

Personal Health and Activity Monitoring Assistant

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Introduction

Activity monitoring can help people to ensure the activities are on-schedule and meet their objective. Also, monitoring activities is a key to personal health. There are some indicators of a healthy lifestyle, for example, having enough sleep, having regular exercises etc. However, monitoring these activities is difficult. So, our project is to develop an application on Android platform that provide function of monitoring activities and give suggestion to users.

Objectives

The main goal of this project is to build an Android application that lets the user monitor his or her daily activity, and also give suggestion to the user to help them identify the potential risk of their health. The final goal of this project is to improve the health condition of the user.

App Features



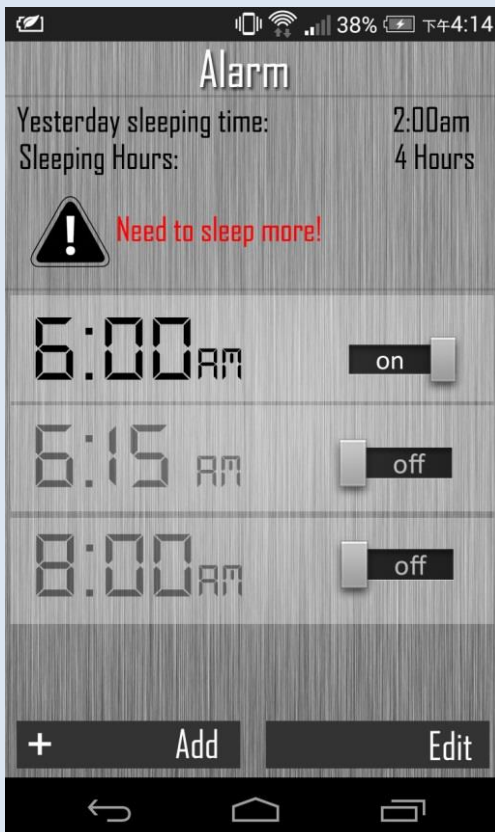
This is the main screen of our application. User can quickly view their date activities and the calorie absorb. The main functions are also list in the screen, including alarm, activity, diet, exercise, summary and setting.



This is the activity page. The page will display yesterday activity of the user using pie chart. The interface is clear and easy to understand. A reminder will also show to have some suggestion to the user daily activity. For example, when user's working time is too long, it will suggest the user to take a rest. A calendar will also display in this page. User can add their activities in this page.

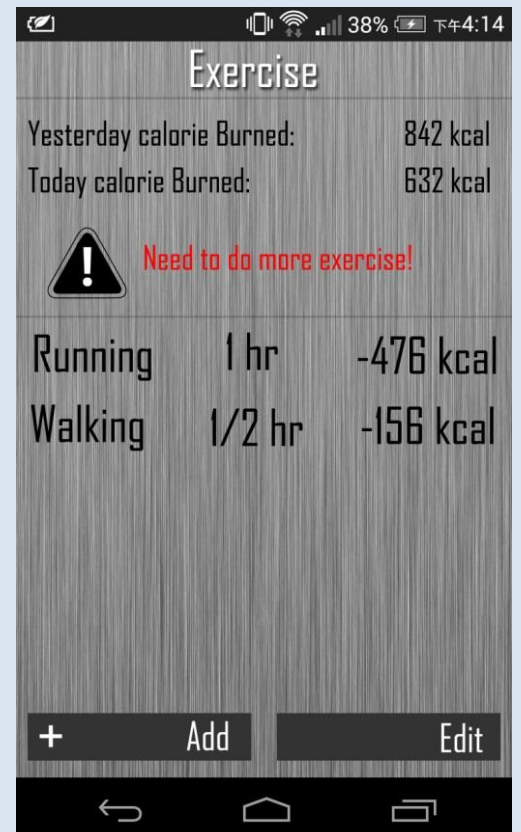


These three pages are diet. User can know their food absorption and compare with yesterday data. They can easily add their diet for recording and check the food database. The food menu is divided into difference categories for easy searching.



The left image is the alarm page. User can view their sleeping time and sleeping hour yesterday. The system will display a reminder according to the sleeping hour of the user to remind the sleep condition of the user.

The right image is the exercise page. User can easy record and check their exercise history. The system will calculate the calorie burn and save in the database. A reminder will show in the screen to remind the user to do more exercise.





These two pages are summary. Let user compare their health and life style to the past. When the user click into any category, the app will display the statistical report of that category.

Implementation

To build the user interface and the function, we use the eclipse with Android Development Tools to develop. We aim to develop the application with a user friendly interface. The user can access different function with single click.

To build the statistical reports, we import a library into the eclipse, named MPAndroidChart. We use the library to generate the line graph in the reports and also generate the pie chart to show the composition of the activities.

Evaluation and Result

We have successfully developed a health and activity monitoring android application that have the following function:

1. Tracking of the sleeping hours.
2. Record the user exercises situation.
3. Create a food database to let the user input the meals.
4. Provide statistical report on the user health condition.

After the testing, it shows that our application can give useful suggestion when the user having bad habits like when the user have not enough sleep the day before, the application will show a warning information. Which can fulfill our objective that the application should be able to monitoring the user activities and give suggestion to the user.