Software Requirements Specification

for

Beer Brew

Version 1.5 approved

Prepared by <Dan yuxi， Zhou haiyun， Wu shihua，Wang zimeng>

<HOPPER>

<22/5/2019>

Table of Contents

Revision History

Name	Date	Reason For Changes	Version
Wang zimeng	3/5	Fulfilled section 1,2,4,5,6	1.0
Wang zimeng	3/12	Fulfilled section 3,4.1	1.1
Wang zimeng	3/27	Fulfilled Appendix B	1.3
Zhou Haiyun	4/2	Correct all the problems	1.4
Dan Yuxi	5/22	Correct 3.2.2	1.5(Final Version)
Wu Shihua	5/22	Correct 3.4.2	1.5(Final Version)

1. Introduction (Written by Wu shihua)

1.1 Purpose

The document aims to descript main aspects including functionalities, UI design, main structure, etc. of an application **Brew Day!** that help brewer to brew at home. This is the first version of SRS for the development of **Brew Day!**

1.2 Document Conventions

Bold fonts in this document is used to show the application name. Use
underline to mark out some keyword.

1.3 Intended Audience and Reading Suggestions

Readers:

Developers of application **Brew Day!** Testers of **Brew Day!** Documentation writers of **Brew Day!**

Description of this SRS:

The rest part of this SRS including Overall Description, System Features, External Interface Requirements, Other Nonfunctional Requirements, Other Requirements.

Reading sequence:

For developers, testers, documentation writers:

- If you are about to learn the main design of this applications, first read the Overall Description.
- If you are about to learn about functionalities of this applications, please check System Features first.
- If you are about to learn about Interface, look up External Interface Requirements first.

1.4 Project Scope

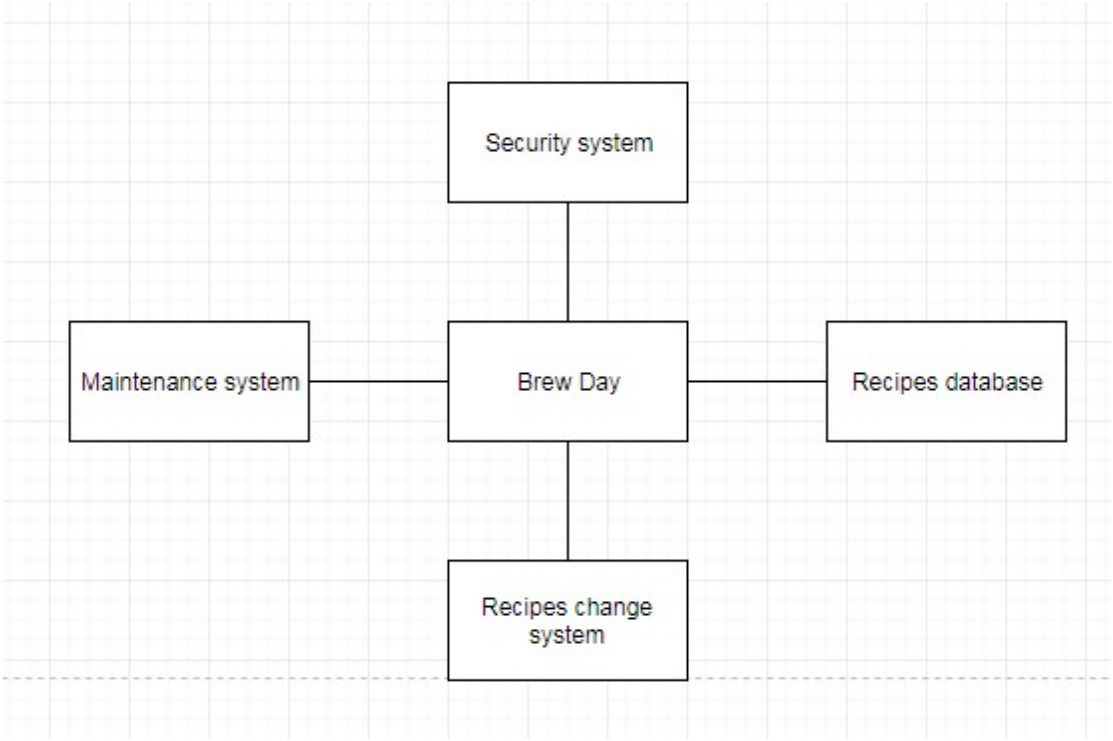
This project is to help home brewers to brew beer more effectively at home. This application can help with recording recipe, available ingredient, calculating the right quantity of ingredient. Home brewers are benefit a lot from this project.

