Comp 5427 Assignment 2

Group 3 in Prac 03

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Persona

Action:

After he has this mobile app, he can record his daily intake on time includes the detail such as name, weight, time and so on. Also when he is in hurry, he can just take a picture of what he ate and app will automatically help him to identify the food and record.

Profile image:

Persona type

Name: John Snow

Occupation: Student

Age 23

Backstory:
john is a software engineering student currently studying at the University of Sydney and currently lives alone in a department near Sydney Olympic Park. John often orders takeaways due to his busy study schedule and the inconvenience of shopping around him. So, he decided to record his daily intake of food.

Motivations:
Due to ordering takeaways every day and not exercising for long periods of time, John was gaining weight, so he wanted an app to keep track of his daily food and calorie intake and to get some knowledge about his diet.

Frustrations:
john had used some diet recording apps before, but they were missing many of the features he wanted including the ability to take photos and upload food information and did not provide knowledge on healthy eating to improve daily intake.

Ideal experience / goals / aspirations / feelings:
john needed a full-featured app for food recording with a simple interface and easy to understand information

Quote:
john wants to keep track of his daily food and calorie intake as he wants to maintain his weight, and would like to look at some dietary health information to give him some advice

User Goals & Concrete Tasks (Prescribed)

Prescribed user goals	Prescribed concrete tasks
The user can log the number of serves of vegetables they ate in a whole day.	*[Initial state of the logger is that no serves of vegetables have been logged]* Suppose you always log your vegetable intake in the evening, just before going to bed. Suppose that today you recall that you ate 3 serves of vegetables. Log that.
The user can correct accidental logging actions.	*[Current state of logger is 3 serves for today]* Suppose that, on reflection, you realise that you have over-estimated the vegetables you ate for dinner. So, for today, you now think you actually ate only 2 serves. Correct the logged record for today.
The logger is linked to the e-textbook information about serving sizes.	*[Current state of logger is 2 serves for today]* Suppose you now remember about two cups of lettuce you ate at lunch, but you cannot recall how many serves that would make. Find out how many serves 2 cups of lettuce is. Then log this. *[Current state of logger should be 4 serves for today – if not, tell the user about the correct serves and you get back to correct state]*
The user can track their e-textbook progress.	*[Current state e-textbook is that the user has read the section about judging the serves of lettuce and has not read about other types of vegetables]* Please tell me which learning topics you have read and which you still need to read.

User Goals & Concrete Tasks (Additional)

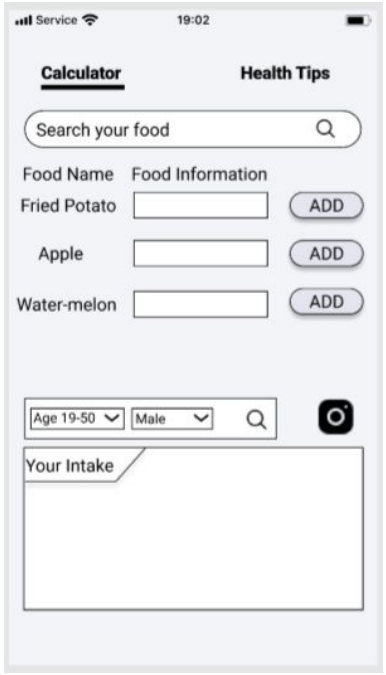
Additional user goals	Additional concrete tasks
The user can delete the data that has been entered.	*[There are some information about Fried Potato and Peach in Your Intake now.]* Suppose, after reflection, you realize that you did not eat peaches today. So now you plan to remove the message about peaches that you have entered.
The user can know which chapters he/she has read or a browsing record and delete some records.	*[The user has already read some content.]* Suppose you want to know which chapters you have read or a browsing record, what should you do?
The user can use the camera function to identify some unrecognized food.	Suppose you find that you don't know the name of some vegetables. How do you get these vegetables' information?
The user can use camera to add combo of food as a entirty into the list and add it directly.	Suppose you eat a certain salad with different fruits every day and you want to take a picture and enter this salad as a new food type, what would you do?

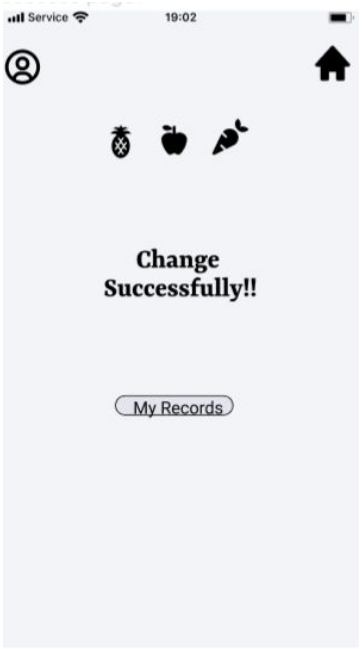
Concrete Tasks (Actual order)

Task No.	Concerete Tasks
Task1	Suppose you always log your vegetable intake in the evening, just before going to bed. Suppose that today you recall that you ate 3 serves of vegetables. Log that.
Task2	Suppose, after reflection, you realize that you did not eat peaches today. So now you plan to remove the message about peaches that you have entered.
Task3	Suppose that, on reflection, you realise that you have over-estimated the vegetables you ate for dinner. So, for today, you now think you actually ate only 2 serves. Correct the logged record for today.
Task4	Suppose you now remember about two cups of lettuce you ate at lunch, but you cannot recall how many serves that would make. Find out how many serves 2 cups of lettuce is. Then log this.
Task5	Suppose you have read the section about judging the serves of lettuce and have not read about other types of vegetables. Please tell me which learning topics you have read and which you still need to read.
Task6	Suppose you want to know which chapters you have read or a browsing record, what should you do?
Task7	Suppose you find that you don't know the name of some vegetables. How do you get these vegetables' information?
Task8	Suppose you eat a certain salad with different fruits every day and you want to take a picture and enter this salad as a new food type, what would you do?

User experience

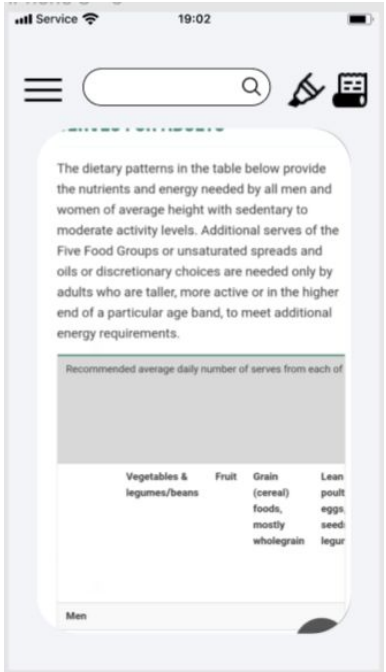
Within the basic functions of the app, including adding new vegetables and fruits, modifying or deleting saved items, users can operate the software intuitively and smoothly, and get timely feedback.

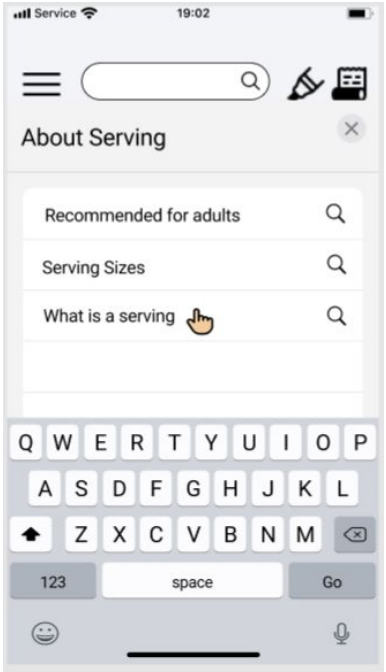


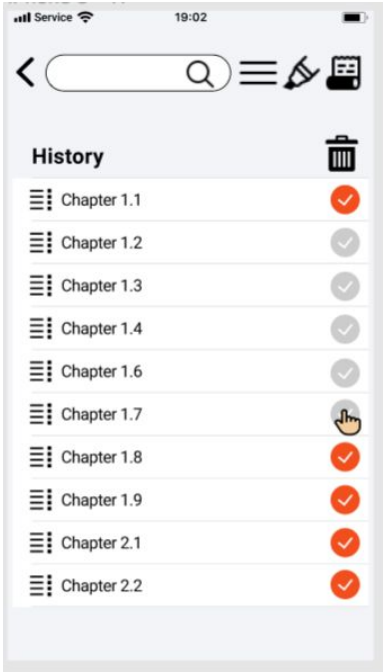


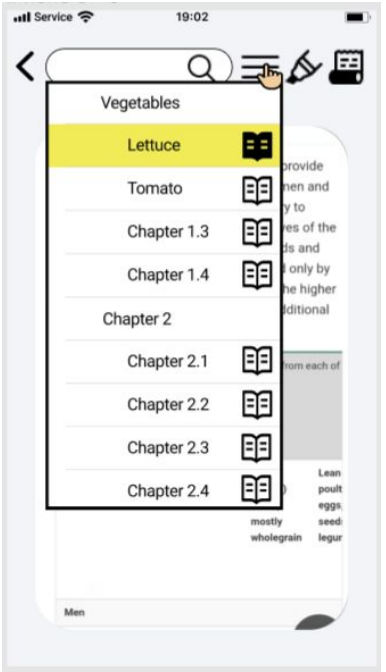
User experience

In the e-book function of the app, users can easily find the information they want, including the information of specific fruits and vegetables and serving size, and can also view their reading history and jump directly to the desired chapter via the table of contents.



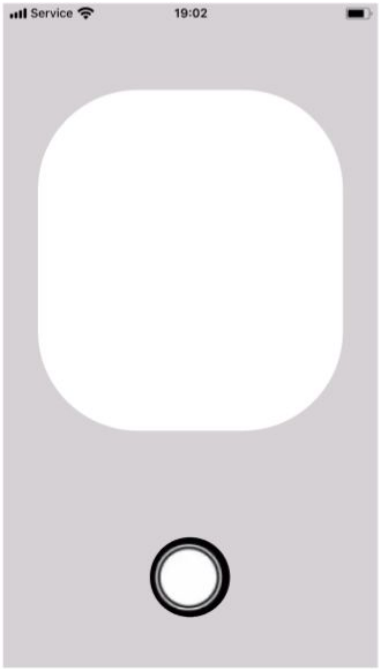


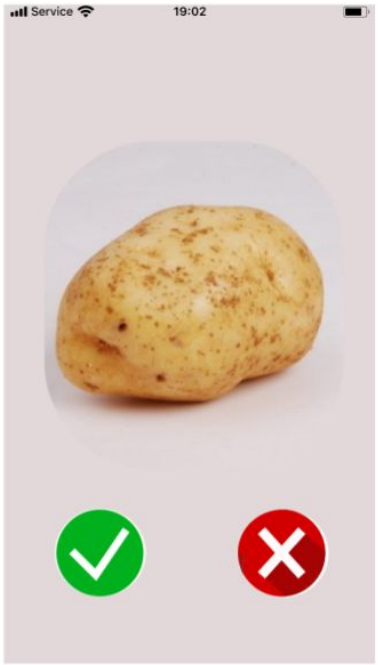


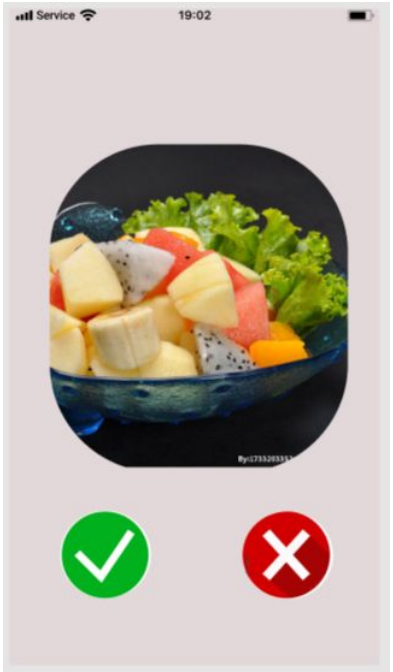


User experience

In the automatic recognition function of the camera in the app, users can quickly and accurately identify and record food by taking photos, and can record the combination of multiple foods as one item, which is convenient for direct entry in the future.







The background questionnaire for the Think-Aloud

BACKGROUND QUESTIONNAIRE

The following questions will enable us to ensure that we invite the right mix of participants for our studies of the and will help us interpret the results.

Demographics:

Please circle or mark your response.

Your age:

18-29 30-50 >50

Are you familiar with using mobile app?

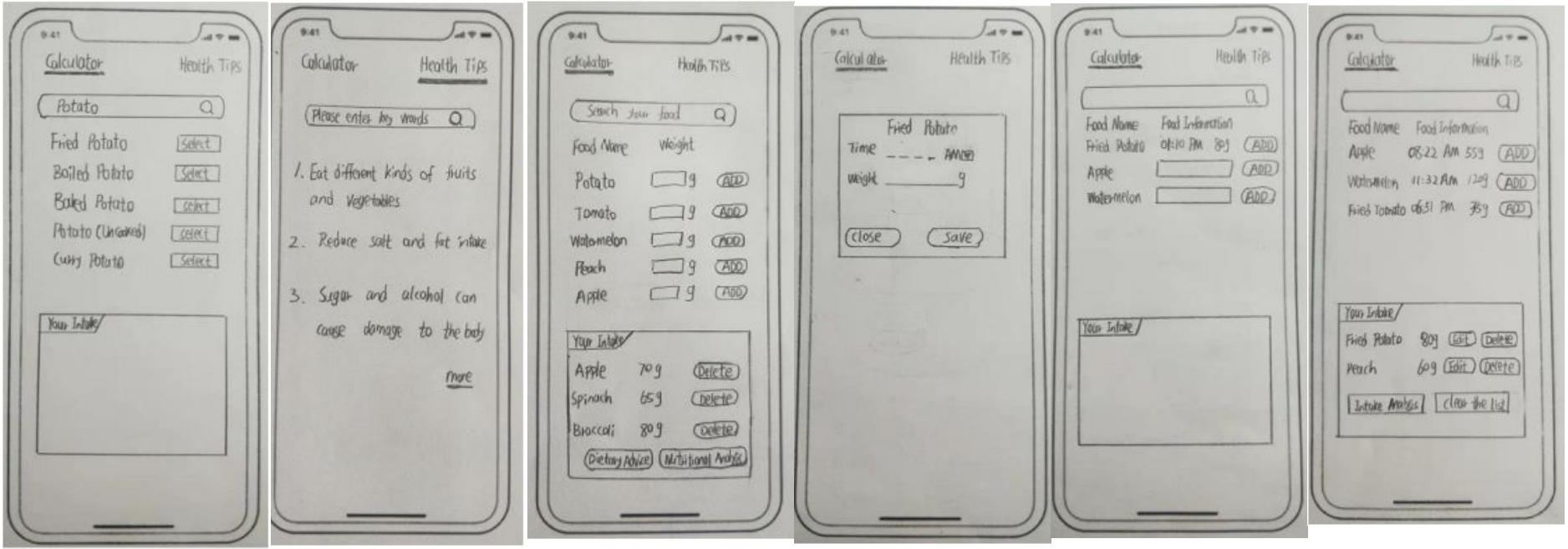
Yes No

Have you ever used a health and diet-related mobile app before?

Yes No

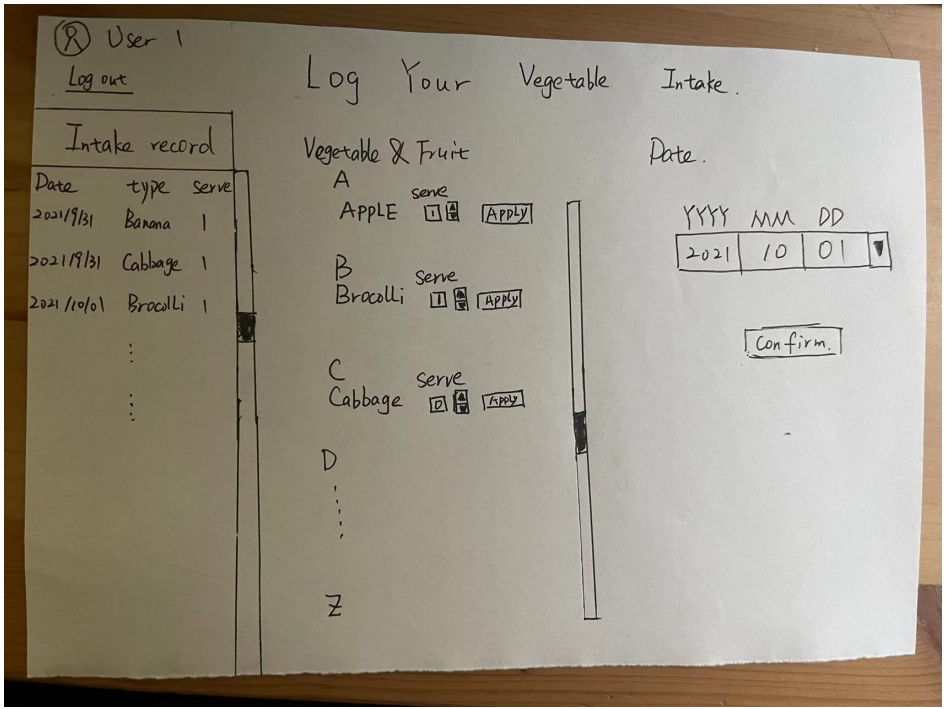
The main purpose of this background questionnaire is to understand the age range of the participants, and to understand the proficiency of the participants for the use of mobile phones. In addition, we also need to know whether the participants have used similar application software. This questionnaire can not only help us understand whether the participants are suitable to participate in this test, but also help us improve our own projects.

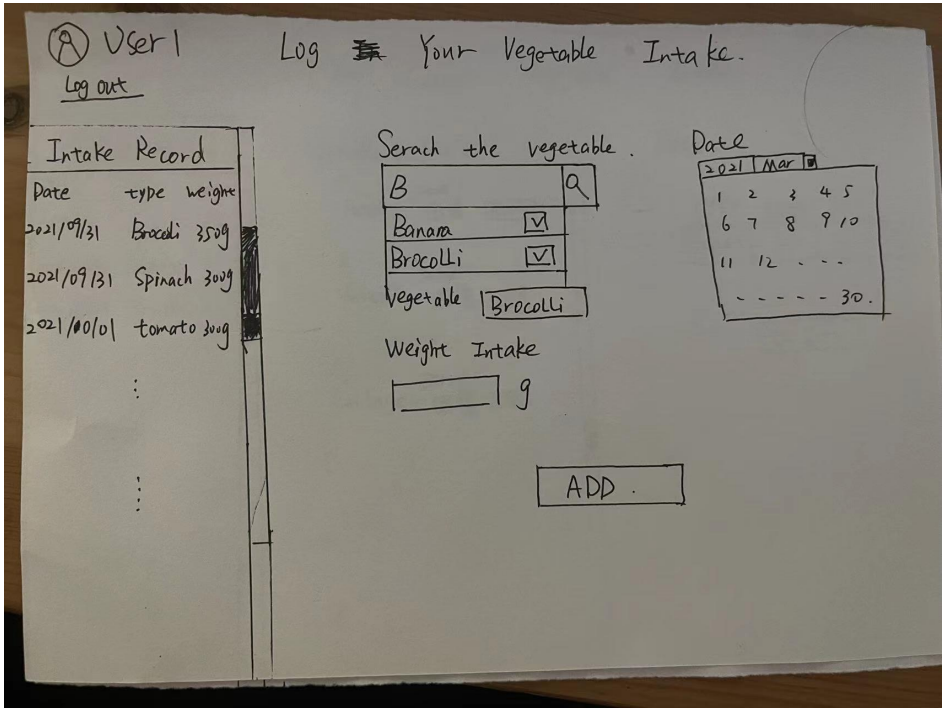
Carefully chosen samples of early prototypes



This is a selection of the early prototypes of the prescribed task1. The reason for choosing these photos is that they played a foundational role in the prototype of our HiFi version later. The calculator module, search module, add food module, weight edit module, and intake module in it are all retained in our later unified version.

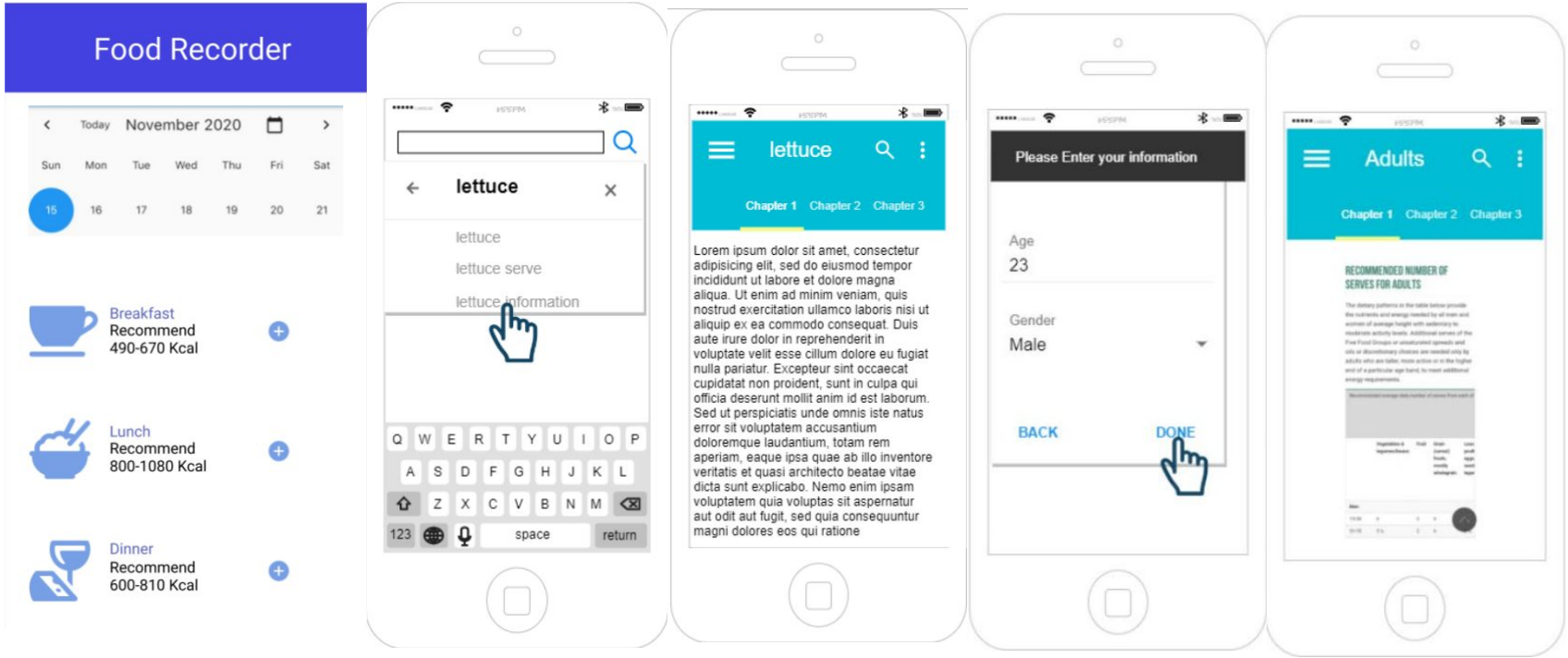
Carefully chosen samples of early prototypes





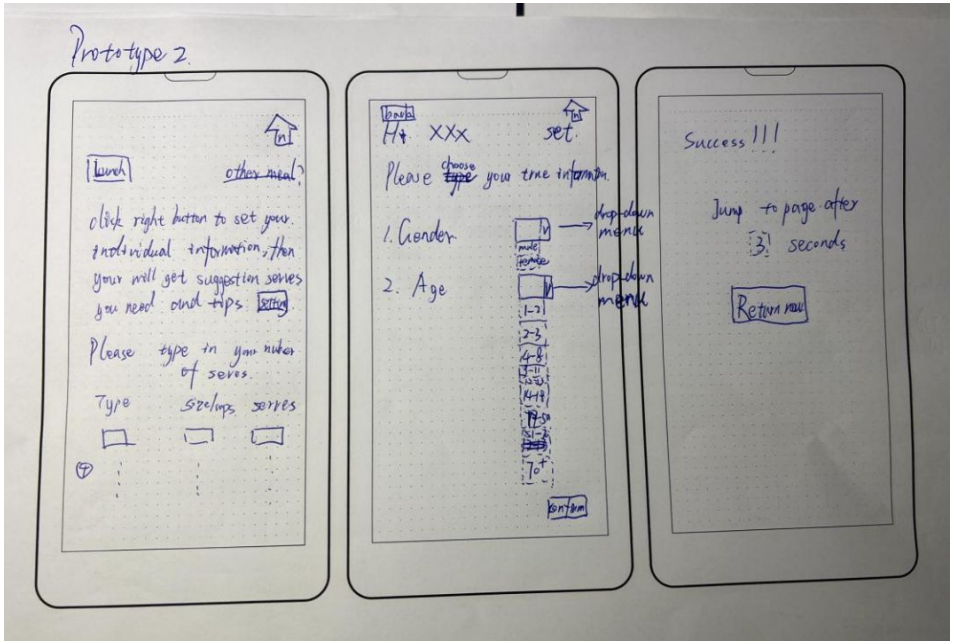
This is a selection of the early prototypes of the prescribed task2. The reason for choosing these two is that they will play a foundational role in the prototype of our HiFi version later. Among them, the intake record, serve up and down buttons to adjust the number of modules, and the date module are all retained in the subsequent unified HiFi version.

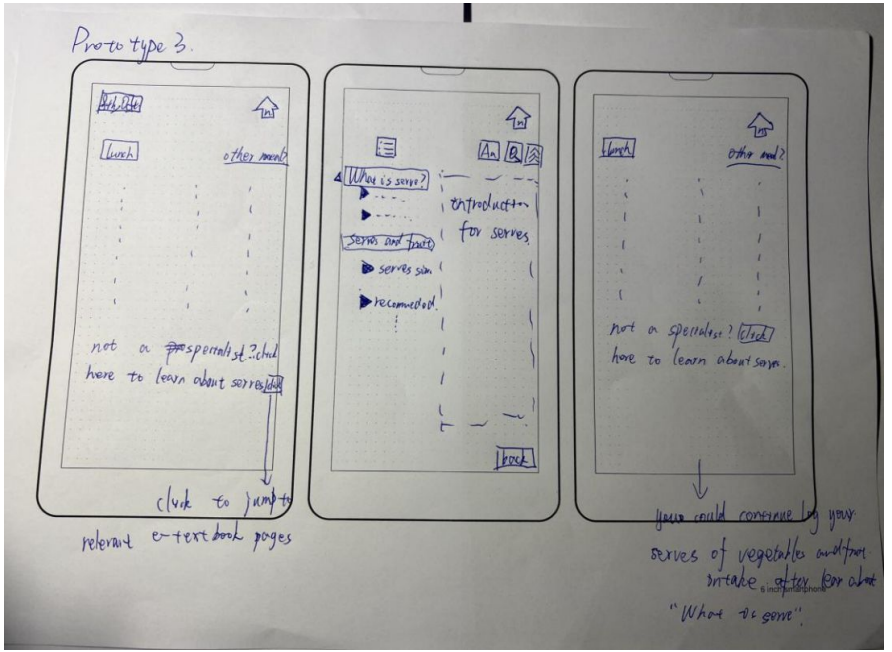
Carefully chosen samples of early prototypes



This is a selection of early prototypes of the prescribed task3. The reason for choosing these photos is that they played a foundational role in our unified HiFi version prototype. Among them, the search page of the e-book, the age and gender setting page, and the chapter list module are all retained in the unified HiFi version later. In particular, the first picture became the prototype of the home page in the unified HiFi version behind us.

