Fooding

Requirement Specification

Team 6

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Contents

1. Preface

1.1. Readership

This document is written for and considering variable readers. Before starting to describe our application, we will first script expecting reader for each part.

A. User Requirement

User requirements, often referred to as user needs, describe what the user does with the system, such as what activities that users must be able to perform (Parker, 2012). Thus, user requirements are written for client managers, contractor managers and customers.

B. System Requirements

System requirements are the building blocks developers use to build the system. These are the traditional “shall” statements that describe what the system “shall do.” (Parker, 2012) System requirements defines what should be implemented, thus main readers of this part are system architects and developers.

1.2. Document Structure

A. Preface

Describe about expected readers for user requirement and system requirement separately. And with document structure, show outline of document and each section.

B. Introduction

Introduction contains objective of introduction, needs and system overview. At Introduction, we'll explain why our system is needed with various grounds. And give purpose of the system with expected result.

C. Glossary

At glossary, we'll explain words which will be used in our document. Almost every word has multiple meanings, and we'll clarify which meaning will be used in this document.

D. User Requirements

User requirements parts are describing requirements from the view of users. In this part, we'll handle requirements describing services the system provides and its operational constraints. We provide requirements divided into functional and non-functional requirements. As mentioned early, this part is written for client managers, contractor managers and customers.

E. System Architecture

At system architecture, we'll first provide broader perspective to system. This part doesn't give explanation or figure as a whole system, but separate by services and give explanation for convenience of readers.

F. System Requirements Specification

System requirements and specification parts are describing requirements from the view of system. This is structured document setting out detailed descriptions of the system's functions, services and operational constraints. This part also defines what should be implemented. We provide requirements divided into functional and non-functional requirements, with scenario example. As mentioned early, this part is written for system architects and developers.

G. System Models

This part shows abstract models of a system, with each model presenting a different view or perspective of that system. We provide three-type of models, context model, interaction model and behavioral model.

Context models are used to illustrate the operational context of a system. More specifically, context models mainly show how system and outer context communicate.

Interaction model is covering user interaction, system-to-system interaction, and component interaction.

Behavioral models are models of dynamic behavior of a system as it is executing.

H. System Evolution

This part shows the environment surrounding the system, and in based on that, shows how to expect the system to respond to the anticipated changes, and to anticipate the various changes surrounding the system that may occur.

I. Appendices

This part explains constraints not mainly dealt with in this documentation, but also have importance in using our system.

J. Index

This part is for tables and figures used in this document. In index, there are brief information such as which page they are.

2. Introduction

2.1. Objectives

Explanation of needs of our system, a brief description of the purpose of the system how to achieve, and the desired results.

2.2. Needs

Home Meal Replacement (HMR) is one of the most growing market in the domestic retail industry. As well as offline markets, due to the influence of COVID-19, various HMR and instant food sectors have been rapidly growing in online shopping. It has several advantages including easy packaging and a uniform shelf life. Not only single-person households but also housewives in their 30s and 50s are increasingly investing in leisure time instead of staying in the kitchen by using HMR(박정완, 2020).

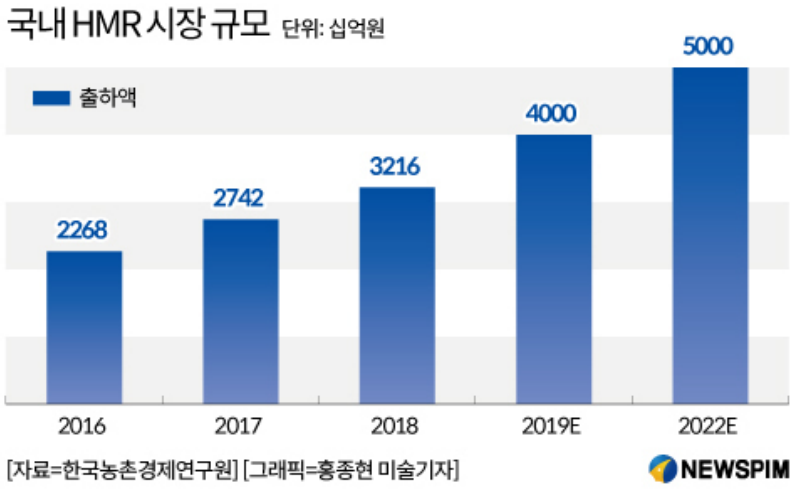

Figure 1. Domestic HMR market size

As the online HMR market grows, review systems such as recommendations, ratings and product reviews are having a significant impact on consumer decisions. As a result, In order to improve the review system, which has many problems such as fake, slander, and advertising reviews, companies are making many attempts to provide better product choice services to consumers such as opening a review platform, analyzing reviews that introduce AI, and reviewing photos and videos.

Figure 2. Distinguishing fake review with AI

However, the fundamental problem with buying an HMR or instant food which is important in taste is that the reviews vary from person to person. Even if a lot of reliable information can be found through reviews or Internet searches, opinions about products vary depending on individual tastes or characteristics, and a small number of consumers, especially those with food allergies or vegetarians, are more cautious in choosing products. No matter how reliable a product review system is, personalized service cannot be provided.

Figure 3. Review vary from person to person

Therefore, it is necessary to introduce a new system to provide personalized reviews and recommended services.

2.3. System Overview

Fooding offers a customized review system that binds consumers by various categories, including taste, allergies, and vegetarianism, to provide reviews among consumers of the same type. As if to provide information on food recommended by people with peanut allergies to consumers who have same allergic, the group's ratings and assessments are accessible depending on which group they belong to, providing the information that is actually needed. It also provides group rankings and food recommendation systems besides overall rankings, which allow us to provide more accurate information for consumers to choose the food they want.

