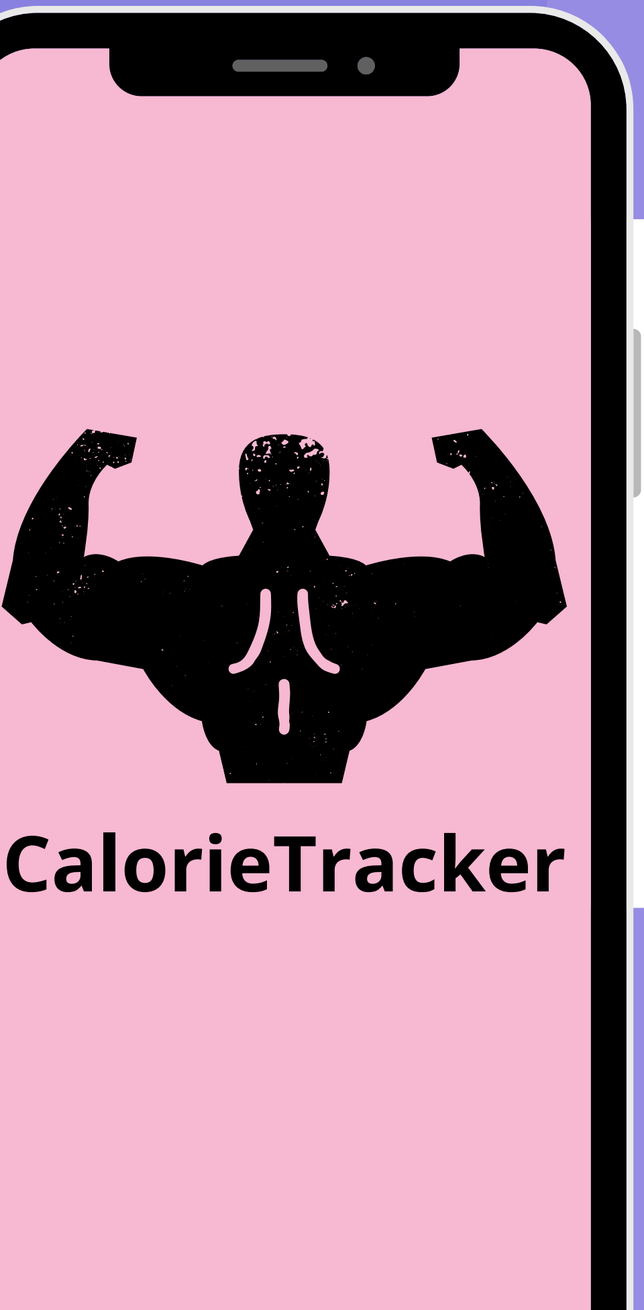

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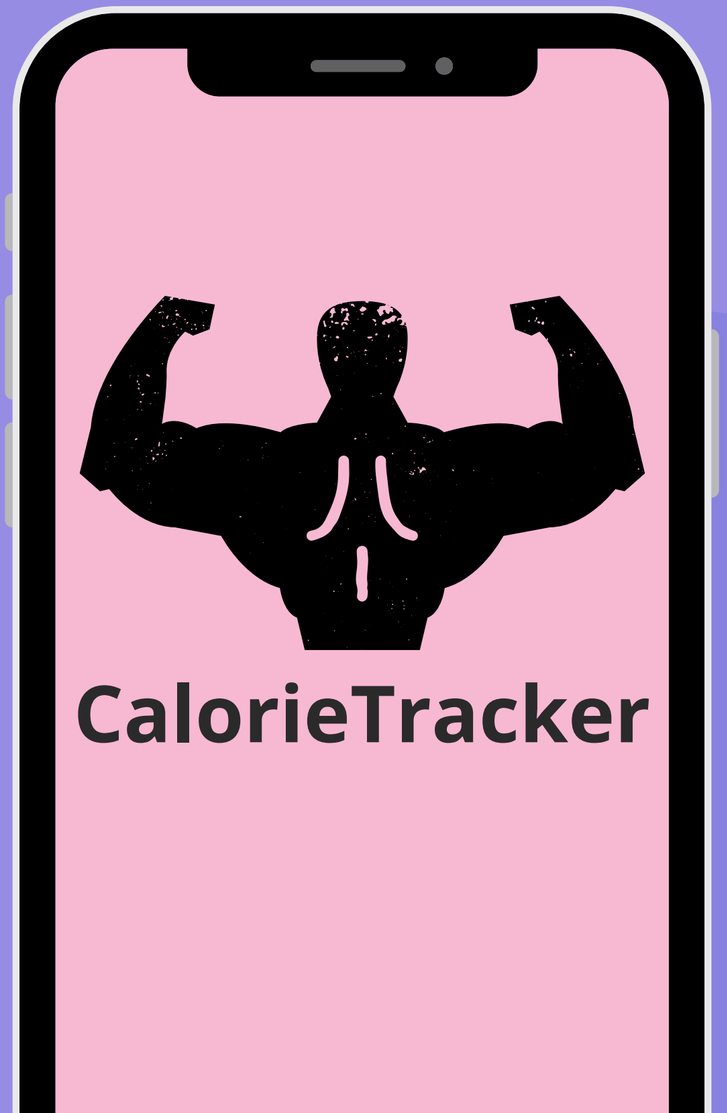
Calorie tracker app

