내게 딱 맞는 핏을 찾다

Fitts: Requirement Specification

(Purpose: Reverse engineering)

Documented by:

Team2

Nguyen Khanh Binh	2019711305
Lim Gunsik	2019711699
Haziq Hamzah	2019711435
Jang Hanbin	

Table of Contents

1. Introduction 4
   1.1. Background of Personalization Application 4
   1.2. Background of Fitts Application 4
2. User Requirements Definition 5
   2.1. Functional Requirements 5
      2.1.1. Sign-up/Sign-in 5
      2.1.2. User Personalization manager 5
      2.1.3. Homepage 5
      2.1.4. Store manager 5
      2.1.5. Review System 6
      2.1.6. Notification System 6
      2.1.7. Mypage 6
      2.1.8. Cart 6
      2.1.9. Payment System 6
      2.1.10. Showroom 6
      2.1.11. Fitts Point System 6
      2.1.12. Search 7
      2.1.13. Log-out 7
      2.1.14. DB manager 7
   2.2. Non-Functional Requirements 7
      2.2.1. Product Requirements 7
      2.2.2. Organizational Requirements 7
3. System Requirements Specification 9
   3.1. Functional Requirements – Frontend 9
      3.1.1. Sign-up 9
      3.1.2. Sign-in 9
      3.1.3. User Personalization Manager (Frontend) 10

3.1.4. Homepage 10
3.1.5. Store Manager (Frontend) 11
3.1.6. Review System (Frontend) 11
3.1.7. Notification System 11
3.1.8. Mypage 12
3.1.9. Cart 12
3.1.10. Payment System (Frontend) 13
3.1.11. Showroom 13
3.1.12. Fitts Point System 13
3.1.13. Search 14
3.1.14. Sign-out 14
3.2. Functional Requirements – Backend 15
3.2.1. User Personalization Manager 15
3.2.2. Store Manager 15
3.2.3. Review System 15
3.2.4. Payment System 16
3.2.5. DB Manager 16
3.3. Non-Functional Requirements 17
3.3.1. Product Requirements 17
3.3.2. Organizational Requirements 17
3.3.3. External Requirements 17
4. System Architecture 18
4.1. Frontend Diagram 18
4.2. Backend Diagram 19
4.3. Use-case Diagram 20

1.Introduction

This section briefly describes the target system including the background of personalization application and about the Fitts application itself.

1.1. Background of Personalization Application

Nowadays, due to the enormous growth of the internet and technologies, it enables people to do many things through their mobile phone, laptop, or television. Online shopping malls appeared in the growth of both fashion companies and the internet. Mobile shopping mall application provides functions for users convenient shopping. Customers can check details of the product at their home, pay as they go, and receive the product at their chosen place. The extent of this is when an application allowed users to personalize their user’s data for better shopping experiences.

1.2. Background of Fitts Application

While so many existing online shopping mall applications on the application store, they are all similar to each other. Thus, some company chooses to make a difference by implementing some minor changes. Fitts is one of those applications that is unique in the market. The key idea of Fitts's success is that they utilize the user's body information to suggest the products which follow the user's personalization. With these unique features, Fitts can increase its revenue.

2. User Requirements Definition

This section covers the definitions for the user requirements of the proposed system. The requirements can be categorized into functional and non-functional requirements.

2.1. Functional Requirements

The functional requirements include, but are not limited to, the following items:

2.1.1. Sign-up/Sign-in

This is a basic requirement for a user to use the Fitts application. The requirement is as such:

- At first, users must sign-up an account of the Fitts system with ID, password, and e-mail, or users can create an account via Facebook or Kakao account.
- Users must Sign-in with their ID and Password.
- When users Sign-in, the system should authenticate the users by matching the given input with the user's account information in the DB.

2.1.2. User Personalization manager

2.1.2.1. Frontend

After logged-in, users must input the information about their bodies such as height, weight, body type, shoe size, and style of clothing.

2.1.2.2. Backend

The user personalization manager must store the information in system DB.

2.1.3. Homepage

Show up the posted reviews of other users, which is about the clothes that they bought with a direct link to buy the product. Must include today's famous posting, daily best product deals, a trend that is right with my bodies information, and other famous product that is not related to my bodies information.

2.1.4. Store manager

2.1.4.1. Frontend

Show up many products with the price available in the Fitts system and direct link to the shop that sells the products. Users can bookmark the product and the shop.

2.1.4.2. Backend

Responsible to handles user request related to store and link it with the DB manager.

2.1.5. Review System

2.1.5.1. Frontend

Users can upload reviews about outfits, shoes, bags using their creativity.