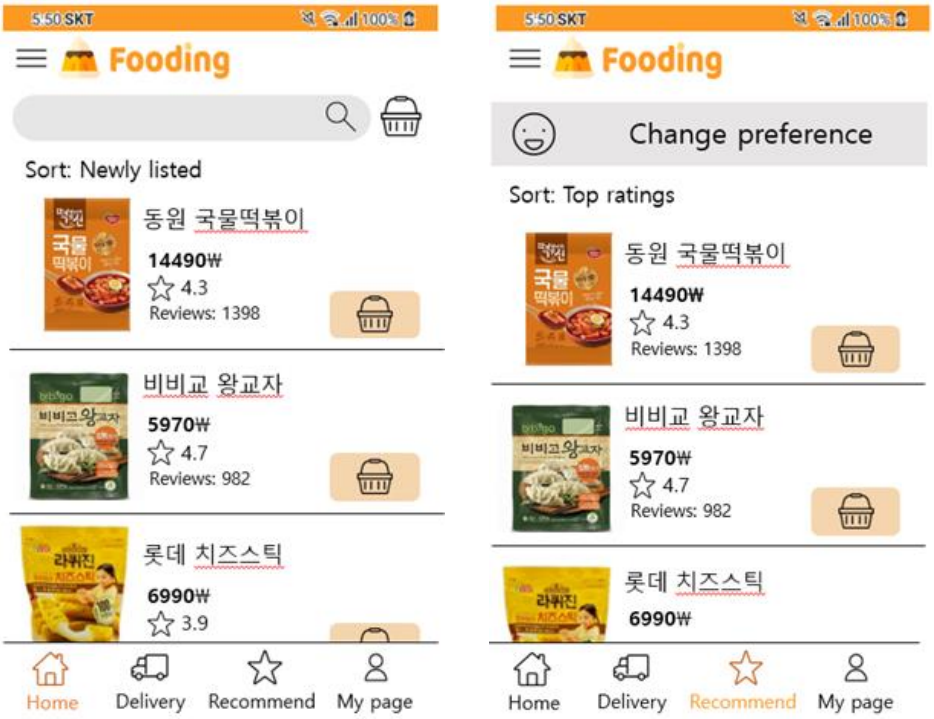

Figure 4. App's Activity screen

2.4. Expected Effects

Deliver consumer-tailored information

Previous systems that provide same reviews of the instant and Home Meal Replacement food for a variety of existing consumers is not a fundamental solution, no matter how much they analyze and provide objective reviews, the information consumers want about food is not objective, but subjective reviews tailored to their individual characteristics, So the current system allows them to make more efficient and easy food choices by providing reviews tailored information.

3. Glossary

Term	Description
Allergens	An allergen is a substance that causes an allergic reaction in someone.
Delivery	It is the step after comes from purchasing the product which enables user to obtain the product
Item	It is the product that provided by the seller.
Preferences	Preferences are taken at the beginning from each user in order to create a profile individually
Provider	It is a medium that fetches necessary contents filled with the information in concern.
Rating	A rating of something is a score or measurement of how good or popular it is.
Recommendations	The recommendations are the things that user specifically produced suggestions.
Review	The reviews are the comments made by other users in order to create an opinion for other users.
Searching	Searching is the act out of finding out the best possible product via processes of selections and filtering.
Survey	Survey is getting detailed information from people.
Swipe	The act of swiping across the touchscreen
User	The customer who is using the app.
Verification	It is the act of validation of the user account from entry information.

Table 1. Glossary

4. User Requirements Definition

4.1. Functional Requirement

A. Sign up/Login

Sign up is a function that requests the personal information of users which are necessary to use our service and stores the information in DB. Users who want to use our service must go through the signing up process. When signing up for our service, users should enter ID, password and some personal information such as phone number or address. The information is stored in DB after the completion of signing up process.

Login is a function that allows users to login to our system by entering ID and password pair generated in the signing up process. If the ID and password pair is matched with the one stored in the DB, the user will successfully login to our service and will receive our service based on the user's information.

B. Preference Survey

Preference survey is conducted to identify user's preferences for food. Users can see 2~3 keywords about their food preferences, and they are categorized into groups according to their food preferences. Recommendation function is provided based on this survey.

C. Product Detail

Product detail shows details, user reviews and average ratings of a specific product. Users can directly buy a product or put it in shopping cart from the product detail page.

D. Search

Search is a function that users can use to search specific products. Users can search products by entering search keyword and using search filters such as food category or price. Users can sort search results by rating, price, etc.

E. Recommendation

Recommendation function shows a list of recommended products that users will like based on the preference survey. The recommendation list includes products purchased a lot or products highly rated by other users who are categorized into the same preference category as the user. Users can choose one of the sorting options. Users can modify the preference survey answers at any time on the recommendation page.

F. Review & Rating

Review & Rating function allows users to write reviews and rate products. On the product detail page, users can see all reviews and average ratings about the product. Users can also see some selected reviews which are called preference reviews. Preference reviews are reviews from other users who have similar food preferences (users who are categorized into the same category as the user). Each review shows a reviewer's nickname, date of review, rating and keywords about the reviewer's food preference.

G. Purchase & Delivery

Purchase is a function that allows users to purchase products that they want. Users can purchase a product directly from the product detail page or purchase all at once from the shopping cart page. After the payment, users can receive the product to the address that they entered.

H. Mypage

Mypage provides various functions such as managing user's personal information and checking order information.

4.2. Non-functional Requirement

A. Product Requirement

(1). Performance

The system needs to group and categorize our customers for their likings, which can cause sparse data. The system should optimize for that sparse data.

(2) Dependability

The system should use atomic operations in every process to provide dependability. For instance, customer should not experience false payment. The system should provide dependability both Front-end Applications and Back-end service.

(3) Security

The system should provide reliability and anonymity for every customer. If customers want anonymity, the system should provide anonymous nickname for customers anytime.

Also, personal data should store with encryption, including ID and Password.

B. Organizational Requirement

(1) Environmental Requirements

The system uses Android environment as Front-end application, without web applications. Because of android have various hardware environments, the Front-end application should light-weight and compatible for multiple versions of android.

(2) Operational Requirements

The system must have cloud-base instance which runs Back-end application. Thus, the system should provide hardware independency and flexibility for environment changes.

(3) Development Requirements

The system requires rapid development due to lack of time. Thus, parallel development is needed for the system. Also, Development process should be designed in plan-driven design, and separate system into 2 part: Front-end Application and Back-end Service.

C. External Requirement

(1) Regulatory Requirement

The system has no external platform dependencies, which means there are no terms from other platforms to follow. The system should obey the local law terms for personal data usage for collection, protection and treatments.

(2) Ethical Requirement

Unlike other systems, the system is highly dependent for customers' behavior; which can make the system vulnerable for abusing behavior or malicious reviews. The system should provide terms of service includes the abuser punishment and reproduction.

(3) Legislative Requirement

The system needs no legislative requirements.

5. System Architecture

5.1. Objective

First, if we explain from the broader perspective that the system architecture gives an understanding for the layout of the general flow of the system. For our application's flow concern is to make users come together and interact with each other through their preferences for the sake of creating an effective shopping experience for users. Our system shows each connection of features in terms of backend and frontend. It is mainly consisting of these two parts. The backend runs algorithms to classify users based on their likes and recommend liked items from other users of the same group. The application will have three essential pages they are the main page, search page and product detail page.

5.2. Flow of System Architecture

When we open the application first, we will come across with the home page. The homepage is basically a page that user is given the chance to search for goods, look at their recommendations according to their collective preferences with users similar to their taste, their delivery statues and most importantly a login page connector which has the prior information from user. After attempt to click a product we will be directed to a product detail page. The product specific pages will consist the classic information of the product and two types of reviews. The first type of the review are the general reviews for that product and the other one is the reviews that the ones comes from the other users witch they are matched. Finally, it is the search page that the main action comes forward. The system in the beginning wants you to make you elaborate survey. That takes place in the from signing up. So the information u given will be used here while you are searching for the products. For instance the filtering for rate would be determined via the information of users you have similar tastes. Other than that it would also have the common features for filtering and extended filtering. According to allergens, tastes, price limits category. Also since the user can change his or her selections anytime they want it is open to be rearranged anytime user pleases with refreshing. The app will mainly be written through android through java. The communications between the pages will occur through the intents and user information’s and user matchings will be kept in databases. The communication between the DB and the app will be through APIs.