1.5 References

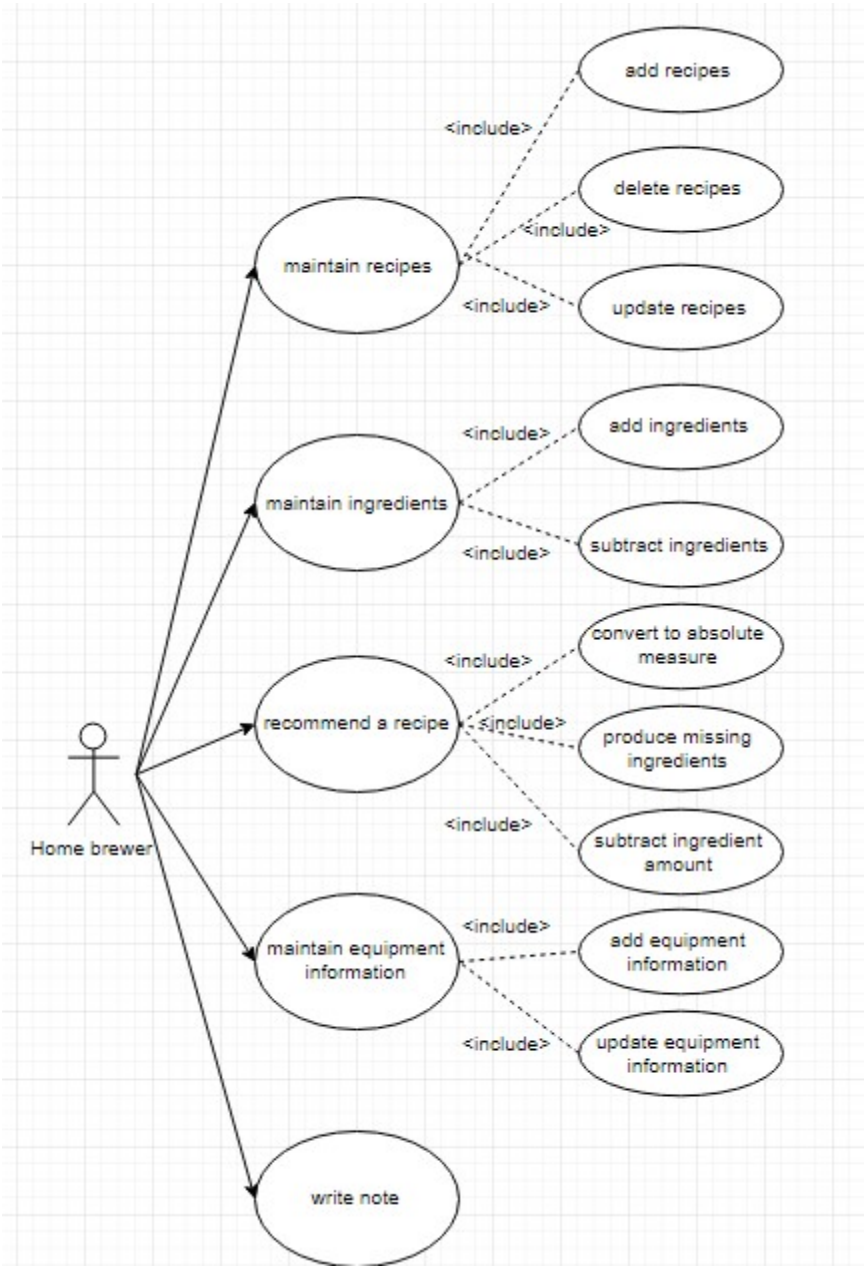
1."Project Description version 1 for <Brew Day!>," 2019.
2. "Project Description version 2 for <An application for home brewer>," 2019.

2. Overall Description (Dan yuxi)

2.1 Product Perspective



2.2 Product Features



2.3 User Classes and Characteristics

The purpose of the project was to develop an app for home winemakers to maintain a list of recipes and adjust existing recipes. The application must also maintain a list of available ingredients, update the list after the batch, and purchase new ingredients, and generate a shopping list for the next batch. A feature of the app is "What should I brew today?" Advantages: It allows for the formulation of ingredients that can be brewed using available ingredients, taking into account the available ingredients and brewing capabilities of the device, maximizing ingredient usage and batch size.

2.4 Operating Environment

The app may be desktop based. It is used on Windows.

2.5 Design and Implementation Constraints

To modify the database of this program needs authority right.

2.6 User Documentation

Requirements document, a design document, and a brief user manual (installation and usage of the application).

2.7 Assumptions and Dependencies

Use Java to write program. Therefore, we need JRE and JDK.

