

# Department of Computer Science



**CSCI-455-M01**  
**Senior Project**  
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## Calorie Manager

### **Team Name: FIVE Assassins**

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## **Abstract**

The project focuses on individual's daily calorie intake. It will be implemented on Android mobile platform to calculate the sum of calories a person takes daily and to provide suggestions according to users' profile, such as age, current figure, health status and ideal figures.

## **Introduction**

### **Background and Purpose**

Everyone is cautious about weight and calorie they take everyday. There are many Android apps that target calorie issue. However, our application will also include many different new features.

The body mass index (BMI) will be used to evaluate user's body status by measuring the relative weight based on the mass and height. In addition to calorie, different ingredients in food, like fiber and protein, will be considered when monitoring daily diet and recommending healthy meals.

### **Technical Details**

Since the app is designed to be used on an android phone, the main programming language is Java and the database would be SQLite, which is light enough and is able to locally store private data. The database content will be designed according to 'The U.S. Dietary Guidelines' and relative online information about natural food properties. Since words are used as the identifier in the database, Hash table would be used in the application implement.

# Feature

## Steps of Application

### *I. Main Page*

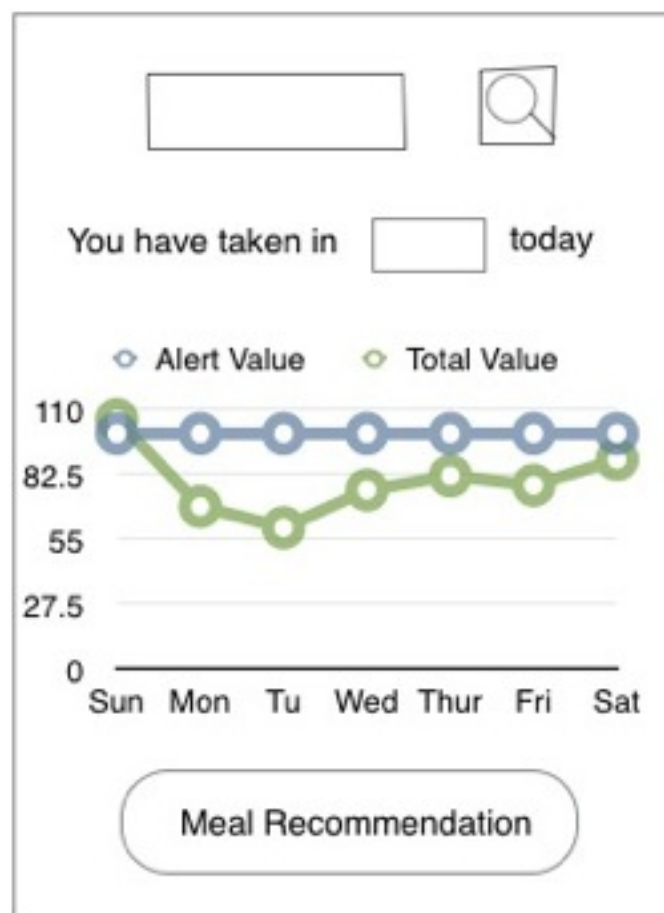
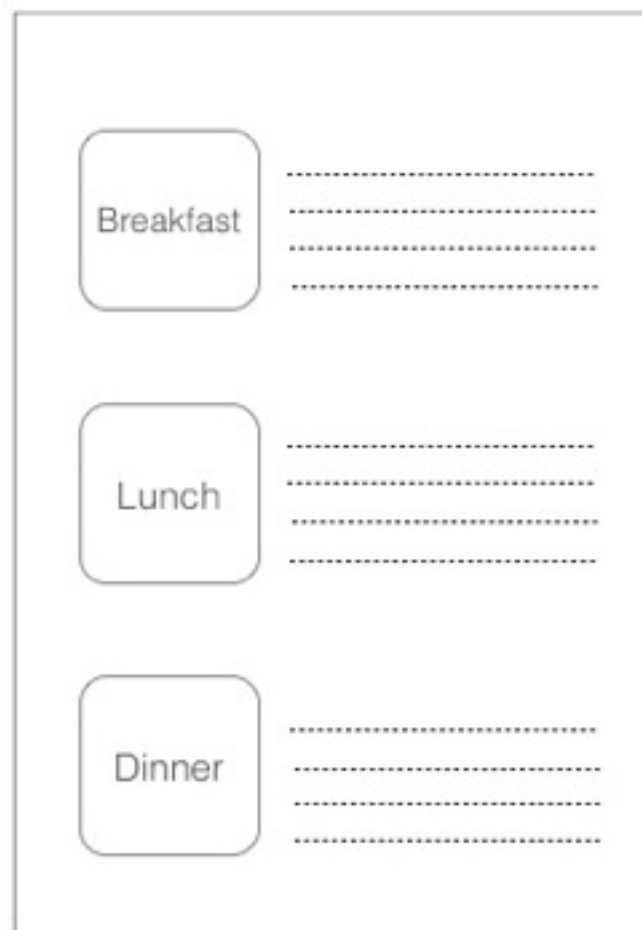


Figure 1 Main Page

1. The search box is at top of the main page. When a food name is typed into the frame, a pull-down menu will appear with a list of searching results.
2. Below the search box, an intraday total calories taken in is shown.