5.3. Log in / Sign up System

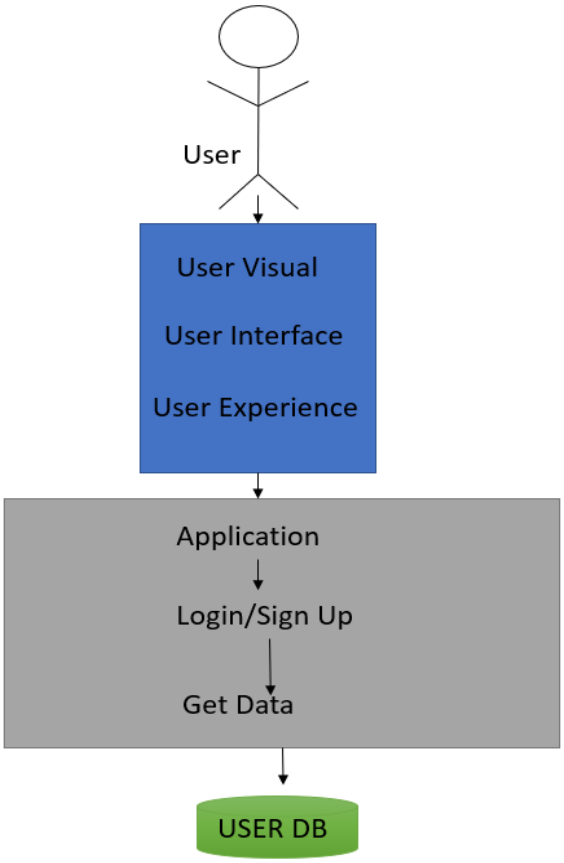

Figure 5. Log in system

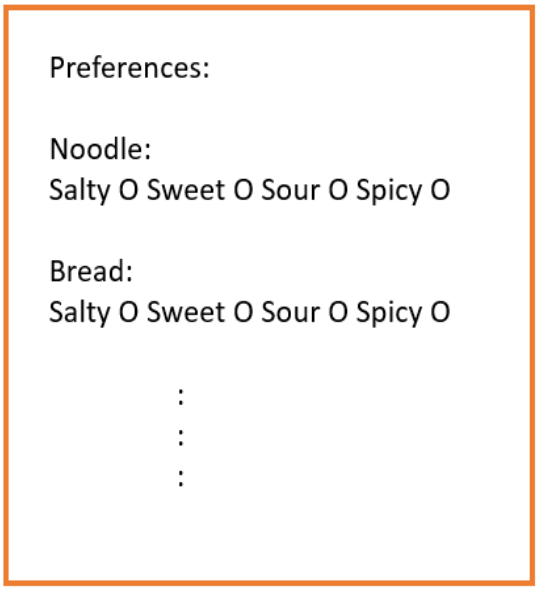

Figure 6. Preference survey

Login systems comes in the home page that you can click through button. If you are not in the database, you are directed to sign up. The sign-up part gets your general information and also in order to matched with other users it gets your preferences through a survey.

5.4. Being Matched with Users / Categorizing

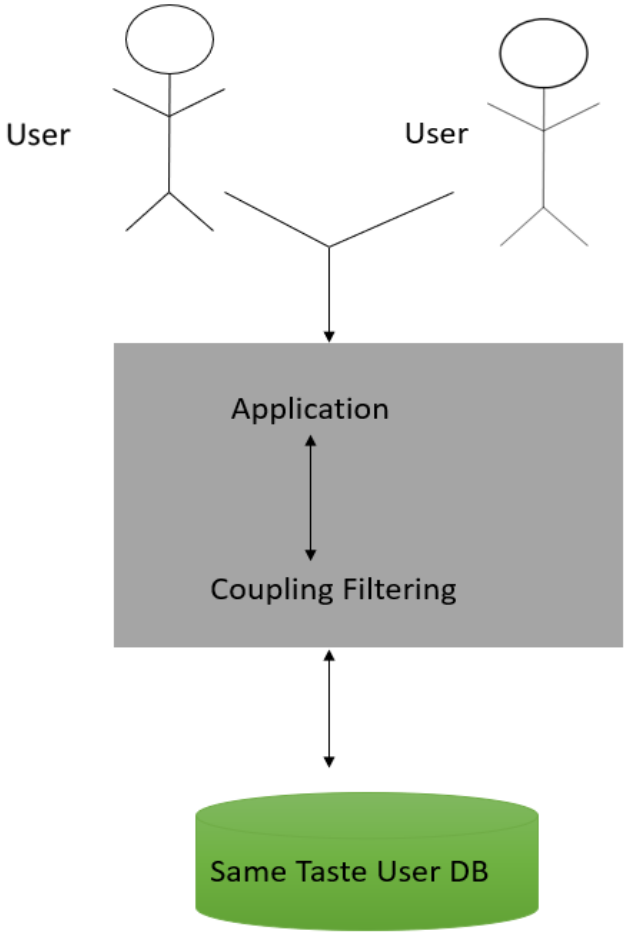

Figure 7. Being matched with users / Categorizing

The recommendations the reviews the users see are all being affected by the other users who they have something in common. The rate of being common is also can be decided by the user. That rate is also stored as an information.

5.5. Recommendation Listing

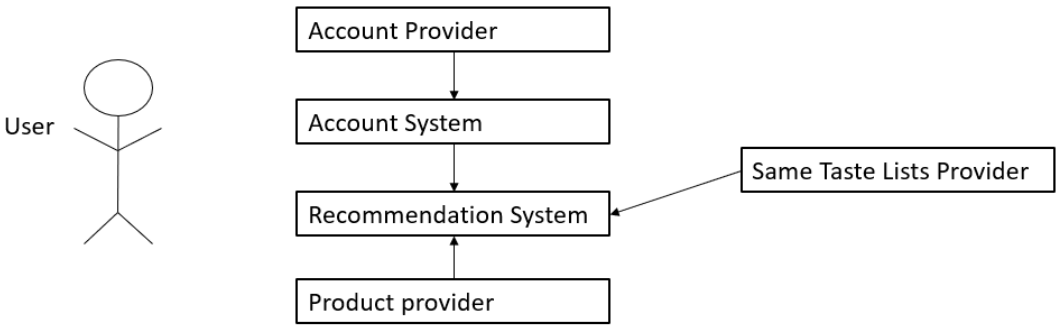

Figure 8. Recommendation listing

This is also similar and applicable to the review systems.