3. System Features

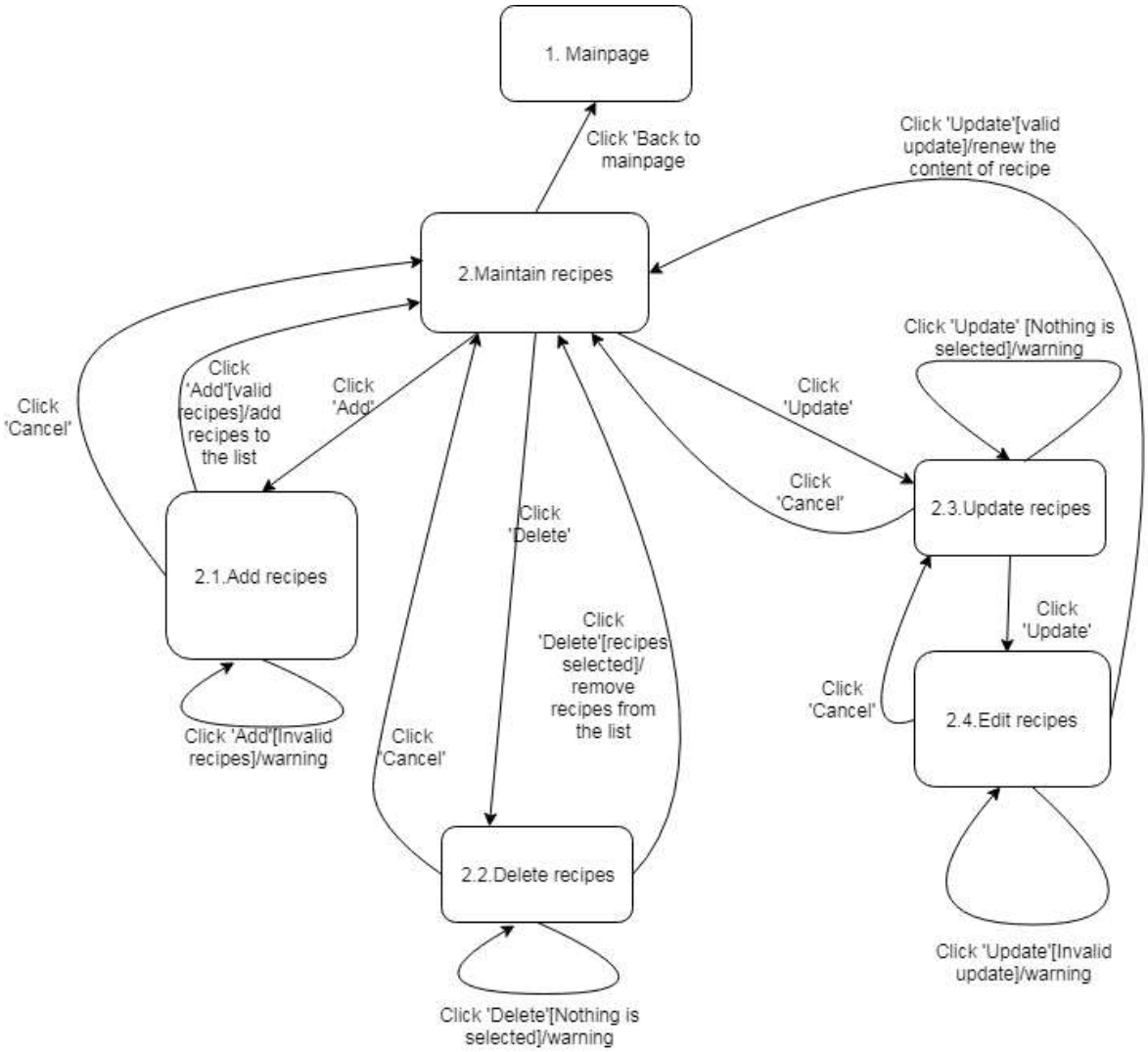
3.1 Maintain Recipe

3.1.1 Description and Priority Maintain

Recipes:

This feature is of the highest priority. Users select the “Maintain Recipes” and the system will provide users with five choices: add, delete, update, take notes for the recipes in database or return to the main page. User can add and update recipes in a specific form. They can also delete recipes. If they want to add notes to recipes specifically, it is possible and they can also delete the notes that they don’t want anymore.

3.1.2 Stimulus/Response Sequences



3.1.3 Functional Requirements

REQ-1: Before confirming the delete or the update, ask users if they are sure about this operation (users can cancel this in setting if they don't like).

REQ-2: If there are no recipes in the list, a warning will occur if they choose delete feature.

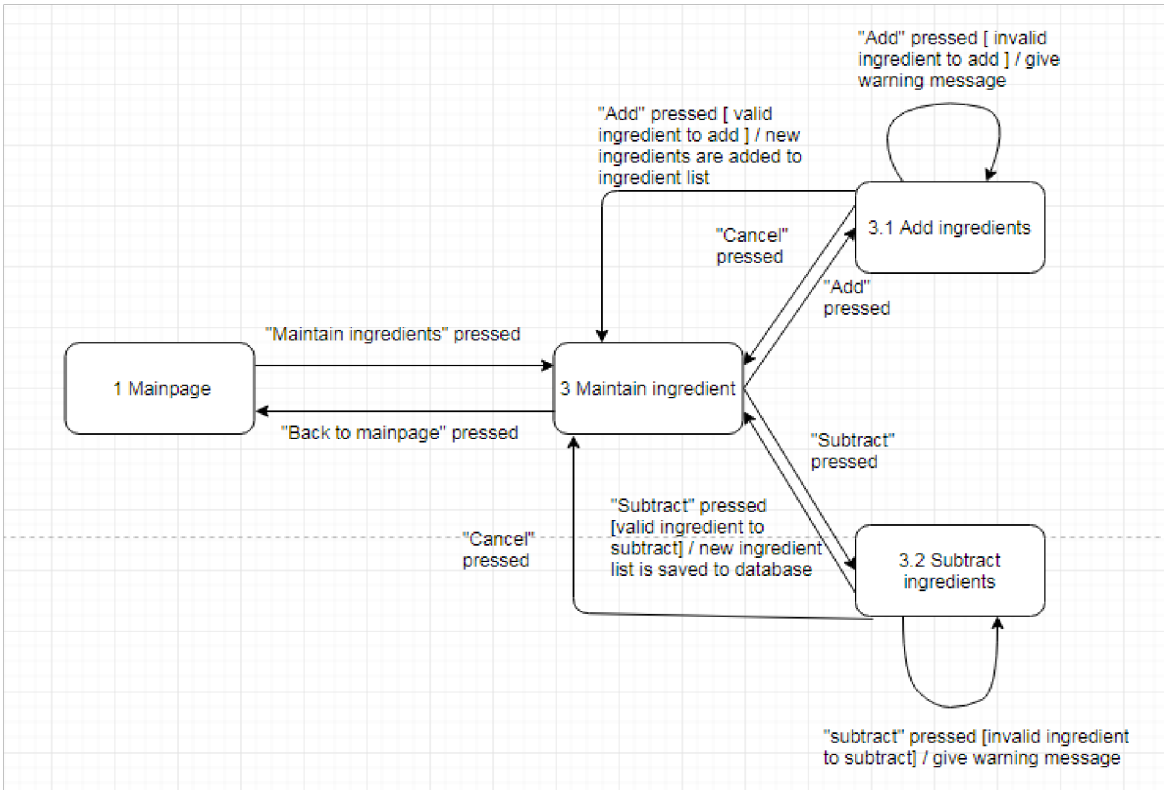
REQ-3: The length of every recipes has limitation. If user put too much data in one recipe, the system will warn you.