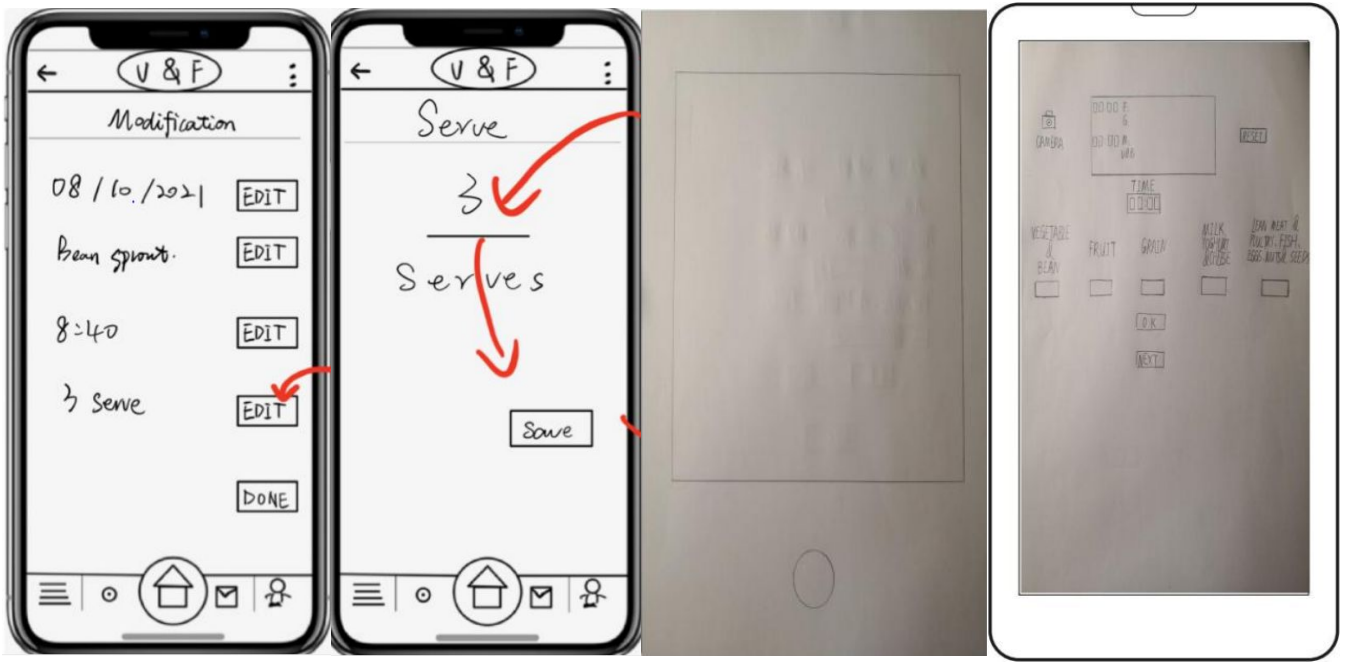
Carefully chosen samples of early prototypes





This is a selection of the early prototypes of the prescribed task4. The reason for choosing these two is that they played a foundational role in our unified HiFi version prototype. Among them, the menu page of the e-book, the age and gender setting page, and the main page of the e-book are all retained in the unified HiFi version later.

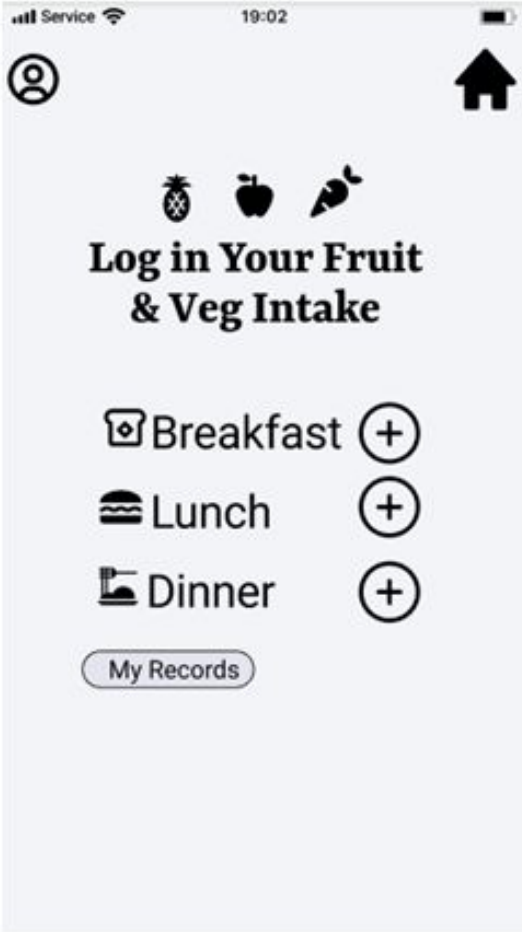
Carefully chosen samples of early prototypes



This is a selection of early prototypes of additional tasks. The reason for choosing these two is that they played a foundational role in our unified HiFi version of the prototype. Among them, the photo page and the entered fruit combination information module are all retained in the unified HiFi version later. In particular, the first two figures provide new ideas and patterns for modifying the serve function in the previously described task2.

The demo prototype and changes from early prototype

This is the main page in the demo prototype. Compared with the previous early prototype, the changes are:
1. The element form is unified.
2. Revised the title.
3. Added the my record button to facilitate the expansion of the subsequent jump pages.
4. Added home button and personal information button.

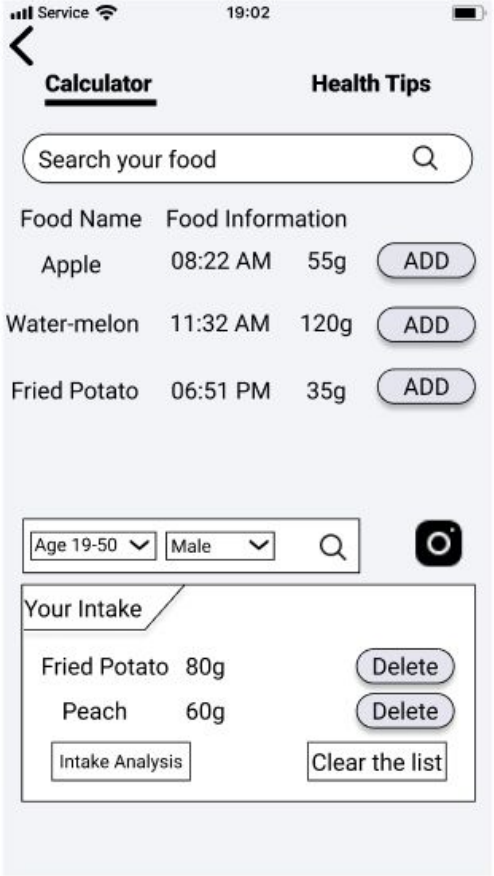


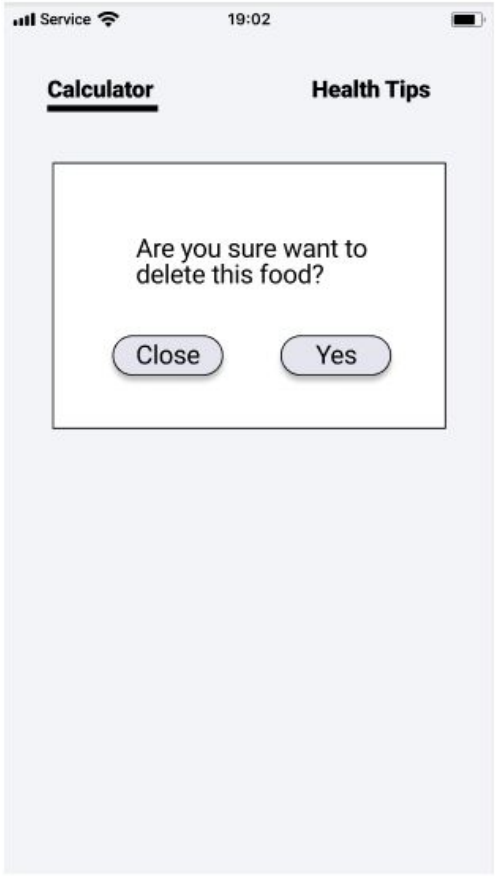
The demo prototype and changes from early prototype

This is the calculator page in the demo prototype. Compared with the previous early prototype, the changes are: 1. The element form is unified. 2. Added the age and gender setting module. 3. Added camera module. 4. Increase the keyboard display. 5. Added the return button.

The demo prototype and changes from early prototype

This is the intake page of the calculator page in the demo prototype. Compared with the previous early prototype, the changes are:
1. The element form is unified.
2. Added the delete confirmation page.

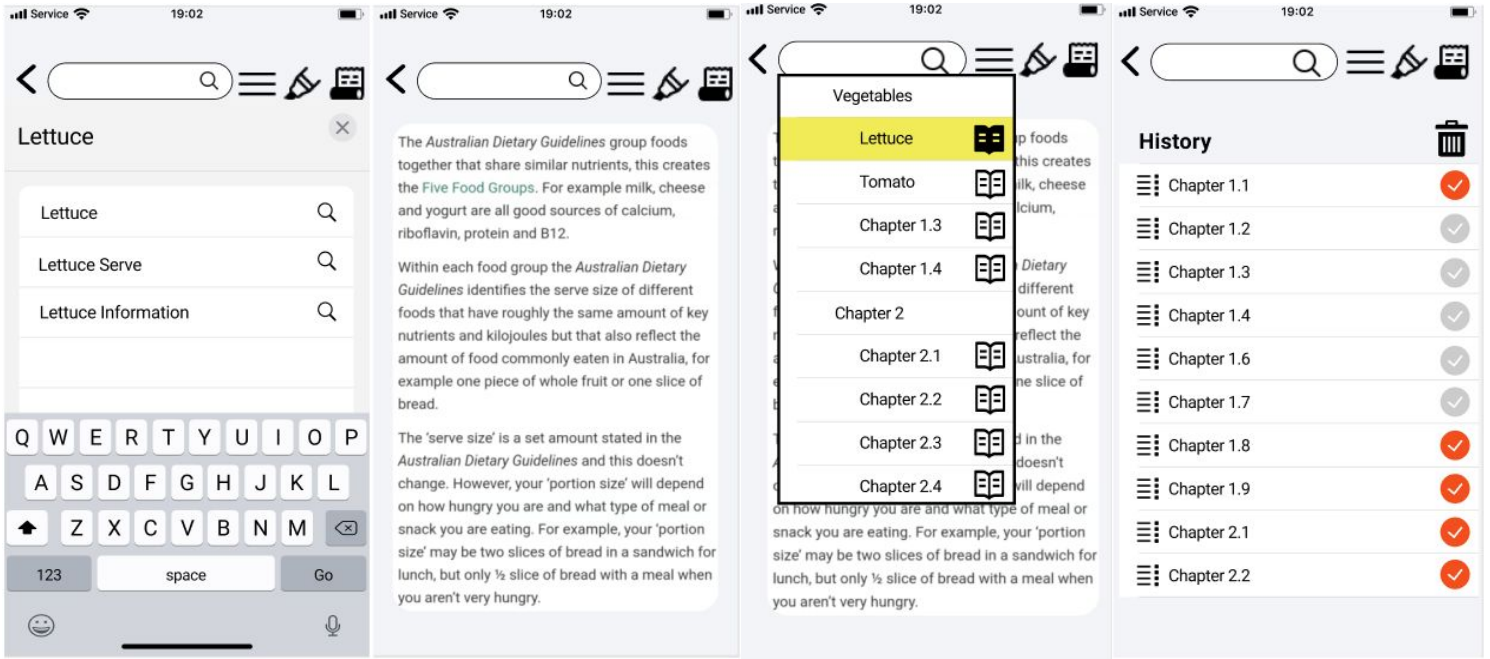




The demo prototype and changes from early prototype

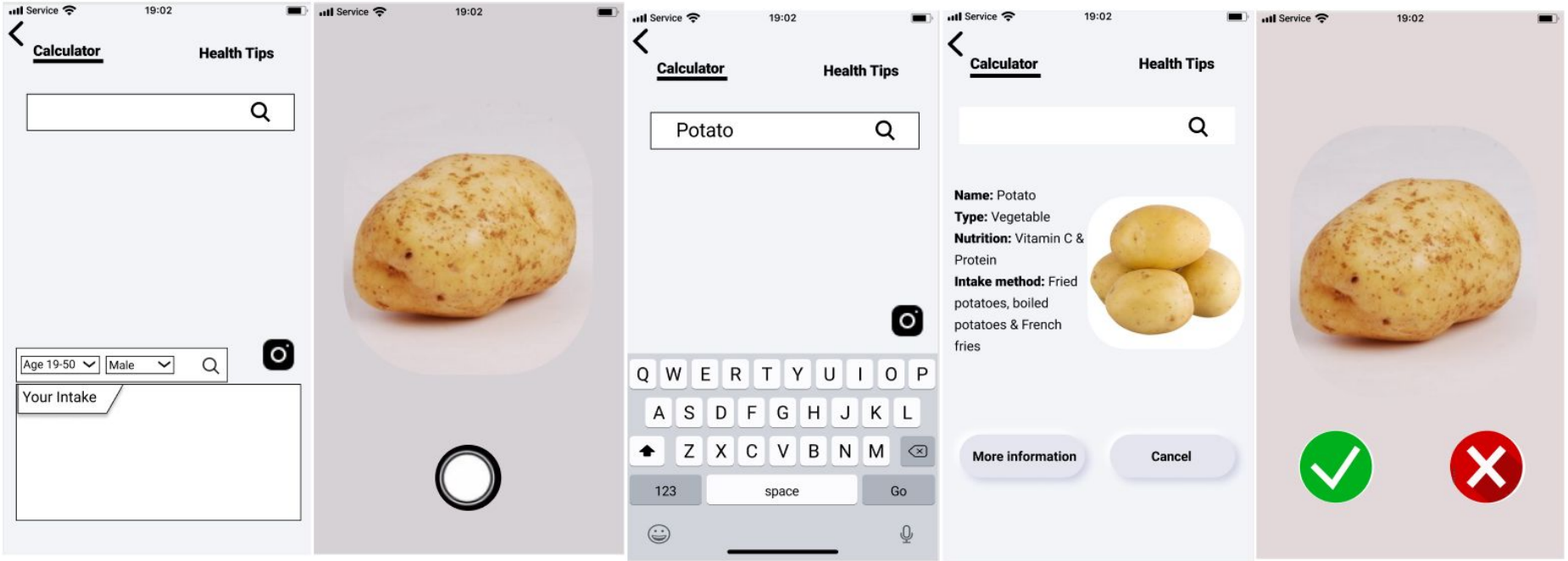
This is my record page in the demo prototype. Compared with the previous early prototype, the changes are: 1. The element form is unified. 2. Replaced with a more direct list page, and only lists. 3. Modified the page for editing server values. 4. Added the save success page.

The demo prototype and changes from early prototype



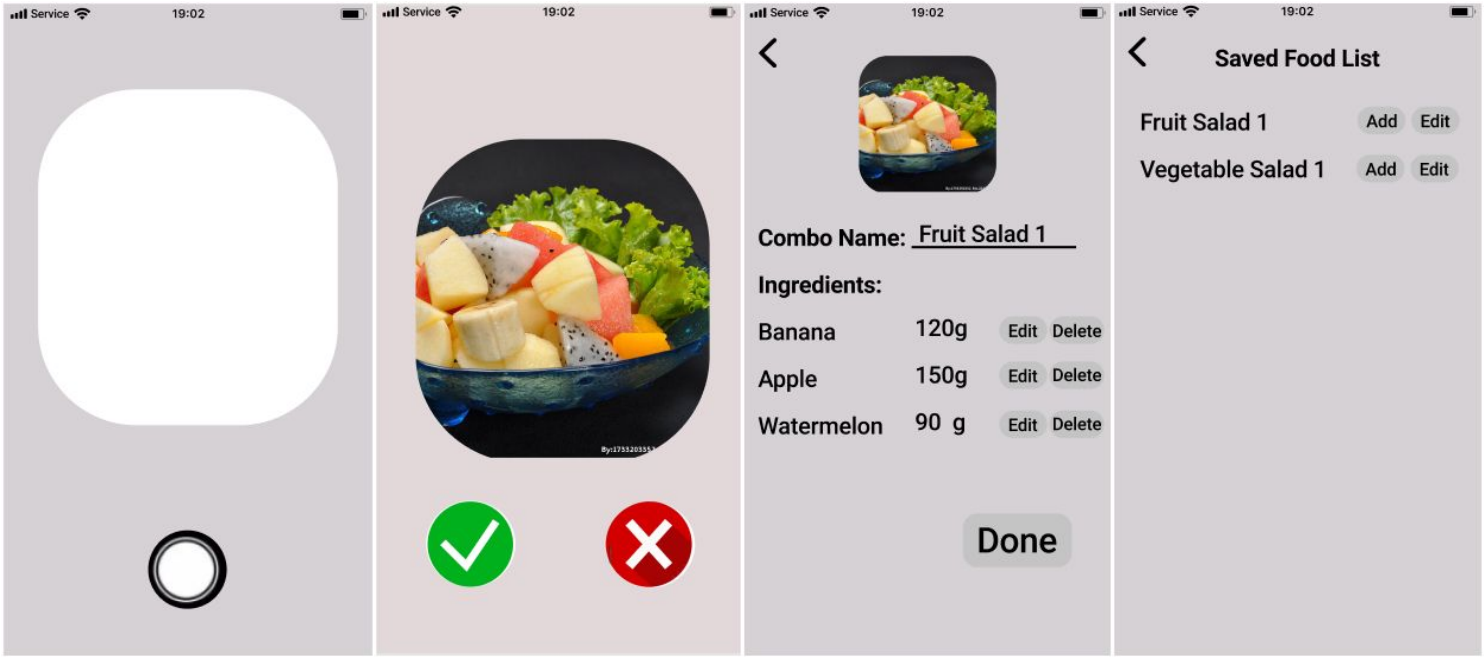
This is the e-book page in the demo prototype. Compared with the previous early prototype, the changes are: 1. The element form is unified. 2. A keyboard display has been added to the search page. 3. Added a back button. 4. Replace the original fixed menu form with a drop-down menu form. 5. An icon for setting the reading status is added next to the name of each chapter. 6. Added the history page.

The demo prototype and changes from early prototype



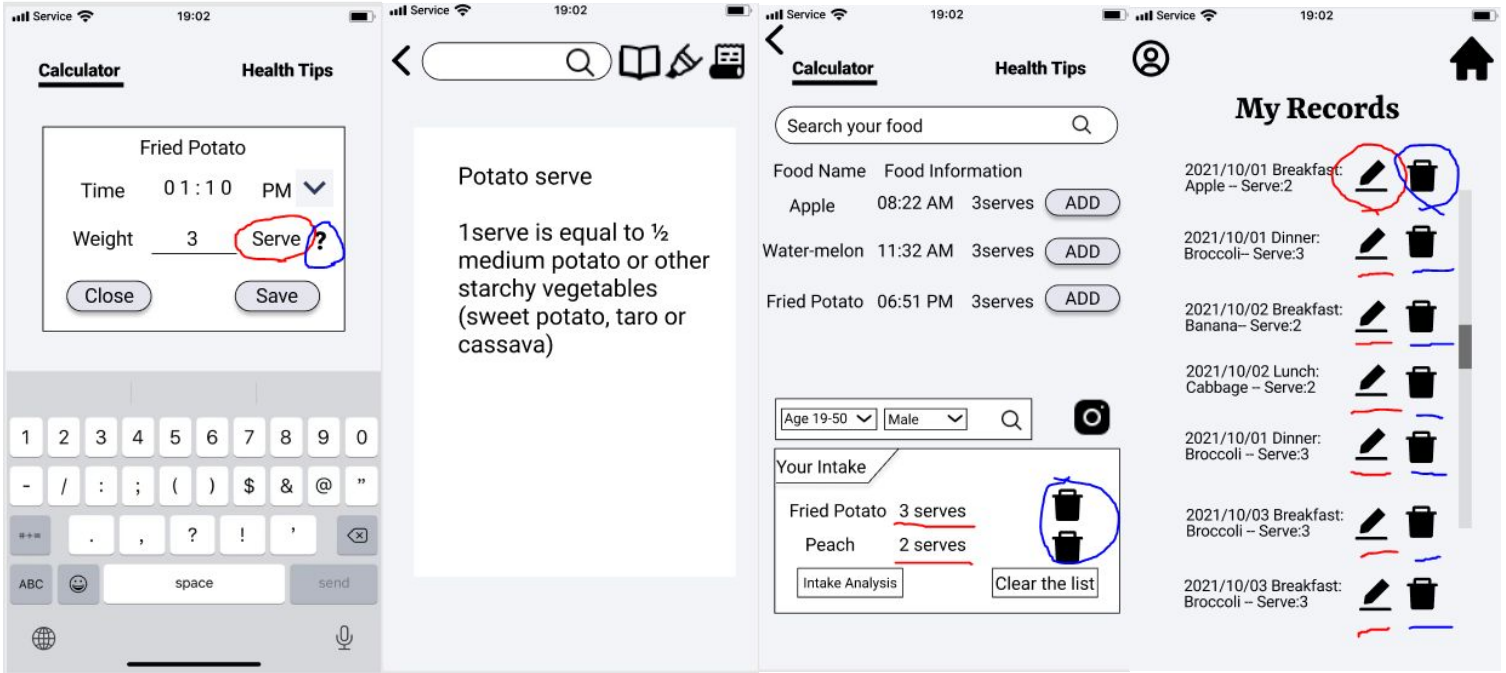
This is the photo page in the demo prototype. Compared with the previous early prototype, the changes are: 1. The element form is unified. 2 Added vegetable pictures. 3. Added the follow-up search page. 4. Added vegetable information page. 5. Added the vegetable confirmation page.

The demo prototype and changes from early prototype



This is the photo and vegetable combination page in the demo prototype. Compared with the previous early prototype, the changes are: 1. The element form is unified. 2. Added a page for confirming vegetable combination. 3. Added the vegetable information editing page. 4. Added a page for saving vegetable information.

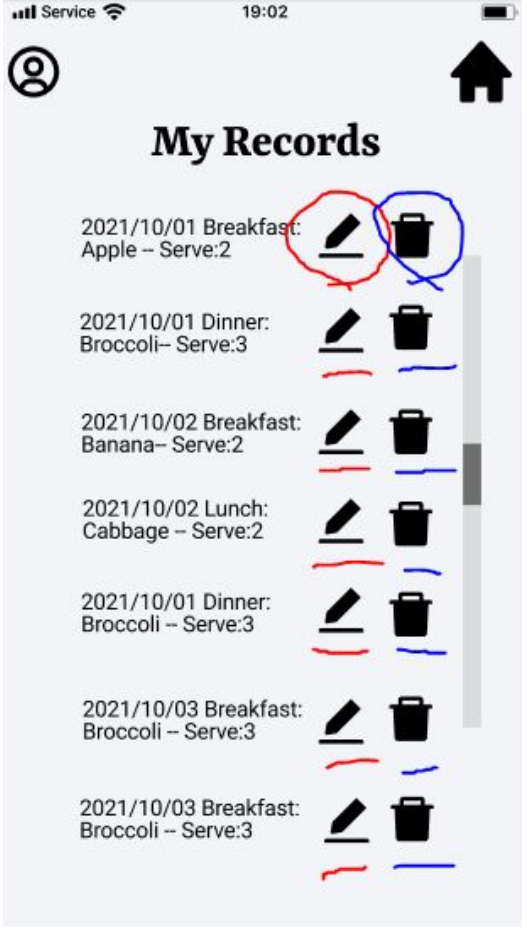
CW and TA informed changes made for the final prototype



According to CW's feedback, users cannot know how to completely complete the task goal, that is, to set the number of servers. So in the page where the final number is set, we changed g to serve. On the other hand, because there is no redirect page for related information about vegetable seve, users cannot complete the prescribed task2 perfectly, so we added a question mark and a redirect page for related information. In addition, on the intake page, we changed the original text delete button to an icon delete button in order to maintain the consistency of the page.

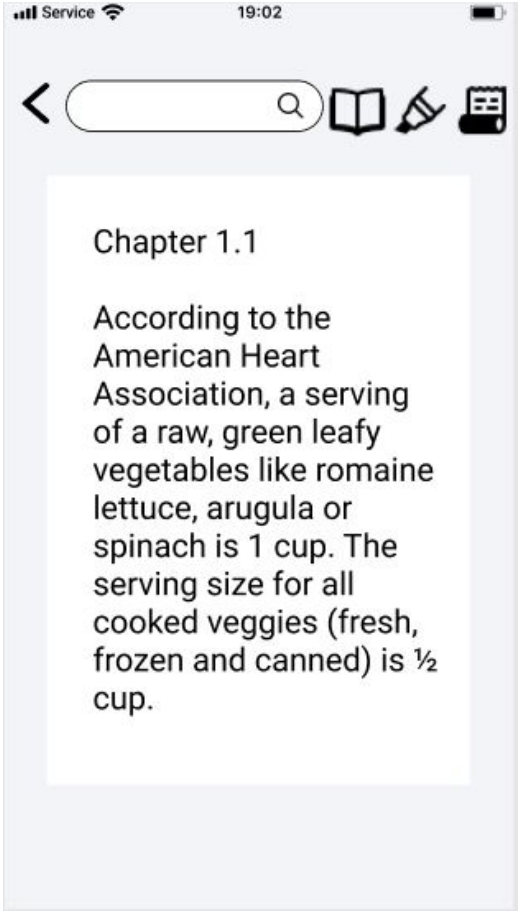
CW and TA informed changes made for the final prototype

Similarly, based on the teacher's feedback, we changed the text-based edit button and text-based delete button on the My Records page to icon-based edit and delete buttons, in order to maintain the overall consistency of the page.



CW and TA informed changes made for the final prototype

We turned the previous screenshot into a page of related text. Through the feedback from CW and TA, the reason is that the previous screenshots made users feel very confused and could not explain the feedback from the machine. The content of the screenshot is irrelevant, so we changed the screenshot to the actual text content this time. It is about lettuce serve, which helps users explain the information of the machine, and finally completes the prescribed tasks 3 and 4



The rationale for the design of final interface

Our users are a group of users who have begun to control their own diet, but they have not yet a good diet control plan and habits, and no suitable recording tools, so our application is to help them record the quantity of vegetables and serve, and at the same time help They develop a habit of recording.

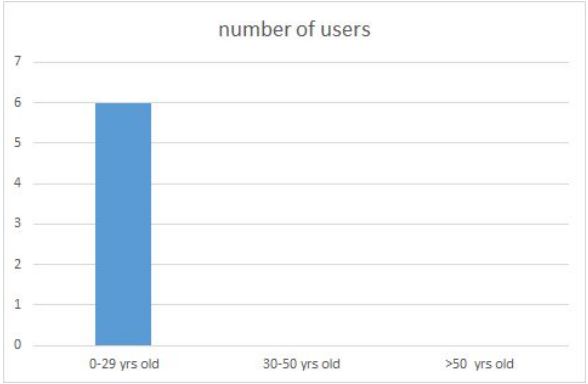
First click on the add button on the main page and it will jump to the calculator page. After that, the user can search for their eaten vegetables and edit the number of serve. Or get relevant tips. Or delete the ingested vegetables.