5.6. Search Filtering

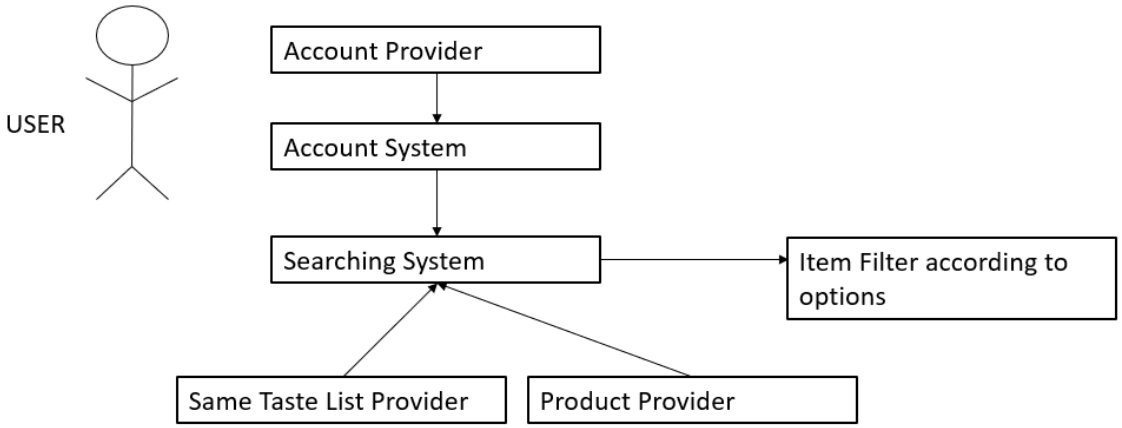

Figure 9. Search filtering

5.7. User/Account Editing

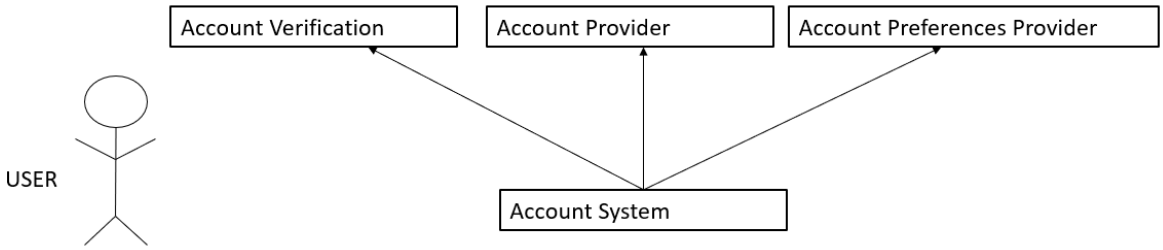

Figure 10. User/Account editing

This feature can be directed easily in order to keep preferences up to date for the user.

5.8. Purchase System

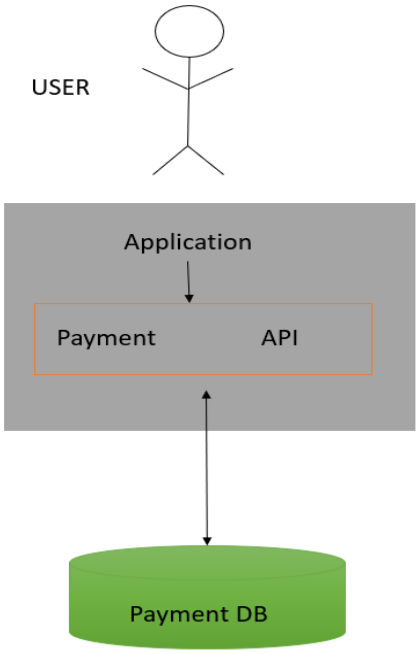

Figure 11. Purchase system

6. System Requirements Specification

6.1. Functional Requirement

A. Sign up

Function	Sign up
Description	Requests personal information of users and stores the information in DB
Input	ID, password, user's personal information (phone number, address... etc)
Output	Sign up complete page
Action	User should enter ID, password and personal information. User should go through authentication or verification process. After successful sign up process, user's information will be stored in the DB and sign up complete page will be shown to the user.
Consideration	· User ID should be unique. · User should fill out the sign up form without any blanks.

Table 2. Functional requirement – Sign up

B. Login

Function	**Login**
Description	Authenticate user with ID, password pair
Input	User ID, password pair
Output	Main homepage
Action	User should enter ID, password pair to login to the system. If the pair is matched with the one stored in the DB, user can successfully login to the system. If not, an error message will be shown to the user to try login again.
Consideration	· User should enter both ID and password. · User cannot access to any other pages before successful login process.

Table 3. Functional requirement – Login

C. Preference Survey

Function	**Preference survey**
Description	Survey conducted to identify user's preference for food
Input	User input
Output	User categorization, user's food preference keywords, survey complete page
Action	User should answer to questions about food preferences and allergic conditions. Users are categorized into groups based on the results of preference survey. After the survey, user's survey answers and food preference keywords will be stored in the DB. If all questions are answered, survey complete page will be shown. If not, an error message will be shown to the user to answer the remaining questions.
Consideration	· User should answer to all questions.

Table 4. Functional requirement – Preference survey

D. Product Detail

Function	**Product detail**
Description	Show product details, user reviews and ratings
Input	-
Output	Product details, user reviews and ratings
Action	Shows product name, photo, price, and other details about the product. Show users' reviews and average rating of the product. If user clicks "Buy now" button, user can directly buy the product from this page. If user clicks "Add to cart" button, user can put the product in the shopping cart.
Consideration	· Should show user-specific preference reviews based on user's food preference.

Table 5. Functional requirement – Product detail

E. Search

Function	**Search**
Description	Search specific product and show search results
Input	Search keyword, search filter options, sorting option
Output	Search results (list of products)
Action	Shows search results based on user's search keyword and search filter options. If user do not enter any search keyword, an error message will be shown to the user to enter the keyword. Search filter such as food category or price will be provided to the user. If user clicks the search button, search results will be shown. User can sort the search results by using sorting option such as rating or price.
Consideration	· User should enter search keyword. · Search keyword should be products' name.

Table 6. Functional requirement - Search

F. Recommendation

Function	**Recommendation**
Description	Show a user-specific list of recommended products
Input	User's food preference keywords
Output	Recommendation results (list of recommended products)
Action	Shows a recommendation list based on the user's preference survey results. Recommendation list includes products purchased a lot or products highly rated by other users who are categorized into the same preference category as the user.
Consideration	· User preference survey should be previously done. · User can modify the preference on the recommendation page.