Takhir Mukhametzhan, Ilyas Kuzubayev, Bakdaulet Rzakul

REVOLUTIONIZING CALORIE TRACKER APPS

Introduction

In today's fast-paced world, maintaining a healthy diet and tracking calories can be challenging. Our project is a mobile application designed to help users monitor their daily calorie intake efficiently. The app was built using Android Jetpack Compose for a modern, intuitive user experience.

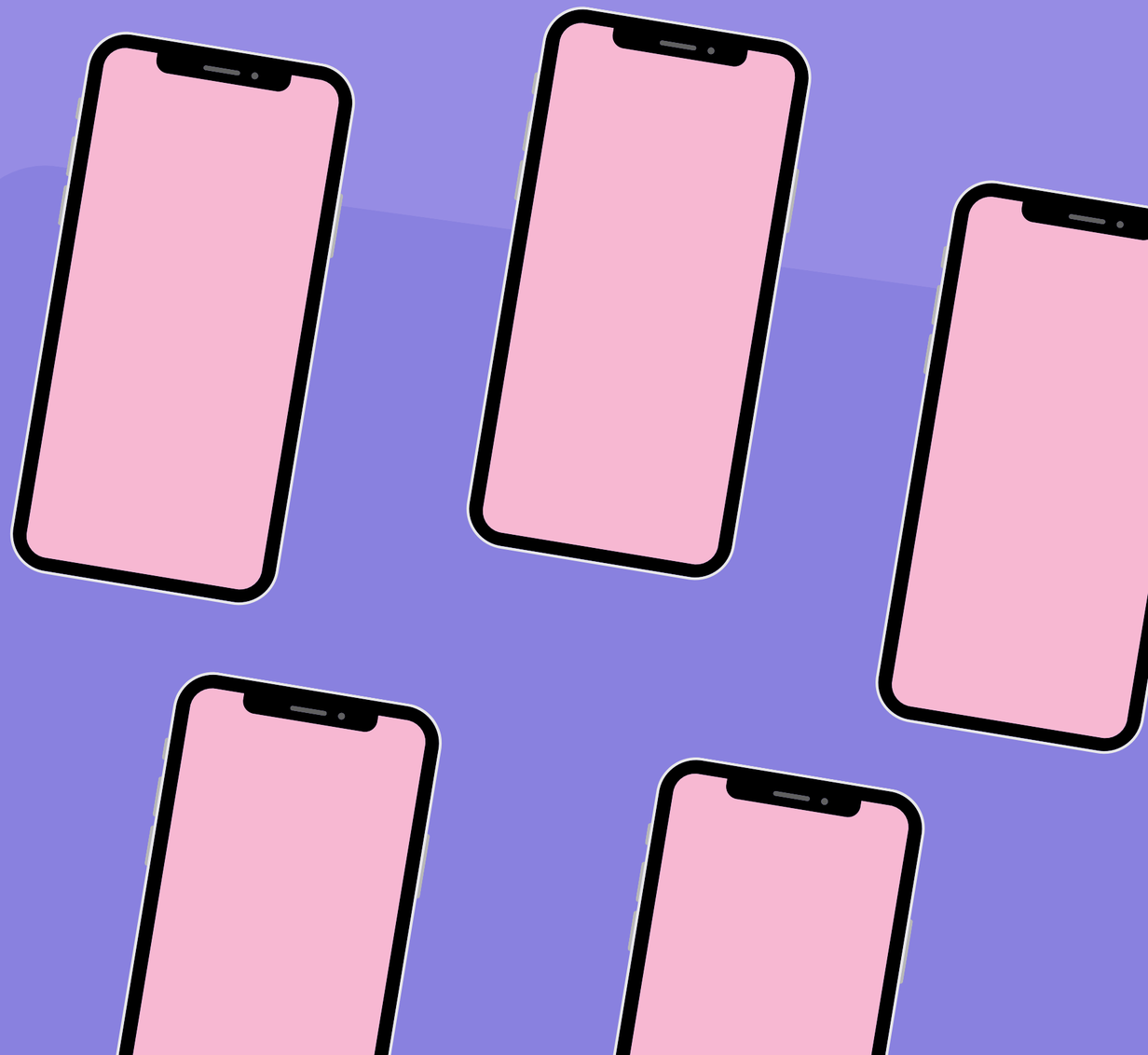


Why is this project Important?

With rising awareness about health and fitness, calorie tracking has become an essential tool for individuals aiming to maintain, lose, or gain weight. Existing apps often come with limitations such as complex interfaces, paywalls, or lack of essential features. Our Calorie Tracker App provides a user-friendly, free, and highly functional alternative.

Idea and Purpose

Our goal was to develop a full-stack calorie tracking app from scratch using modern Android development practices. Users can add food items, track daily calorie intake, and monitor weight trends over time. The app offers barcode scanning, data persistence, and graphical analysis, making it a powerful tool for personal health management.



Comparison Analysis

Comparison Analysis: Our App vs. Others

Most calorie tracker apps, like MyFitnessPal and Lose It!, are cluttered with ads, require internet access, and store user data in the cloud. In contrast, our app is simple, fast, and fully functional offline while keeping all data private on the user's device.

Key differences:

- No unnecessary features – clean and easy to use
- Barcode scanning – quick food entry
- Automatic daily reset – no manual input needed
- Advanced weight tracking – detailed graphs over time
- No forced cloud sync – user data stays private

Our app focuses on efficiency, privacy, and a better user experience without extra costs or distractions.

Architecture Overview

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Model: Handles data logic and storage.

ViewModel: Manages UI-related data and business logic.

View: Displays user interface components using Jetpack Compose.

Functional & Non-Functional Requirements

Functional Requirements:

✅ Add, view, and delete food items from meals.

✅ Barcode scanning for quick food entry.

✅ Graphical analysis of weight trends over time.

