Calorie Counter App

BHSc Hons Health Information and Communication Technology

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Content

Page

1.The Problem

In today's fast-paced and hectic lifestyle, most people have difficulty maintaining a well-balanced and healthy diet because they are often too busy to know what and how much they consume throughout the day. With the burdens of work schedules, social commitments, and the increasing prevalence of fast foods and processed meals in our society, people tend to use more convenient choices whenever possible with complete disregard for nutritional value or proper calorie intake. Over a period of time, this generally leads to an excessive intake of calories, poor eating habits, and nutritional imbalance. Consequently, most individuals encounter serious health consequences such as obesity, diabetes, hypertension, and cardiovascular diseases as a result of poor food management. Conventionally, daily calorie intake monitoring involves manually recording meals, portion-size estimations, and calculation of the number of calories consumed based on food labels or nutritional charts. However, this may be time-consuming, inconvenient, and prone to human error, especially for those people who are not familiar with nutritional information or portion control. The manual method also fosters no consistency, as most people find it tedious to maintain a written record of their food over a long period. Therefore, there is an emerging need for a simple, efficient, and user-friendly digital solution through which one can log meals, track calorie consumption, and monitor nutritional intake with ease. A digital calorie tracking system can offer instant feedback, personalized recommendations, and visual insights into eating patterns to make better dietary choices. Integration of technology into daily health management can help bring about better life habits, prevent diet-based diseases, and thus support the attainment of fitness and wellness goals.

2.The Solution

The Calorie Counter App is designed to provide an efficient and easy way of monitoring one's food intake every day without much fuss. It allows the user to log every meal with its value in calories and immediately displays the total count of daily calories consumed. It provides a user-friendly interface where everything is straightforward, and a person can track what he or she eats without having to do any tedious work outside the tool. This mobile application is developed in Android Studio using Kotlin to make it compatible, reliable, and smooth on various Android devices. The application will use the Room Database for local data storage of meals that user's input; this database allows them to view and manage their information even without an internet connection. The project adheres to the MVVM architecture to ensure efficiency and maintainability by explicitly separating the UI layer from data handling and business logic. The design of the app follows Material Design principles for an intuitive, visually clear, and clean interface. Users can add, delete, and view meals in real time, while the total calorie count will auto-update. The lightweight base is designed to ensure speed on all data operations yet retaining a responsive interface. In future development, the system would also provide additional functionality, such as goals on calorie intake, progress charts, and recommendations on nutrition.

Core Features

1. **Add Meal Entries**
   - Users can input meal name and calorie count through a simple form.
2. **View Meal List**
   - All added meals are displayed in a scrollable list with their calorie values.
3. **Total Calorie Calculation**
   - The app automatically calculates and displays the total daily calorie count.
4. **Delete Meal Entries**
   - Users can remove meals to adjust their daily log as needed.
5. **Local Data Storage (Offline Mode)**
   - Data is stored locally using Room Database, allowing users to access their records even without an internet connection.

3.Tasks

In Sri Lanka, post-harvest losses for fruits and vegetables are as high as 30–40%, which is mainly due to a lack of affordable and accessible cold storage infrastructure for small farmers. Therefore, many farmers are forced to sell their produce on the spot at lower prices, which causes heavy income loss and wastage of foods. While there are cold stores, there is a shortage of a single, centralized digital platform to link farmers and storage owners. Lack of real-time information, higher costs, and inadequate communication make it an inefficient process. Hence, there is a strong requirement for a digital platform to meet this challenge and achieve sustainable post-harvest behaviour