Table 7. Functional requirement - Recommendation

G. Review & Rating

Function	**Review & Rating**
Description	Write reviews and rate products
Input	User input
Output	User review
Action	User can write a review and rate the product. Reviews and average rating will be shown on the product detail page. Each review shows a reviewer's nickname, date of review, rating and keywords about the reviewer's food preference. Selected reviews, which are called preference reviews, will be provided based on user's food preference. Preference reviews are reviews from other users who have similar food preferences (users who are categorized into the same category as the user).
Consideration	· Preference review should be selected based on user's food preference.

Table 8. Functional requirement – Review & Rating

H. Purchase

Function	**Purchase**
Description	Purchase specific products
Input	Product list
Output	Purchase complete page, order information
Action	Users can purchase a product directly from the product detail page or purchase all at once from the shopping cart page. After successful payment process, purchase complete page will be shown to the user. User can check order information after the purchase process.
Consideration	· If user clicks “Buy now” button, the product is automatically added to the shopping cart. · To go through purchase process, there should be at least 1 product in the shopping cart.

Table 9. Functional requirement - Purchase

I. Delivery

Function	**Delivery**
Description	Show delivery information
Input	Order information
Output	Delivery information
Action	Shows delivery information of ordered products.
Consideration	-

Table 10. Functional requirement - Delivery

J. My Page

Function	My Page
Description	Provide various functions
Input	User input
Output	User information
Action	Provides various functions such as managing user's personal information and checking order information.
Consideration	-

Table 11. Functional requirement – My page

6.2. Non-functional Requirement

A. Product Requirement

(1) Performance

The system needs to group and categorize our customers for their likings, which can cause sparse data. The system should optimize for that sparse data. NoSQL, like Key-Value Storage is recommended for the system, but also General RDBMS could be used because the system is small enough for now.

(2) Dependability

The system should use atomic operations in every process to provide dependability. For instance, customer should not experience false payment. The system should provide dependability both Front-end Applications and Back-end service.

For instance, Front-end Application of the system should handle request for payment at once. This will prevent incidences from client failures.

Also, Back-end Service of the system should use transaction for each operation. This will prevent incidences from server failures.

(3) Security

The system should provide reliability and anonymity for every customer. If customers want anonymity, the system should provide anonymous nickname for customers anytime.

Also, personal data should store with encryption, including ID and Password with salt.

B. Organizational Requirement

(1) Environmental Requirement

The system uses Android environment as Front-end application, without web applications. Because of android have various hardware environments, the Front-end application should light-weight and compatible for multiple versions of android. For providing regular services in hardware varieties, Front-end application of the system should avoid complicated jobs, and Back-end Service of the system should handle that jobs.

(2) Operational Requirement

The system must have cloud-base instance which runs Back-end application; like AWS, GCP, Azure, etc. Thus, the system should provide hardware independency and flexibility for environment changes; using Vagrant, Ansible or Docker.

(3) Development Requirement

The system requires rapid development due to lack of time. Thus, parallel development is needed for the system. Also, Development process should be designed in plan-driven design, and separate system into 2 part: Front-end Application and Back-end Service.

C. External Requirement

(1) Regulatory Requirement

The system has no external platform dependencies, which means there are no terms from other platforms to follow. The system should obey the local law terms for personal data usage for collection, protection and treatments.

(2) Ethical Requirement

Unlike other systems, the system is highly dependent for customers' behavior; which can make the system vulnerable for abusing behavior or malicious reviews. The system should provide terms of service includes the abuser punishment and reproduction.

(3) Legislative Requirement

The system needs no legislative requirements.

6.3. Scenario Examples

A. Join and Sign-in Scenario

(1) Initial assumption

Users can sign in and use the service after going through the Sign-up process. Sign-up process includes a preliminary survey for ID, ID duplicate check, password, address, and category classification.

(2) Normal flow of events

After signing up as a member, the user's database moves to the corresponding category and provides customized services.

(3) What can go wrong

If a member is not signed up, it generates an error message and recommend signing up. If the password is wrong, it generates an error message and recommend trying it again.

(4) System state on completion

If the user has successfully signed in, they can use the service on the Home, Delivery, Mypage, and Recommendation pages.

B. Recommendation scenario

(1) Initial Assumption

Users have signed up and accessed the system to purchase food and may or may not have the kind of food they want in mind.

(2) Normal flow of events

Once signed into the system, a total of four tabs are available. A home page listing basic foods, a Recommendation page offering recommendations from a custom group, a Delivery page for viewing delivery status, and a Mypage page for viewing or modifying personal information. Users can access information about food purchased or recommended by people belonging to the same group on the Recommendation page, and when viewing specific food information, they can also have priority access to reviews of people belong to the same group, Moreover, users can search for products they want.

(3) What can go wrong

When the number of users in the same group is small, or the number of user's review is not enough, it shows information about foods that meet only some conditions according to their priority in the category.

(4) System state on completion

If the user decides to make a purchase, click Buy and make a payment. Food is delivered within a period, and if a user writes a review of the purchase history and the food, it is stored in the database.

7. System Models

System Models describes system components and interactions between systems when using specific functions. For detailed explanation, the system is expressed by various models using UML.