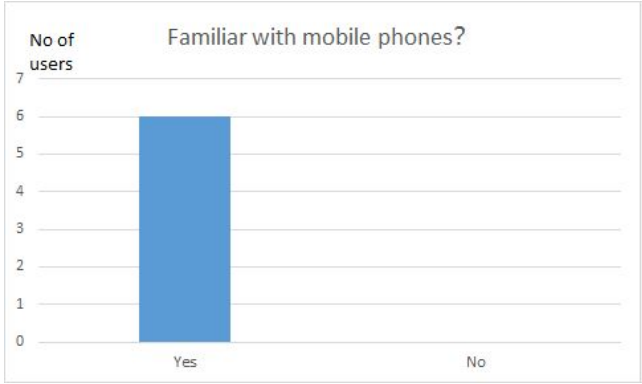
By clicking the camera button on the calculator page, we can take pictures of the vegetables we have eaten, and get relevant information, or take pictures of vegetable combinations to help us identify which vegetables and their content, and at the same time can add them to our diet records.

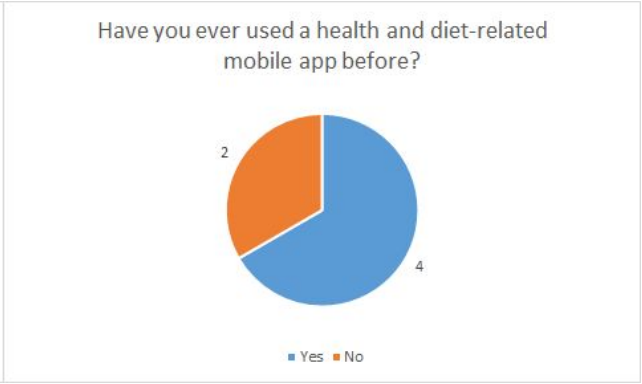
Back to the calculator page, we jump to the e-book page by clicking the healt tips button, where users can find the vegetable health knowledge they want to know, and at the same time can set the reading status of each chapter, so that you can know which ones you want next time. Did not read.

After returning to the main page, you can click on my record to jump to the serve quantity setting and modification page, where we can edit the serve quantity of each record.

Users’ background and demographics







All users are under 29 years old and know how to use a smartphone, 4 of them have used health and diet-related apps.

Results of questionnaires

	User 1	User 2	User 3	User 4	User 5	User 6	Average
Task 1 SEQ	6	4	6	4	5	7	5.3
Task 2 SEQ	5	5	7	3	6	7	5.5
Task 3 SEQ	7	3	6	5	6	7	5.6
Task 4 SEQ	4	4	6	3	7	6	5
Task 5 SEQ	6	4	6	4	6	6	5.3
Task 6 SEQ	7	5	7	4	5	6	5.7
Task 7 SEQ	6	5	7	5	5	5	5.5
Task 8 SEQ	6	4	6	5	6	5	5.3
SUS Score	85	60	87.5	70	82.5	100	80.8
open questions	No	more features on the e-textbook page would be better for me	Generally speaking, the design is very good, it would be better if the color is not too single.	Very good design, better make more beautiful interface.	I hope that the system can add foods other than breakfast, lunch and dinner, such as afternoon tea and supper.	None	

Table of performance data for all users

	User1	User2	User3	User4	User5	User6
Task1	✓	✓	✓	✓	✓	✓
Task2	✓	✓	✓	✓	✓	✓
Task3	✓	✓	✓	✓	✓	✓
Task4	✓	✓	✓	✓	✓	✓
Task5	✓	✓	✓	✓	✓	✓
Task6	✓	✓	✓	✓	✓	✓
Task7	✓	✓	✓	✓	✓	✓
Task8	✓	✗	✓	✓	✓	✓

Participant succeeded alone ✓

Participant succeeded but only with help ✓

Interface failure for this task ✗

In summary most tasks can be completed by the majority of users, with only a small number of users needing help in carrying out the task or being unable to complete it, Task2 having the highest success rate.

Table of qualitative observations over all users.

	Summary of observation,errors and comments
Task1	Users 1, 2, 3, 4 and 5 found the interface for this task to be very simple and clear and easy to complete, while user 6 found the interface to be a little complex.
Task2	User one thought it took time to find the delete button, other users thought the interface was easy to use.
Task3	User 2 thought that using text as a button looked a bit cluttered and User 3 did not find the button to go back to the home page.
Task4	Users 1, 4 and 6 find it difficult to find the buttons and the health tips buttons are too inconspicuous
Task5	Users 3, 4 and 6 do not understand the meaning of the button.
Task6	None
Task7	Users 4,6 thought it is hard to find the camera button.
Task8	None

Strengths and problems

Strength:

1.The interface is in line with normal usage of mobile software, clear and easy to understand and relatively easy to use.

2.Fully functional and practical, with some interesting and innovative features.

Probelms:

1.The button design is problematic, some of the buttons are not easy to understand and the buttons do not have consistency.

2.The design of the interface is a little bit not good, the colours are rather monochromatic and there are problems with the typography of some of the buttons.

Detailed Explanation

The group first designed eight concrete tasks based on the user's goals and during the think aloud study, each task was recorded in a table for each user, recording the user's actions, what the user said and what problems the user encountered. The team then aggregated the data to see how well each task was completed to determine the ease of use of the interface and to generate a user performance table.

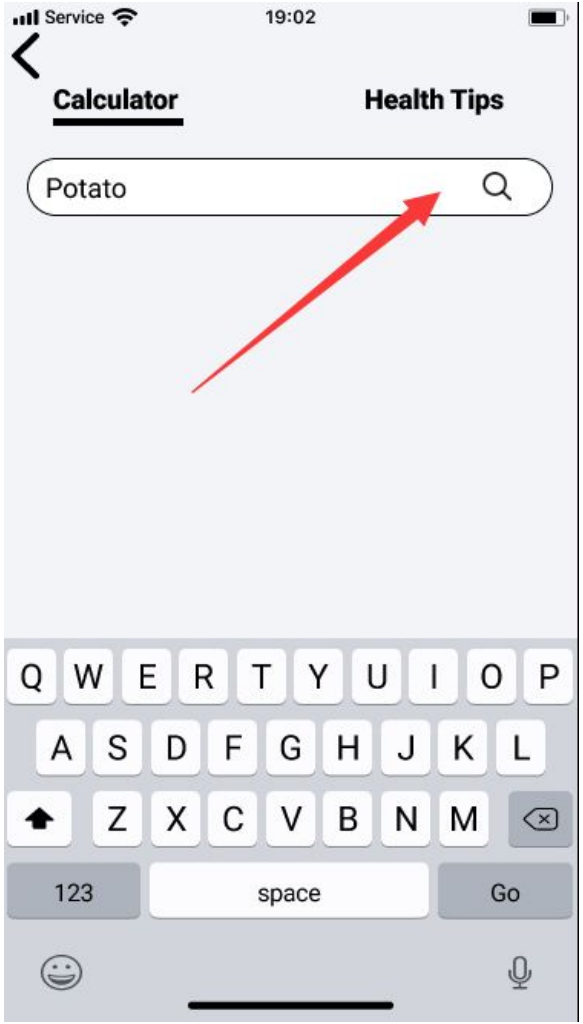
The group then compared the performance of each user on each task side-by-side to find out how users rated each task and the problems they encountered to determine the strengths and weaknesses of the interface. Finally the summarised evaluations were integrated with the previous user evaluations obtained through SUS, SEQ and open-ended questions to discover the strengths and weaknesses of the interface.

Summary of Cognitive Walkthrough

Overall, the three main questions described through CW which include is the correct activity obvious to user, will user understand instructions and will user interpret the response from the action correctly.

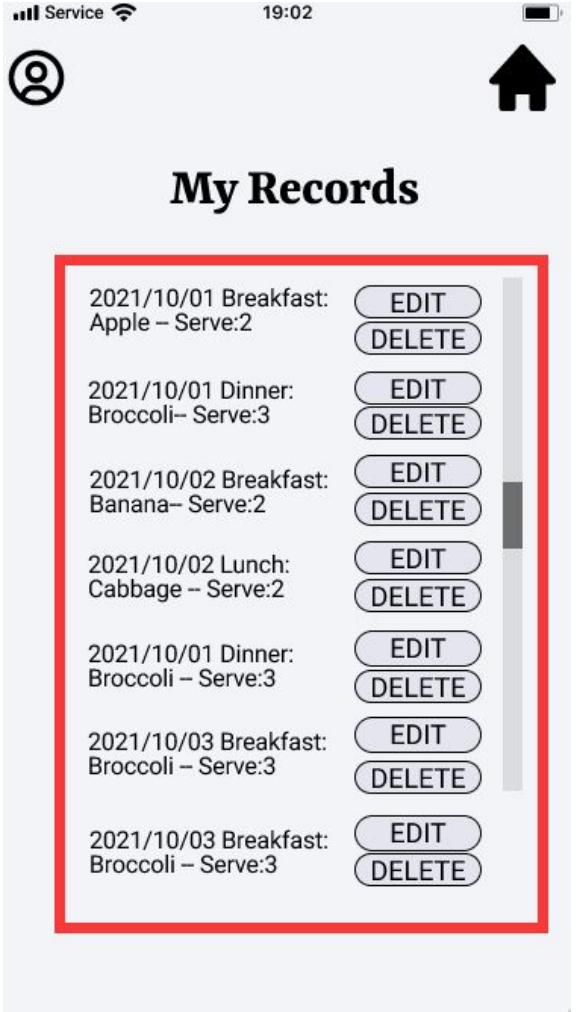
Conclusion of Cognitive Walkthrough

Task 1: In CW we've found that search food function on this screen. Users might be worried about not being able to search for the food they want.



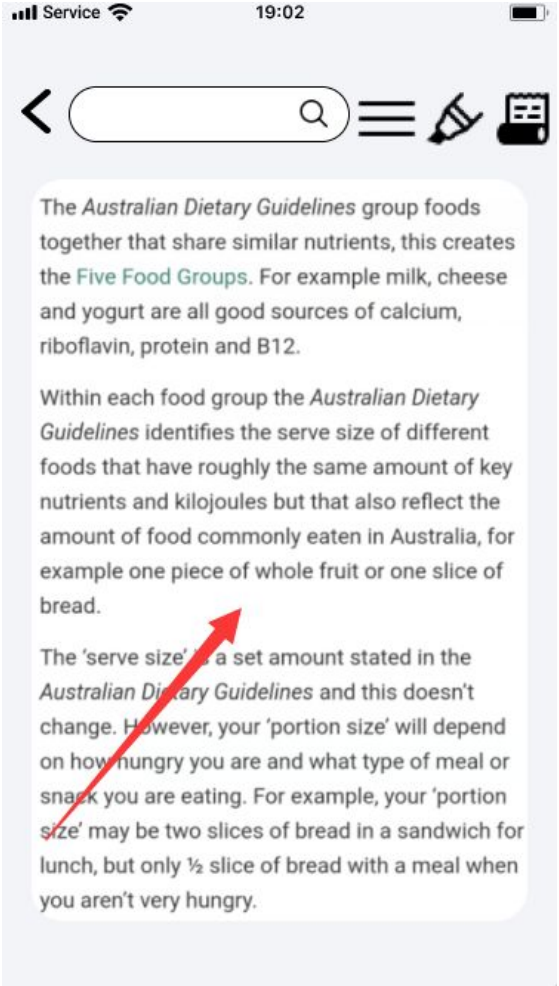
Conclusion of Cognitive Walkthrough

Task 2: In CW we've found that no problems in users providing feedback on task 2 implementation, however too much text in record list makes the interface unattractive.



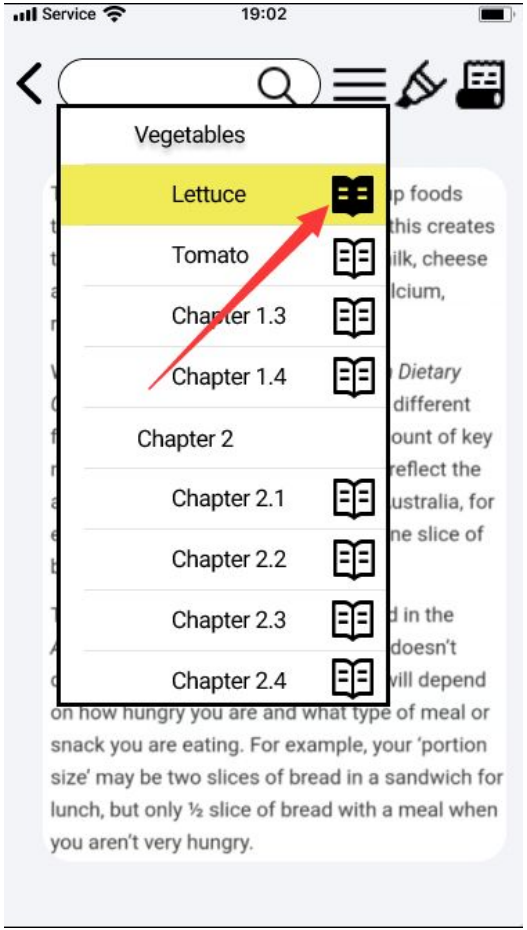
Conclusion of Cognitive Walkthrough

Task 3: In CW we've found that the etextbook screen might be confusing to user because there are too much information to read.



Conclusion of Cognitive Walkthrough

Task 4: In CW we've found that the chapter menu screen might be confusing to user because users need time to understand why white books turn black.



Reflection on the prototype interface

After Think-Aloud testing, many users said that our prototype is very simple to use but the color is too single, I hope we can design more beautiful.

When we conducted the Cognitive Walkthrough test, we found that the interface still has these problems. First of all, when the user adds the weight of the food ingested, the test problem is serves but the unit in the prototype is grams. This is easy to cause confusion and confusion among users.

The second is that the buttons in the prototype are inconsistent, some places are delete signs, and some places are delete texts.

Finally, the layout is too compact. For example, on the user-recorded page, all the content is squeezed together, making it difficult for users to find the module they want to operate. Moreover, the color page of the page is too single and the visual complexity is too low, which can easily lead to the loss of female customers.

We need to adjust the prototype.Adding prompts in places that are prone to confusion, unifying button icons, and changing the layout and colors to make the page look clearer and more beautiful.

Reflection on design process

In the early stage, each of our team members designed many low-fi prototypes. Through comparison and discussion, we chose the best designed prototype as the follow-up hifi design direction.

We used Think-Aloud and Cognitive Walkthrough to evaluate the hifi prototype and found some areas for improvement.

We iteratively select the most suitable one from the original prototypes, and then improve the existing prototypes through various evaluation methods.

Conducted study of Think-Aloud

We do the Think-Aloud test, and the selected test users are all under the age of 29. These users often use smartphones so they know how to operate App software. In particular, 4 out of 6 users have experience using apps related to health and diet. Although the group under the age of 29 is currently one of the main groups that pay the most attention to health. But failing to test users over the age of 30 may cause our test results to not fully cover all users.

We should choose some users who are over 30 years old and have no experience in using health and diet-related apps.

More than two-thirds of people have experience in using health and diet-related apps, which also makes it difficult for us to dig out the pain points of users' software operations through the Think-Aloud test.

Think-Aloud’s tasks are comprehensive, but considering users’ experience in using smartphones, we should further increase the difficulty of tasks to understand the user’s pain points.

Cognitive Walkthrough in the study and tasks

We conducted a professional evaluation of the prototype by doing a Cognitive Walkthrough test. We found some problems that led to a poor user experience, some function buttons were not labeled, which made people confused, and the button icons were not uniform, and so on.

However, as a designer, a professional evaluation of the prototype is likely to ignore some small issues such as whether the page layout makes users feel uncomfortable, whether the color of the prototype is too single and the user does not want to use it, etc.

For the tasks in the Cognitive Walkthrough test, we believe that the entire main process can be covered, but we have overlooked some branch processes. For example, the user can click the back button to return to the previous page. We need to conduct Cognitive Walkthrough tests on these branch processes in subsequent upgrades.

Strengths and weaknesses of the evaluation methods

Think-Aloud

Strengths

Simple, flexible and easy to learn

Weaknesses

Need to test the appropriate user groups, otherwise the results may be misleading

Impact

By observing the user's words and deeds, we can get useful information and evaluations for the design. For example, users will hesitate when they are confused about a certain function.

Cognitive Walkthrough

Strengths

Quickly do not require personnel to assist in the test

Weaknesses

Need evaluator to have senior experience

Impact

The factors of the failure story can be summarized, and the design can be modified according to the reason.

Appendix-Xingran Li(content)

1. Prototype for additional task
2. Persona
3. Cogntive walkthrough for 4 concrete tasks
4. Think- aloud study for 8 tasks
5. Introduction & Appendix section in report

Appendix - Xingran Li (Work in the Week 7)

1. Record the time that you actually created each record;

	Lunch 12:00	**Afternoon**	**Supper 18:00**	**night**
Saturday	Onion, tomato	Durian *14:20*	Chives	Watermelon *20:18*
Sunday	Bean sprout	Peach *17:03*	Long beans	Apple 19:37

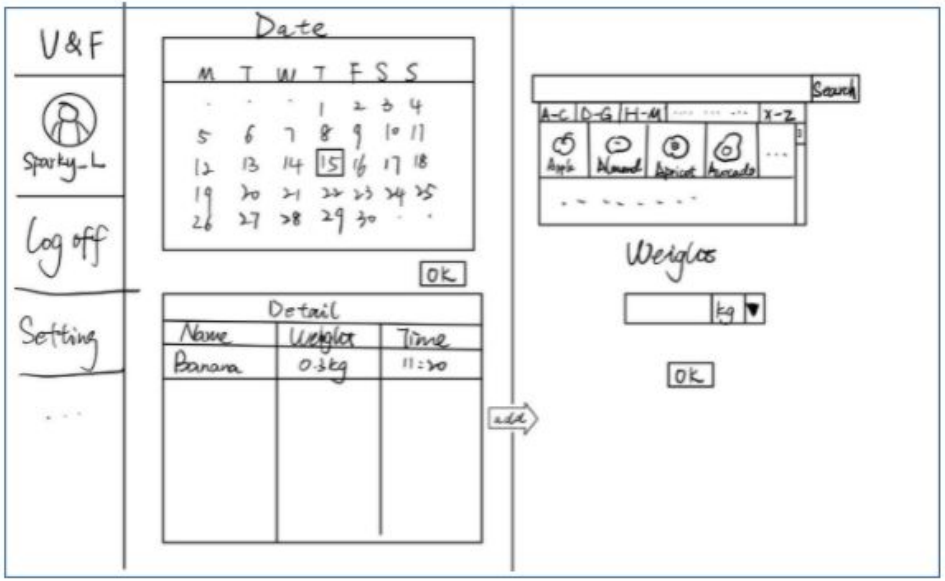
2. Make notes about the way you decided to do the recording, and why you chose that approach;

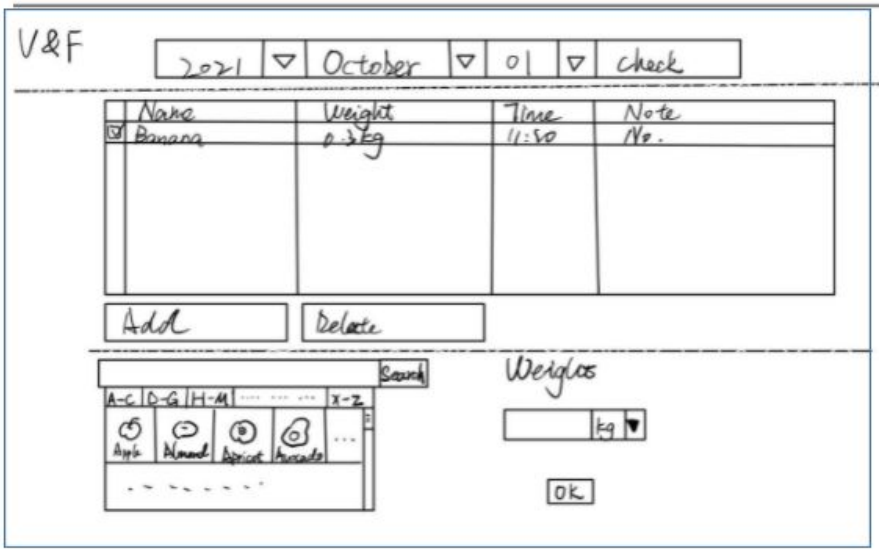
I took notes on my phone, because that was convenient.

3. Make notes about any difficulties you had getting a complete 2-day record - taking care to focus on the assignment goal of creating an e-textbook that helps people learn how to estimate their vegetable intake

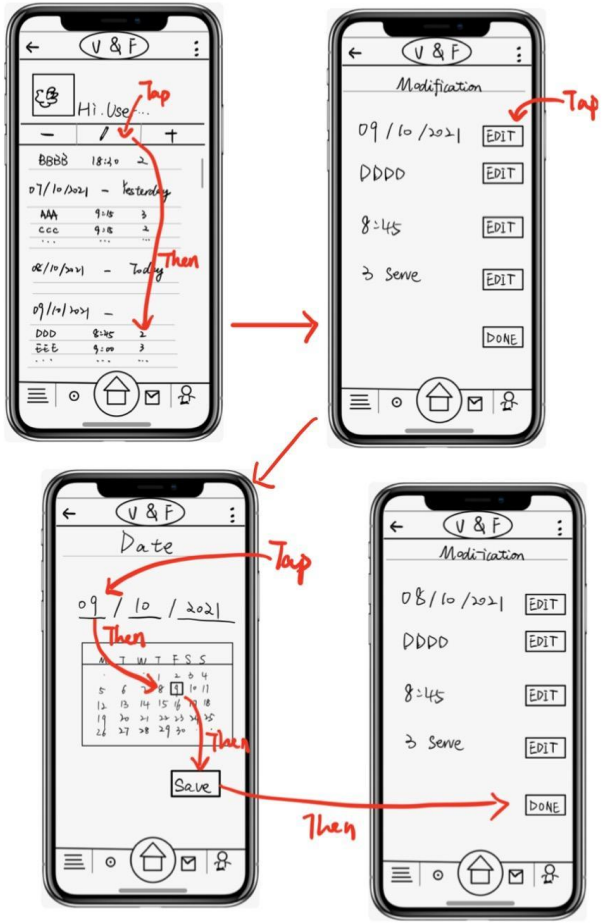
I hardly have breakfast when I live alone, so it might be a bad habit for this task, and sometimes I may forget to record when eat vegetable/fruit.

Appendix - Xingran Li (Early prototypes)

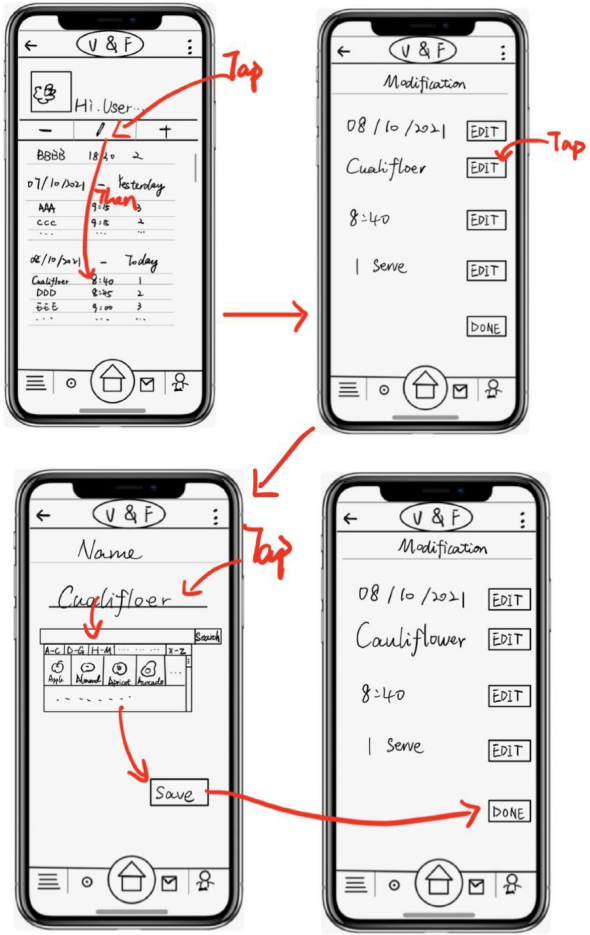




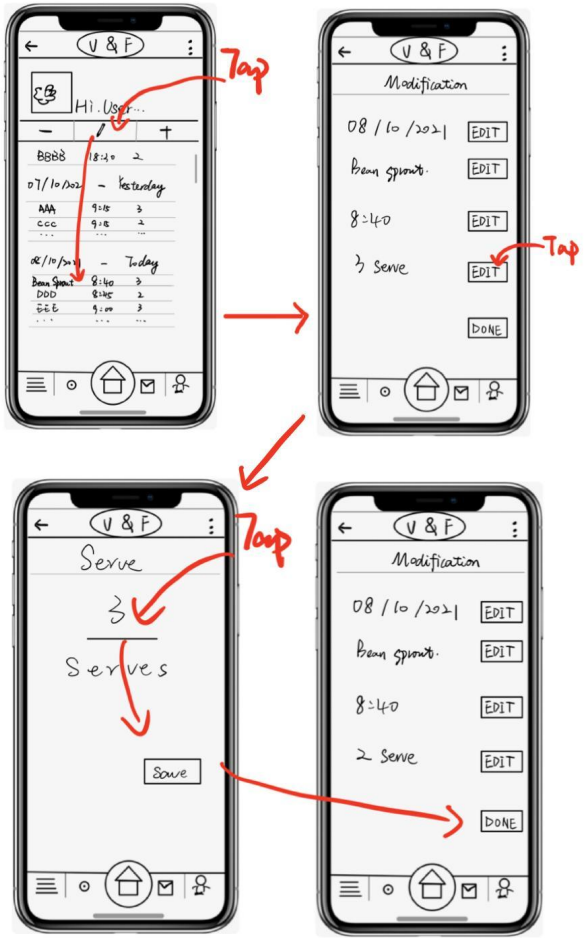
Appendix - Xingran Li (Design exploration 1)



Appendix - Xingran Li (Design exploration 2)



Appendix - Xingran Li (Design exploration 3)



Appendix - Xingran Li (Think aloud 1)

User ID	01
Task ID	1 .
Overall success?	Yes
Clock Time 00:00 00:01 00:02 00:03	Task1:Suppose you want to input your own food (name, time and weight) **Observations** 1. User observation: 2. He finds the plus icon and taps it. 3. He taps the searching bar then type 'apple'. 4. He selects apple and input the time and weight. 5. He taps save. **Use comment:** 'This is pretty easy, because this app has the normal design just as the others, easy to get'
Summary of key problems observed	None
Other notes	None

Appendix - Xingran Li (Think aloud 2)

User ID	01
Task ID	2
Overall success?	Yes
Clock Time 00:00 00:01 00:02 00:03	Task2: Suppose you want to delete the accidental logging item. **Observations** 1. User observation: 2. He stays at the intake list page. 3. He finds the apple item and regards this as the one need deleted. 4. He taps the delete button. 5. He selects yes to confirm. **Use comment:** 'It takes time for me to find the where the item is at the first time.'
Summary of key problems observed	None
Other notes	None

Appendix - Xingran Li (Think aloud 3)

User ID	01
Task ID	3
Overall success?	Yes
Clock Time 00:00 00:01 00:02 00:03	Task3: Suppose you want to edit the existing item. **Observations** 1. User observation: 2. He is at the home page of the app. 3. He taps the record button to the page of intake recording. 4. He taps the edit button. 5. He adjusts the number and taps save. **Use comment:** 'Still easy but a little bit harder than the previous tasks.'
Summary of key problems observed	None
Other notes	None

Appendix - Xingran Li (Think aloud 4)

User ID	01
Task ID	4
Overall success?	With help
Clock Time 00:00 00:01 00:02 00:03 00:04	Task4: Suppose you want to use e-textbook reader to find the serving size. **Observations** 1. User observation: 2. He stays at the home page. 3. He doesn't find the e-textbook reader. And ask for help. 4. He taps the plus button to the intake list. 5. He taps the health tips to launch the e-textbook reader. 6. He searches for the item he wants and then gets the serving size. **Use comment:** 'This one is quite hard, because I don't know where the reader is, so I have to ask. '
Summary of key problems observed	None
Other notes	None

Appendix - Xingran Li (Think aloud 5)

User ID	01
Task ID	5
Overall success?	Yes
Clock Time 00:00 00:01 00:02 00:03	Task5: Suppose you want to track your e-book progress. **Observations** 1. User observation: 2. He stays at e-textbook reader. 3. He finds the menu icon and taps it. 4. He taps the second chapter and finds the yellow bar means current reading, white books means haven't read, black book means have read. **Use comment:** 'Said nothing'
Summary of key problems observed	None
Other notes	None

Appendix - Xingran Li (Think aloud 6)

User ID	01
Task ID	6
Overall success?	Yes
Clock Time 00:00 00:01 00:02 00:03	Task6: Suppose you want to view and manage your e-textbook history. **Observations** 1. He finds the history icon on the top right and taps it. 2. He sees his reading history. 3. He taps the grey tick and it gets to orange. 4. He taps the bin icon above to delete. **Use comment:** 'Ez'
Summary of key problems observed	None
Other notes	None

Appendix - Xingran Li (Think aloud 7)

User ID	01
Task ID	7
Overall success?	Yes
Clock Time 00:00 00:01 00:02	Task7: Suppose you want to identify a vegetable by camera. **Observations** 1. He gets to the intake list and taps the camera icon. 2. He takes a photo of an apple and tap the tick icon. 3. He views the information of apple and taps cancel. **Use comment:** 'Very innovated idea.'
Summary of key problems observed	None
Other notes	None

Appendix - Xingran Li (Think aloud 8)

User ID	01
Task ID	8
Overall success?	Yes
Clock Time 00:00 00:01 00:02 00:03	Task8: Suppose you want to identify a combination of vegetable by camera. **Observations** 1. User observation: 2. He taps the camera icon. 3. He takes a picture of a salad. 4. He adjusts the weight of each ingredient in it. 5. He types the name of this salad Salad 1 and save it in the list. **Use comment:** 'Useful function '
Summary of key problems observed	None
Other notes	None

Appendix - Xingran Li (SEQ)

Seq

Overall rate of the task

Strongly disagree						Strongly agree
1	2	3	4	5	**6**	7

Strongly disagree						Strongly agree
1	2	3	4	**5**	6	7

Strongly disagree						Strongly agree
1	2	3	4	5	6	**7**

Strongly disagree						Strongly agree
1	2	3	**4**	5	6	7

Strongly disagree						Strongly agree
1	2	3	4	5	**6**	7

Strongly disagree						Strongly agree
1	2	3	4	5	6	**7**

Strongly disagree						Strongly agree
1	2	3	4	5	**6**	7

Strongly disagree						Strongly agree
1	2	3	4	5	**6**	7

Appendix - Xingran Li (Cognitive Walkthrough 1)

Task 1. Users can input their own food, food amount and time, and can adjust the input data.

