

# Requirement Analysis

We are Android Group. The other 4 teams are MiniProgram(frontend), Algorithm(backend), Database (backend), and Web Service.

## What we need from others:

### Requirements from Users

**Requirement1:** They will need to set their personal info (name / id / age / interest / recent work / password).

**Description1:** To be able to receive notifications for interesting items, users have to build a profile with relevant info so they can be characterized and receive notifications based on that relevant info. Specifically, when users register, they need to set their username, password, and interests; at other times, they can enter the settings interface to modify personal information.

**Requirement2.1:** Feedback after checking the item

**Description2:** The user will have to give feedback after seeing the item so that info can be stored and used to evaluate the quality of the item and *to form a tendency on the items the user likes and receive more notifications for his tastes.*)

**Requirement2.2:** Feedback from the notification

**Description:** The user should rate the notification so the Algorithm can improve and the user only gets useful notifications.

**Requirement3:** A way to upload location and get the map

**Description3:** The user will have to give his location through our APP so that the app can give notifications based in the user location. And a map which contains the destination of shops should be provided to the user.

**Requirement4:** A way to scan the items

**Description4:** The user will need a way to easily confirm the item after he enters the store, can be through scan or other way, will be further discussed.

**Requirement5:** A memory list

**Description5:** User will need a subspace in the app to be able to save the items he already "hunted", so he can see info and an image of the item.

## Requirements from Groceries

**Requirement1:** Images and descriptions

**Description1:** The groceries will need to give us an image and a description of the item so we can have those on the app for the user to see

**Requirement2:** Store description

**Description2:** Basic store info to be seen by the customer when he enters the app to see what the notification is about

**Requirement3:** Guest reminder and a statistic system

**Description3:** When the customer visit the shop, there will be a message provided, and further more, there should be a module for displaying statistical data(including number of visitors, their interests, etc).

## MiniProgram Group

**Requirement1:** to make functions basically the same

**Description1:** Wechat app should have the same functionalities as the android one, probably only differing in the frontend.

## Requirements from Algorithm Group

**Requirement1:** interest recommendation (using personal info and grocery info)

**Description1:** sort after info provided, so it can be organized for comparison to determine whether to send an alert based on the treasure of the shop nearby.

**Requirement2:** rate the shops twice based on users' interest and their feedback to recommendation (before and after purchase)

**Description2:** It serves as a way to improve the users experience, and the shops visibility on treasure collection.

**Requirement3:** To improve the notifications received

**Description3:** The users first interests will be too general, so we will need the Algorithm to improve with the ratings that we talked about in the previous requirement.

### Database Group

**Requirement1:** database with personal info.

**Requirement2:** database with grocery info.

**Requirement3:** store the result of each recommendation.

**Requirement4:** Store the feedback so user can check later.

**Requirement5:** database API.

**Description3:** provide a way to access all these information.

### Web Service Group

**Requirement1:** the info from the groceries.

**What others might need:**

### Requirements for Users:

R: interface

D: Users will need a reliable interface so they can interact easily in the app, probably a home subspace and then the other subspaces after choosing from home subspace

R: Account Space

D: Users will need a subspace where to set up a personal profile.

R:Treasure Collection.

D: A subspace to see the treasure already explored, with images and descriptions.

R:Item registration process.

D: Users will need to have a way to register the items, which will be further discussed among our team in the next meetings.

R: Notifications

D: Users will require the app to send a notification of the treasure, where it should indicate/show where and what shop is alerted to.

R: Feedback

D: Users need a way to comment on the item, after seeing it, and a way to rate the item which alerted, cause probably sometimes will alert to an item the person has less interest, although it is within the interest span the user configures.

R: Preferences:

D: Users require a way they can set up the classes of treasures they want to find.

### **Requirements for Algorithm Group**

R: Receiving the data

D: Android App needs to be able to receive the data from the algorithm, so it has to be supportive of the algorithm.

R: Process the data

D: App needs to be able to treat the data and use it to send the notifications