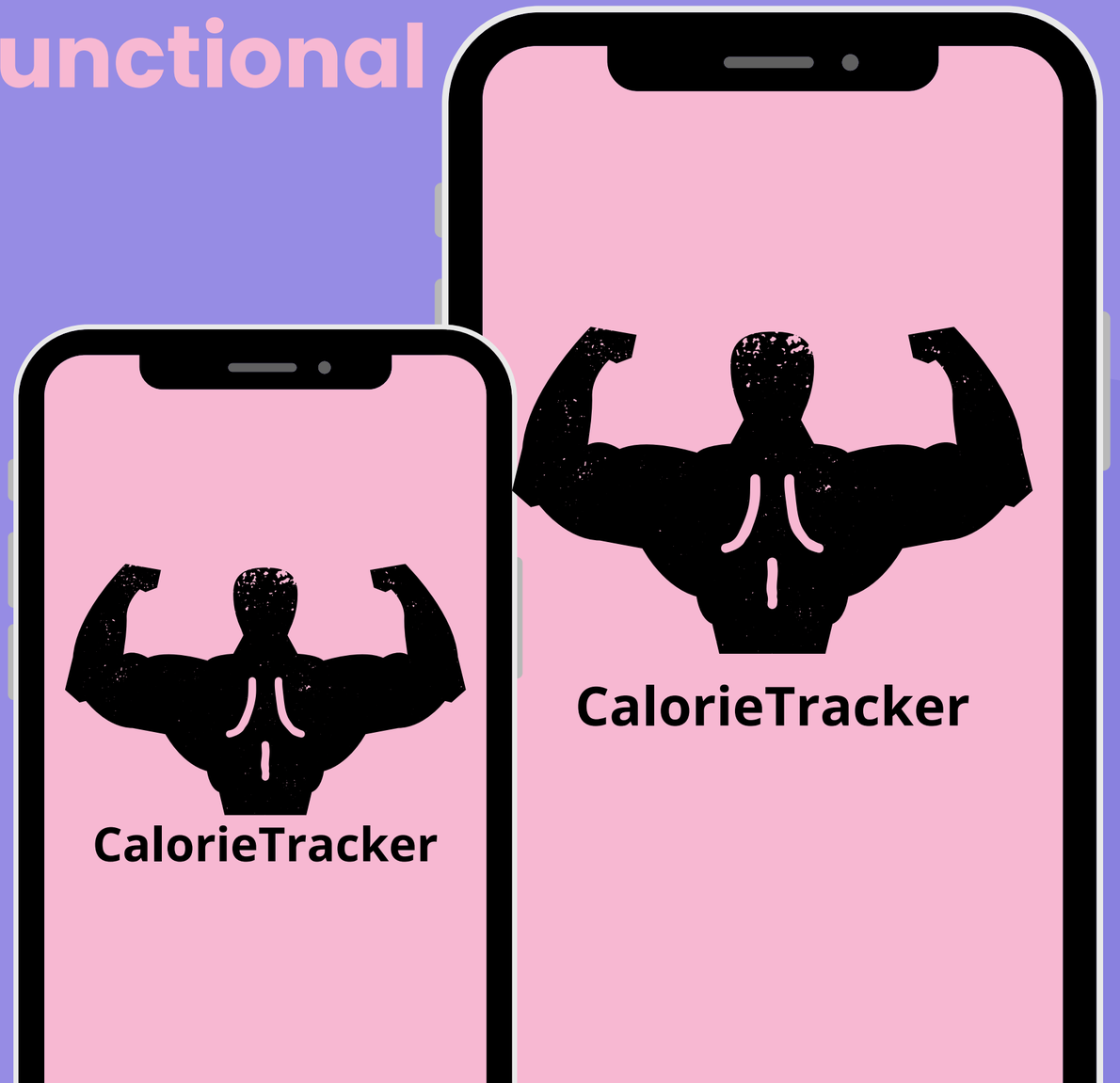
✅ Persistent data storage even after app closure.

Non-Functional Requirements:

✅ Smooth and responsive UI using Jetpack Compose.

✅ Efficient database handling with Room.

✅ Daily calorie reset functionality.