3.2 Maintain Ingredients

3.2.1 Description and Priority

Maintain Ingredients is to add new ingredients to the ingredient list when a list of ingredients has changed, and then update the ingredients list. Maintain Ingredients is the highest priority.

3.2.2 Stimulus/Response Sequences



3.2.3 Functional Requirements

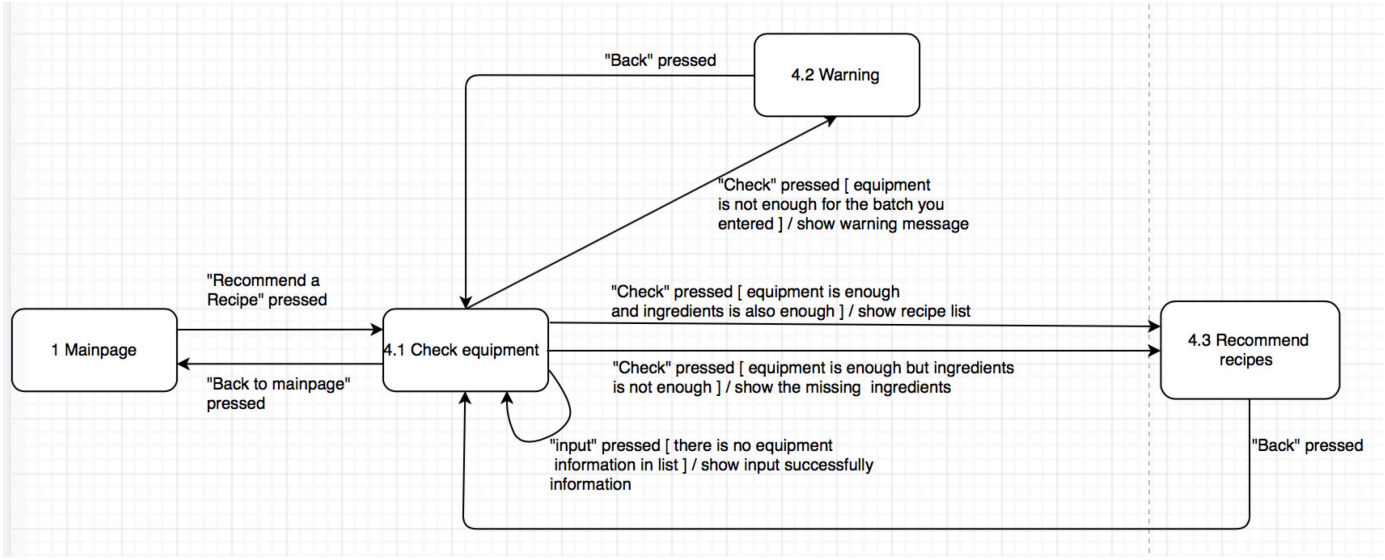
Return to Home Page: After home brewer updated ingredients, the system will back to home page.

3.3 Recommend a Recipe

3.3.1 Description and Priority

Recommend Recipe can recommend a recipe according to the equipment you have. First, user can enter the amount of beer which he/she want brew. And system will give some recommended recipes according to the equipment you have, or other recipes that missing some ingredients. If the users choose a recommended recipe, this recipe can be converted into an absolute measure. If the users choose recipes that missing ingredients, system will produce a missing ingredient list which display the ingredients that user do not have. And then, system will subtract the ingredient in the recipe that user chose from the ingredient list of user. Recommend a Recipe is the highest priority.