3. A chart shows the everyday calorie data taken in during a week. It enables the user to see the changes between everyday. And an alert value is set in order to remind users to take care of their current diets.
4. At the bottom the interface lies a 'Meal Recommendation' button, which goes to another interface showing the more healthy meals recommended for a new day.

## *II. Meal Recommendation*



A form titled 'Meal Recommendation' with a dashed border. It contains three sections, each with a rounded rectangular label and four horizontal dashed lines for text input:

- Breakfast**: Four dashed lines for input.
- Lunch**: Four dashed lines for input.
- Dinner**: Four dashed lines for input.

Figure 2 Meal Recommendation

In this interface, the recommended meal plan, including breakfast, lunch and dinner, which maybe much fitter and more healthy for the users will be shown.

### *III. Food Properties*

Picture

Introduction

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.....

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Fiber Protein Calories

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.....

.....

Quantity Add

Figure 3 Food Properties

Figure 3 shows the food selected by user from the searching list.

A picture of the food is at the top left corner of the interface. And next to the picture is a brief and concise introduction.

Under the introduction, the nutrient components are listed. Take an example, the quantity of fiber, protein, calories and so on.

At the bottom of the interface, the quantity of the food needs to be input by user. After the 'Add' button is pressed, the calorie of the food will be added into the daily sum of calories taken in by the user.

Both the name and the quantity of food need to be typed in by users. A calculator can come up with the approximate calories taken in by users. By comparing with the built-in database in various properties of food, the idea health meal will be suggested.

## **Scope**

The goal of the project is to set up a workable android app to give advice on improving people's health by recording their daily diet. All the information collected by the app can be used for human health analysis in the future.

## **Learning Outcome**

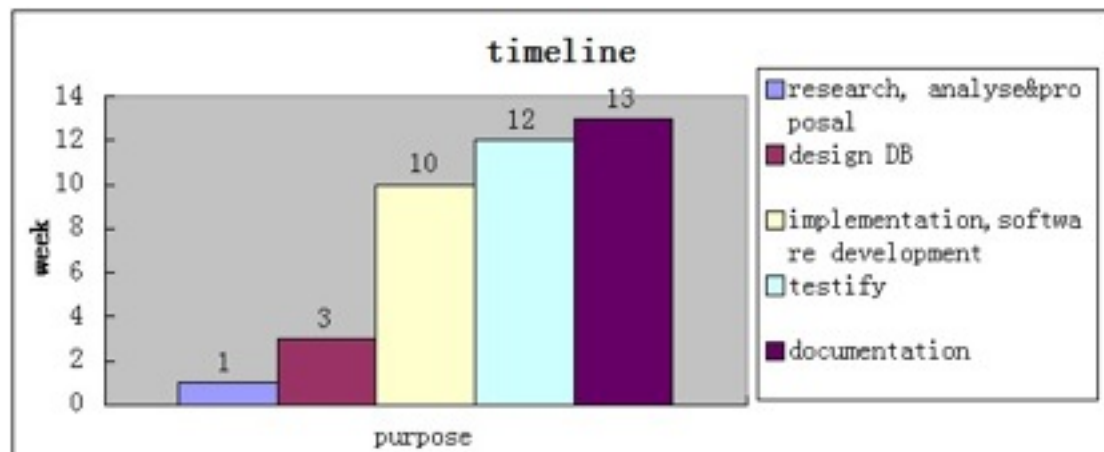
Knowledge in mobile terminal app development, UI design, database design and implement can be attained throughout the process of the project. And after the promotion of the product, more people can get information from and for their daily eating and body health status in a much easier way.

## **Conclusion**

The aim is to achieve comparatively mature android application, development skills and the cooperation experiences in a team for a project by developing academic android application to manage daily calories taken in by a person.

## Time Line

Week 1	Research, analysis and proposal
Week 2-3	Database design
Week 4-10	Implementation and software development
Week 11-12	Software test
Week 13	Documentation



## Member Contributions

Bonnie	General design and implement as a team leader
Chuck	Database and its interface design and implement
Liz	Database design and information management
Mona	GUI design and test
Tony	GUI implement and test