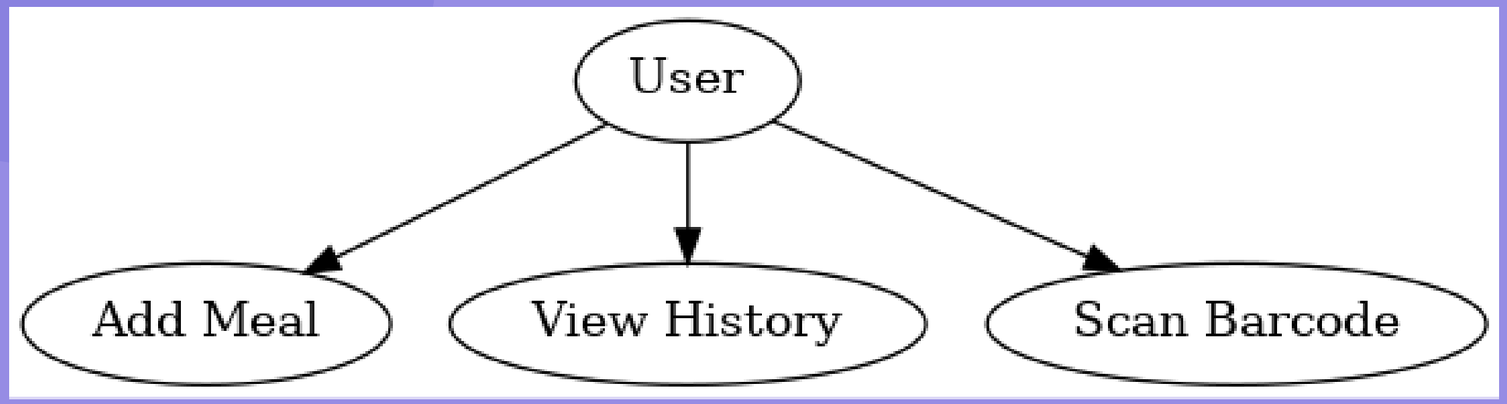
Technologies used

- Programming Language: Kotlin
- UI Framework: Jetpack Compose

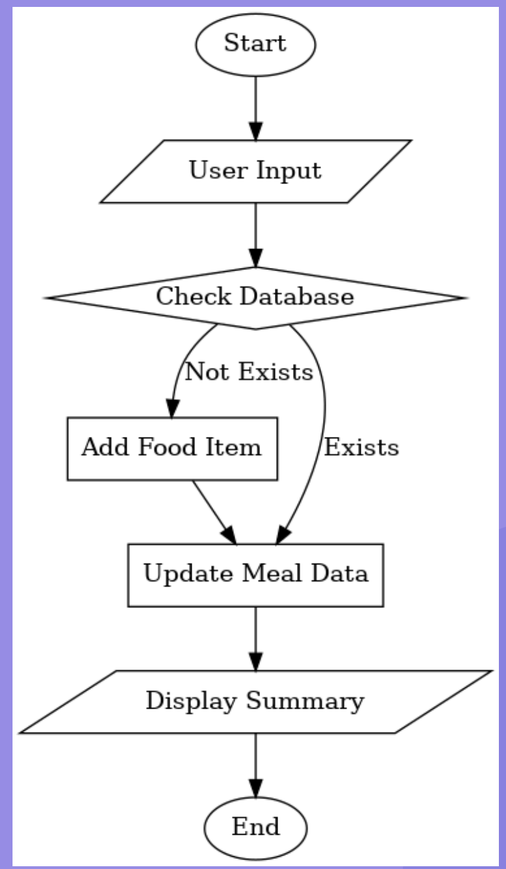
- State Management: ViewModel, LiveData, StateFlow
- Database: Room (SQLite)

- Barcode Scanning: ML Kit
- Graph Visualization: MPAndroidChart

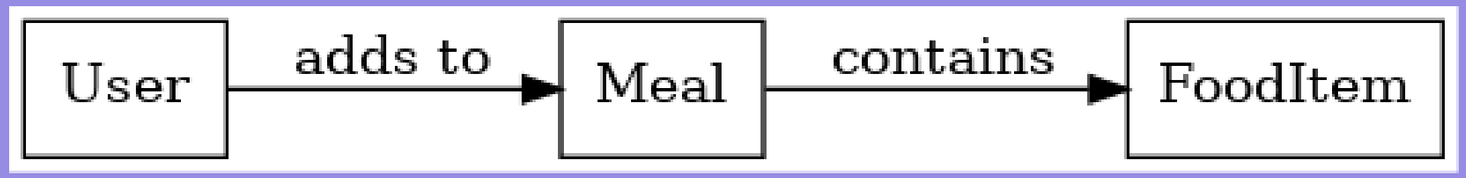
Entity-Relationship Diagram



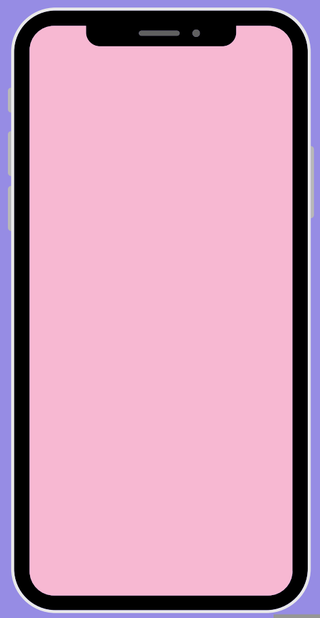
Flowchart



Use case diagram



User Interface



Main Screens of the App

- Home Screen: Displays daily calorie intake with quick access to add meals.
- Add Meal Screen: Users can manually enter food details or scan barcodes.

UI Features

- History Screen: Shows past meals and calorie data.
- Graph Screen: Visualizes weight trends with interactive graphs.

