Design and Implementation for Food Planning Mobile Application (June 2011)

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Abstract — **This journal discusses the design and implementation of food regulation system based mobile applications. The main purpose of implementing this system is to regulate and recommend foods that match a user profile.**

The method used in software development includes three main parts namely the method of analysis, design, and literature. The method of analysis includes a survey of the running system, analysis of survey findings, identify information needs, and identifying system requirements. Design method using the approach of the Unified Modeling Language (UML). The results are the use of food-based recommendation system IOS platform.

Keywords - food; assistant, my, my assistant food, nutrition, food planning, food recommendation

I. INTRODUCTION

Along with the development time, today there are many people, especially those who are busy with work or study, or circles that do not have adequate knowledge about a balanced diet. In such conditions, they have difficulty in managing their daily diet, either as to what should be consumed and what is not, nor things that are related to the amount and balance of nutrients obtained from foods consumed. With the growing science and information technology today, then our group want to develop applications My Food Assistant based on IOS to provide a solution to this problem. Solutions are provided through the My Food Assistant application, among others, with the following features:

a. *Food Plan*: Showing the foods that have the user select the features Food Suggestion.
b. *Food suggestion*: Provide recommendations to users about the food choices that can be consumed in accordance with user profile, within a specified time range. In this feature, users can add the food to the Food Plan.
c. *Food Tips*: Provide a variety of tips about eating healthy, nutritious foods are good and beneficial for the body, and how good the food processing.
d. *Food History*: Users can view the data in the past about what has been consumed and the amount of nutrient intake, which is prepared in the format as of the date and a time to eat.
e. *Food Location*: enables users to find locations that provide certain foods in the area around the user is through the folder location.
f. *User Profiling*: Users enter information about themselves, for example: weight, height, blood type, age, and occupation, which will be used to determine the food choices that can be consumed on the Food Suggestion feature.

Expected by the application, users can improve their diet so that eating will be more regular.

II. METHOD

A. Analysis Method

The means used to analyze the existing problem is:

The survey was conducted in 2 ways:

1) *Interview, conducted by asking questions to a nutritionist.*
2) *The questionnaire, carried out by asking the question in the general population.*

B. Design Methods

The method is carried out in the form of design process flow diagram (flowchart). Flow diagram (flowchart) is a diagram that explains the relationship and sequence of processes running in the system.

C. Study Method literature

This method is used to collect information in the form of written literature or books as a theoretical basis in preparing the thesis.

III. RESULT

A. Designing User Process

In the figure below illustrated there are two types of users who can access this application, the user frontend and backend users, i.e. user frontend is the user who uses this application to manage his/her diet. And the backend user is admin and manager of foods that use the website to enter our system of food and nutritional foods to the database.
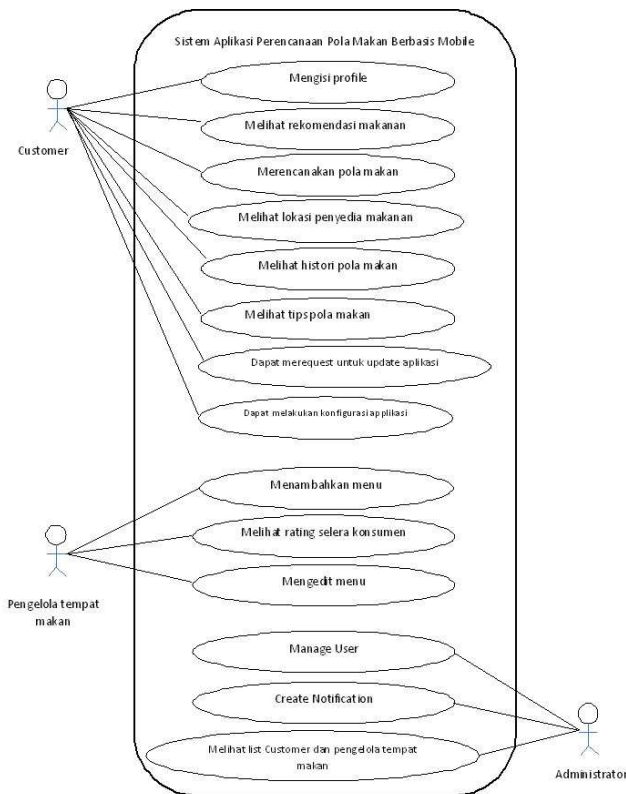