Steps	As the user, would I know what to do at this step?	If I do the right thing, as the user, do I know I have made progress toward my goal?
1. User opens the App to the home page, taps the plus icon.	Yes	Yes
2. User searches and selects the item	Yes, but might be worried about something cannot find.	Yes
3. User inputs the information like time and weight.	Yes	Yes
4. User taps add icon to put the item into the list.	Yes	Yes

Appendix - Xingran Li (Cognitive Walkthrough 2)

Task2. The user can delete accidental logging actions.

Steps	As the user, would I know what to do at this step?	If I do the right thing, as the user, do I know I have made progress toward my goal?
1. User gets to the intake list page.	Yes	Yes
2. Finds the item need deleted and taps the delete icon	Yes	Yes
3. Then tap Yes to confirm the deletion.	Yes	Yes

Appendix - Xingran Li (Cognitive Walkthrough 3)

Task 3. The logger is linked to the e-textbook information about serving sizes

Steps	As the user, would I know what to do at this step?	If I do the right thing, as the user, do I know I have made progress toward my goal?
1. User gets to the intake list page and taps the health tips top right	Yes	Yes
2. User types key words about the items and taps the search icon.	Yes	Yes
3. User can find all the information below.	Yes, but there is too much information.	Yes

Appendix - Xingran Li (Cognitive Walkthrough 4)

Task 4. The user can track their e-textbook progress

Steps	As the user, would I know what to do at this step?	If I do the right thing, as the user, do I know I have made progress toward my goal?
1. User gets to the page health tips	Yes	Yes
2. Taps the menu icon upon the content.	Yes	Yes
3. User can see the yellow bar is the chapter reading, white books are chapters haven't been read, and black books are the chapters have been read.	Yes	Yes

Appendix - Ruixian Liu (Work in the Week 7)

Content:

1.Prototype for task3

2.Persona

3.Cogntive walkthrough for 4 concrete tasks

4.Think- aloud study for 8 tasks

5.Background questionnaire

6.SUS & SEQ

7.Thinkaloud section in report

Appendix - Ruixian Liu (Work in the Week 7)

2021/09/17 Friday

Time	Fruit & Vegetable
10:00 am	Orange juice
13:00 pm	Broccoli, Apple
18:00 pm	Orange

2021/09/19 Sunday

Time	Fruit & Vegetable
9:00 PM	Juice
13:00 PM	Blue berry, Spinach
19:00 PM	Mandarin

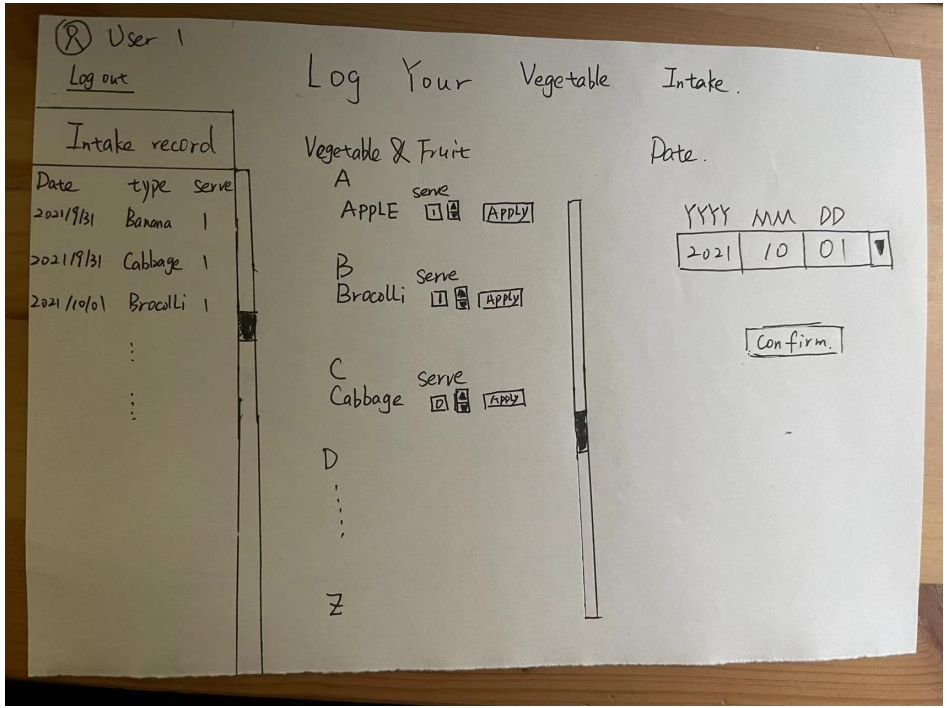
Record method

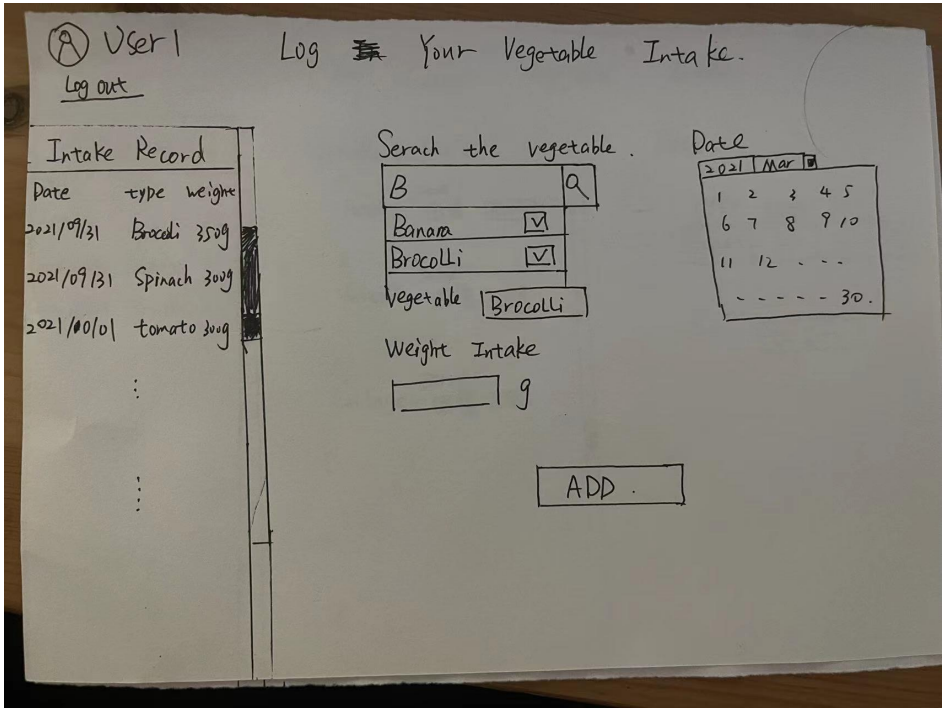
The way I choose to keep track is to record the time of each meal and the fruit and vegetables I eat on a table, which I think will prevent me from missing or forgetting anything. And the use of the table can be very clear to show.

Make notes about any difficulties you had getting a complete 2-day record.

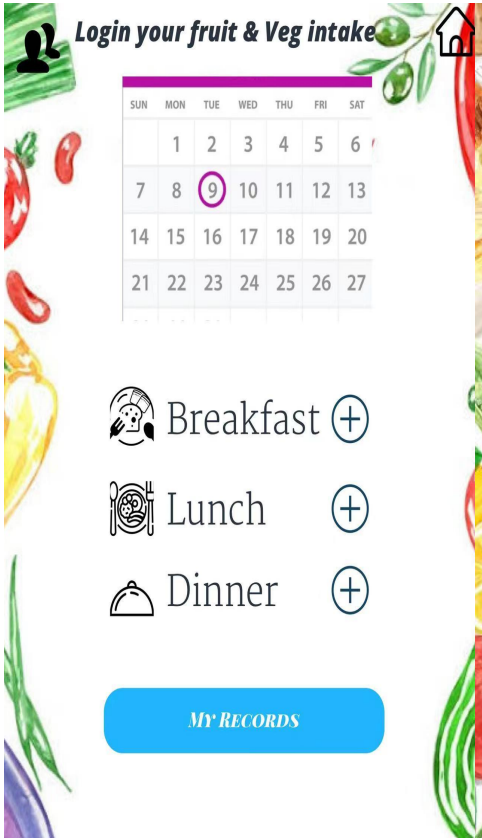
I think the amount of 1 serve is difficult to grasp and I think the e-book should provide the energy of various things by weight as well as calories to make it easier for the user to record their data accurately.

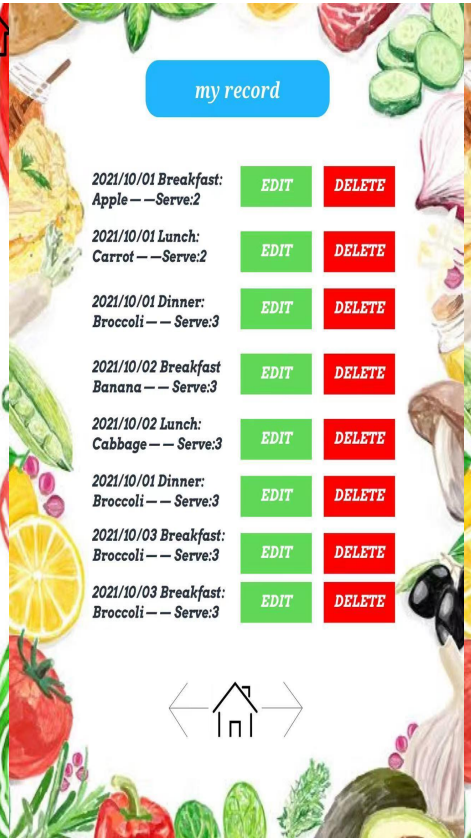
Appendix - Ruixian Liu (Early prototypes)

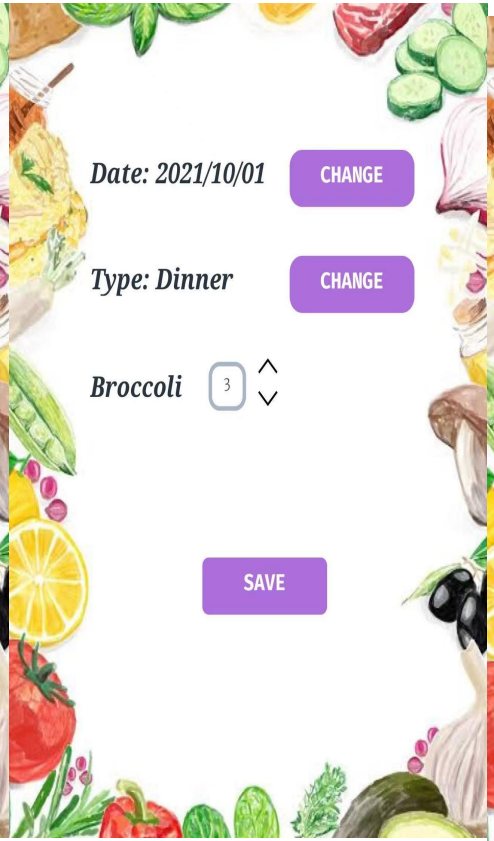


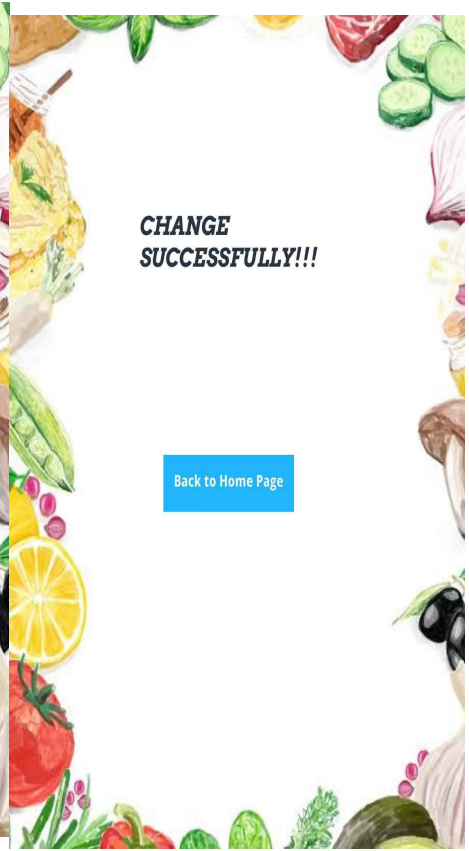


Appendix - Ruixian Liu (Design exploration 1)

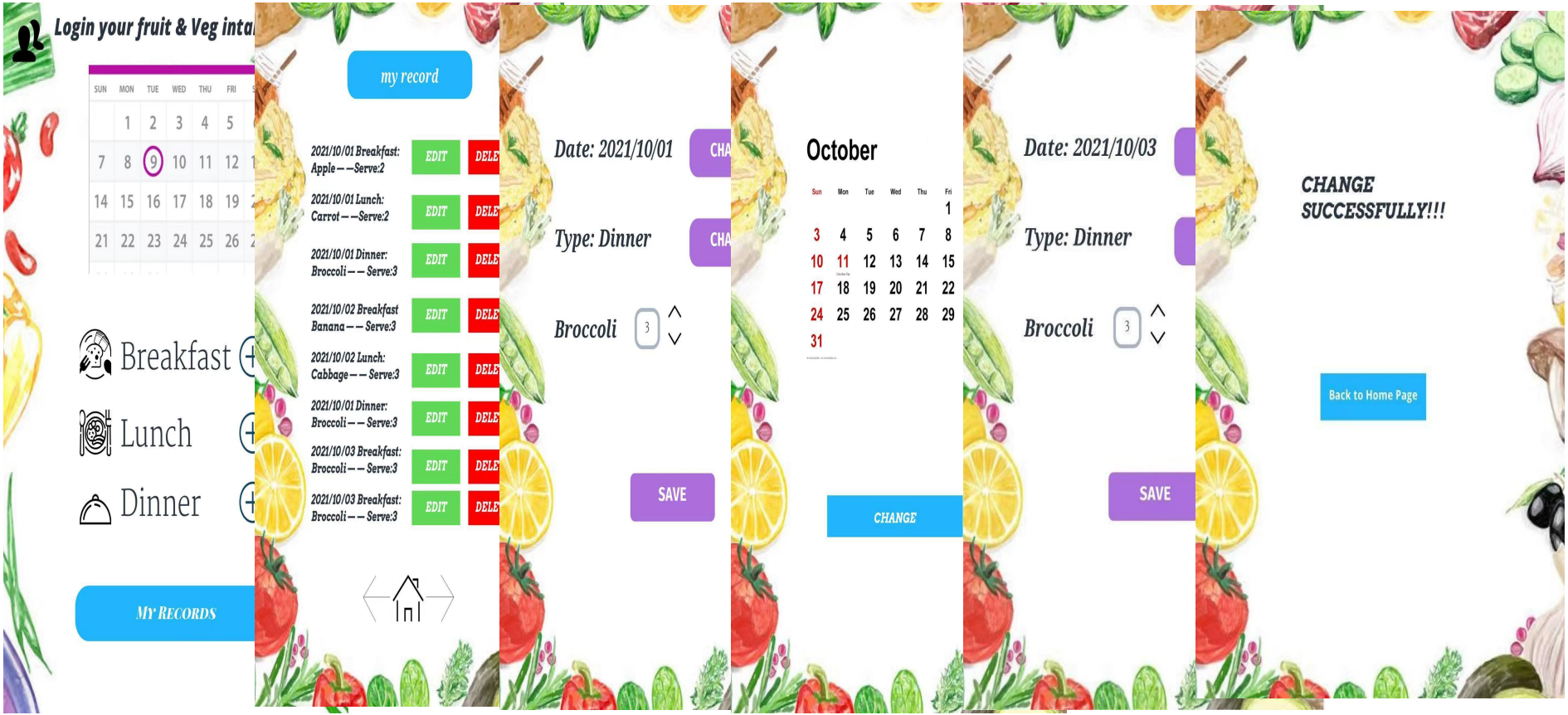




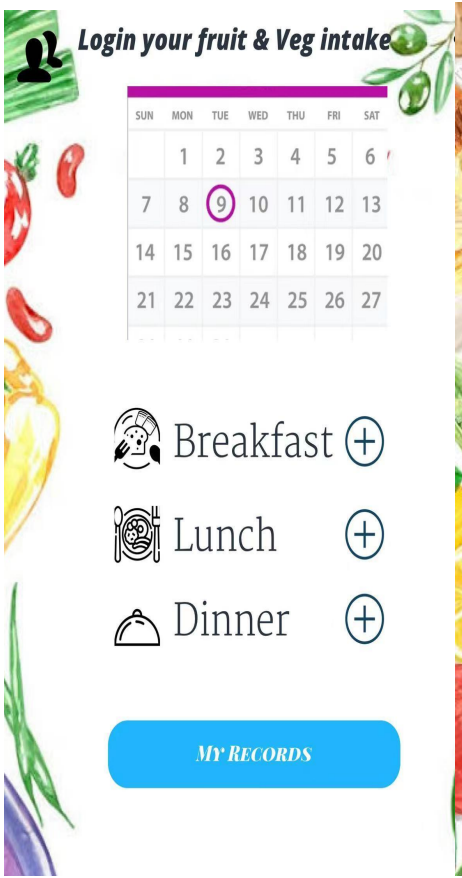


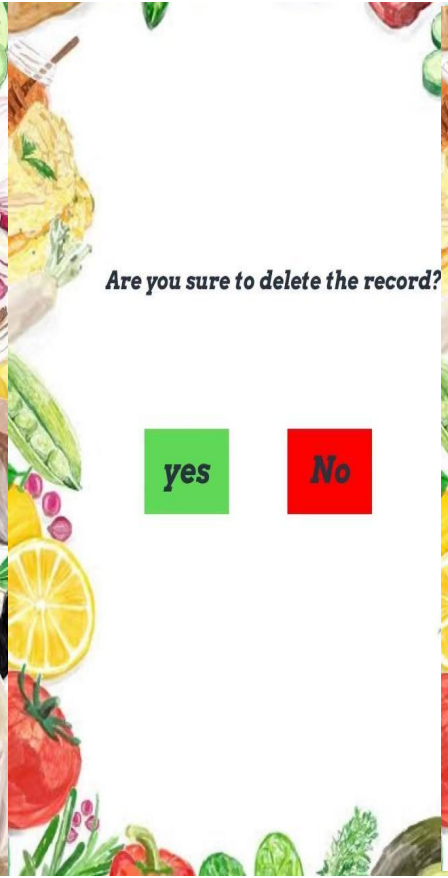


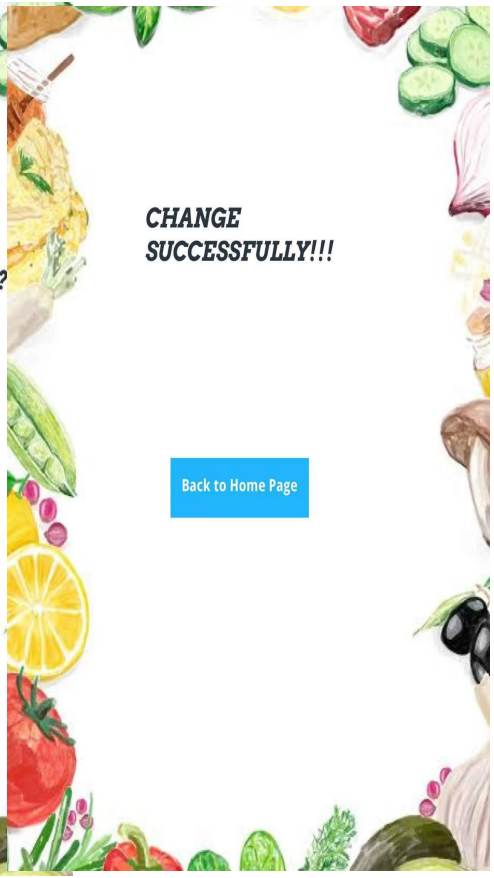
Appendix - Ruixian Liu (Design exploration 2)



Appendix - Ruixian Liu (Design exploration 3)







Appendix - Ruixian Liu (Think aloud 1)

User ID	2
Task ID	1
Overall success?	Only-with-help
Clock Time	Observations and user comments Task: Suppose you always log your vegetable intake in the evening, just before going to bed. Suppose that today you recall that you ate 3 serves of vegetables. Log that.
0:00-0:01	User clicked on the add button besides Dinner.
0:01-0:02	User asked where to find the vegetable and was told to click on the search box.
0:02– 0:04	User clicked on search button and saw a list
0:06- 0:08	User selected the first on fried potato and clicked the text box to enter the time and weight.
0:09-0:10	User clicks add and the meal is successfully added.
Summary of key problems observed	User didn't know where to find food at first and successfully added it after being informed.
Other notes	None

Appendix - Ruixian Liu (Think aloud 2)

User ID	2
Task ID	2
Overall success?	Yes
Clock Time 0:00-0:01 0:01-0:02 0:02– 0:04	Observations and user comments Task: Suppose you want to remove one vegetable from the intake list, what should you do? User clicked on delete button besides Peach A pop-up window appeared asking the customer if they wanted to delete the record. The record is successfully deleted. User comments: This task is easy to operate on the interface.
Summary of key problems observed	None
Other notes	None

Appendix - Ruixian Liu (Think aloud 3)

User ID	2
Task ID	3
Overall success?	Yes
Clock Time	Observations and user comments Task: Suppose that, on reflection, you realize that you have over-estimated the vegetables you ate for dinner. So, for today, you now think you actually ate only 2 serves. Correct the logged record for today.
0:00-0:01	Go to myrecords page by lick the my records button..
0:01-0:02	User change the serve number to 2
0:02– 0:04	User clicked save and successfully save the record
Summary of key problems observed	None
Other notes	None

Appendix - Ruixian Liu (Think aloud 4)

User ID	2
Task ID	4
Overall success?	Only with help
Clock Time	Observations and user comments Task: Suppose you now remember about two cups of lettuce you ate at lunch, but you cannot recall how many serves that would make. Find out how many serves 2 cups of lettuce is. Then log this.
0:00-0:01	User don't know where to find the answer, and clicked the health button after informed.
0:01-0:02	User searched lettuce serve in the search box
0:02– 0:03	User get the required information from the article showed
Summary of key problems observed	Health tip button is hard to notice it is a button.
Other notes	None

Appendix - Ruixian Liu (Think aloud 5)

User ID	2
Task ID	5
Overall success?	Only with help
Clock Time	Observations and user comments Task: Suppose you have read the section about judging the serves of lettuce and has not read about other types of vegetables. Please tell me which learning topics you have read and which you still need to read.
0:00-0:01	The user did not know where to look for the catalogue of the ebook at first, but finally found content button under the advice
0:01-0:02	User clicked on lettuce and go back to last page
0:02– 0:04	User clicked on the record button and mark the chapter as read.
Summary of key problems observed	Graphical buttons may sometimes not be understood by users, so it is best to change them to text or a more representative pattern
Other notes	None

Appendix - Ruixian Liu (Think aloud 6)

User ID	2
Task ID	6
Overall success?	yes
Clock Time	Observations and user comments Task: Suppose you want to know which chapters you have read or browsing record， what should you do?
0:00-0:01	The user clicked on record button, and fing the reading record User Comment: This task is easy.
Summary of key problems observed	None
Other notes	None

Appendix - Ruixian Liu (Think aloud 7)

User ID	2
Task ID	7
Overall success?	Only with help
Clock Time	Observations and user comments Task: Suppose you find that you don't know the name of some vegetables. How do you get these vegetables' information?
0:00-0:01	The user didn't know what to do and was informed to click on the camera button.
0:01-0:02	The user takes a photo of the vegetable and click yes button, and the page showed the information of the potato
Summary of key problems observed	The camera button is hard to notice.
Other notes	None

Appendix - Ruixian Liu (Think aloud 8)

User ID	2
Task ID	8
Overall success?	Yes
Clock Time	Observations and user comments Task: Suppose you find that you don't know the name of some vegetables. How do you get these vegetables' information? Suppose you eat a certain salad with different fruits every day and you want to take a picture and enter this salad as a new food type, what would you do?
0:00-0:01	The user clicked the camera button and took a photo of the salad
0:01-0:02	The user clicked yes button and the system automatically analyzed what fruits are in the salad.
0:03-0:04	User clicked done button and successfully and the food the food list. User comments: This function is amazing!
Summary of key problems observed	None
Other notes	None

Appendix - Ruixian Liu (Cognitive Walkthrough 1)

Task1:Suppose you always log your vegetable intake in the evening, just before going to bed. Suppose that today you recall that you ate 3 serves of vegetables. Log that.		
	As the user, would I know what to do at this step?	If I do the right thing, as the user, do I know I have made progress toward my goal?
Step 1: Find where to add food for dinner.	Yes, click on the add button	Yes, the page will be directed to another page.
Step 2: Click the search box and enter the food name.	Yes, but first it will be a lit bit difficult to understand how to add food?	Yes, the vegetable will show in the search box.
Step 3:Click on the search button to find the food	Yes, this is easy.	Yes, a list of food shown
Step 4: Select the first , fried potato	Yes,easy to understand	Yes, but the system asks me to enter the weight, not the number of serves.
Step 5: enter the time and weight of the meal and click add	Yes	Yes
Summary	Only when add food, a little bit hard to understand where to find the food	The task ask me to enter serves, but the system only allow me to enter the weight of food

Appendix - Ruixian Liu (Cognitive Walkthrough 2)

Task2: Suppose that, on reflection, you realise that you have overestimated the vegetables you ate for dinner. So, for today, you now think you actually ate only 2 serves. Correct the logged record for today.		
	As the user, would I know what to do at this step?	If I do the right thing, as the user, do I know I have made progress toward my goal?
Step 1: Find my records	Yes, click on the my record button	Yes, the page will be directed to another page.
Step 2: edit the second	Yes, Click on the edit button	Yes, the record detail is shown
Step 3:Click on the search button to find the food	Yes, this is easy.	Yes, a list of food shown
Step 4: change the serve number to 2 by clicking the arrow	Yes,easy to understand	Yes, change successfully
Summary	Clear and easy to understand	This task is easy to under and easy to operate

Appendix - Ruixian Liu (Cognitive Walkthrough 3)

Task3: Suppose you now remember about two cups of lettuce you ate at lunch, but you cannot recall how many serves that would make. Find out how many serves of 2 cups of lettuce is. Then log this.		
	As the user, would I know what to do at this step?	If I do the right thing, as the user, do I know I have made progress toward my goal?
Step 1: Find health tips	Yes, click on the health tips button	Yes, the page will be directed to another page.
Step 2: Search lettuce serve on the search box	Yes, search lettuce and click the second one lettuce serve	Yes, a paragraph of text shown.
Step 3 Find the information need from the article	Yes, the article is a little bit long, better highlight the information	Yes,
Summary	Clear and easy to understand	This task is easy to under and easy to operate

Appendix - Ruixian Liu (Cognitive Walkthrough 4)

Task4: Suppose you have read the section about judging the serves of lettuce and has not read about other types of vegetables. Please tell me which learning topics you have read and which you still need to read.		
	As the user, would I know what to do at this step?	If I do the right thing, as the user, do I know I have made progress toward my goal?
Step 1: Find content	Yes, but the button pattern is a little to understand	Yes, the page will be directed to another page.
Step 2: click the lettuce	Yes, easy to find lettuce	No
Step 3 Click the record button to see my reading record	Yes,	Yes,
Step 4:mark the chapter as read	Yes	Yes
Summary	The design of the content button should be changed	Don't know where to click after reading a chapter

Appendix - Ruixian Liu (SUS)

1.Is this task easy?