2.1.5.2. Backend

Responsible to handles user request related to review and link it with the DB manager.

2.1.6. Notification System

Users should receive any notice about events, coupons, best deals, payment completions, shipping information and many more.

2.1.7. Mypage

Mypage provides users with information related to ordering and activity. Users can check their orders and shipping information. From mypage, users can go to their showroom to view their posted reviews. It also provides a bookmark feature, event notification feeds, and friend invitation.

2.1.8. Cart

All of the products to be bought by users are listed in the cart.

2.1.9. Payment System

2.1.9.1. Frontend

Payment of products is linked with various payment methods such as credit card, master card, Kakao pay, Naver pay, and so on.

2.1.9.2. Backend

Responsible to handles user request related to payment and link it with the DB manager..

2.1.10. Showroom

The reviewed product by the users must be shown here as a kind of user’s private blog.

2.1.11. Fitts Point System

Fitts points can be viewed on mypage. This is the point earn from posting reviews about the product. Users can collect this point to buy coupons or products in Fitts store. Besides earn point from posting review, users can earn points by shopping, inviting peoples, and complete some events.

2.1.12. Search

Users can search for other users, shop, or product in this area.

2.1.13. Log-out

After users log-out, all application instances and services must be terminated with the user's device. Except for background service such as notification services.

2.1.14. DB manager

Responsible to update and store DB data according to the incoming request from other components.

2.2. Non-Functional Requirements

The non-functional requirements can be further classified into the Product Requirements and Organizational Requirements as follows:

2.2.1. Product Requirements

2.2.1.1. Performance

- It needs the same performance as other personalization applications when users are shopping for products.
- It also needs a good system to upload and download the image for products. It needs to balance the network to make it fast enough when users are using certain services.

2.2.1.2. Security

A review must be reliable and must guarantee the anonymity of the reviewer. Each personal information must be protected from external access. ID and passwords should also be protected by any third-party access.

2.2.1.3. Usability

The UI of the application should be simple to provide important information at the tip of a finger. Tutorial of using application must be given when the user uses the application for the first time.

2.2.1.4. Safety

The Fitts point must be stable and reliable throughout the application.

2.2.2. Organizational Requirements

- Any updates must be conduct as a team, and must be discussed (Github or KakaoTalk).
- Documents created must follow the guidance of SE class.
- All diagrams drawn must follow the UML model.

- Attribute Driven Develepmont must be use when refining the target system

3. System Requirements Specification

This chapter specifies the functional and non-functional requirements. We focus on the following detail requirements: Name, description, inputs, outputs, action, requirements, pre-condition and post-condition.

3.1. Functional Requirements – Frontend

3.1.1. Sign-up

Name	Sign-up
Description	Users can create their account
Inputs	{ID, password, user details}
Outputs	The account of the user is created
Action	When the user first opens the application, it requires the user to Sign-in or if the user does not have an account, the user must sign-up. When signing-up, user must input their desired ID and password. They also are required to input details about them
Requirements	The person with no account
Pre-condition	Users should have email, Facebook or Kakao account
Post-condition	N/A

Table 1: Sign-up

3.1.2. Sign-in

Name	Sign-in
Description	User can Sign-in to their account after signing-up or already have an account
Inputs	{ID, password}
Outputs	Homepage
Action	The user Sign-in with the account that was signed-up previously. After user is logged in to the application, the first-page instance that the user view is homepage.
Requirements	User must have the credential in the application system
Pre-condition	N/A

Post-condition	N/A

Table 2: Sign-in

3.1.3. User Personalization Manager (Frontend)

Name	User personalization manager (frontend)
Description	Provide UI for the user to input the data related to user's body information
Inputs	{Body weight, height, shoe size, …..}
Outputs	User personalization manager sends the data to the DB manager for DB update
Action	The user opens the UI to input their body information. User input all the required inputs. The user personalization manager gets the input data and send to DB manager.
Requirements	User body information
Pre-condition	Input options must be provided by personalization manager
Post-condition	Input data must be sent to DB manager

Table 3: User Personalization Manager (Frontend)

3.1.4. Homepage

Name	Homepage
Description	Provide view of available products, shops, daily deals, and trends
Inputs	User body information
Outputs	The data related to products, shops, daily deals, and trend which relates to the user body information
Action	When user access homepage, it will automatically provide view of products, shops, daily deals, and trends which relates to the user body information
Requirements	User body information
Pre-condition	N/A