7.1. Context Model

A. Context diagram

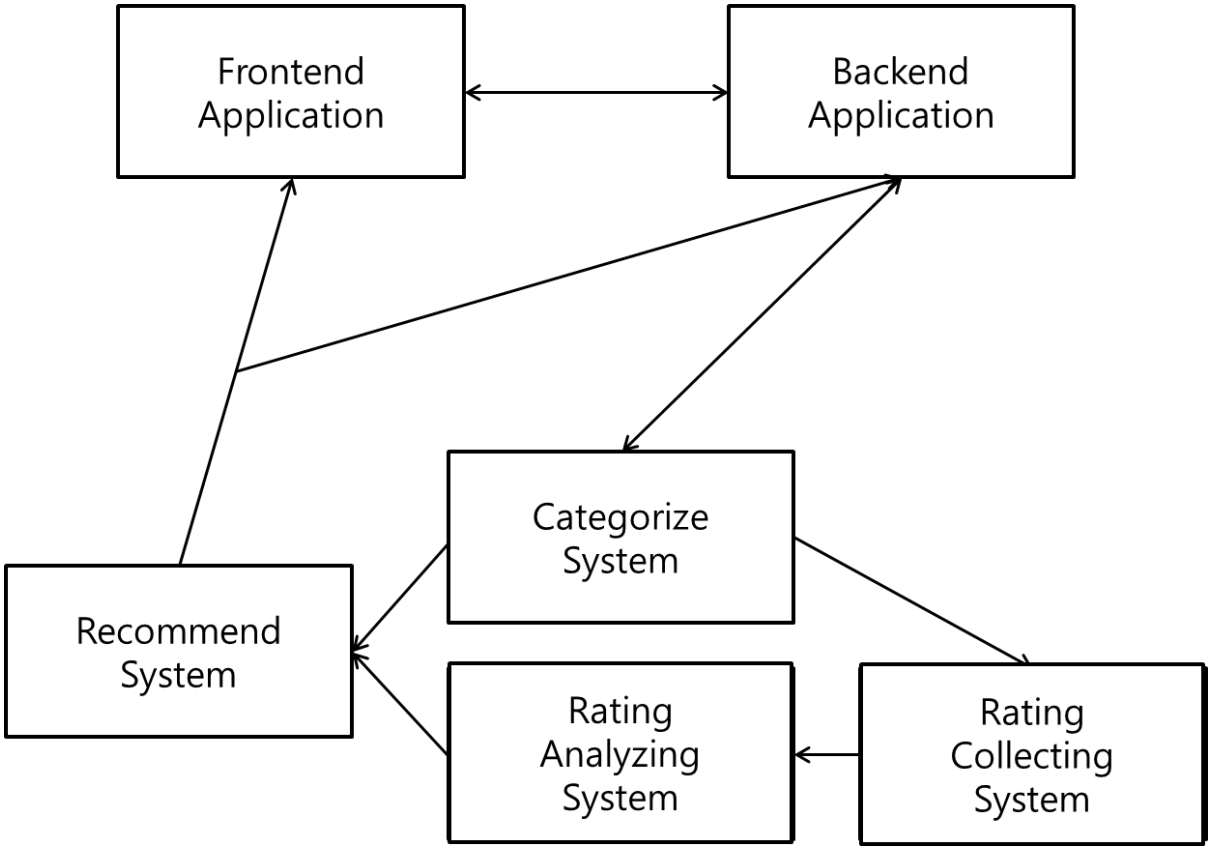

Figure 12. Overall context diagram

B. Process Diagram

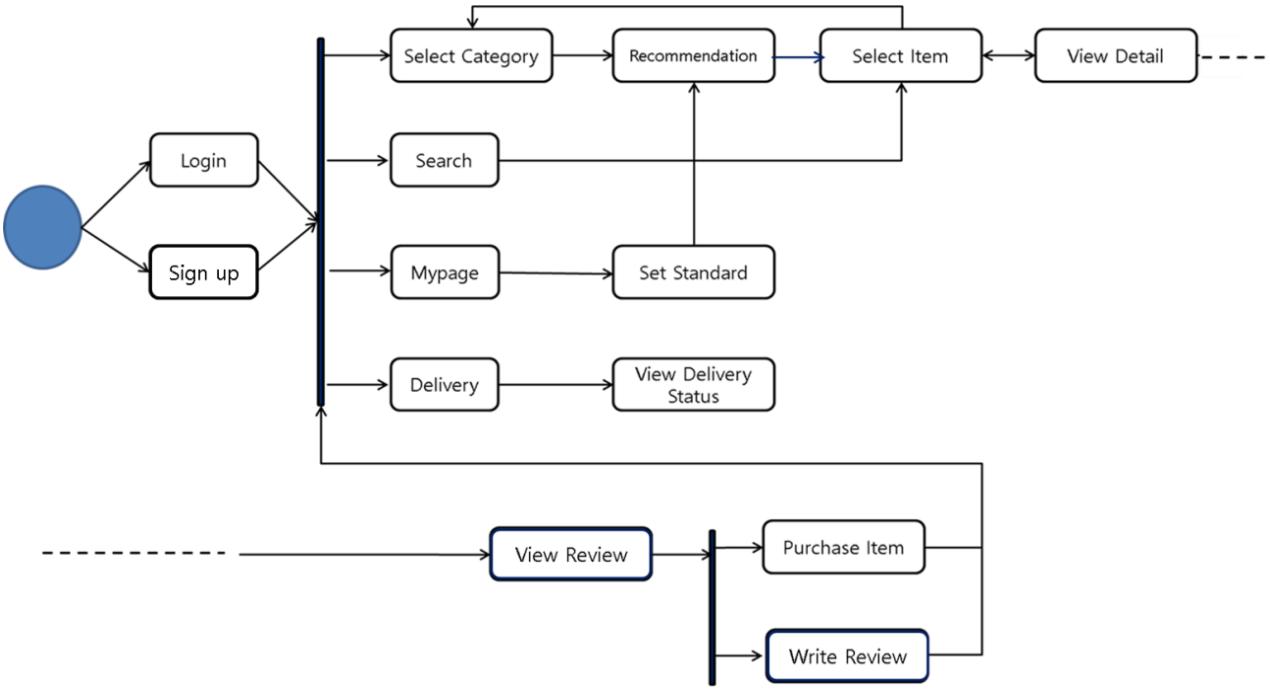

Figure 13. Process diagram

7.2. Interaction Model

A. Use Case Diagram

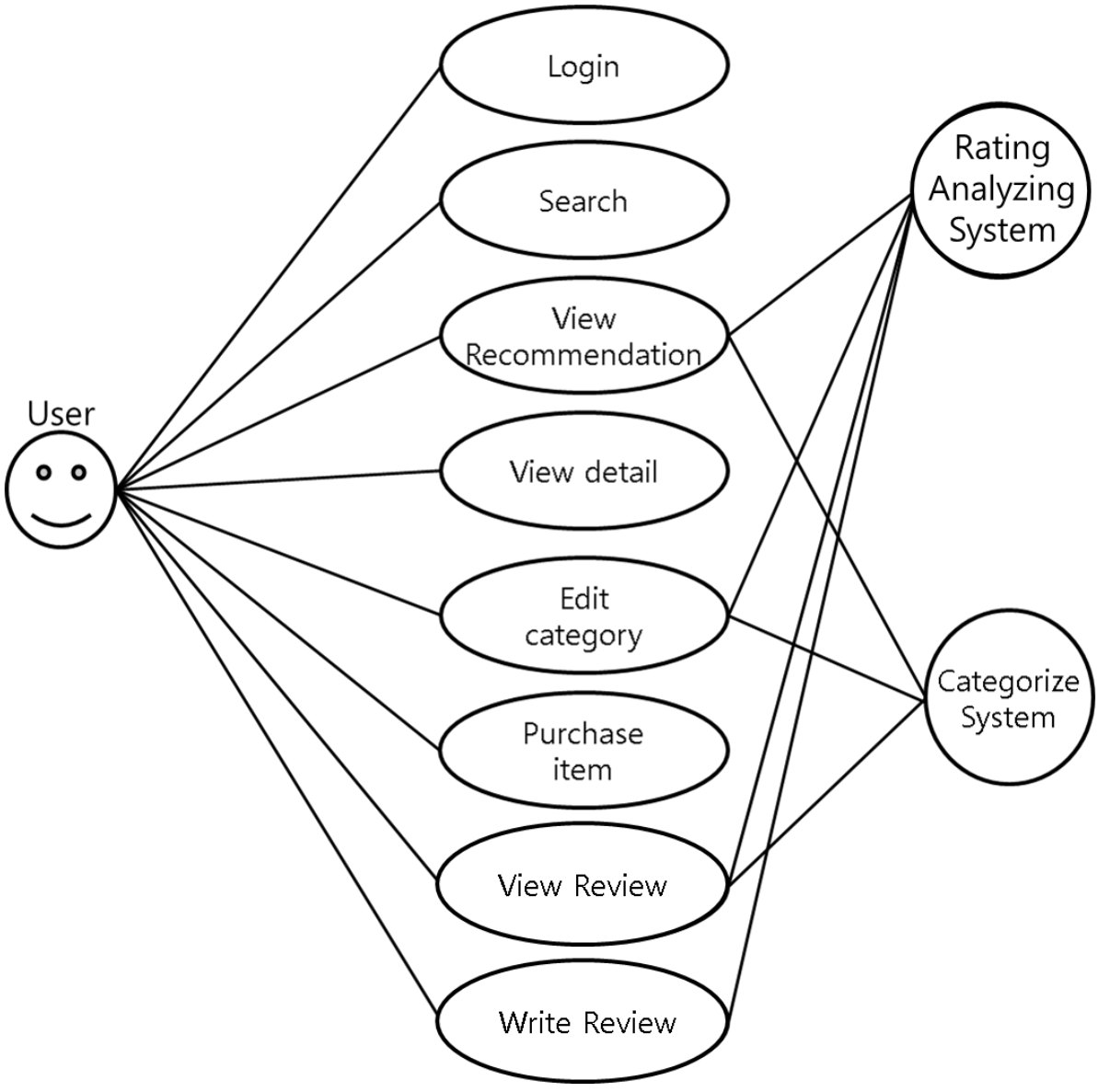

Figure 14. Use case diagram

B. Tabular Description for Each Use Case

B.1. Login

Use case	Login
Actor	User, Database (User)
Description	Process of determining whether the accessed user matches the user information registered in the system.
Trigger	User enter ID and PW
Success response	User ID exists in database PW matches User ID in database Give the authority using app
Failure Response	Error message is displayed depending on the case that ID doesn't exist or ID and PW don't match.

Table 12. Use case - Login

B.2. Search

Use case	Search
Actor	User, Database(Item)
Description	Searching the item directly using name
Trigger	User enter the item name and push the search button
Success response	Show the item list that the name is matched or contained
Failure Response	If there is no item matched, show the empty list and print error message

Table 13. Use case - Search

B.3. View recommendation

Use case	**View recommendation**
Actor	User, Database(Item), Database(user), Database(review), categorize system, Rating analyze system
Description	Showing the recommendation item list from database The item rating(categorized) should be higher than user's search standard
Trigger	Push recommend button
Success response	Show the item list
Failure Response	If there is no item matched, show the empty list and print message whether user change category or search standard

Table 14. Use case – View recommendation

B.4. View item detail

Use case	**View item detail**
Actor	User, Database(Item)
Description	View item information that printed by recommendation or searching
