



UNIVERSITY OF
LEICESTER

School of Computing and Mathematical Sciences

CO7201 Individual Project

Interim Report

Finance Tracker

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DECLARATION

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1. Introduction

Managing personal finances is essential in today's digital age, yet many struggle with tracking income, expenses, and savings. Existing finance apps are often complex, costly, or lack key features like multi-currency support and offline access. This project aims to develop a **Finance Tracker App** that provides a secure, user-friendly solution for budgeting, transaction tracking, and financial visualization.

The app will address common limitations by ensuring **data security, real-time synchronization, efficient database management, and an intuitive UI**. By tackling these challenges, it aims to offer a seamless and practical financial management tool, empowering users to take control of their finances effortlessly.

2. Status Of Requirements

1. Completed Tasks

- **User Authentication:** Users must be able to register and log in using email/password authentication.
- **Google Sign-In:** Support for Google authentication to provide an easier sign-in process.
- **Project Proposal & Research:** Defined project objectives, identified user needs, and outlined the feature set to create a structured development plan.
- **UI/UX Design (Wireframes, Prototyping):** Designed intuitive wireframes and prototypes to ensure a smooth and user-friendly experience.
- **Base UI:** Developed navigation, layouts, and primary screens to provide a consistent and interactive user experience.
- **Multi-Currency & API Integration [Desirable]:** Integrated real-time exchange rate API to support multi-currency transactions.
- **Cloud Synchronization:** Implement Firebase integration to allow users to sync financial data across multiple devices.

2. On Going Tasks

- **Backend Setup (Room Database, Firebase) [Essential]:** Setting up local storage with Room Database for offline access and Firebase for cloud sync.
- **Core Features (Add, Edit, Delete Transactions) [Essential]:** Implementing functionality for users to manage transactions efficiently.
- **Transaction Filtering & Searching:** Allow users to filter and search transactions by category, date, or amount for quick access.

3. Not Completed

These features are not mandatory but would provide additional benefits and improve the overall experience.

- **Notifications & Reminders:** Send alerts to notify users about budget limits and upcoming expenses.
- **Data Export:** Enable users to export financial records in CSV and PDF formats for external use.

- **Receipt Scanning (OCR):** Implement Optical Character Recognition (OCR) to allow users to scan receipts and auto-fill expense details.
- **Fingerprint Authentication:** Allow biometric login for enhanced security and quick access.
- **Dark Mode:** Introduce a dark mode theme for better accessibility and user preference.

3. Revised Time-plan

Time Plan

[illegible]

Viva Preparation	Prepare responses for the viva, anticipate possible questions, and practice explaining the project's technical aspects.	Week 12 (Not Started)
Presentation Preparation	Create presentation slides summarizing the project's objectives, implementation, challenges, and outcomes. Practice delivery.	Week 12 (Not Started)
Final Submission & Viva	Submit the final report, codebase, and presentation. Participate in the viva and defend the project.	Week 14 (Not Started)

4. References

Research Papers & Journal Articles

- [1] Oswal, S., & Koul, S. (2013). Big data analytic and visualization on mobile devices. In *Proc. Nat. Conf. New Horizons IT-NCNHIT* (p. 223).

Online Resources & Documentation

- [1] Google Developers, *Official Android Documentation*, Available: <https://developer.android.com>.
- [2] Google Firebase, *Firebase Documentation*, Available: <https://firebase.google.com/docs>.
- [3] JetBrains, *Kotlin Coroutines Guide*, Available: <https://kotlinlang.org/docs/coroutines-overview.html>.
- [4] Google Material Design, *Material Design Guidelines*, Available: <https://material.io/design>.
[Accessed: Day-Month-Year].
- [5] Google Developers, *Room Database Guide*, Available: <https://developer.android.com/training/data-storage/room>.
- [6] P. Lackner, *Philipp Lackner [YouTube Channel]*, YouTube. Available: <https://www.youtube.com/@PhilippLackner>.