Business model and SWOT ANALYSIS

- Freemium model – Basic app is free, potential monetization through premium features or ads.
- Data insights – Future integration with fitness companies for personalized diet plans.

1

Strengths

Free, user-friendly, offline functionality.

2

Weaknesses

Limited food database compared to commercial apps.

3

Opportunities

Integration with fitness trackers, AI-based diet recommendations.

4

Threats

Competition from established apps like MyFitnessPal.

Practical Value

Our app helps users to

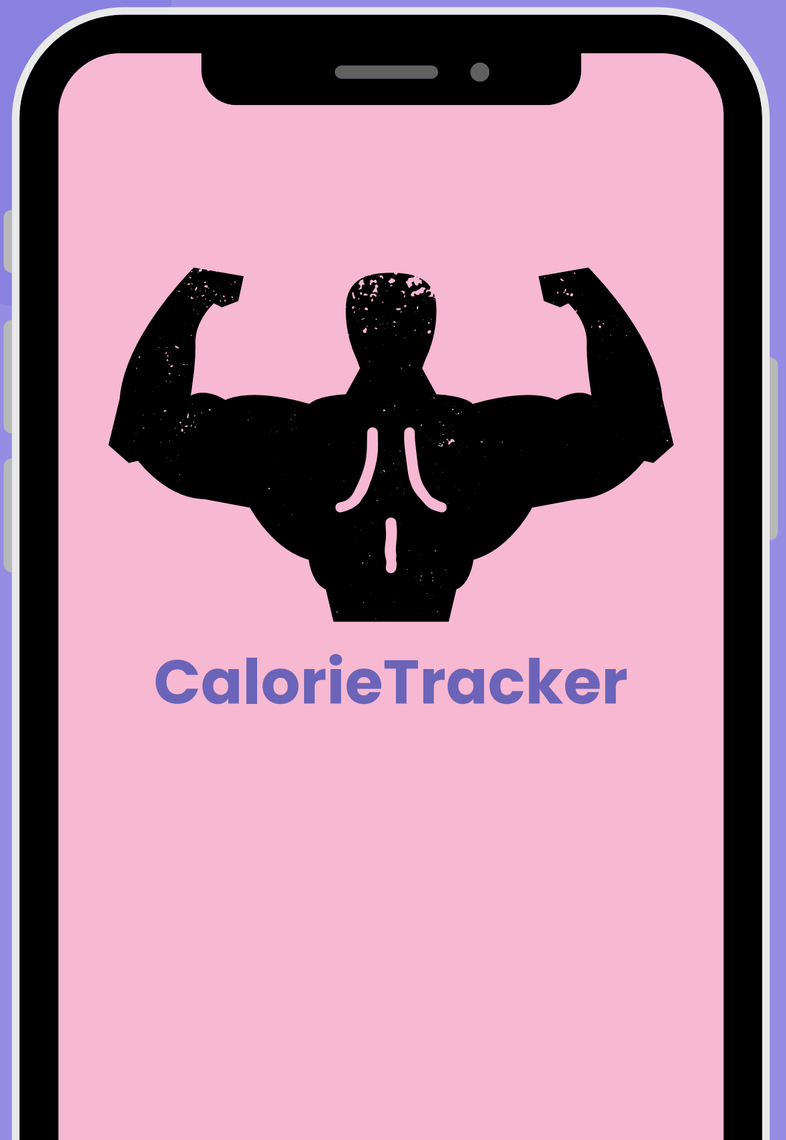
For Individuals: Helps users achieve fitness goals by tracking daily caloric intake.

For Businesses: Could be extended into a personalized health & diet tracking platform.

For Researchers: Useful for analyzing diet trends and user habits in nutrition studies.

Experimental Verification & Economic Effectiveness

- User Testing: We conducted testing with a sample group to validate ease of use and accuracy.
- Performance Metrics: The app runs smoothly on devices with minimal resource usage.
- Economic Viability: Potential for revenue through ads, premium features, or corporate partnerships.



Conclusion

FitnessTracker team

Our Calorie Tracker App successfully meets the requirements of a modern, user-friendly, and functional mobile application. By leveraging Android Jetpack Compose and modern development techniques, we created a fully functional calorie tracking system that provides a seamless user experience, accurate data tracking, and long-term usability.

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CalorieTracker

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