3.3.2 Stimulus/Response Sequences



3.3.3 Functional Requirements

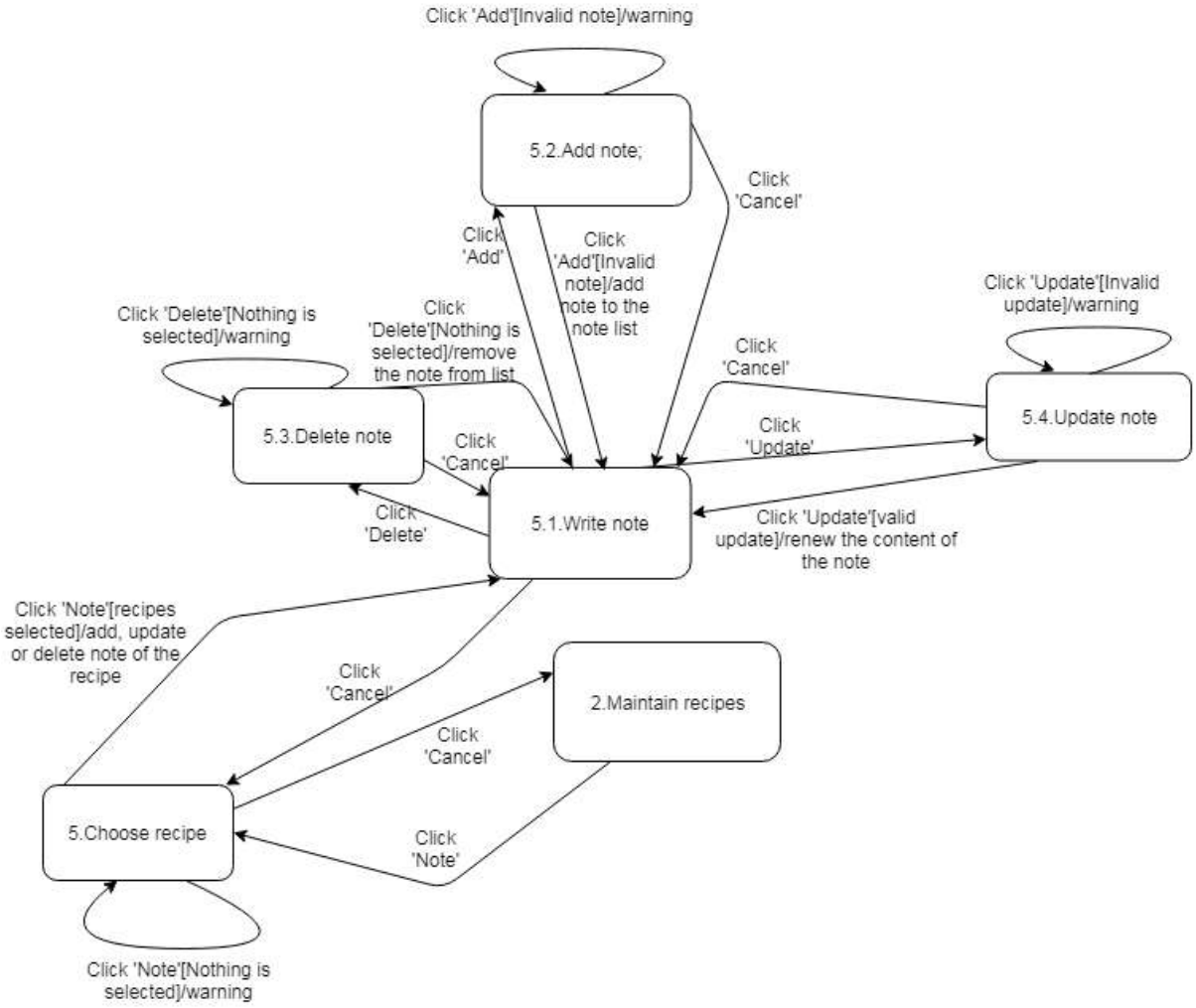
The responses of each page are quick. The instruction is clear to understand.

3.4 Write Note

3.4.1 Description and Priority

Write note is function that can let users manage notes for every recipe. Users can add notes to recipes specifically, it is possible and they can also delete the notes that they don't want anymore. Users can edit the notes. This function is of secondary priority.

3.4.2 Stimulus/Response Sequences



3.4.3 Functional Requirements

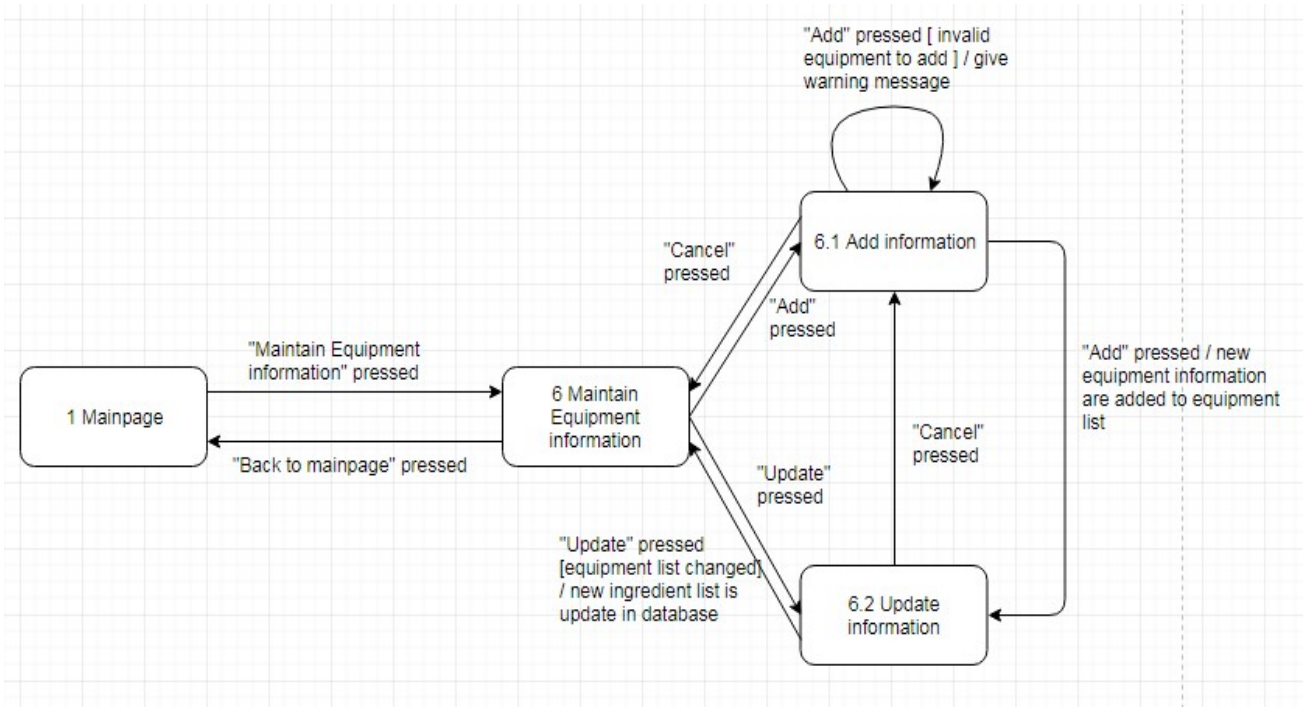
REQ-1: Notes are separated for different recipes.