Strongly disagree				Strongly agree
1	2	3	4	5

2.Is the task hard to understand?

Strongly disagree				Strongly agree
1	2	3	4	5

3.Are you confident when using the software?

Strongly disagree				Strongly agree
1	2	3	4	5

4.Are you feeling struggled when completing the task?

Strongly disagree				Strongly agree
1	2	3	4	5

5.Do you need someone to help when completing the task?

Strongly disagree				Strongly agree
1	2	3	4	5

6.Do you hate the design of the interface?

Strongly disagree				Strongly agree
1	2	3	4	5

7.Do you think the function showed by this task is useful?

Strongly disagree				Strongly agree
1	2	3	4	5

8.Do you think there are too much inconsistency in the system?

Strongly disagree				Strongly agree
1	2	3	4	5

9.Is this task interesting?

Strongly disagree				Strongly agree
1	2	3	4	5

10.Do you feel the functions showed by this task boring?

Strongly disagree				Strongly agree
1	2	3	4	5

Appendix - Ruixian Liu (SEQ)

Overall rate of the task

Strongly disagree						Strongly agree
1	2	3	4	5	6	7

Appendix - Jingqi Ma

Content:

1.Prototype for task7

2.Persona

3.Cogntive walkthrough for 4 concrete tasks

4.Think- aloud study for 8 tasks

6.SUS & SEQ

7.Critique of all major aspects in assignment 2 report

Appendix - Jingqi Ma (Work in the Week 7)

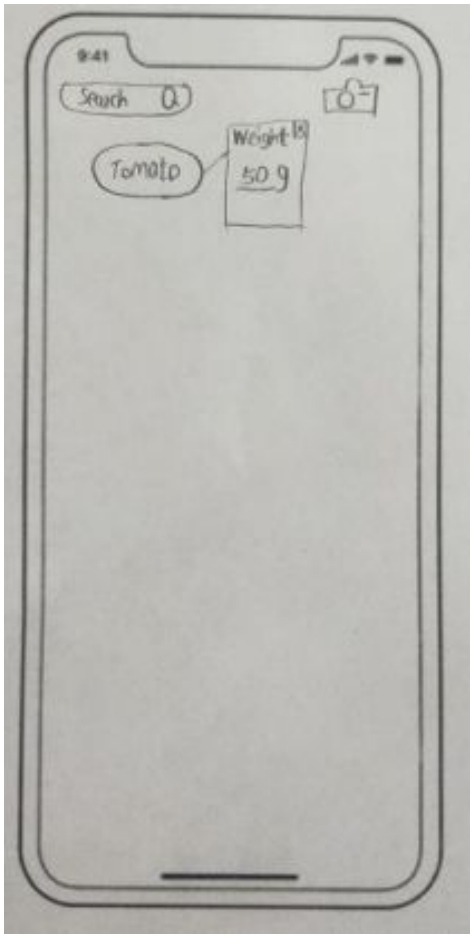
No	Time	Fruit and vegetable intake	Record	Reason for Record
1	08:10 AM Friday	Apple 170g	Picture taken by phone	Easily record the type of food consumed
2	11:55 AM Friday	Tomato 50g Cabbage 100g Mushroom 65g Pea 10g Edible tree fungus 15g	Picture taken by phone	Easily record the type of food consumed
3	06:46 PM Friday	Cucumber 100g Lemon 10g Spinach 70g	Picture taken by phone	Easily record the type of food consumed
4	07:16 PM Friday	Tangerinr 50g	Picture taken by phone	Easily record the type of food consumed
5	08:18 AM Saturday	Peach 80g Lemon 10g	Picture taken by phone	Easily record the type of food consumed
6	10:06 AM Saturday	Cantaloupe 200g	Picture taken by phone	Easily record the type of food consumed
7	12:11 PM Saturday	Potato 110g Carrot 95g Chinese chives 50g	Picture taken by phone	Easily record the type of food consumed
8	06:34 PM Saturday	Onion 110g Chili 30g Garlic 10g	Picture taken by phone	Easily record the type of food consumed
9	07:14 PM Saturday	Pear 85g Lemon 10g	Picture taken by phone	Easily record the type of food consumed

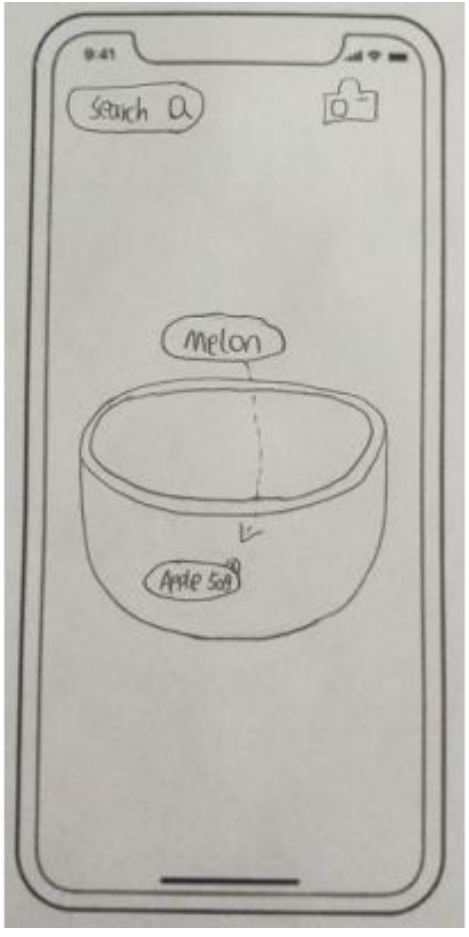
Note: All recorded times are Beijing time, not Sydney time

Difficulties

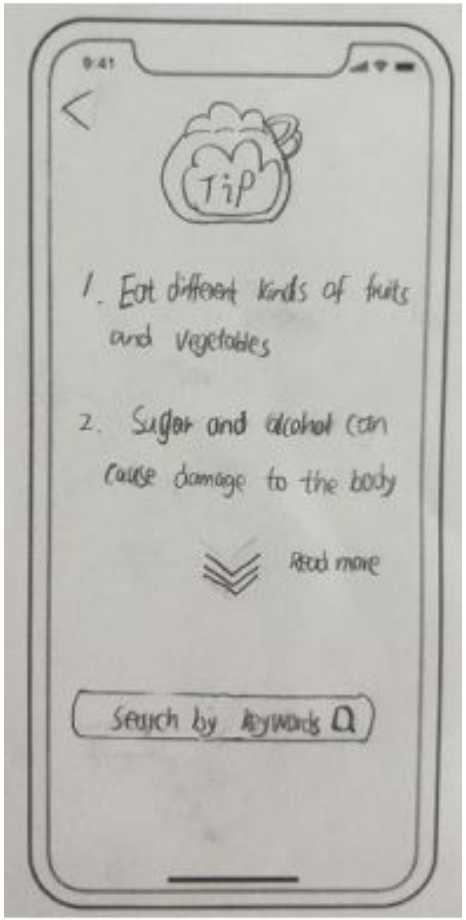
1. Since Chinese meals are not divided into meals, it is difficult to accurately record the intake of vegetables.
2. Only the flesh of the fruit can be eaten, so the weight is difficult to accurately record.
3. Sometimes forget to take pictures at the first time

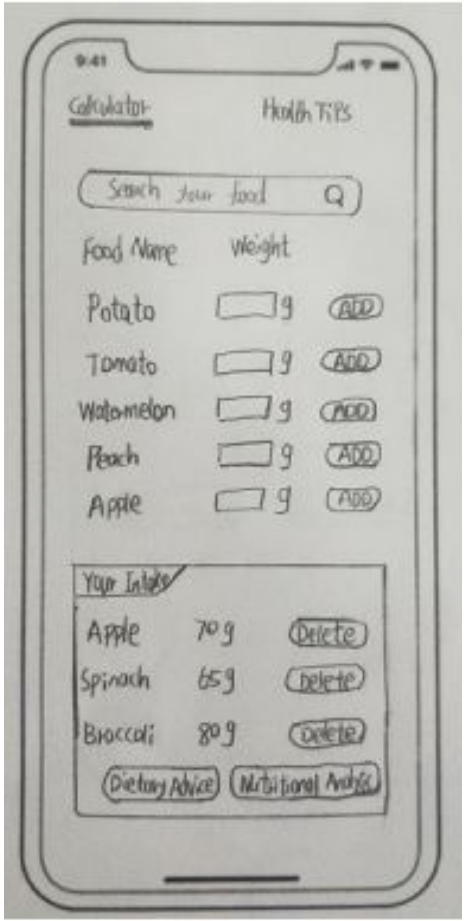
Appendix - Jingqi Ma (Early prototypes)

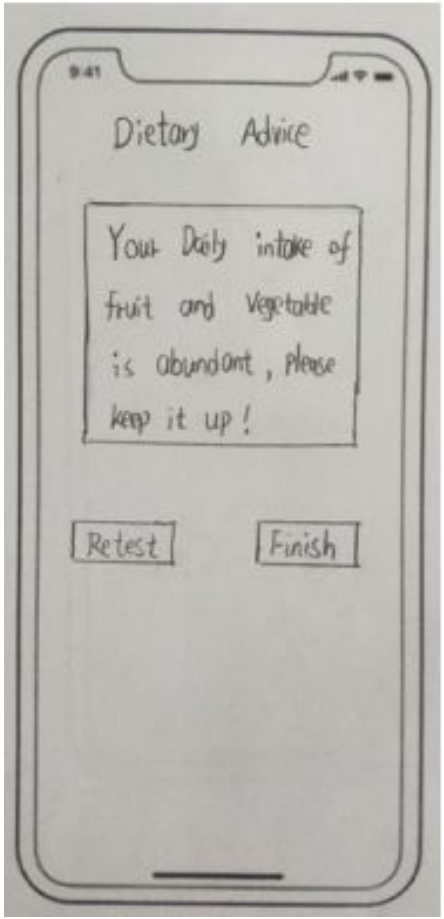


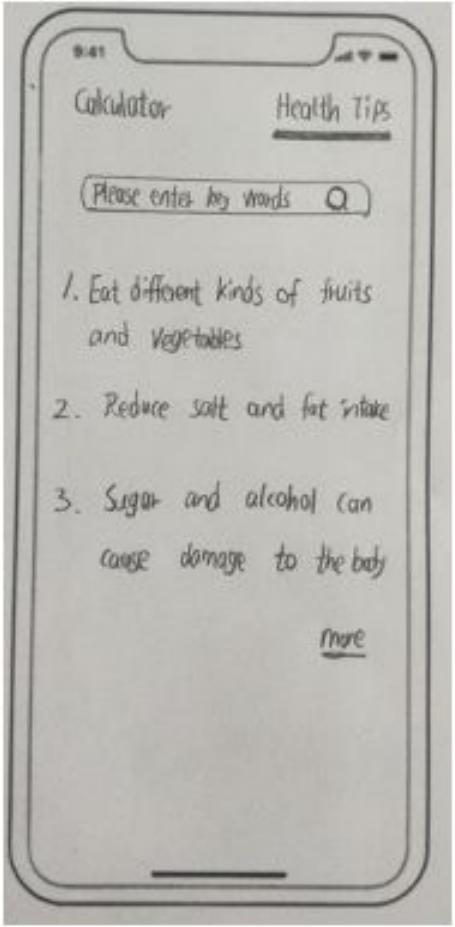


Appendix - Jingqi Ma (Early Prototypes)

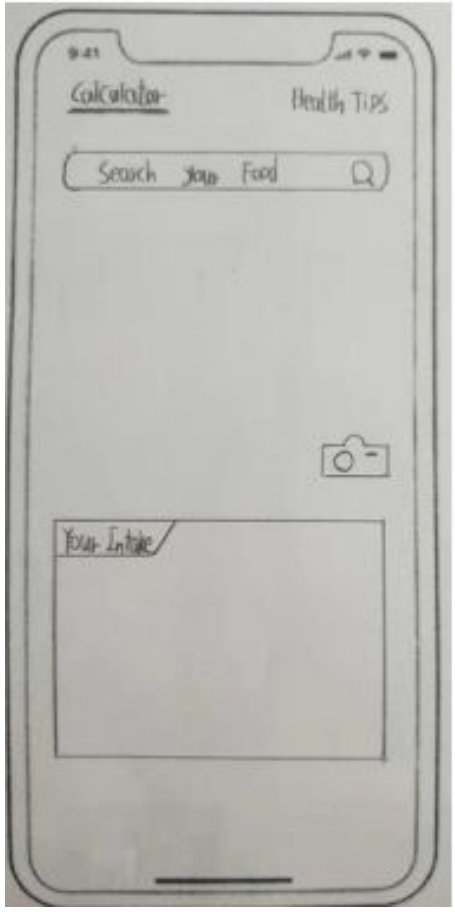


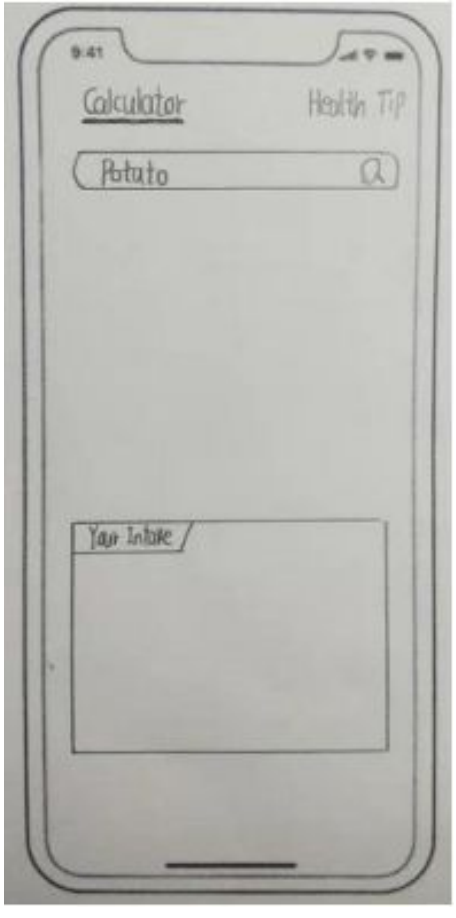




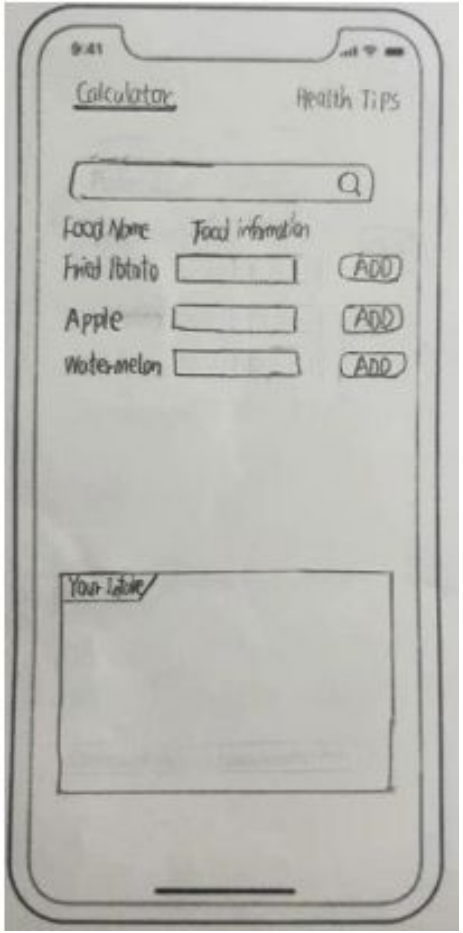


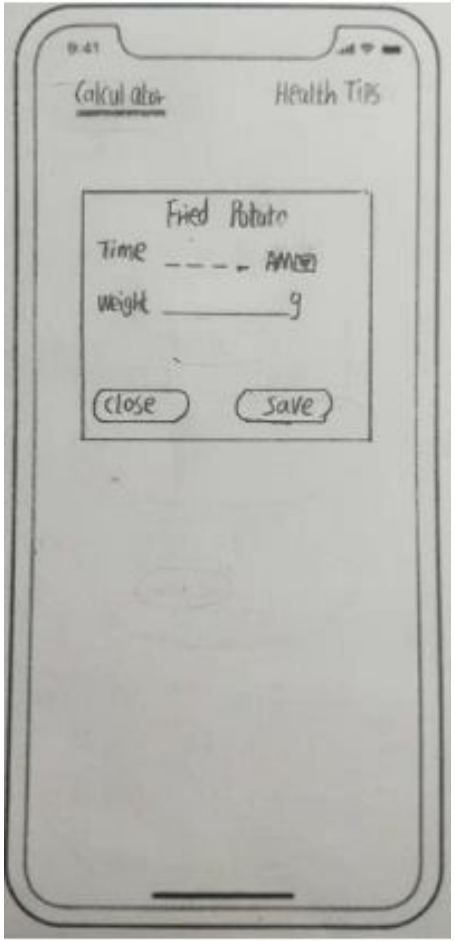
Appendix - Jingqi Ma (Design Exploration)

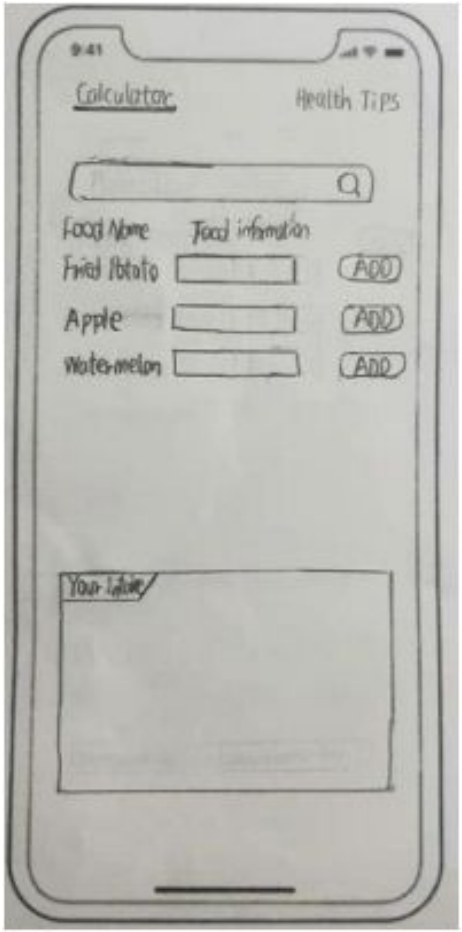


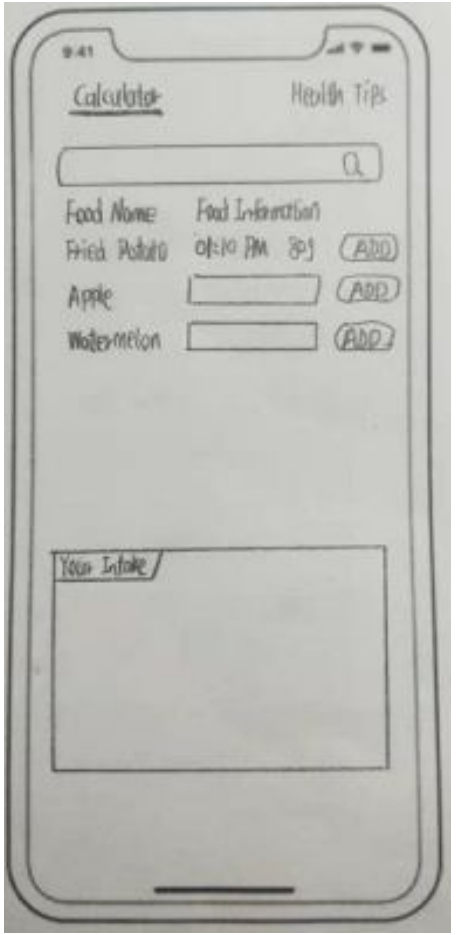


Appendix - Jingqi Ma (Design Exploration)

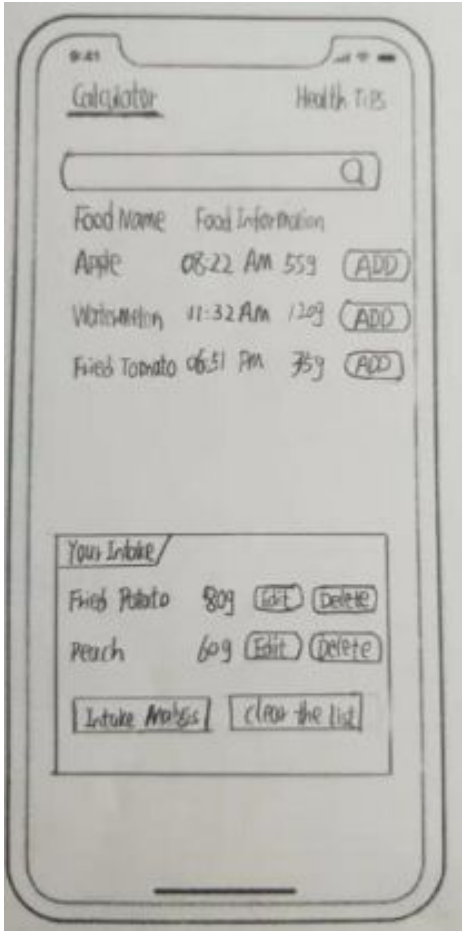


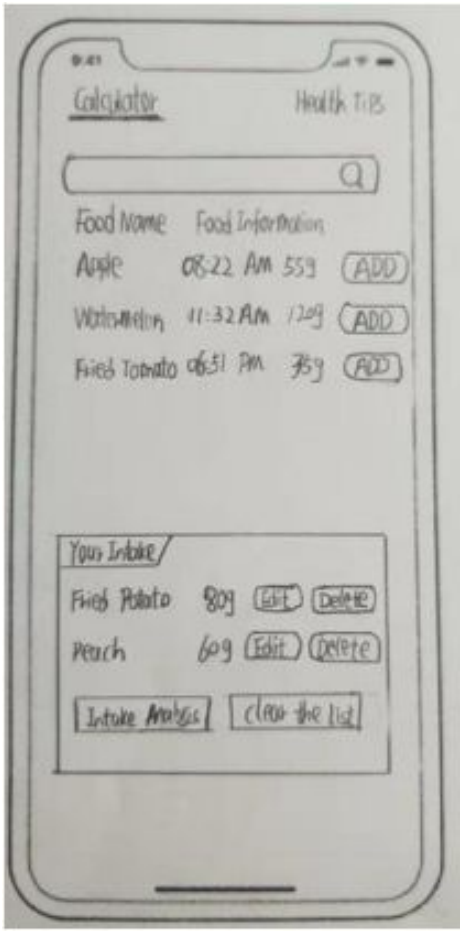


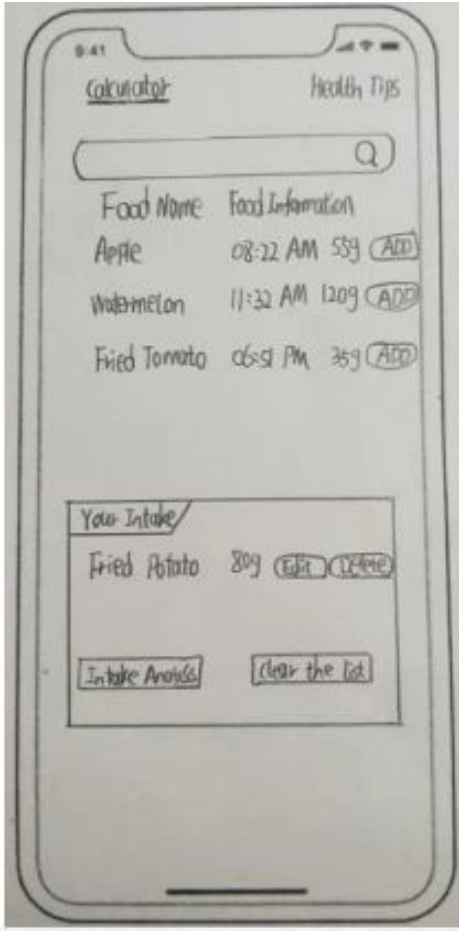




Appendix - Jingqi Ma (Design Exploration)







Appendix - Jingqi Ma (Think-aloud)

User ID	03
Task ID	1
Overall success?	Yes
	Task1: Suppose you want to log your dinner's vegetable intake, what should you do? **Observation**
00:00	1. Interviewee click the Dinner button.
00:00	2. Interviewee click the search Box.
00:00	3. Interviewee click the Search button.
00:01	4. Interviewee view the search list.
00:01	5. Interviewee click the Select button behind the Fired Potato.
00:01	6. Interviewee click the Food information Box.
00:01	7. Interviewee enter the data of Fired Potato.
00:02	8. Interviewee click the Save button.
00:02	9. Interviewee click the Add button. **User Comments**: 1. 'Dinner? It should be this one'. 2. 'I think need to search the vegetable first'. 6. 'This step should let me enter the information'. 9. 'Oh, I can add it now'.
Summary of key problems observed	None
Other notes	None