Figure 1. Use Case

B. Designing Model View Controller

Here is the MVC from the manager of dining

Figure 2. MVC backend

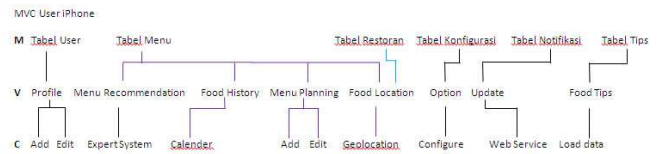Here is the MVC of the users who use this application on the iPhone

Figure 3. MVC frontend
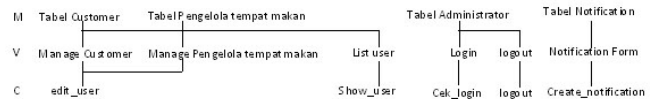
Here is the MVC of the users admin

Figure 4. MVC admin

C. Designing DFD
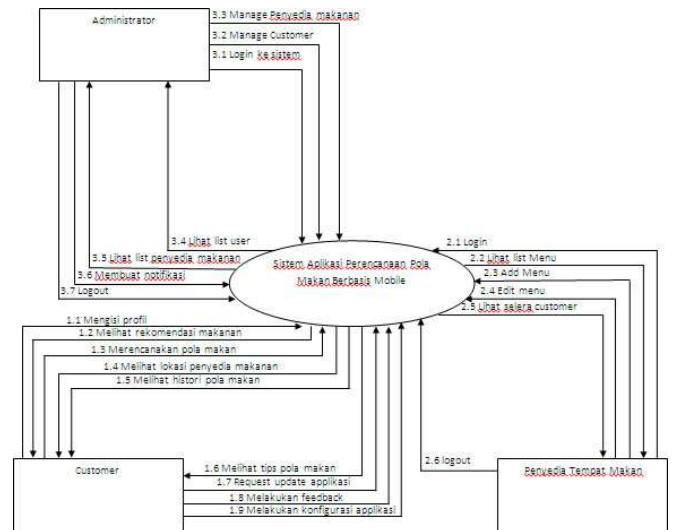
Here is the design of our system DFD

Figure 5. DFD

D. Designing ERD

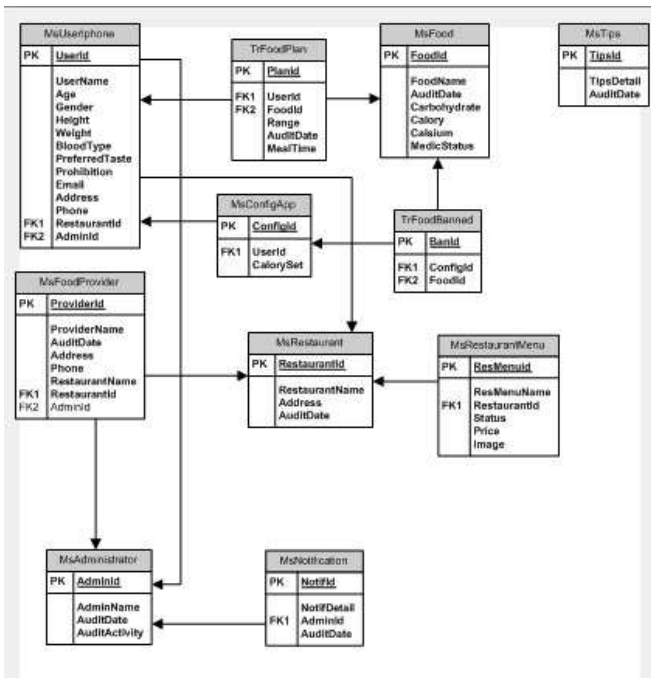Here is the design of our system ERD

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Figure 6. ERD

IV. CONCLUSION

In the design and implementation of food regulation system based mobile applications, it can be concluded some points:

- User applications can be helpful in adjusting the diet.
- The management of food can be helpful because the expected number of visitors increases

V. ADVICE

For further development, some of suggestions that can be given is as follows:

- Additional feedback feature
- Additional features food ordering

VI. BIBLIOGRAPHY

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