Finance Advisor: An Android Application for Personal Financial Management

Shriniwas Patil, Anuj Panchal, Shreyas Jagdale
Department of Computer Engineering
Jayawantrao Sawant Polytechnic, Hadapsar, Pune, India
Email: shriniwaspatil121314Hemail.com

Abstract*—*Managing personal finances has become increasingly important in today's fast-paced lifestyle. Many individuals struggle to keep track of their daily expenses, savings, and bill payments, which often leads to poor financial planning and inefficient budgeting This paper presents the design and development of a Finance Advisor Android application that helps users manage their financial activities efficiently.

The application provides features such as expense tracking, bill reminders, savings goal management, financial tips, and visual analytics using charts. Users can categorize their expenses, monitor total spending, and receive notifications for upcoming bill payments to avoid late fees. The system stores financial data locally using the Room Database for secure and efficient data management.

Additionally, graphical visualization such as pie charts is used to provide insights into spending patterns across different categories. The application is designed with a simple and user-friendly interface to ensure ease of use for individuals with basic smartphone knowledge. Overall, the application helps users improve financial awareness, budgeting habits, and financial decision-making through a structured digital platform.

***Index* Z'erms**—Android Application, Personal Finance, Expense Tracking, Room Database, Budget Management, Mobile Appli- cation

I. INTRODUCTION

Personal financial management is a crucial part of everyday life. With the increasing use of digital transactions and mobile payments, individuals often lose track of their spending habits. Without proper tracking and budgeting tools, people may overspend or fail to save effectively.

Mobile applications have transformed how people manage daily tasks. Android applications provide a convenient platform for managing financial records and analyzing spending behavior. A personal finance application can help users monitor expenses, set savings goals, and receive reminders for bill payments.

The Finance Advisor application is developed to provide a simple yet effective solution for managing personal finances. It offers features that assist users in tracking expenses, analyzing spending patterns, arid improving financial discipline.

II. LITERATURE REVIEW

Several studies have explored the role of mobile applications in financial management. Many financial management tools provide budgeting features and expense tracking capabilities.

Previous research indicates that users benefit significantly from applications that provide visual insights into their financial behavior. Graphical representations such as pie charts and bar charts help users understand spending patterns more easily. However, many existing applications are complex and contain features that are difficult for average users to understand. Therefore, there is a need for a simplified financial management system that focuses on essential features while maintaining usability.

The Finance Advisor application addresses these challenges by offering an intuitive interface combined with essential financial management tools.

III. PROBLEM STATEMENT

Many individuals struggle to maintain accurate records of their daily expenses and financial activities. Manual tracking methods such as notebooks or spreadsheets are often inefficient and time-consuming.

Additionally, people frequently forget to pay bills on time, leading to penalties and financial stress. Without proper financial awareness, users may also fail to identify unnecessary spending habits.

Therefore, a simple and efficient mobile-based financial management system is needed to assist users in organizing and monitoring their financial activities.

IV. OBJECTIVES

The main objectives of the Finance Advisor application are:

- To develop an Android application for tracking daily expenses.
- To provide reminders for bill payments.
- To allow users to set and monitor savings goals.
- To visualize spending patterns using graphical charts.
- To store financial data securely using Room Database.

V. SYSTEM ARCHITECTURE

The system architecture of the Finance Advisor application consists of multiple modules that interact with each other to manage financial data efficiently.

The major components include:

- User Interface Module
- Expense Management Module
- Bill Reminder Module
- Savings Goal Module

- Data Storage Module (Room Database)
- Visualization Module (Charts)

These modules work together to ensure smooth operation of the application and efficient management of financial information.

VI. METHODOLOGY

The development process of the Finance Advisor application follows a structured software development approach.

Initially, requirements were gathered to understand user needs and financial management challenges. Based on these requirements, system design and interface prototypes were created.

The application was implemented using Android Studio with Java/Kotlin programming language. The Room Database library was used for local data storage. Data visualization tools were integrated to display spending analysis in the form of charts.

Testing was performed to ensure that all modules function correctly and provide accurate financial insights.

VII. SYSTEM FLOWCHART

The following flowchart illustrates the workflow of the Finance Advisor application.

VIII. IMPLEMENTATION

The Finance Advisor application was developed using Android Studio. The user interface was designed using XML layouts, while the application logic was implemented using Java/Kotlin programming language.

The Room Database library was used for managing local data storage. This ensures efficient storage and retrieval of financial records.

Charts were implemented to visualize financial data and provide insights into spending patterns.

The application includes several screens such as:

- Dashboard
- Add Expense Screen
- Expense History
- Savings Goal Tracker
- Bill Reminder System
- Financial Analytics Charts

IX. RESULTS AND DISCUSSION

The developed application successfully provides users with tools to track expenses and manage their finances effectively. Users can categorize their spending and analyze their financial habits using graphical charts. The bill reminder system ensures that users receive notifications before payment deadlines.

Testing results show that the application performs efficiently with minimal system resources. The user-friendly interface allows even non-technical users to manage their finances easily.

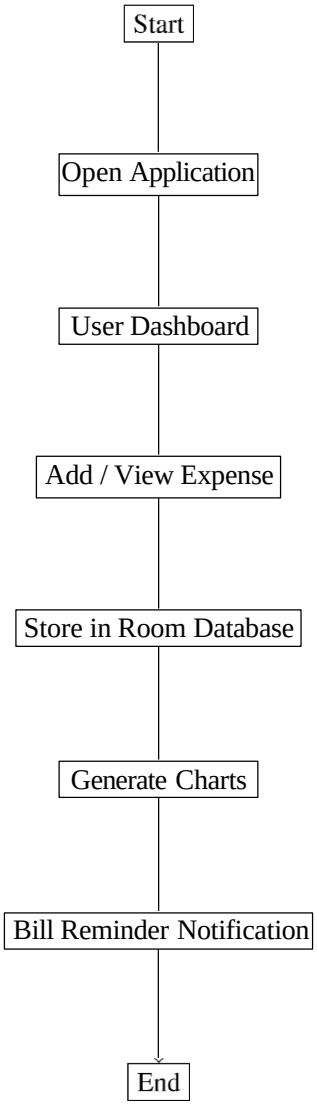

Fig. 1. Workflow of Finance Advisor Application

X. FUTURE WORK

Future improvements for the Finance Advisor application include:

- Integration with bank APIs for automatic transaction tracking
- Cloud storage for data backup
- AI-based financial recommendations
- Multi-device synchronization
- Advanced financial analytics

These enhancements will further improve the capabilities of the system.

XI. CONCLUS ION

The Finance Advisor Android application provides an effective solution for managing personal finances. The system enables users to track expenses, receive bill reminders, and analyze spending patterns using visual charts.

By combining simplicity with useful financial tools, the application helps users develop better financial habits and improve budgeting practices.

Future enhancements such as cloud integration and AI-driven insights can further enhance the system and make it more powerful for real-world financial management.

REFERENCES

[1] Android Developers, "Room Persistence Library," Google Documentation.
[2] J. Doe, "Mobile Applications for Personal Finance Management," Journal of Mobile Computing, 2022.
[3] A. Smith, "Financial Technology and Budgeting Applications" International Conference on FinTech, 2021.
[4] R. Kumar, "Mobile Based Espense Tracking Systems," IEEE Conference on Smart Applications, 2020.