Post-condition	N/A

Table 4: Homepage

3.1.5. Store Manager (Frontend)

Name	Store manager (frontend)
Description	Manage the view for products and shops
Inputs	User body information
Outputs	The data related to products and shops
Action	When user access the store page, store manager will automatically provide view of products and shops
Requirements	User body information
Pre-condition	N/A
Post-condition	N/A

Table 5: Store Manager (Frontend)

3.1.6. Review System (Frontend)

Name	Review system (frontend)
Description	Manage the page intances relates to reviewing a product
Inputs	Reviewed data of a product
Outputs	Fitts point gained from reviewing product
Action	When user review certain products, review system will automatically provide view of products and shops
Requirements	User must fill up all required data
Pre-condition	Check whether reviewed data is valid to the system standard
Post-condition	N/A

Table 6: Review System (Frontend)

3.1.7. Notification System

Name	Notification system
Description	Manage the notification of certain deals of products and some payment related notices
Inputs	Data to be notify

Outputs	User is notified with the data
Action	Whenever the application is running, user should be noticed with the deals about product and also must notify user for every successful payment
Requirements	Application must be running in the device environment
Pre-condition	N/A
Post-condition	N/A

Table 7: Notification system

3.1.8. Mypage

Name	Mypage
Description	Organizes user data and let user view it in one page. It also contains link to bookmark and showroom
Inputs	User related data
Outputs	View of organized data
Action	When user open the mypage, user can view their shopping history. They also can go to bookmark and showroom via mypage
Requirements	Data of user must be valid to that specific account
Pre-condition	Collect user data from DB
Post-condition	User data must be organized before view

Table 8: Mypage

3.1.9. Cart

Name	Cart
Description	Temporarily store the product to be bought by users
Inputs	Products to be bought
Outputs	Payment of the products
Action	When user is shopping, they will want to store some products in a list before buying them
Requirements	Cart must be empty after all product was payed
Pre-condition	Product that is stored in a cart depends on the availability of the product
Post-condition	N/A

Table 9: Cart

3.1.10. Payment System (Frontend)

Name	Payment system (frontend)
Description	Interface for user to pay for products
Inputs	User payment details
Outputs	Notification of success payment
Action	When user wants to pay for the product, payment system will provide interface for payment procedure. Payment system will link with notification system to notify user when payment is successful
Requirements	User must be notify for either succeed or failed payment
Pre-condition	Validate the payment details
Post-condition	N/A

Table 10: Payment System (Frontend)

3.1.11. Showroom

Name	Showroom
Description	This is the page that shows all of the posted review by the user
Inputs	History of reviewed data
Outputs	View for the posted reviews
Action	When user go into the showroom page, user can view the reviews that they posted
Requirements	Reviews must be only from the user
Pre-condition	N/A
Post-condition	N/A

Table 11: Showroom

3.1.12. Fitts Point System

Name	Fitts point system
Description	In app currency that can be consider as real money
Inputs	Token related to user’s account
Outputs	Fitts point of the user
Action	Everytime user open pages that contains Fitts point, user must be able to view it

Requirements	Fitts point must be reliable and stable
Pre-condition	N/A
Post-condition	N/A

Table 12: Fitts Point System

3.1.13. Search

Name	Search
Description	Responsible to find the word that wants to be searched by users
Inputs	Word to be searched
Outputs	Contains related to the word
Action	When user search for any word (ex. Store or product name), the search result must be shown to the users
Requirements	Words that use for the search must only be in the app domain
Pre-condition	Filter words that is not in the app domain
Post-condition	Prioratize the search result according to the input words

Table 13: Search

3.1.14. Sign-out

Name	Sign-out
Description	End all session related to the user’s account
Inputs	User’s account data
Outputs	Terminte all services
Action	When user sign-out, the session of the user must be terminated
Requirements	User sessions must be terminated
Pre-condition	N/A
Post-condition	N/A

Table 14: Sign-out

3.2. Functional Requirements – Backend

3.2.1. User Personalization Manager

Name	User personalization manager (backend)
Description	Interfaces with DB manager, and store the user personalization data in the DB system.
Inputs	{Body weight, height, shoe size, …..}
Outputs	User personalization manager sends the data to the DB manager for DB update
Action	The user opens the UI to input their body information. User input all the required inputs. The user personalization manager gets the input data and send to DB manager.
Requirements	User body information
Pre-condition	Input options must be provided by personalization manager
Post-condition	Input data must be sent to DB manager

Table 15: User Personalization Manager

3.2.2. Store Manager

Name	Store manager (backend)
Description	Manage the interfaces between frontend views and DB manager
Inputs	User body information
Outputs	The data related to products and shops
Action	When user access the store page, store manager will automatically provide view of products and shops
Requirements	User body information
Pre-condition	N/A
Post-condition	N/A