Trigger	Push item icon
Success response	Bring the item information from database by using item key

Table 15. Use case – View item detail

B.5. Change preference

Use case	Change preference
Actor	User, categorize system, rating analyze system
Description	Changing preference that is used recommendation
Trigger	Push ‘change’ button and change preference
Success response	Show changed preference and re-recommend the item matched category
Failure Response	If user don’t check any category, print error message

Table 16. Use case – Change preference

B.6. Purchase item

Use case	Purchase item
Actor	User, database(user), database(item)
Description	For purchasing item, get user’s credit information from user database and pay the price
Trigger	Push buy button
Success response	Go to pay page and send item delivery status information to delivery page
Failure Response	Print error message to each case

Table 17. Use case – Purchase item

B.7. View review

Use case	View review
Actor	User, Database (Item), Database (review)
Description	View the present categorized preference reviews and rating or overall reviews
Trigger	Click view more.. button in item detail page
Success response	Show the reviews
Failure Response	null

Table 18. Use case – View review

B.8. Write review

Use case	Write review
Actor	User, Database (Item), Database (review), rating collecting system, rating analyzing system, categorize system
Description	User writes review and rating. Store this information to database used analyzing system
Trigger	Write the review and rating and submit
Success response	Rating is accumulated 2 way 1. Present user preference(category) 2. Overall rating
Failure Response	null

Table 19. Use case – Write review

7.3. Behavioral Model

In this part, focusing on Rating analyze system and Categorize system which are the most important sub-system in this app.