Appendix - Jingqi Ma (Think-aloud)

User ID	03
Task ID	2
Overall success?	Yes
	Task2: Suppose you want to remove one vegetable from the intake list, what should you do? **Observation** 00:00 1. Interviewee click the Delete button. 00:00 2. Interviewee view the confirm page. 00:00 3. Interviewee click the Yes button. 00:01 4. Interviewee view the intake list. **User Comments**: 1. 'Remove the vegetable from the list?' 4. 'Ok, it is already delete'.
Summary of key problems observed	None
Other notes	None

Appendix - Jingqi Ma (Think-aloud)

User ID	03
Task ID	3
Overall success?	Yes
	Task3: Suppose that, on reflection, you realize that you have over-estimated the vegetables you ate for dinner. So, for today, you now think you actually ate only 2 serves. Correct the logged record for today. **Observation** 00:00 1. Interviewee click the My Record button. 00:00 2. Interviewee click the EDIT button. 00:00 3. Interviewee Adjust the Broccoli number from 3 to 2. 00:01 4. Interviewee click the Save button. 00:01 5. Interviewee click the My Record button again. 00:01 6. Interviewee click the EDIT button to view the information update or not. **User Comments**: 3. 'Oh, I can adjust the number at here '. 6. 'I can click this go back home'.
Summary of key problems observed	There no Back button for Interviewee go back to the information list. Interviewee need to click the Home button go back home first.
Other notes	None

Appendix - Jingqi Ma (Think-aloud)

User ID	03
Task ID	4
Overall success?	Yes
	Task4: Suppose you now remember about two cups of lettuce you ate at lunch, but you cannot recall how many serves that would make. Find out how many serves of 2 cups of lettuce. Then log this. **Observation** 00:00 1. Interviewee click the Health Tips button. 00:00 2. Interviewee click the search Box. 00:00 3. Interviewee enter the lettuce serves and click the Search button. 00:01 4. Interviewee view the search list. 00:01 5. Interviewee click the Search button behind the Lettuce Serve. 00:01 6. Interviewee view the Lettuce Serve information. **User Comments**: 1. It may be in this page'. 2. 'I think need to search first'. 6. 'Oh, there it is'.
Summary of key problems observed	None
Other notes	None

Appendix - Jingqi Ma (Think-aloud)

User ID	03
Task ID	5
Overall success?	Yes
	Task5: Suppose you have read the section about judging the serves of lettuce and have not read about other types of vegetables. Please tell me which learning topics you have read and which you still need to read? **Observation** 00:00 1. Interviewee view the button on the top list. 00:00 2. Interviewee click the Setting button. 00:00 3. Interviewee click the Mark button. 00:01 4. Interviewee click the Setting button to close the list. **User Comments**: 1. 'Let me view the function first'. 2. 'I think it should be this one'. 3. 'Yes, it is correct'.
Summary of key problems observed	The interviewee has some doubts about the button to choose after hearing the question.
Other notes	None

Appendix - Jingqi Ma (Think-aloud)

User ID	03
Task ID	6
Overall success?	Yes
00:00 00:00 00:00 00:01	Task6: Suppose you want to know which chapters you have read or a browsing record, what should you do? **Observation** 1. Interviewee click the History button. 2. Interviewee view the chapter list. 3. Interviewee click the Tick button of Chapter of 1.7. 4. Interviewee view the chapter list. **User Comments**: 1. 'may be this one'.
Summary of key problems observed	None
Other notes	None

Appendix - Jingqi Ma (Think-aloud)

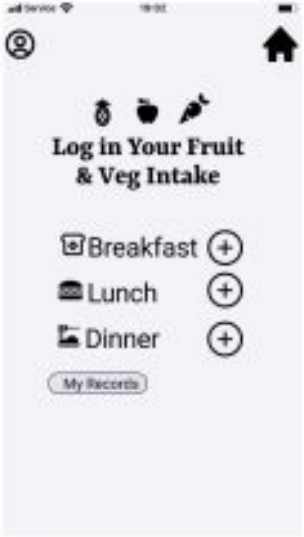
User ID	03
Task ID	7
Overall success?	Yes
	Task7: Suppose you find that you don't know the name of some vegetables. How do you get these vegetables' information? **Observation** 00:00 1. Interviewee click the Camera icon. 00:00 2. Interviewee click the take picture button to take a picture of the unknown vegetable. 00:00 3. Interviewee click the green tick. 00:01 4. Interviewee view the information of the vegetable. 00:01 5. Interviewee click the Cancel button. **User Comments**: 1. 'Unknown Vegetable? It should be this one'. 2. 'Use the camera to identify the vegetable?' 4. 'This is the information'.
Summary of key problems observed	None
Other notes	None

Appendix - Jingqi Ma (Think-aloud)

User ID	03
Task ID	8
Overall success?	Yes
	Task8: Suppose you eat a certain salad with different fruits every day and you want to take a picture and enter this salad as a new food type, what would you do? **Observation** 00:00 1. Interviewee click the Camera icon. 00:00 2. Interviewee click the take picture button to take a picture of the salad. 00:00 3. Interviewee click the green tick. 00:01 4. Interviewee add the information of the salad. 00:01 5. Interviewee click the Done button 00:01 6. Interviewee view the Saved food list. **User Comments**: 1. 'Add new food type, maybe use this way'. 6. 'Ok, it finish.'
Summary of key problems observed	None
Other notes	None

Appendix - Jingqi Ma (Cognitive Walkthrough)

Task: User want to log the dinner's vegetable intake.



Action1: Click the Dinner button
CW: 1. Users can clearly see the dinner button on the home page.
2. The user knows that clicking the dinner button can start recording the vegetables consumed for dinner.

Action2: Click the search box and enter the name of vegetable.
CW: 1. User can clearly see the search box.
2. Users know that clicking the search box can search for vegetables by entering keywords.

Appendix - Jingqi Ma (Cognitive Walkthrough)

Action4: Click the Select button

CW: 1. User can clearly see the food list and Select button.

2. The user knows that they need to click the select button to select the vegetables in the search list.

Action3: Click the search button

CW: 1. User can clearly see the search button.

2. The user has app experience and knows that the food can be added to the list after the search is completed.

Appendix - Jingqi Ma (Cognitive Walkthrough)

Action5: Click the Food information box

CW: 1. User can clearly see the Food Information box. Users know that they need to fill in food information

2. Users know that they need to fill in the food information to add vegetables to the list.

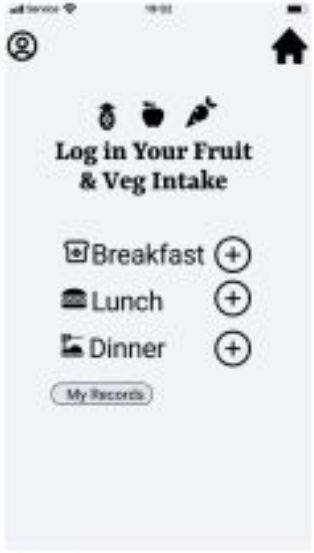
Action6: Enter the Food information and click Save button

CW: 1. User can clearly see the Information box and Save button. Users know click the Save button can save the food's information.

2. Users know that they only need to save the food information to add vegetables to the list.

Appendix - Jingqi Ma (Cognitive Walkthrough)

Task: Users want to edit the record of the intake today.



Action1: Click the My Record button

CW: 1. Users can clearly see the My Record button on the home page. The user knows that clicking the My Record button can enter the user Record page

2. The user knows that the record can be edited by entering the user Record page.

Action7: Click the Add button

CW: 1. User can clearly see the Add button.

2. Users know click the Add button can add the food's information into the intake box.

Appendix - Jingqi Ma (Cognitive Walkthrough)

Action3: Adjust the number of servings and click the Save button
CW: 1. Users can clearly see the Adjust button and SAVE button on the home page. The user knows that clicking the Adjust button can adjust the number of servings.
2. The user know click the Save button can save the edited information.

Action2: Click the EDIT button
CW: 1. Users can clearly see the EDIT button on the home page. The user knows that clicking the EDIT button can edit the record.
2. The user can edit the record to indicate a more successful step.

Appendix - Jingqi Ma (Cognitive Walkthrough)

Task: User can find out the serves of 2 cups of lettuce

Action1: Click the Health Tips button on the top list.
CW: 1. Users can clearly see the Health Tips button on the home page. The user knows that find information in another page.
2. The user knows skip to health tips can enquiry the serves of 2 cups of lettuce.

Action2: Select the Lettuce Serve and click the search button
CW: 1. User can clearly see the search result and search button.
2. Users know that clicking the search button can get the result of the serves of lettuce.

Appendix - Jingqi Ma (Cognitive Walkthrough)

Task: User can know which learning topics have read and which still need to read

Action3: Click the Back button

CW: 1. User can clearly see the Back button on the top list.

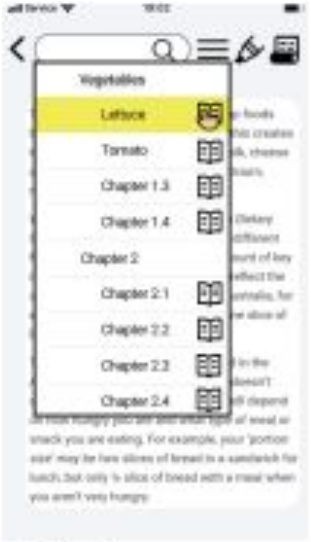
2. Users know that clicking the back button can back to the last page.

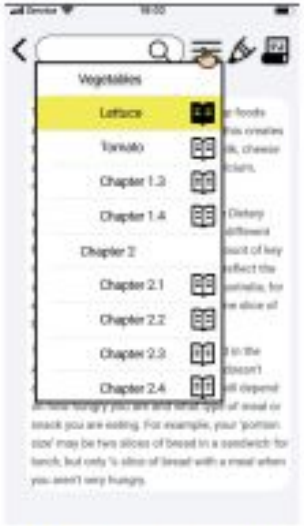
Action1: Click the Setting button on the top list.

CW: 1. Users can clearly see the Setting button on the top list. The user knows can make mark which learning topics have read.

2. The user knows the next step is mark the have read topic.

Appendix - Jingqi Ma (Cognitive Walkthrough)





Action3: Click the Setting button again.
CW: 1. Users can clearly see the topic is already marked. The user knows click the Setting button to close page.
2. The user knows close the setting page is completing the task successfully.

Action2: Click the Mark button.
CW: 1. Users can clearly see the Mark button. The user knows can make mark by clicking the Mark button.
2. The user knows the next step is closing the setting page after mark the have read topic.

Appendix - Jingqi Ma (SEQ)

SEQ

Overall rate of the task

Very Difficult						Very Easy
1	2	3	4	5	**6**	7

SEQ

Overall rate of the task

Very Difficult						Very Easy
1	2	3	4	5	**6**	7

SEQ

Overall rate of the task

Very Difficult						Very Easy
1	2	3	4	5	6	**7**

SEQ

Overall rate of the task

Very Difficult						Very Easy
1	2	3	4	5	6	**7**

SEQ

Overall rate of the task

Very Difficult						Very Easy
1	2	3	4	5	**6**	7

SEQ

Overall rate of the task

Very Difficult						Very Easy
1	2	3	4	5	6	**7**

SEQ

Overall rate of the task

Very Difficult						Very Easy
1	2	3	4	5	**6**	7

SEQ

Overall rate of the task

Very Difficult						Very Easy
1	2	3	4	5	**6**	7

Appendix - Jingqi Ma (SUS)

SUS

1. I think this system is easy to use

Strongly disagree				Strongly agree
1	2	3	4	**5**

2. I think this system is hard to operation?

Strongly disagree				Strongly agree
1	2	3	4	5

3. I think this system is very beautiful

Strongly disagree				Strongly agree
1	2	3	4	**5**

4. I think the design of this system is too ugly

Strongly disagree				Strongly agree
1	2	3	4	5

5. I can easily complete the current task using this system

Strongly disagree				Strongly agree
1	2	3	**4**	5

6. It is a big challenge for me to use this system to complete the current task

Strongly disagree				Strongly agree
1	2	3	4	5

7. I think the function design of this system is very friendly

Strongly disagree				Strongly agree
1	2	3	4	**5**

8. I think the functional design of this system is too inhumane

Strongly disagree				Strongly agree
1	2	3	4	5

9. I will use this system for a long time

Strongly disagree				Strongly agree
1	2	3	**4**	5

10. I don't want to use this system one more.

Strongly disagree				Strongly agree
1	2	3	4	5

Appendix - Dongrui Wang

Content:

1.Prototype for task4

2.Persona

3.Cogntive walkthrough for 4 concrete tasks

4.Think- aloud study for 8 tasks

5.Background questionnaire

6.SUS & SEQ

7. Summary of Cogntive walkthroughsection in assignment 2 report

Appendix - Dongrui Wang (**Work in the Week 7)**

Learn about the number of serves of vegetables you should eat each day (using the resources below).
6. A standard serve is about 75g (100–350kJ)

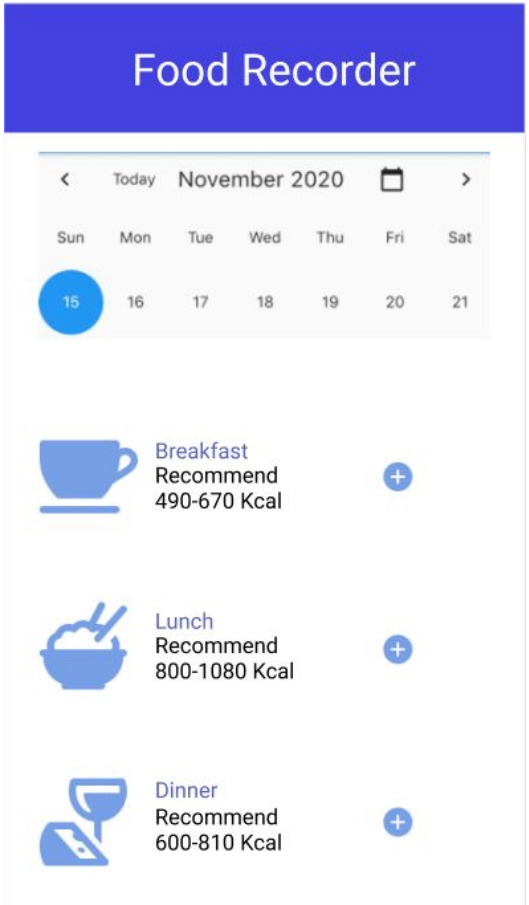
Record your fruit and vegetable intake over two (2) days, preferably one on a weekend and one on a weekday.
Friday - 9.17:
Lunch: Grilled beef(300g) with rice & broccoli
Dinner: 1 Pear & Mango Flavored Yogurt
Saturday – 9.18:
Lunch: Grilled Eel with rice & broccoli
Dinner: 1 watermelon cut & strawberry Flavored Yogurt

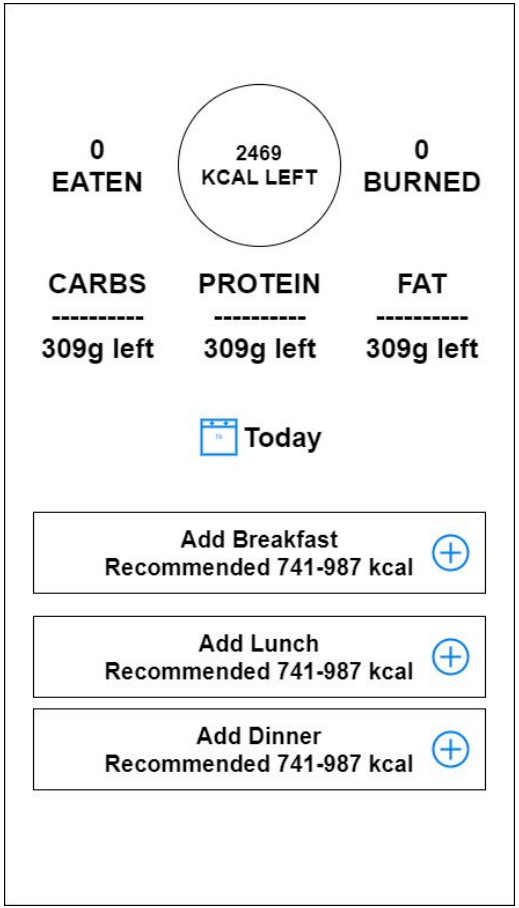
Record the time that you actually created each record.
Every record is after a meal Lunch record time is 12.30 and Dinner record time is 18.30.

Make notes about the way you decided to do the recording, and why you chose that approach.
Using by health App. because I am losing weight, so I have to control and record my diet and weight every day.

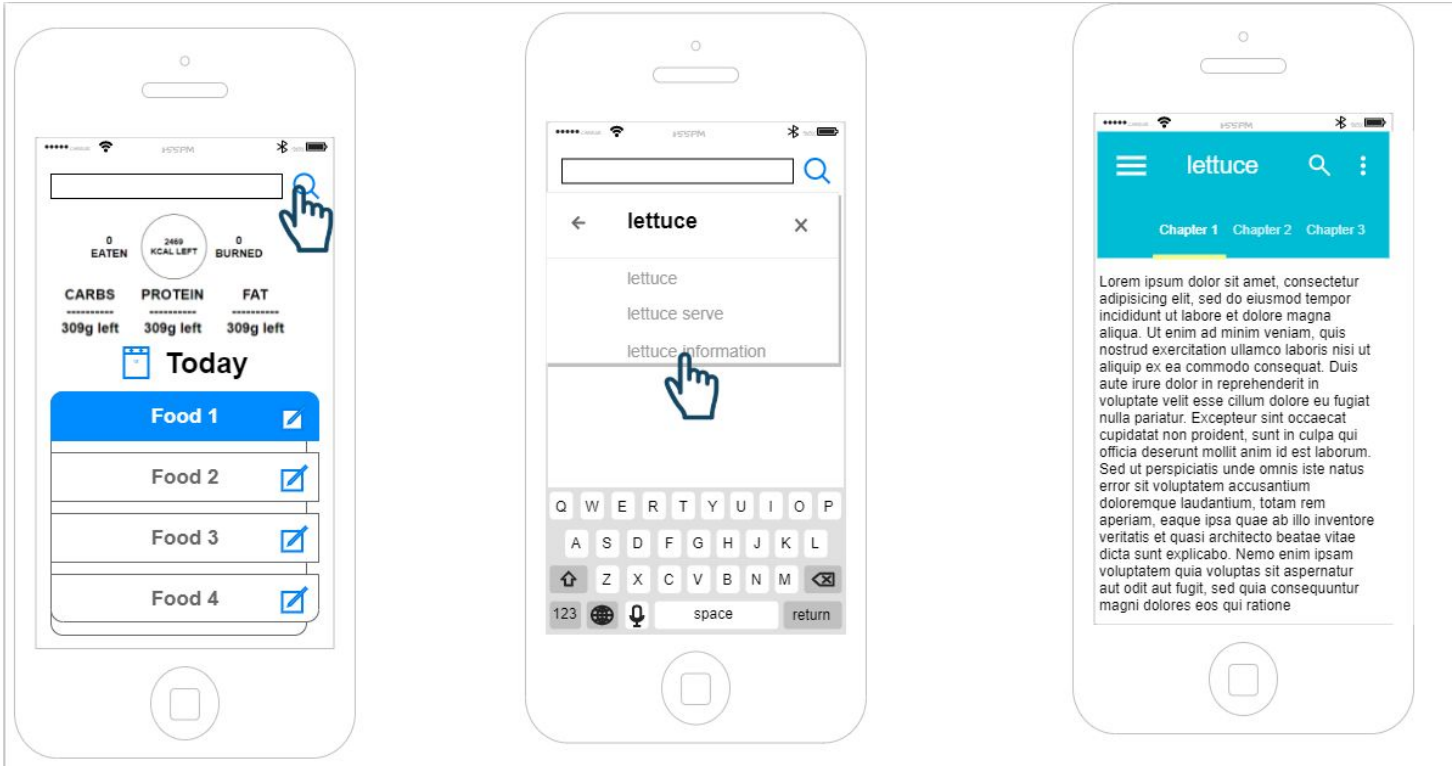
Make notes about any difficulties you had getting a complete 2-day record - taking care to focus on the assignment goal of creating an e-textbook that helps people learn how to estimate their vegetable intake.
Each time the record does not know how heavy the intake of food.

Appendix - Dongrui Wang (Early prototypes)

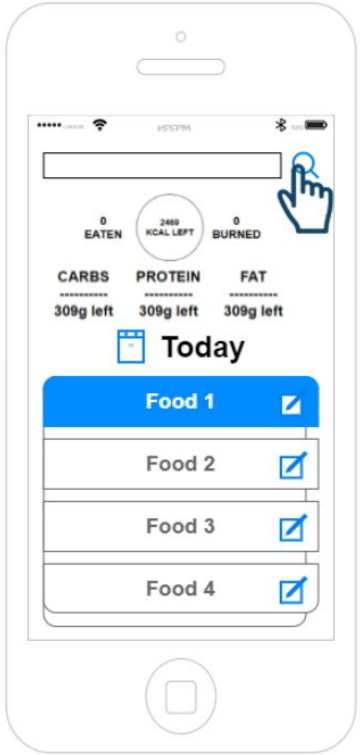


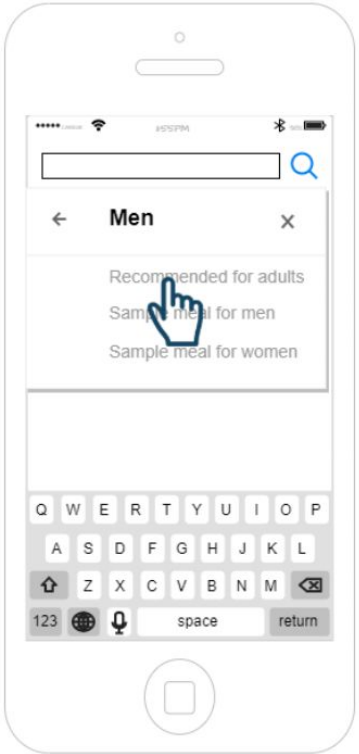


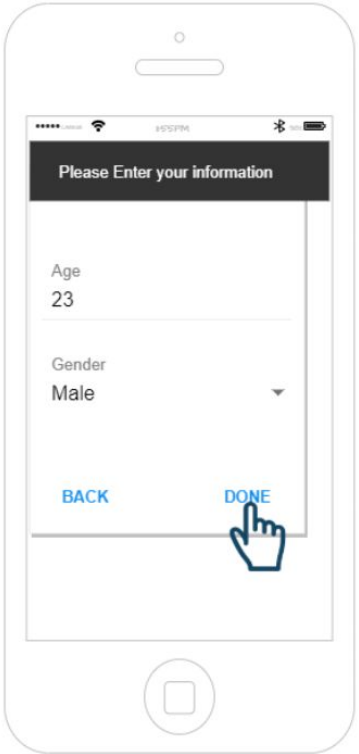
Appendix - Dongrui Wang (Design exploration 1)

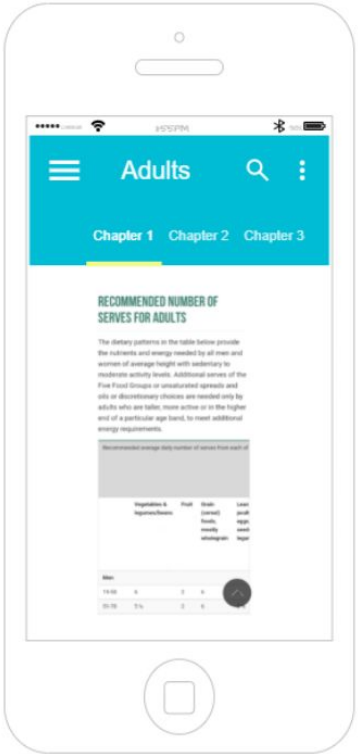


Appendix - Dongrui Wang (Design exploration 2)

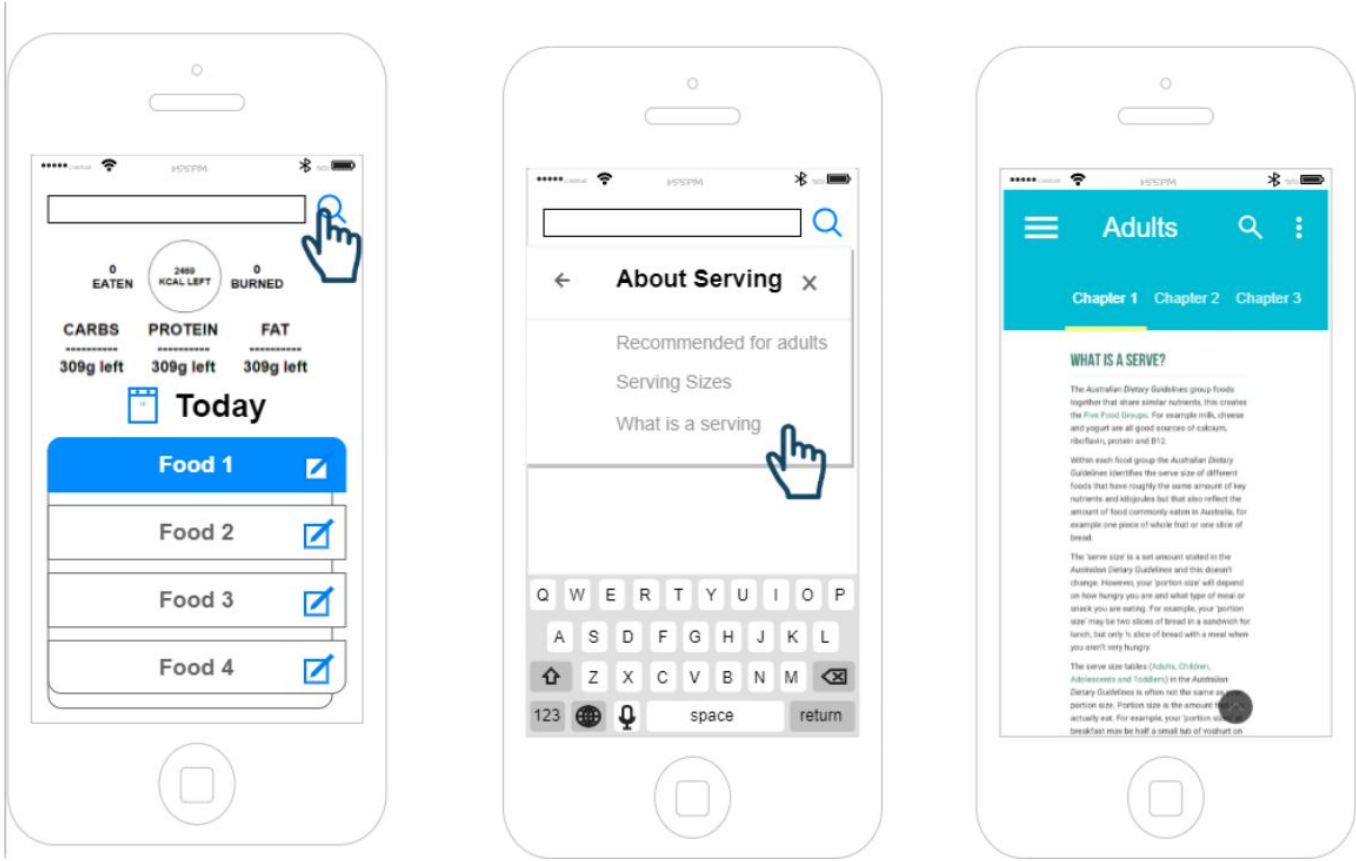








Appendix - Dongrui Wang (Design exploration 3)



Appendix - Dongrui Wang (Think aloud 1)