Table 16: Store Manager

3.2.3. Review System

Name	Review system (backend)
Description	Manage the interface between frontend views with DB manager

Inputs	Reviewed data of a product
Outputs	Fitts point gained from reviewing product
Action	When user review certain products, review system will automatically provide view of products and shops
Requirements	User must fill up all required data
Pre-condition	Check whether reviewed data is valid to the system standard
Post-condition	N/A

Table 17: Review System

3.2.4. Payment System

Name	Payment system (backend)
Description	Background validation service to ensure payment of products is done in a right way
Inputs	User payment details
Outputs	Notification of success payment
Action	When user wants to pay for the product, backedn payment system will provide the interface required
Requirements	User must be notify for either succeed or failed payment
Pre-condition	Validate the payment details
Post-condition	N/A

Table 18: Payment System

3.2.5. DB Manager

Name	DB manager
Description	Update and store DB data according to the incoming request from other components
Inputs	Query commands
Outputs	Query output
Action	DB manager handles all request going in and out from the DB system
Requirements	Query data must be validated by DB manager
Pre-condition	N/A
Post-condition	N/A

Table 19: DB Manager

3.3. Non-Functional Requirements

3.3.1. Product Requirements

Refer to 2.2.1.

3.3.2. Organizational Requirements

Refer to 2.2.2.

3.3.3. External Requirements

3.3.3.1. Personal Information Protection

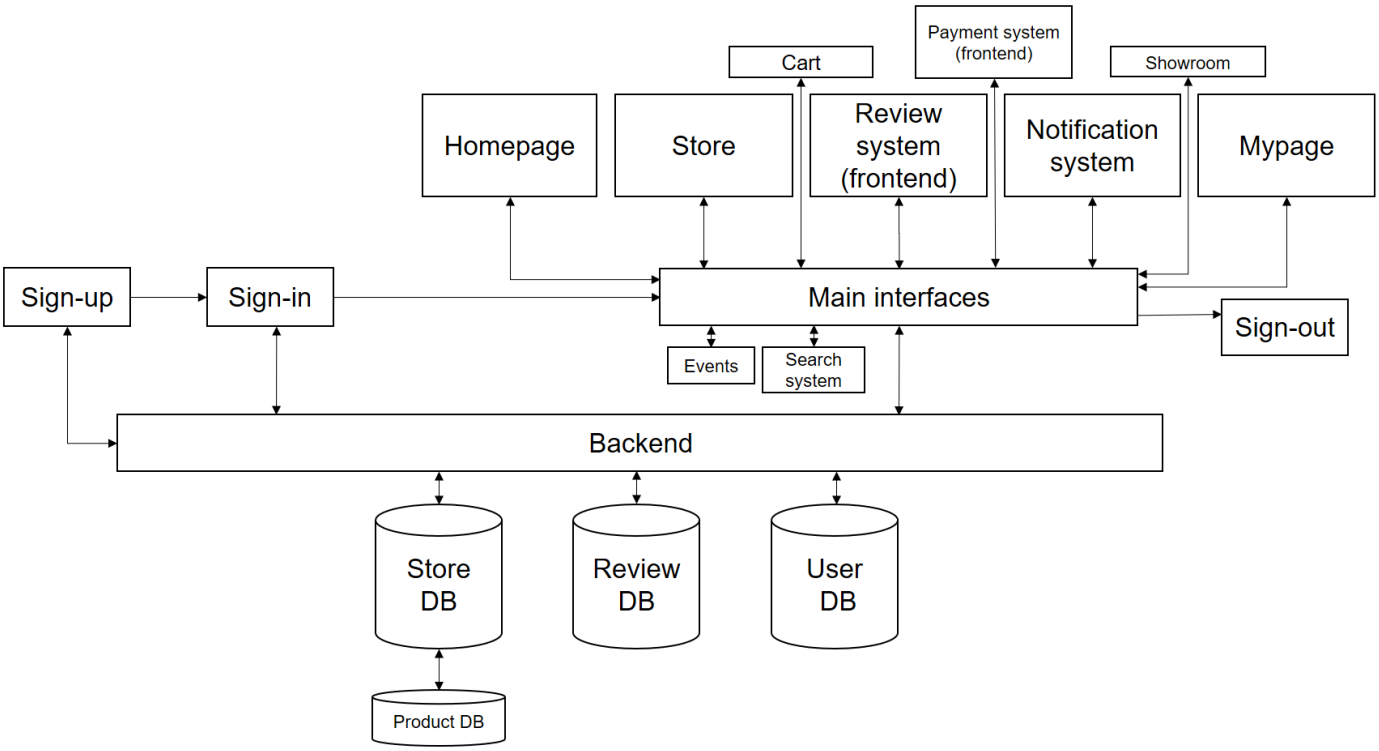
The system collects and stores user information when they sign-up. Only some basic information of users must be gathered, and most of the personal information should be confidential from third-party viewers.