3.5 Maintain Equipment information

3.5.1 Description and Priority

Maintain Equipment Information is for users to add new equipment information to the equipment list so that this system can recommend a recipe according to this equipment. When a list of equipment has changed, then update the equipment list. Maintain equipment Information is the highest priority.

3.5.2 Stimulus/Response Sequences

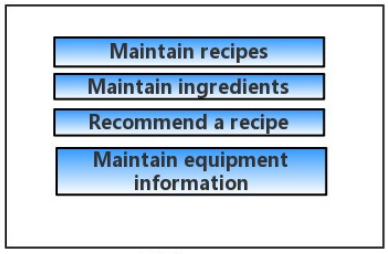


3.5.3 Functional Requirements

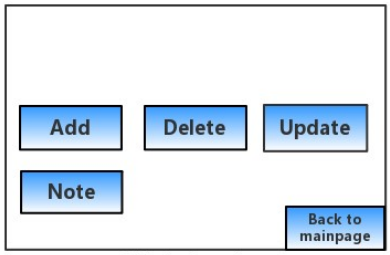
Return to Home Page: After home brewer updated equipment information, the system will back to home page.

4. External Interface Requirements (Written by Zhou Haiyun)

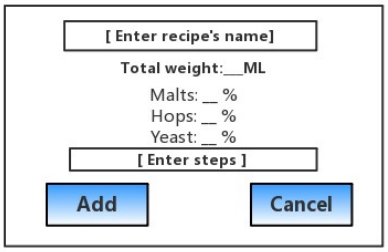
4.1 User Interfaces



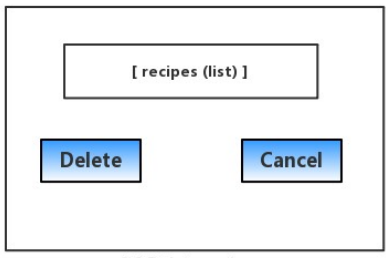
1.Mainpage



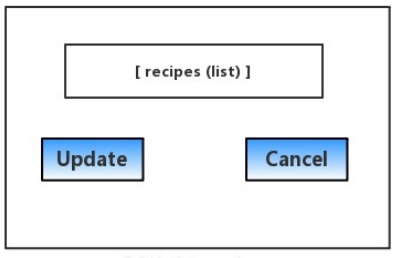
2. Maintain recipes



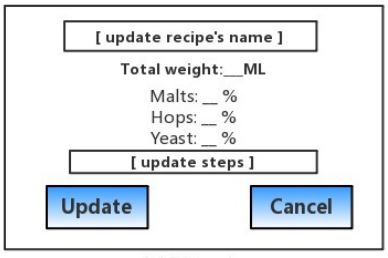
2.1 Add recipes



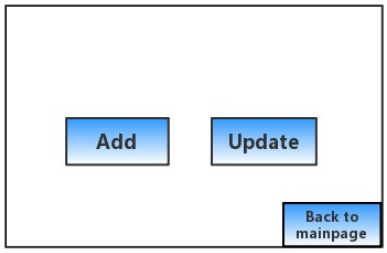
2.2 Delete recipes



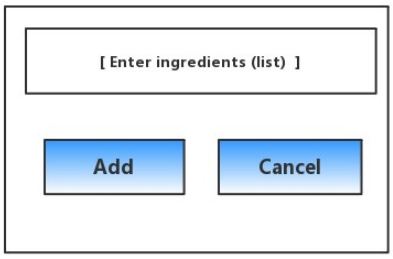
2.3 Update recipes



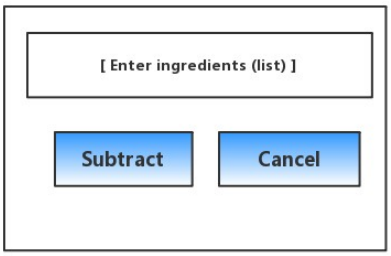
2.4 Edit recipes



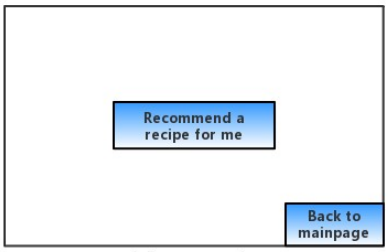
3. Maintain ingredients



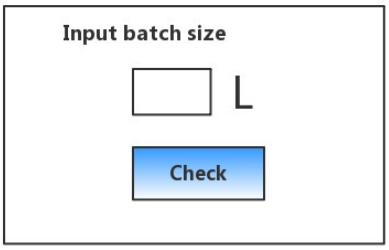
3.1 Add ingredients



3.2 Subtract ingredients



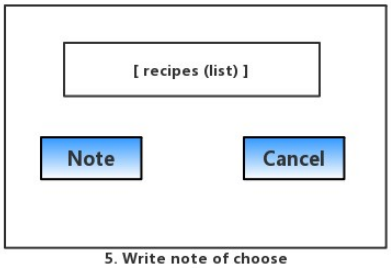
4. Recommend a recipe



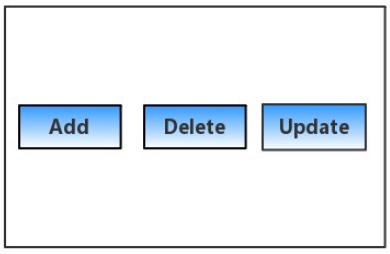
4.1 Check equipment

4.2 Warning

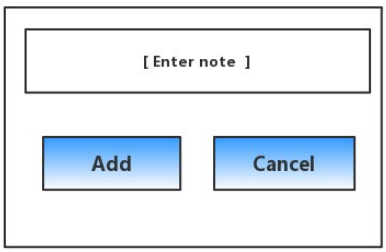
4.3 Recomanded recipes



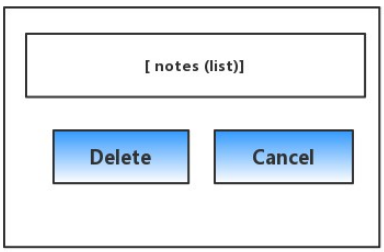
5. Write note of choose recipe



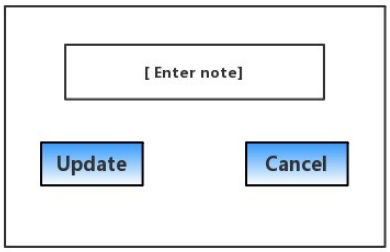
5.1.Write note



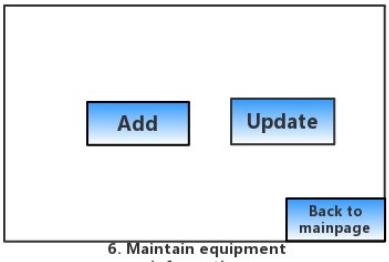
5.2 Add note



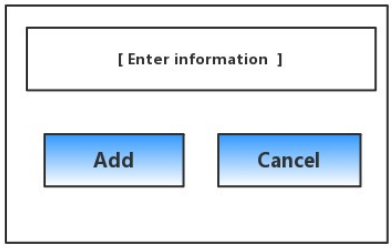