User ID	04
Task ID	01
Overall success?	Yes
0:00 – 0:01 0:01 – 0:02	Task 1: Suppose you want to log your dinner's vegetable intake, what should you do? **Observations:** 1. User opened application and go to log in intake interface 2. User clicked the "Add dinner" button 3. User clicked the search box 4. User entered the keyword "Potato" and click "Search" button 5. User clicked the "Search" button in the select list 6. User clicked the food information box and entered the food information 7. User clicked the "Save" button 8. User added the food into intake list **User comments**: In general, the interface and buttons are clear to me and it is easy to know what to do at each step, but the enter food information step I need to think about which button to click there to add an information.
Summary of key problems observed	None
Other notes	None

Appendix - Dongrui Wang (Think aloud 2)

User ID	04
Task ID	02
Overall success?	Yes
0:00 – 0:01	Task 2: Suppose you want to remove one vegetable from the intake list, what should you do? **Observations:** 1. User went to calculator interface 2. User clicked the "Delete" button in "Your intake" component 3. User clicked the "Yes" button on the dialog box **User comments**: The task process is simple and there is no difficulty in operating it.
Summary of key problems observed	None
Other notes	None

Appendix - Dongrui Wang (Think aloud 3)

User ID	04
Task ID	03
Overall success?	Yes
0:00 – 0:01	Task 3: Suppose that, on reflection, you realize that you have over-estimated the vegetables you ate for dinner. So, for today, you now think you actually ate only 2 serves. Correct the logged record for today. **Observations:** 1. User in log in intake interface 2. User clicked the "My records" button 3. User clicked the "Edit" button at the second record 4. User change the number of broccoli 3 to 2 and click "Save" button 5. User viewed the change successfully message and click "My records" button back to initial interface **User comments**: Overall good, there is a suggestion in reord interface, the recorded information interface is a bit messy can replace the delete and edit button into an icon
Summary of key problems observed	None
Other notes	None

Appendix - Dongrui Wang (Think aloud 4)

User ID	04
Task ID	04
Overall success?	Yes
0:00 – 0:01	Task 4: Suppose you now remember about two cups of lettuce you ate at lunch, but you cannot recall how many serves that would make. Find out how many serves of 2 cups of lettuce. Then log this. **Observations:** 1. User went to Calculator interface and clicked the "Health tips" button 2. User clicked the search box and entered keyword "Lettuce". 3. User chose the Lettuce Serve and clicked the "search" icon 4. User read the information **User comments**: After clicking on health tips, it will be redirected to the search box, or you need to have an initial page for the e-textbook.
Summary of key problems observed	None
Other notes	An initial page may need to be added

Appendix - Dongrui Wang (Think aloud 5)

User ID	04
Task ID	05
Overall success?	Yes
0:00 – 0:01	Task 5: Suppose you have read the section about judging the serves of lettuce and have not read about other types of vegetables. Please tell me which learning topics you have read and which you still need to read. **Observations:** 1. User went to e-textbook interface. 2. User think and clicked the "Menu" button on the nav bar 3. User chose the lettuce chapter and clicked the white book icon 4. User clicked the "Menu" button again to close. **User comments**: The overall layout of the e-textbook interface is good, but for my first time using the app, I need to think which is the chapter button and the notification of what I have read.
Summary of key problems observed	None
Other notes	User clicked the history icon first and back to clicked the menu button

Appendix - Dongrui Wang (Think aloud 6)

User ID	04
Task ID	06
Overall success?	Yes
0:00 – 0:01	Task 6: Suppose you want to know which chapters you have read or a browsing record, what should you do? **Observations:** 1. User went to the e-textbook interface. 2. User clicked the history icon 3. User clicked the chapter 1.7 icon to red 4. User try to clicked the bin icon and delete the history **User comments**: Overall not bad, delete History is a useful feature
Summary of key problems observed	None
Other notes	None

Appendix - Dongrui Wang (Think aloud 7)

User ID	04
Task ID	07
Overall success?	Yes
0:00 – 0:01	Task 7: Suppose you find that you don't know the name of some vegetables. How do you get these vegetables' information? **Observations:** 1. User went to Calculator interface and clicked "Camera" button 2. Then user clicked take photo. 3. User clicked green tips button 4. User viewed the food information 5. User click the "cancel" button and go back to calculator interface **User comments**: Good, this is a novel feature I can also continue searching for other foods by the search box on the food information interface
Summary of key problems observed	None
Other notes	None

Appendix - Dongrui Wang (Think aloud 8)

User ID	04
Task ID	08
Overall success?	No
0:00 – 0:01	Task 8: Suppose you eat a certain salad with different fruits every day and you want to take a picture and enter this salad as a new food type, what would you do? **Observations:** 1. User went to Calculator interface and clicked "Camera" button 2. Then user clicked take photo. 3. User clicked green tips button 4. User clicked done button and viewed saved food list **User comments**: This is a great feature but how do you distinguish it from the previous task in one button?
Summary of key problems observed	Users don't know how two different functions can be implemented in one button
Other notes	New components may need to be added

Appendix - Dongrui Wang (Cognitive Walkthrough 1)

Cognitive Walkthrough for prescribed task 1

User goal: The user can log the number of serves of vegetables they ate in a whole day.

Prescribed task 1:
Suppose you want to log your dinner's vegetable intake, what should you do?

Task processes:
1. Open log in veg intake interface
2. Click add dinner button
3. Click search button
4. Enter the food name in the search box
5. Select the food from search list
6. Enter the selected food information
7. Click save button

Is the correct action obvious enough to the user? ("Know what to do?" - Does the user know how to complete the task?)
Yes, the interface is intuitive, all buttons and information are visible on the interface

2. Will user understand instructions?
Yes, all buttons and other component convey a clear message and there are no similar buttons.

3. Will user interpret machine action correctly or Will the user associate and interpret the response from the action correctly?
Yes, current jump to the desired interface after each operation

Appendix - Dongrui Wang (Cognitive Walkthrough 2)

Cognitive Walkthrough for prescribed task 2

User goal: The user can correct accidental logging actions.

Prescribed task 2:

[Current state of logger is 3 serves for today]

Suppose that, on reflection, you realise that you have over-estimated the vegetables you ate for dinner. So, for today, you now think you actually ate only 2 serves. Correct the logged record for today.

Task Processes

1. Open log in veg intake interface
2. Click my records button
3. Click edit button at second record
4. Change the number of broccolis 3 to 2
5. Click save button
6. View the change successfully tips

Is the correct action obvious enough to the user? ("Know what to do?" - Does the user know how to complete the task?)
Yes, the interface is intuitive, all buttons and information are visible on the interface

2. Will user understand instructions?
Yes, all buttons and other component convey a clear message and there are no similar buttons.

3. Will user interpret machine action correctly or Will the user associate and interpret the response from the action correctly?
Yes, current jump to the desired interface after each operation

Appendix - Dongrui Wang (Cognitive Walkthrough 3)

Cognitive Walkthrough for prescribed task 3

User goal: The logger is linked to the e-textbook information about serving sizes

Prescribed task 3:

[Current state of logger is 2 serves for today]

Suppose you now remember about two cups of lettuce you ate at lunch, but you cannot recall how many serves that would make. Find out how many serves 2 cups of lettuce is. Then log this.

[Current state of logger should be 4 serves for today – if not, tell the user about the correct serves and you get back to correct state]

Task processes:

1. Open the calculator interface
2. Click the health tips
3. Click the search button in search box
4. Enter the lettuce keyword
5. choose the lettuce serve
6. Jump to e-textbook interface and read the information
7. Record the information

Is the correct action obvious enough to the user? ("Know what to do?" - Does the user know how to complete the task?)
Yes, the interface is intuitive, all buttons and information are visible on the interface

2. Will user understand instructions?
Yes, all buttons and other component convey a clear message and there are no similar buttons.

3. Will user interpret machine action correctly or Will the user associate and interpret the response from the action correctly?
Yes, current jump to the desired interface after each operation

Appendix - Dongrui Wang (Cognitive Walkthrough 4)

Cognitive Walkthrough for prescribed task 4

User goal: The user can track their e-textbook progress

Prescribed task 4:

[Current state e-textbook is that the user has read the section about judging the serves of lettuce and has not read about other types of vegetables]

Please tell me which learning topics you have read and which you still need to read.

Task processes:

1. Open the e-textbook interface
2. Click the Menu button
3. Select the current chapter
4. Click the white book button
5. Close the menu

Is the correct action obvious enough to the user? ("Know what to do?" - Does the user know how to complete the task?)
Yes, the interface is intuitive, all buttons and information are visible on the interface

2. Will user understand instructions?
No, when selecting a read chapter, the user needs to understand the meaning of the white book button

3. Will user interpret machine action correctly or Will the user associate and interpret the response from the action correctly?
No, users need time to understand why white books turn black

Appendix - Yuhao Xu

Content:

1.Prototype for task5&6

2.Persona

3.Cogntive walkthrough for 4 concrete tasks

4.Think- aloud study for 8 tasks

5.Background questionnaire

6.SUS & SEQ

7. ass2 part 2 Highlights of the interface design process and history

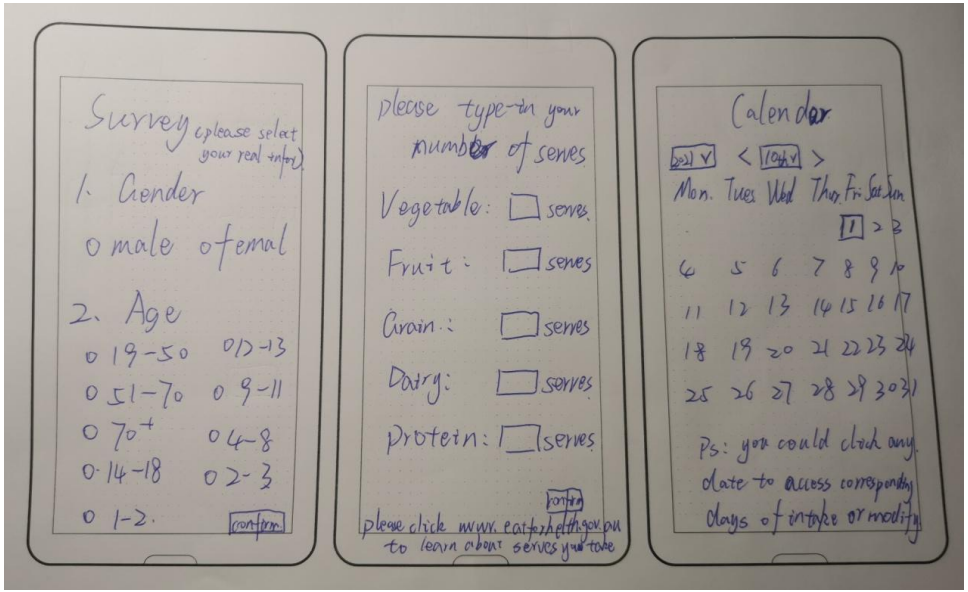
Appendix - Yuhao Xu (Work in the Week 7)

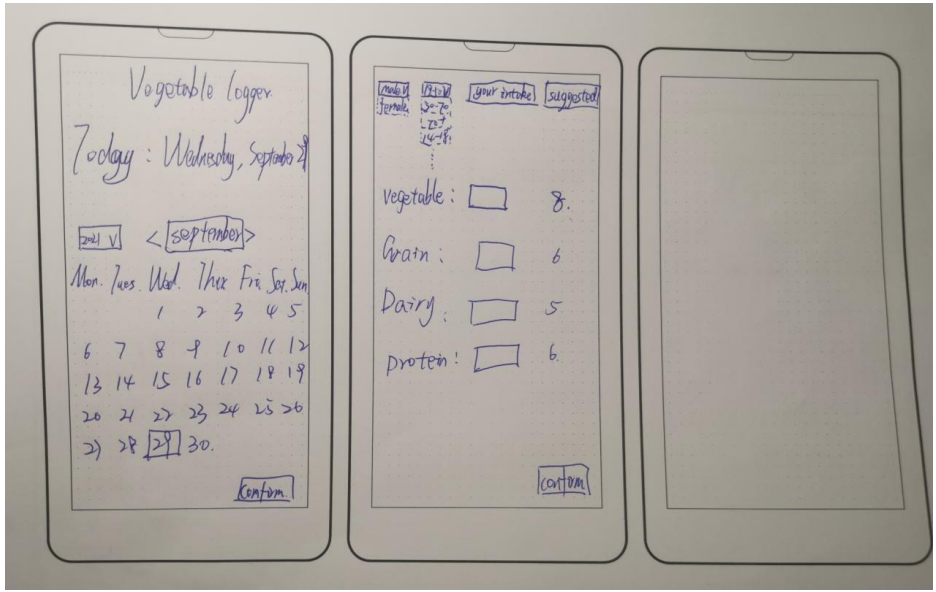
	morning	noon	evening	Sum
9.16(Thursday)	One egg, one cup of milk, three slices of bread	Half a plate of fried broccoli, half a plate of braised pork, a bowl of rice	Half a plate of potatoes stir-fried green peppers, a bowl of porridge	
Serves	1+2+3=6	1+2+1=4	1.5+1=2.5	12.5
9.18(Saturday)	Two eggs, one cup of milk, three slices of bread	Half a sauteed tomato, half a vegetable shrimp, half a fish, and a bowl of rice	Half a dish of scrambled eggs with Onions, half a dish of stir-fried pepo, a bowl of rice porridge, half a baked cake	
Serves	2+2+3=6	1+1+2+1=5	1.5+1+1+1+1=5.5	16.5

recording: take some photographs

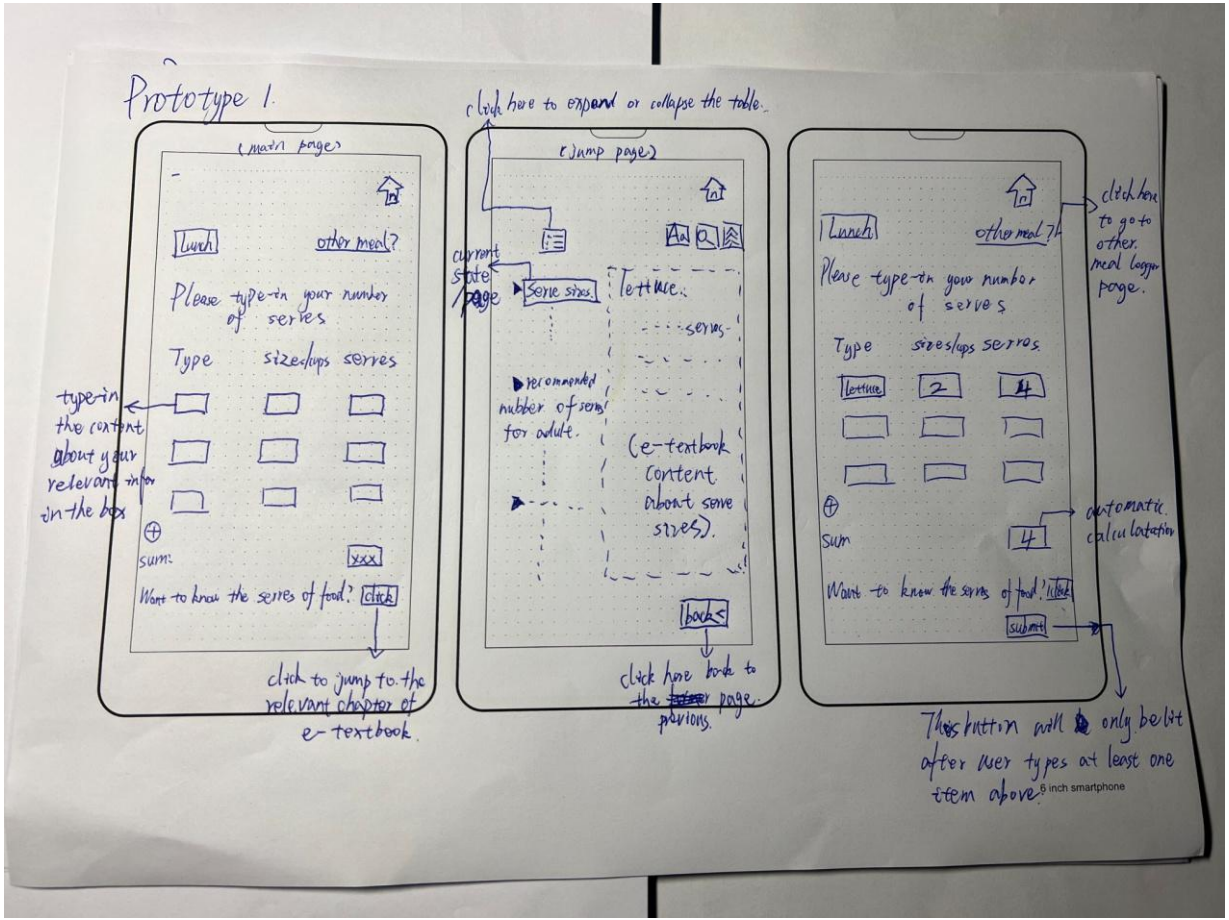
problems:
1. Breakfast time, people are more sleepy, easily confused, it is easy to forget to record. On Saturday morning, I forgot to write it down, just remember what I ate later
2. It is not easy to estimate intake due to different containers
3. The peak intake should be at noon, but it turned out to be more at breakfast, which was baffling

Appendix - Yuhao Xu (Early prototypes)

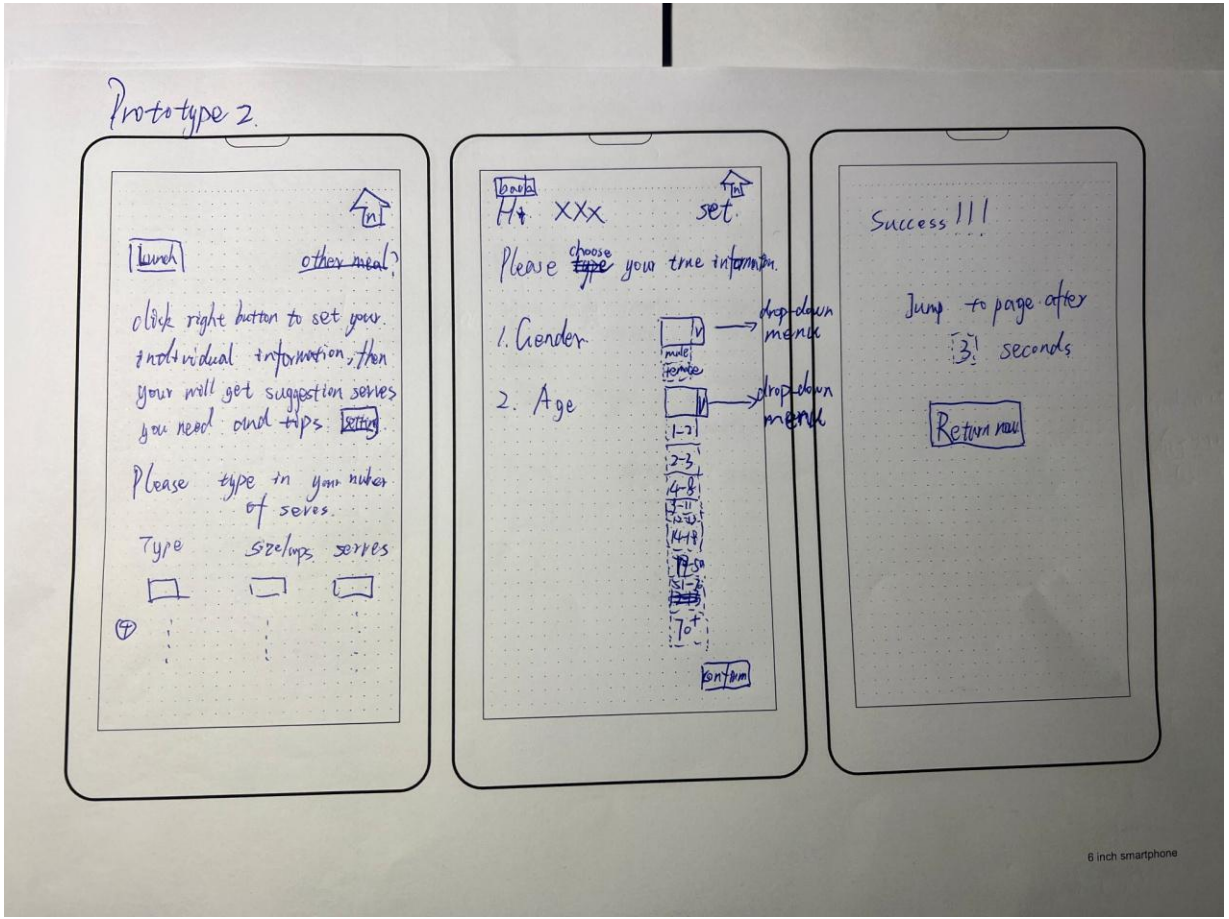




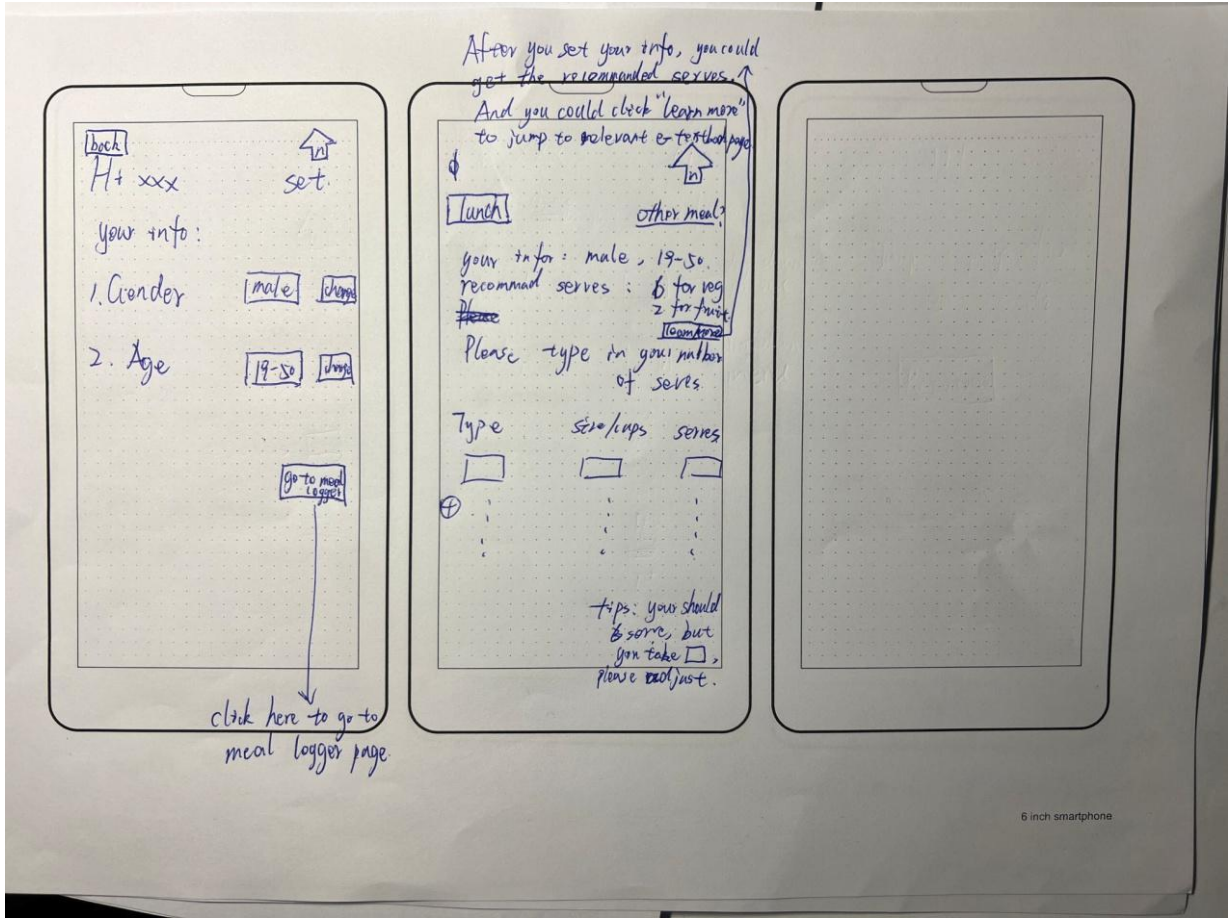
Appendix - Yuhao Xu (Design exploration 1)



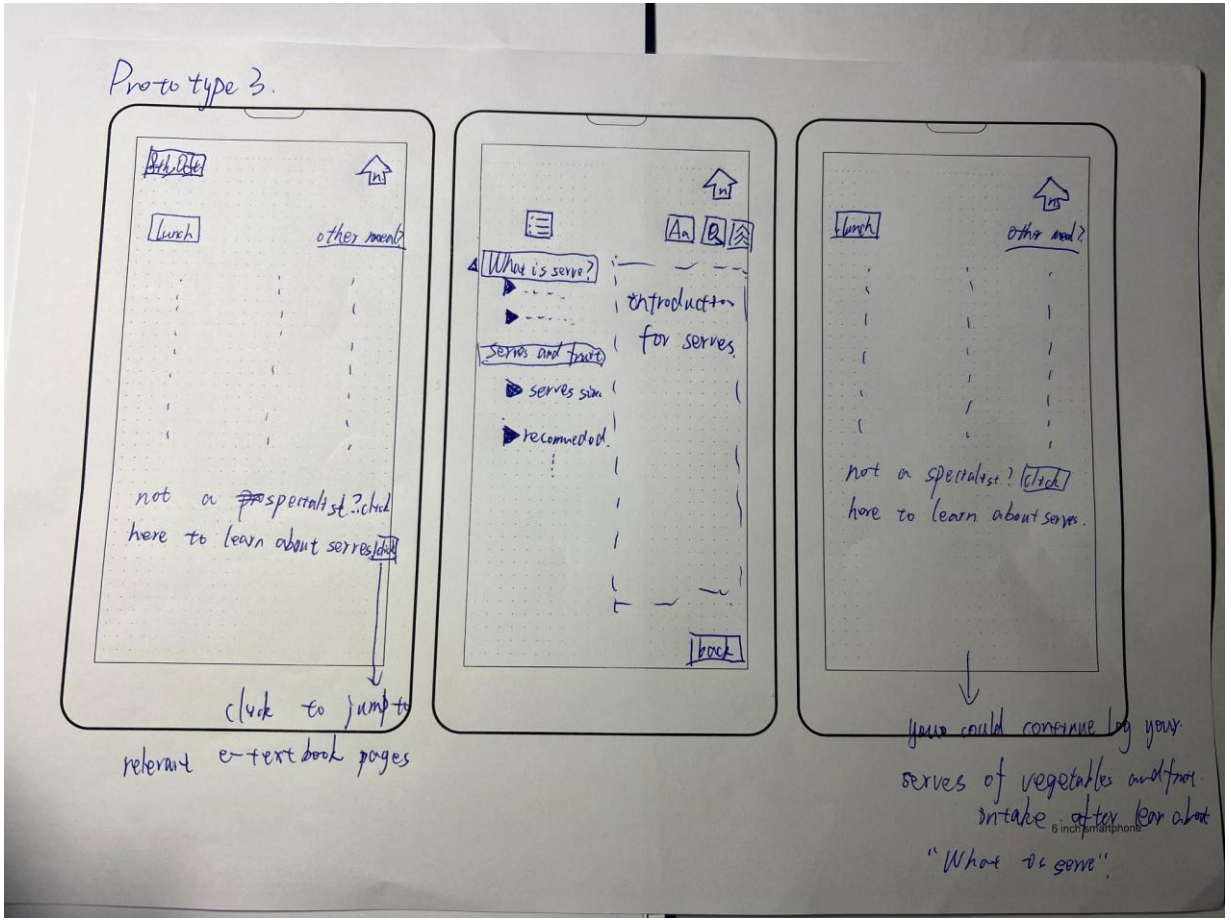
Appendix - Yuhao Xu (Design exploration 2)



