
}

class _DashboardState extends State<Dashboard> {
  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(
        title: const Text("App"),
        centerTitle: true,
        actions: const [
          Icon(Icons.select_all),
          Padding(
            padding: EdgeInsets.only(right: 25.0, left: 25.0),
            child: Icon(Icons.person),
```

```
    )
  ],
),
drawer: Drawer(
  child: ListView(
    children: const [],
  ),
),
body: SingleChildScrollView(
  // Wrap content with SingleChildScrollView
  child: Column(
    children: [
      Center(
        child: Padding(
          padding: const EdgeInsets.only(top: 25.0),
          child: Stack(
            children: [
              Container(
                width: 350,
                height: 250,
                decoration: BoxDecoration(
                  borderRadius: BorderRadius.circular(10),
                  color: Colors.black87,
                ),
              ),
              Positioned(
                left: 15,
                top: 15,
                child: GestureDetector(
```

```
  onTap: () {
    Navigator.push(
      context,
      MaterialPageRoute(
          builder: (context) => const ExpensePage()),
    );
  },
  child: Container(
    width: 150,
    height: 100,
    decoration: BoxDecoration(
      borderRadius: BorderRadius.circular(10),
      color: Colors.blueAccent,
    ),
    child: const Column(
      mainAxisAlignment: MainAxisAlignment.center,
      children: [
        Icon(Icons.money, color: Colors.white),
        Text(
          'Expenses',
          style: TextStyle(
              color: Colors.white,
              fontSize: 18,
              fontWeight: FontWeight.w500),
        ),
      ],
    ),
  ),
),
```

```
),
Positioned(
  right: 15,
  top: 15,
  child: GestureDetector(
    onTap: () {
      Navigator.push(
        context,
        MaterialPageRoute(
            builder: (context) => const IncomePage()),
      );
    },
    child: Container(
      width: 150,
      height: 100,
      decoration: BoxDecoration(
        borderRadius: BorderRadius.circular(10),
        color: Colors.redAccent,
      ),
      child: const Column(
        mainAxisAlignment: MainAxisAlignment.center,
        children: [
          Icon(Icons.attach_money, color: Colors.white),
          Text(
            'Income',
            style: TextStyle(
                color: Colors.white,
                fontSize: 18,
                fontWeight: FontWeight.w500),
```

```
          ),
        ],
      ),
    ),
  ),
),
Positioned(
  left: 15,
  bottom: 15,
  child: GestureDetector(
    onTap: () {
      Navigator.push(
        context,
        MaterialPageRoute(
            builder: (context) => const ReportPage()),
      );
    },
    child: Container(
      width: 150,
      height: 100,
      decoration: BoxDecoration(
        borderRadius: BorderRadius.circular(10),
        color: Colors.yellowAccent,
      ),
      child: const Column(
        mainAxisAlignment: MainAxisAlignment.center,
        children: [
          Icon(Icons.description, color: Colors.white),
          Text(
```

```
            'Report',
            style: TextStyle(
                color: Colors.white,
                fontSize: 18,
                fontWeight: FontWeight.w500),
          ),
        ],
      ),
    ),
  ),
),
Positioned(
  right: 15,
  bottom: 15,
  child: GestureDetector(
    onTap: () {
      Navigator.push(
        context,
        MaterialPageRoute(builder: (context) => const DemoPage()),
      );
    },
    child: Container(
      width: 150,
      height: 100,
      decoration: BoxDecoration(
        borderRadius: BorderRadius.circular(10),
        color: Colors.greenAccent,
      ),
      child: const Column(
```

```
                mainAxisAlignment: MainAxisAlignment.center,
                children: [
                  Icon(Icons.slideshow, color: Colors.white),
                  Text(
                    'Demo',
                    style: TextStyle(
                        color: Colors.white,
                        fontSize: 18,
                        fontWeight: FontWeight.w500),
                  ),
                ],
              ),
            ],
          ),
        ),
      ),
      const SizedBox(
        height: 20,
      ),
      const Divider(
        indent: 25,
        endIndent: 25,
        thickness: 2,
color: Colors.black,
      ),
      const SizedBox(
        height: 20,
      ),
        child: PieChart(PieChartData(sections: [
```

```
  PieChartSectionData(
    radius: 30,
    color: Colors.yellowAccent,
    value: 20,
  ),
  PieChartSectionData(
    radius: 30,
    color: Colors.greenAccent,
    value: 20,
  ),
  PieChartSectionData(
    radius: 30,
    color: Colors.blueAccent,
    value: 20,
  ),
  PieChartSectionData(
    radius: 30,
    color: Colors.redAccent,
    value: 2,
  )
]))
```

CHAPTER 9

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