5.3 Delete note



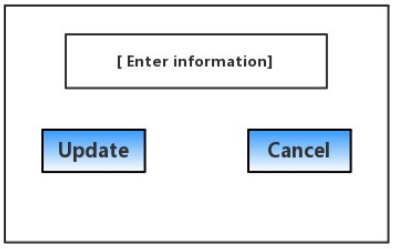
5.4 Update note



6. Maintain equipment information



6.1 Add informaion



6.2 Update informaion

4.2 Hardware Interfaces

None.

4.3 Software Interfaces

- Database: MYSQL Community Server 8.0
- Operating system: Windows10
- Data items or messages (between MYSQL to the application):
- This needs to maintain a list of recipes for customers, also needs to store ingredients of brewing beers.
- Services: MYSQL server
- There is no data that will be shared across software components.

4.4 Communications Interfaces

None.

5. Other Nonfunctional Requirements (written by Wang Zimeng)

5.1 Performance Requirements

The software takes less than 1 second for executing one user's behavior.

5.2 Safety Requirements

This software doesn't serve underage users since people who were adult shouldn't drink any kinds of alcohol. The degreed of each beer recipe will be marked significantly for the reason that alcohol does bad effect on one's health.

5.3 Security Requirements

Each user account bonded with user's email address in the hitch of forgetting password and resetting. Users need to assert their email address after registration. The data of users will be kept on the service safely.

5.4 Software Quality Attributes

- Adaptability: The software can run properly on any versions of Windows 10 and Windows 7 with no restriction.
- Maintainability: Our engineers will provide update patch for optimization and new features.
- Reusability: The software can be reuse.
- Robustness: The software won't crash or cause system malfunction.
- Usability: The software have clear interface and instruction guide to use easily.