A. Categorize system DFD

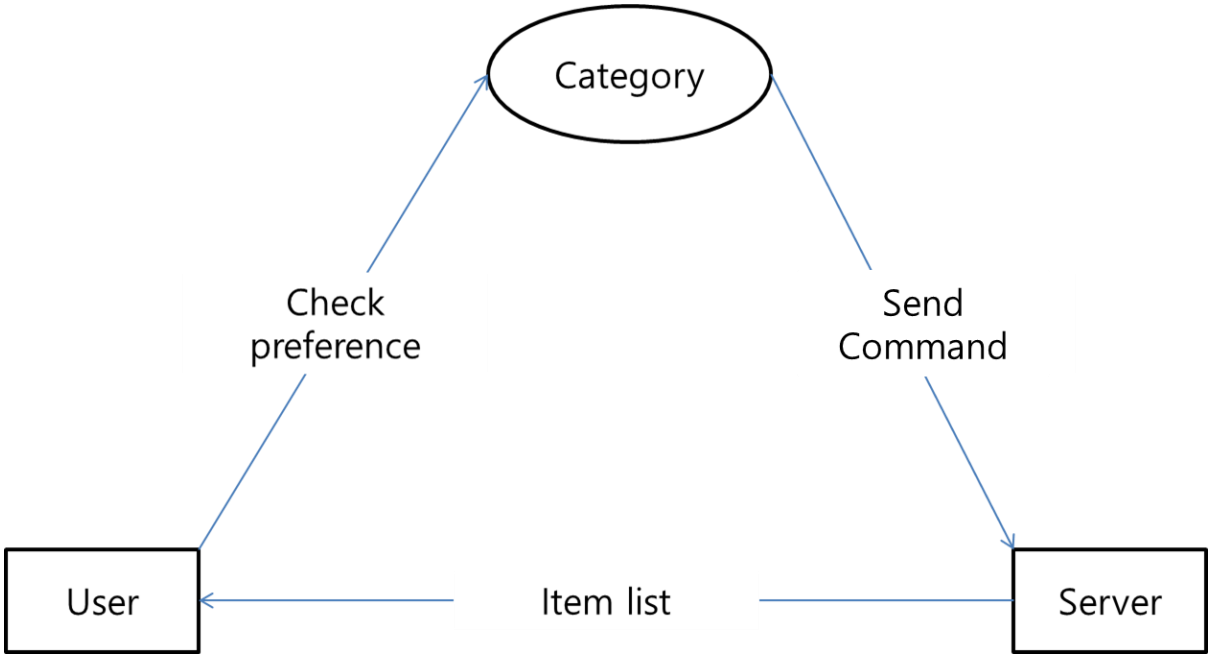

Figure 15. Data flow diagram of categorize system

B. Rating analyzing system

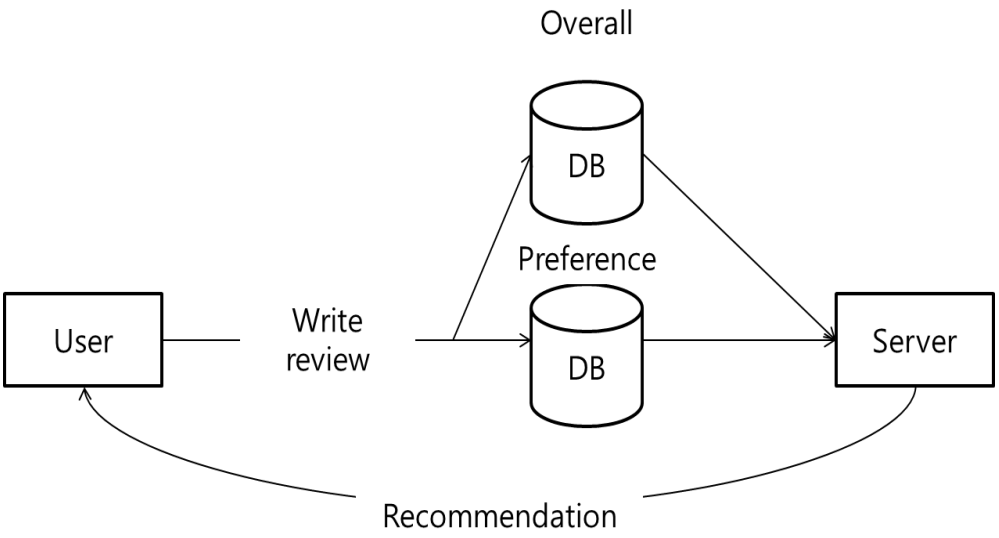

Figure 16. Data flow diagram of rating analyzing system

C. Delivery sequence diagram

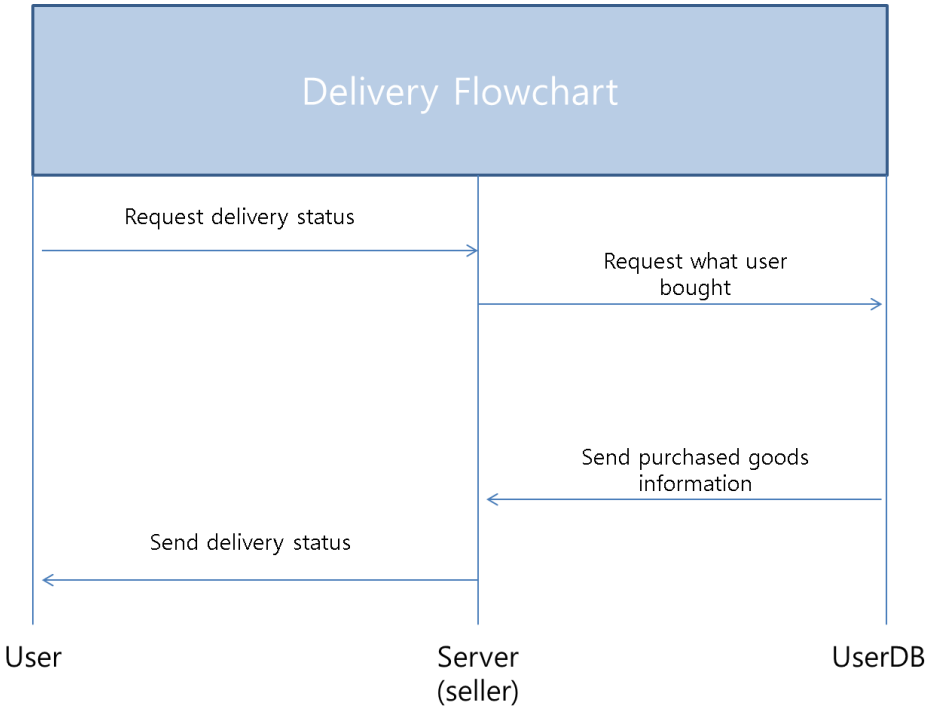

Figure 17. Sequence diagram of delivery status function

8. System Evolution

In this part, we describe the environment surrounding the system, how to expect the system to respond to the anticipated changes, and to anticipate the various changes surrounding the system that may occur while deploying and operating the system. This eliminates the possibility of side-by-side design changes that may occur in future modifications to the system and lowers the cost of modification.

Tag Searching

User wants to search the item but he doesn't know the item name. In this situation, tag searching feature makes user find the item. For making tags, we need NLP (Natural Language Processing) technique. We can find frequent words in reviews and create tags by comparing and combine the words and category.

Statistical Analysis

This application is based on online shopping mall so it is important to make statistics about sales, net profits, how long it took to sell and etc. We analyze these statistics to decide what to buy more or less from food manufacturers. This process makes more benefits. Users can refer to these statistics like how many it sold.

Expand to Web

Recently many shopping malls have their own website and application. Although mobile users are constantly increasing, we can't ignore PC users. Therefore we have to consider for expanding to Web. Web platform, HTTP service, Site form will be considered.

OAuth Implementation

A convenient way of signing in/up could be implemented using Google Identity platform, Facebook login, Kakaotalk login, and Naver login.

9. Appendices

Software/Hardware Requirements

For the side of operating system software this application user needs Android devices with Android 7+.

For the database It is going to be mainly in the format of MySQL 5.6, 5.7, 8. It is important to set out the database in rules because Hashtags or recent mentions of usernames containing a dot do not return search results.

For the side of hardware Usage of CPU, RAM, and storage space can vary significantly based on user behavior. These hardware recommendations are based on traditional deployments and may grow or shrink depending on how active your users are.

Moreover, memory requirements can be driven by peak file sharing activity. Recommendation is based on default 50 MB maximum file size, which can be adjusted from the system console. Changing this number may change memory requirements.

It basically depends on the user number and each user information amount.

10. Index

10.1. Figure

10.2. Table

11. Referencees

Parker, John. “Business, User, and System Requirements.” *Enfocus Solutions Inc*, Enfocus Solutions, 18 Feb. 2012, enfocussolutions.com/business-user-and-system-requirements/.

박정완 . (2020, May 8). 50대 이상 가정간편식 선호 급증. Retrieved May 13, 2020, from http://www.chukkyung.co.kr/news/articleView.html?idxno=57300

송기욱 . (2020, May 9). CJ제일제당, 펫푸드·외식사업 접고 가정간편식 '홈밥' 집중. Retrieved May 13, 2020, from http://www.newspim.com/news/view/20200507000969