3.3.3.2. External System Policy

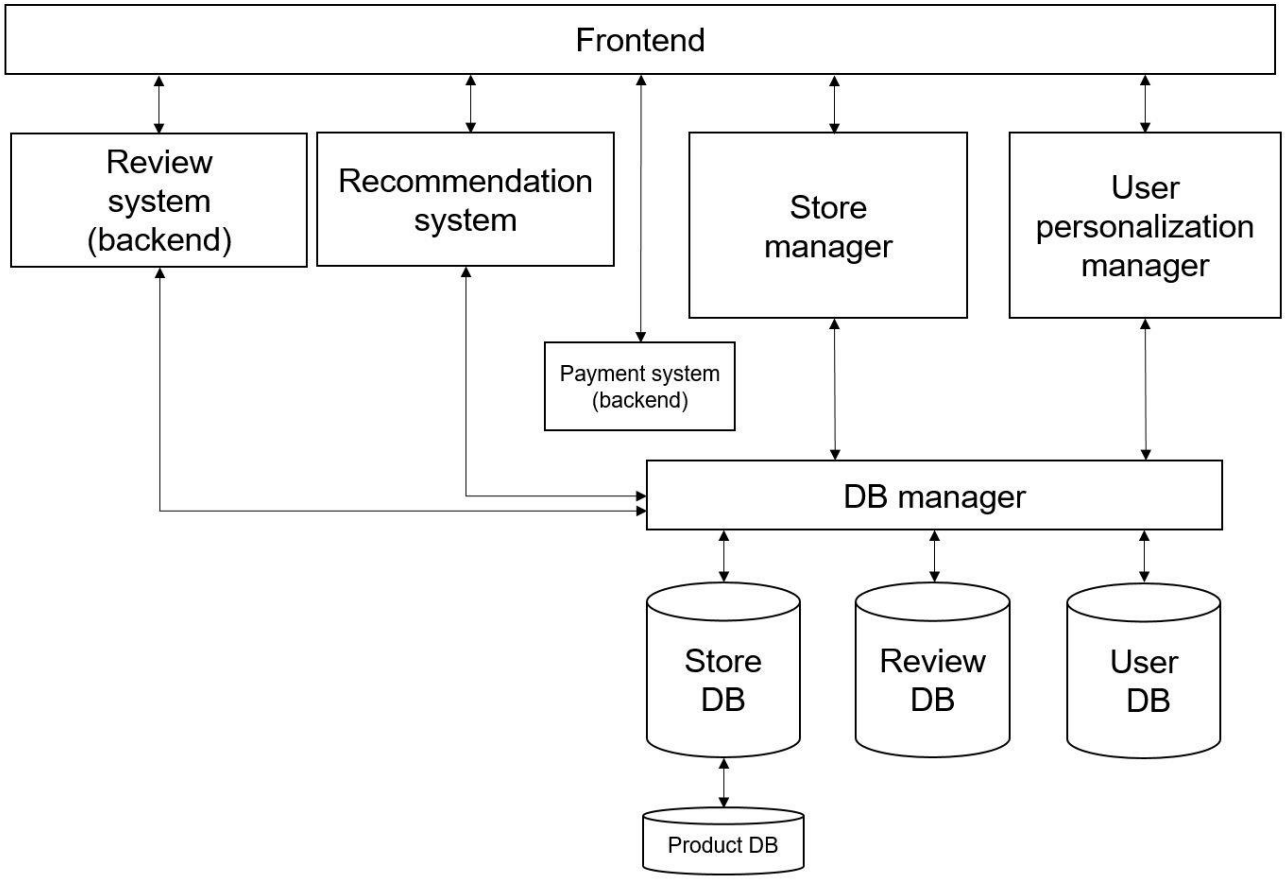
As this system provides information reprocessing of the review list of other systems, the system that prohibits unauthorized reproduction of data may violate the operation policy depending on the data collection method. Therefore, it is necessary to carefully check the operation policy of the information collection of the target system and collect data without violating the policy.

4. System Architecture

4.1. Frontend Diagram



4.2. Backend Diagram



4.3. Use-case Diagram