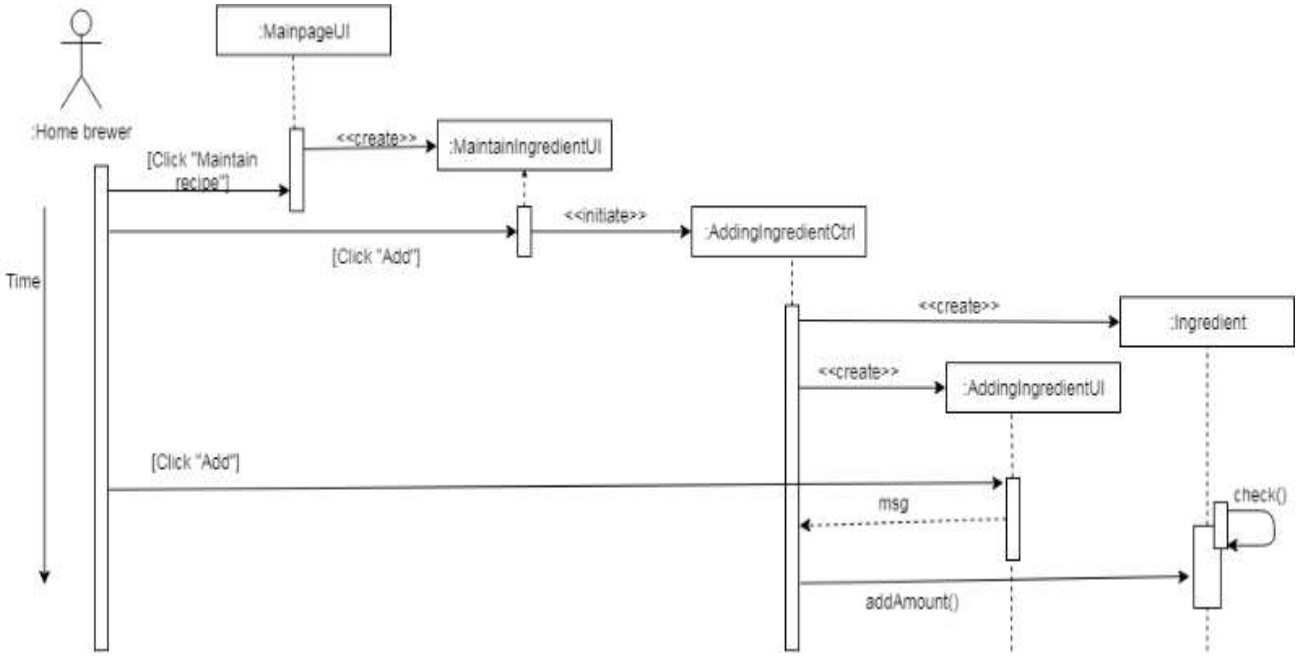
6. Other Requirements

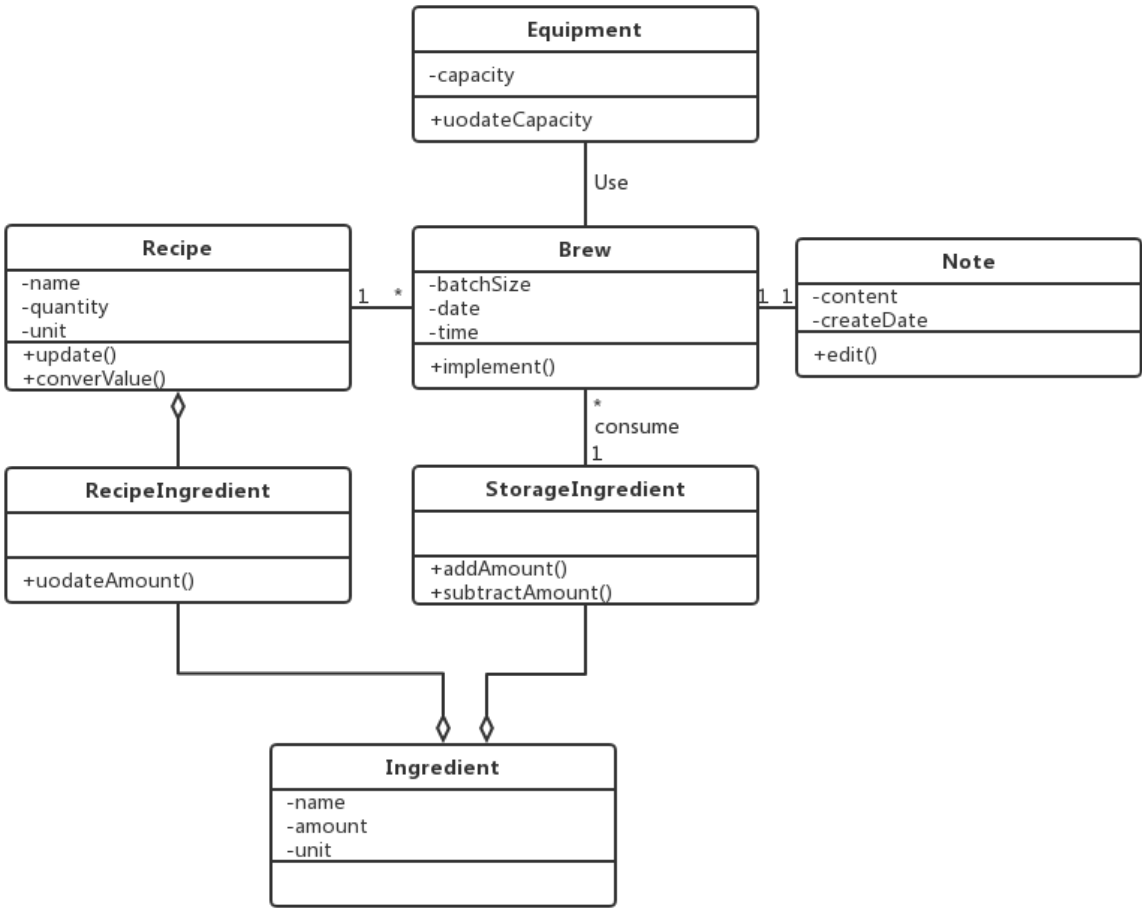
- Database requirements: The developing team also provides database service for users.
- Internationalization requirements: The software serves users from the whole world.
- Legal requirements: Users need to verify they are reach the local legal age to drink.

Appendix A: Glossary

None.

Appendix B: Analysis Models





Appendix C: Issues List

None.