Appendix - Yuhao Xu (Design exploration 2)



Appendix - Yuhao Xu (Design exploration 3)



Appendix - Yuhao Xu (Think aloud 1)

User ID	05
Task ID	1
Overall success?	Yes
	Task 1: Suppose you want to log your dinner's vegetable intake, what should you do? (now at home page)
0.00 - 0.01	1. Click on lunch, no response, and then see a plus sign next to it, click the plus sign to add.
0:01 - 0:01	2. Click the search bar to automatically jump to the typed potato page, click search
0:01 - 0:02	3. Select the type of potato and jump to the calculator page
0:02 - 0:03	4. Click the text box to jump to the typing interface, select weight and time
0:03 - 0:03	5. Click Save to jump back to the computer page.
0:03 - 0:03	6. Click Add
Summary of key problems observed	Because it is a ready prototype, the typing part is made into a fixed jump page (so the overall operation is relatively quick), so it can only detect whether some buttons are reasonable, obvious, and whether there are prompts. In this task, the user buttons are more obvious, and the user has almost no obstacles. Except that the page is a bit more complicated.
Other notes	none

Appendix - Yuhao Xu (Think aloud 2)

User ID	05
Task ID	2
Overall success?	Yes
0.00 - 0.00 0:00 - 0:01	task 2. Suppose you want to remove one vegetable from the intake list, what should you do? 1. Click the selected delete button, click the first one, no response, click the second one to jump to the delete confirmation page 2. Click yes to confirm deletion
Summary of key problems observed	Because it is a ready prototype, the typing part is made into a fixed jump page (so the overall operation is relatively quick), so it can only detect whether some buttons are reasonable, obvious, and whether there are prompts. In this task, the user buttons are more obvious, and the user has almost no obstacles.
Other notes	none

Appendix - Yuhao Xu (Think aloud 3)

User ID	05
Task ID	3
Overall success?	Yes
	task 3. Suppose that, on reflection, you realize that you have over-estimated the vegetables you ate for dinner. So, for today, you now think you actually ate only 2 serves. Correct the logged record for today. 0.00 - 0.01 1. Click the my records button to jump to the log page 0:01 - 0:01 2. Select the edit button next to Broccoli to jump to the modification page 0:01 - 0:02 0:02 - 0:03 3. Click the ↓ button to change the number 3 to 2 0:03 - 0:03 4. Click Save 5. Click the my records button to jump to the modified log page
Summary of key problems observed	Because it is a ready prototype, the typing part is made into a fixed jump page (so the overall operation is relatively quick), so it can only detect whether some buttons are reasonable, obvious, and whether there are prompts. In this task, the user buttons are more obvious, and the user has almost no obstacles.
Other notes	none

Appendix - Yuhao Xu (Think aloud 4)

User ID	05
Task ID	4
Overall success?	Yes
	task 4.Suppose you now remember about two cups of lettuce you ate at lunch, but you cannot recall how many serves that would make. Find out how many serves of 2 cups of lettuce. Then log this.
0.00 - 0.01 0:02 - 0:02 0:02 - 0:03 0:03 - 0:03 0:03 - 0:03 0:03 - 0:03	1. Click the search button to jump to the error page 2. Back 3. Finally choose health tips and jump to the e-book page 4. Click search and automatically type keywords 5. Click to confirm search 6. Reading
Summary of key problems observed	Because it is a ready prototype, the typing part is made into a fixed jump page (so the overall operation is relatively quick), so it can only detect whether some buttons are reasonable, obvious, and whether there are prompts. In this task, the only drawback is that the health tip function description is not obvious, which is easy to confuse customers and can be improved.
Other notes	none

Appendix - Yuhao Xu (Think aloud 5)

User ID	05
Task ID	5
Overall success?	Yes
0.00 - 0.00 0:00 - 0:01 0:01 - 0:02	task 5. Suppose you have read the section about judging the serves of lettuce and have not read about other types of vegetables. Please tell me which learning topics you have read and which you still need to read. 1. Click the menu button 2. Click the current reading chapter, there is no response 3. Click the white book button to turn into a black book button
Summary of key problems observed	Because it is a ready prototype, the typing part is made into a fixed jump page (so the overall operation is relatively quick), so it can only detect whether some buttons are reasonable, obvious, and whether there are prompts. In this task, the only shortcoming is that there is no hint between the white book and the black book, which makes it easy for the user to not know what the expression means.
Other notes	none

Appendix - Yuhao Xu (Think aloud 6)

User ID	05
Task ID	6
Overall success?	Yes
0.00 - 0.02 0:02 - 0:03 0:03 - 0:03 0:03 - 0:03	task 6. Suppose you want to know which chapters you have read or a browsing record, what should you do? 1. Click the similar list button in the upper right corner to jump to the history page 2. Click the gray button next to 1.7, the button turns red 3. Click the trash can button, no response 4. Click Back to jump to the calculator page.
Summary of key problems observed	Because it is a ready prototype, the typing part is made into a fixed jump page (so the overall operation is relatively quick), so it can only detect whether some buttons are reasonable, obvious, and whether there are prompts. In this task, the only drawback is that there is no prompt between the gray button and the red button, which makes it easy for the user to not know what it means.
Other notes	none

Appendix - Yuhao Xu (Think aloud 7)

User ID	05
Task ID	7
Overall success?	Yes
	task 7. Suppose you find that you don't know the name of some vegetables. How do you get these vegetables' information?
0.00 - 0.00 0:00 - 0:00 0:01- 0:01 0:01 - 0:02	1. Click the camera button 2. Click the photo button 3. Click √ to confirm that the corresponding vegetable type retrieved is consistent with the actual 4. Click the cancel button to return to the previous page
Summary of key problems observed	Because it is a ready prototype, the typing part is made into a fixed jump page (so the overall operation is relatively quick), so it can only detect whether some buttons are reasonable, obvious, and whether there are prompts. The disadvantage is that there are no other prompts when retrieving related vegetable types, which is easy to mislead users, and more confirmation information needs to be provided.
Other notes	none

Appendix - Yuhao Xu (Think aloud 8)

User ID	05
Task ID	8
Overall success?	Yes
	task 8. Suppose you eat a certain salad with different fruits every day and you want to take a picture and enter this salad as a new food type, what would you do? 0.00 - 0.00 1. Click the camera button 0:00 - 0:01 2. Click the photo button 0:01 - 0:01 3. Click √ to confirm that the corresponding vegetable type retrieved is consistent with the actual 0:01 - 0:02 4. Click Edit, no response 0:02 - 0:03 5. Click the done button and find that it has been saved to the food list 0:03 - 0:03 6. Click back, no response
Summary of key problems observed	Because it is a ready prototype, the typing part is made into a fixed jump page (so the overall operation is relatively quick), so it can only detect whether some buttons are reasonable, obvious, and whether there are prompts. The disadvantage is that the done button is unclear and cannot be returned.
Other notes	none

Appendix - Yuhao Xu (Cognitive Walkthrough 1)

Cognitive Walkthrough for prescribed task 1

Prescribed task 1:

Suppose you want to log your dinner's vegetable intake, what should you do?

Task operation:

1. enter the main home interface
2. Click add dinner button
3. Click search box
4. type the food name
5. Select the food type from search list
6. Click the food information box
7. type the time and weight
8. Click the save button

1. Is the correct action obvious?

Yes, all the buttons are visible, the message is visible, the button and the message are obvious.

2. Will user understand instructions?

Yes, all buttons and other component convey a clear message and there are no similar buttons.

3. Will user interpret machine action correctly?

Yes, each time after clicking the button will jump to the corresponding page, the page also has changes.

Appendix - Yuhao Xu (Cognitive Walkthrough 2)

Cognitive Walkthrough for prescribed task 2

Prescribed task 2:

[Current state of logger is 3 serves for today]

Suppose that, on reflection, you realise that you have over-estimated the vegetables you ate for dinner. So, for today, you now think you actually ate only 2 serves.

Correct the logged record for today.

Task operation:

1. Enter the main home interface
2. Click my records button
3. Click edit button at Broccoli record
4. Change the serve number of broccolis 3 to 2
5. Click save button
6. Click my record and see the changed number

1.Is the correct action obvious?

Yes, all the buttons are visible, the message is visible, the button and the message are obvious.

2. Will user understand instructions?

Yes, all buttons and other component convey a clear message and there are no similar buttons.

3. Will user interpret machine action correctly?

Yes, each time after clicking the button will jump to the corresponding page, the page also has changes.

Appendix - Yuhao Xu (Cognitive Walkthrough 3)

Cognitive Walkthrough for prescribed task 3

Prescribed task 3:

[Current state of logger is 2 serves for today]
Suppose you now remember about two cups of lettuce you ate at lunch, but you cannot recall how many serves that would make. Find out how many serves 2 cups of lettuce is. Then log this.
[Current state of logger should be 4 serves for today – if not, tell the user about the correct serves and you get back to correct state]

Task operation:

1. Enter the calculator interface
2. Click the health tips
3. Click the search box
4. Type the lettuce
5. choose the Lettuce Serve keywords
6. Jump to corresponding chapters and read information

1.Is the correct action obvious?
Yes, all the buttons are visible, the message is visible, the button and the message are obvious.

2. Will user understand instructions?
Yes, all buttons and other component convey a clear message and there are no similar buttons.

3. Will user interpret machine action correctly?
Yes, each time after clicking the button will jump to the corresponding page, the page also has changes.

Appendix - Yuhao Xu (Cognitive Walkthrough 4)

Cognitive Walkthrough for prescribed task 4

Prescribed task 4:

[Current state e-textbook is that the user has read the section about judging the serves of lettuce and has not read about other types of vegetables]

Please tell me which learning topics you have read and which you still need to read.

Task processes:

1. Enter the e-textbook interface
2. Click the Menu button
3. Click the white book button from the current chapter
4. Click the corresponding white book button
5. Click the Menu button

1.Is the correct action obvious?

Yes, all the buttons are visible, the message is visible, the button and the message are obvious.

2. Will user understand instructions?

Yes, all buttons and other component convey a clear message and there are no similar buttons.

3. Will user interpret machine action correctly?

Yes, each time after clicking the button will jump to the corresponding page, the page also has changes.

Appendix - Qijing Zhang (Content)

1. Prototype for task1
2. Persona
3. Cogntive walkthrough for 4 concrete tasks
4. Think - aloud study for 8 tasks
5. Open questionnaire for think aloud
6. SUS & SEQ
7. Thinkaloud section in report

Appendix - Qijing Zhang (Work in the Week 7)

Part 2: Homework for the tutorial and Assignment 2

16th Sep	
Breakfast (7:15)	Milk 250mL
	Egg 50g
	Steamed stuffed bun 150g
Lunch (12:03)	Rice 150g
	Carrot + pork 150g + 25g
	Towel gourd 125g
Fruit (15:10)	Grape 200g
Dinner (18:07)	Rice 125g
	Pig 's trotters 150g
	Chinese cabbage 350g

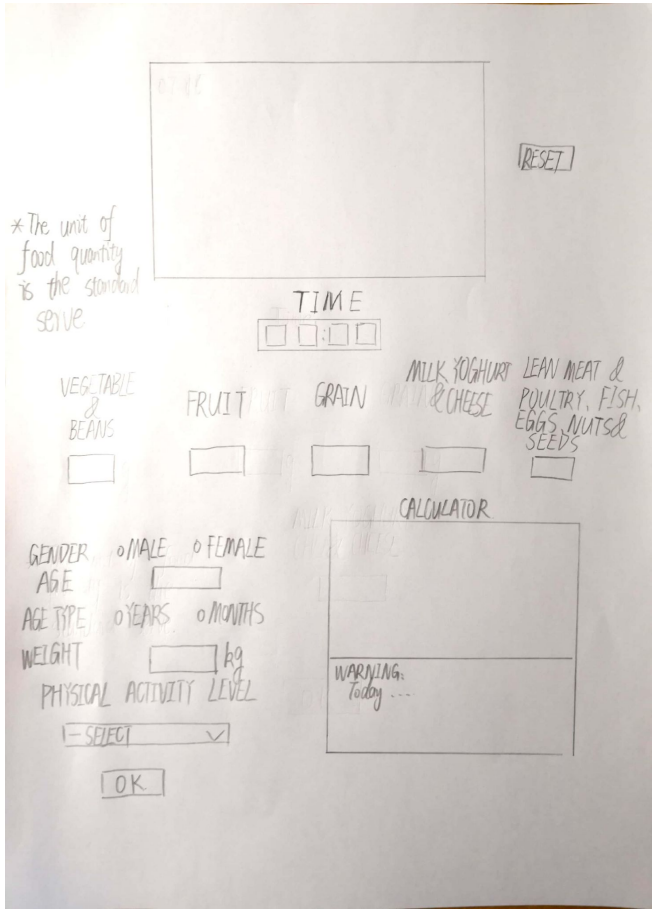
17th Sep	
Breakfast (7:08)	Milk 250mL
	Egg 50g
	Pork pie 200g
Lunch (12:03)	Rice 150g
	Shrimp 150g
	Pumpkin 110g
Fruit (15:10)	Pomegranate 180g
Dinner (18:07)	Rice 125g
	Cucumber + pork 160g + 15g
	Brassica chinesis 300g

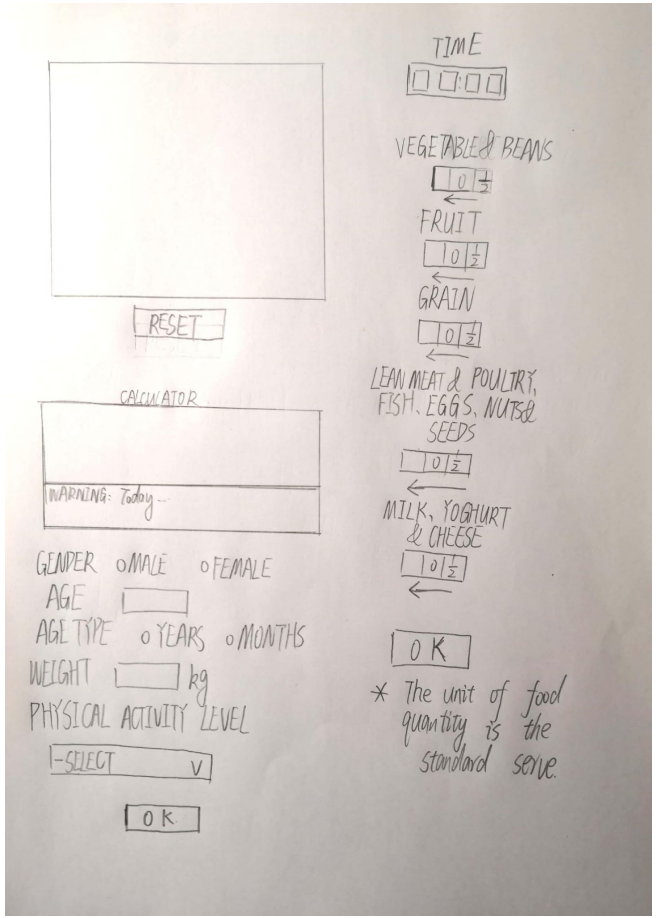
Due to going out on weekends, weekend records were not selected.

Methods: I use many methods to record my daily food. First, use an electronic scale to measure and record the food before cooking (these data will be more accurate), then take photos of some food (it is not easy to forget), and finally estimate the amount of some food (food that is not convenient to measure).

Difficulties: There are also many difficulties. The first measurement is the total amount of food, but actually I only ate a part, so my personal consumption is the average amount obtained by dividing the total amount by the number of people. Secondly, some snacks are difficult to calculate, such as walking in the street and giving things. Finally, the oil added during cooking is difficult to calculate.

Appendix - Qijing Zhang (Early prototypes)





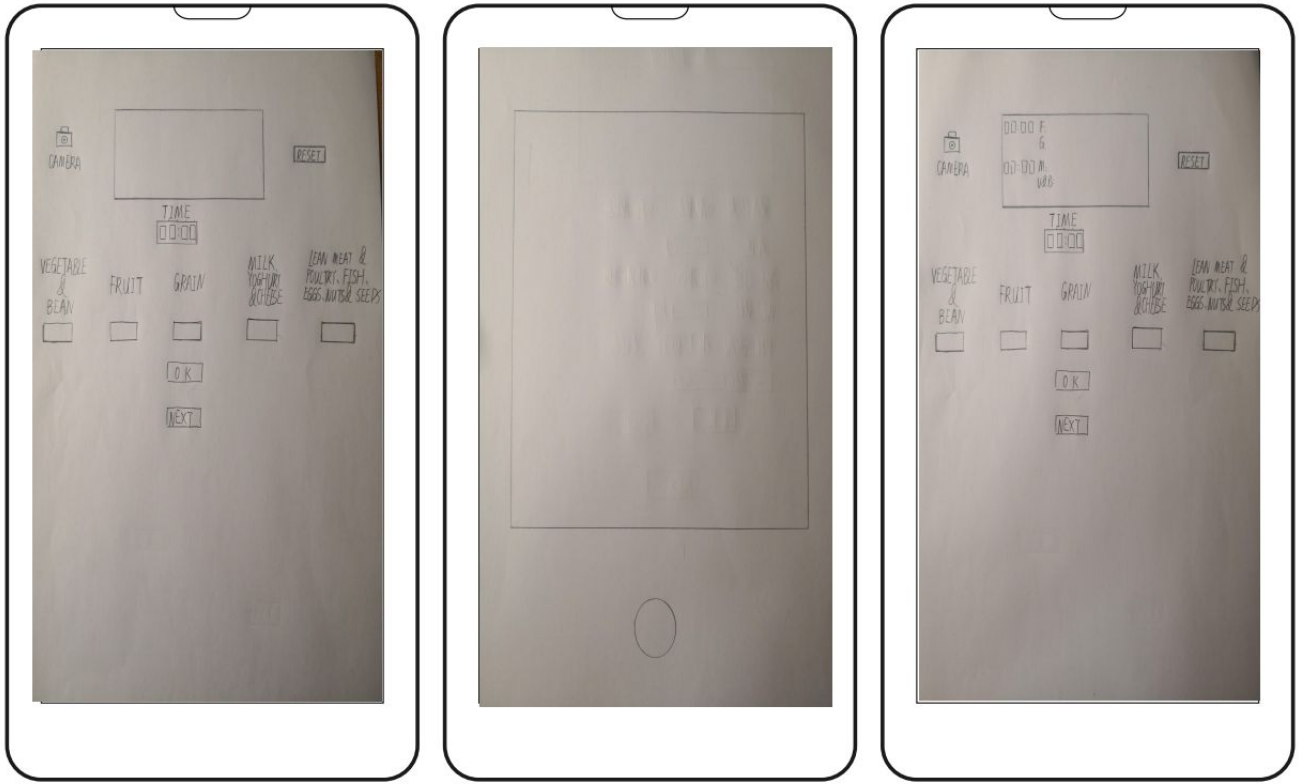
Appendix - Qijing Zhang (Design exploration 1)

Task 1 a

Enter the page, first enter the time and drag it into the big circle, then enter the amount of food you ate, drag it into the time circle in the big circle, and finally click next to save.

Appendix - Qijing Zhang (Design exploration 2)

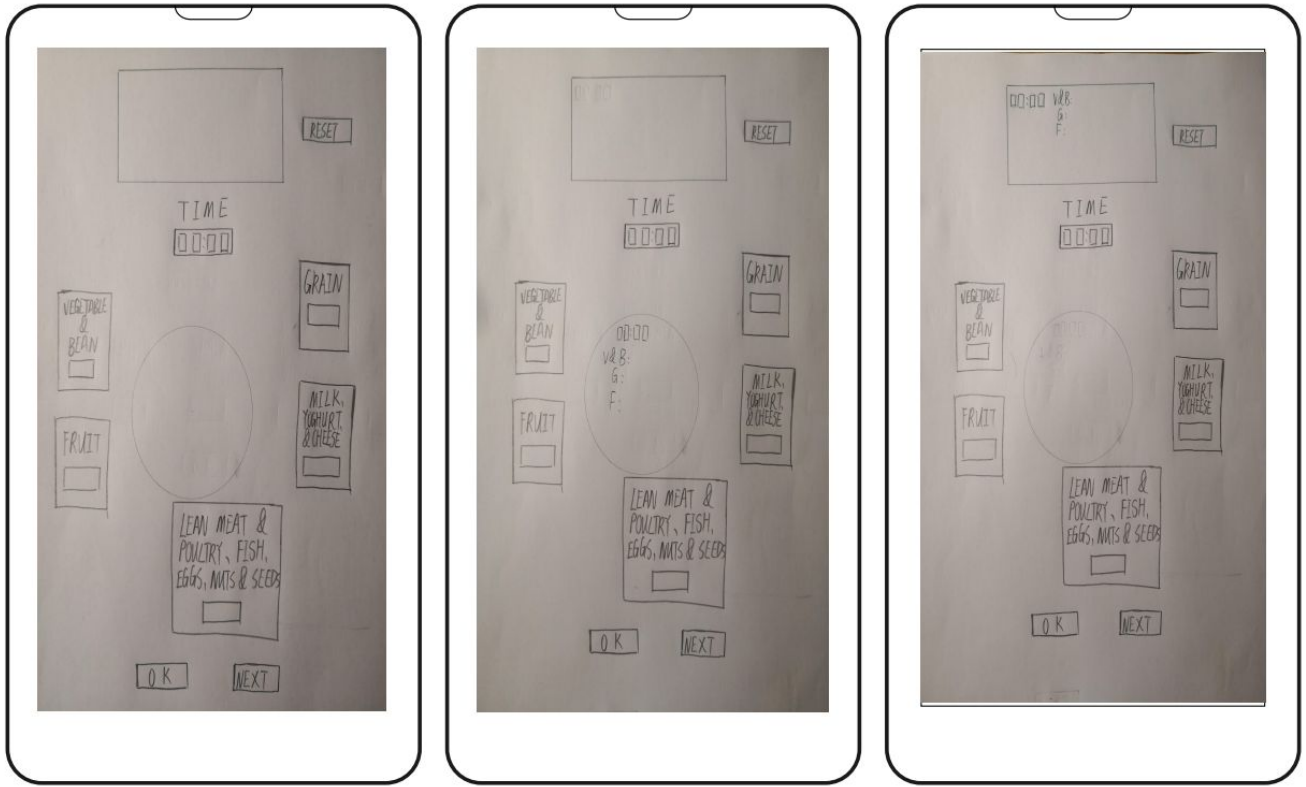
Task 1 b



This page has a camera function, you can use the camera to estimate the amount of food, and the time is the system time. Because the time of taking pictures is usually when the user is eating, there is no need to enter the time.

Appendix - Qijing Zhang (Design exploration 3)

Task 1 c



When the user enters the time and food amount in the small box, it will be displayed in the circle, and click OK to save it to the box above.

Appendix - Qijing Zhang (Think aloud 1)

User ID	06
Task ID	1
Overall success?	Yes
	Task 1: Suppose you want to log your dinner's vegetable intake, what should you do? **Observation**
00:00--00:03	1. Click *dinner* and go to the next page
00:03--00:10	2. Search for *potato* in the search box
00:10--00:12	3. Select *Fried potato*
00:12--00:15	4. Click on *food information*
00:15--00:35	5. Enter information about the *fried potato*
00:35--00:40	6. Click *Add* to add the information to the box below
	User comment: The page is simple, and various operation functions can be known at a glance.
Summary of key problems observed	Notes about errors observed and how the participant recovered from them No errors were found.
Other notes	eg problems with the equipment The user said there were no other problems.

Appendix - Qijing Zhang (Think aloud 2)

User ID	06
Task ID	2
Overall success?	Yes
	Task 2: Suppose you want to remove one vegetable from the intake list, what should you do? **Observation** 00:00--00:02 7. Click *delete* next to the peach 00:02--00:04 8. Click *yes* 00:04--00:06 9. Delete information about *peach* **User comment**: The page is simple, and various operation functions can be known at a glance.
Summary of key problems observed	Notes about errors observed and how the participant recovered from them No errors were found.
Other notes	eg problems with the equipment The user said there were no other problems.

Appendix - Qijing Zhang (Think aloud 3)

User ID	06
Task ID	3
Overall success?	Yes
00:00--00:02 00:02--00:05 00:05--00:10	Task 3: Suppose that, on reflection, you realize that you have over-estimated the vegetables you ate for dinner. So, for today, you now think you actually ate only 2 serves. Correct the logged record for today. **Observation** 10. Click *Health Tips* 11. Select *Lettuce Serve* 12. Read the information **User comment**: The page is simple, and various operation functions can be known at a glance.
Summary of key problems observed	Notes about errors observed and how the participant recovered from them No errors were found.
Other notes	eg problems with the equipment The user said there were no other problems.

Appendix - Qijing Zhang (Think aloud 4)

User ID	06
Task ID	4
Overall success?	Yes
00:00--00:02 00:02--00:05 00:05--00:10	Task 4: Suppose you now remember about two cups of lettuce you ate at lunch, but you cannot recall how many serves that would make. Find out how many serves of 2 cups of lettuce. Then log this. **Observation** 13. Click *the directory icon* 14. Find information about *Lettuce* 15. Read the information **User comment**: The page is simple, and various operation functions can be known at a glance.
Summary of key problems observed	Notes about errors observed and how the participant recovered from them No errors were found.
Other notes	eg problems with the equipment The user said there were no other problems.

Appendix - Qijing Zhang (Think aloud 5)

User ID	06
Task ID	5
Overall success?	Yes
00:00--00:03 00:03--00:15	Task 5: Suppose you have read the section about judging the serves of lettuce and has not read about other types of vegetables. Please tell me which learning topics you have read and which you still need to read. **Observation** 16. Find information about *Tomato* 17. Read this information **User comment**: The page is simple, and various operation functions can be known at a glance.
Summary of key problems observed	Notes about errors observed and how the participant recovered from them No errors were found.
Other notes	eg problems with the equipment The user said there were no other problems.

Appendix - Qijing Zhang (Think aloud 6)

User ID	06
Task ID	6
Overall success?	Yes
00:00--00:05 00:05--00:10	Task 6: Suppose you want to know which chapters you have read or browsing record, what should you do? **Observation** 18. Click *History* icon 19. Read this history information and can delete some information **User comment**: The page is simple, and various operation functions can be known at a glance.
Summary of key problems observed	Notes about errors observed and how the participant recovered from them No errors were found.
Other notes	eg problems with the equipment The user said there were no other problems.

Appendix - Qijing Zhang (Think aloud 7)

User ID	06
Task ID	7
Overall success?	Yes
	Task 7: Suppose you find that you don't know the name of some vegetables. How do you get these vegetables' information? **Observation** 00:00--00:02 20. Click *Dinner* 00:02--00:04 21. Click *Camera* icon 00:04--00:21 22. Take photos of unknown food 00:21--00:33 23. The system automatically identifies food and enters it into the system **User comment**: The page is simple, and various operation functions can be known at a glance.
Summary of key problems observed	Notes about errors observed and how the participant recovered from them No errors were found.
Other notes	eg problems with the equipment The user said there were no other problems.

Appendix - Qijing Zhang (Think aloud 8)

User ID	06
Task ID	8
Overall success?	Yes
	Task 7: Suppose you eat a certain salad with different fruits every day and you want to take a picture and enter this salad as a new food type, what would you do? **Observation** 00:00--00:02 24. Click *Dinner* 00:02--00:04 25. Click *Camera* icon 00:04--00:23 26. Take photos of unknown food 00:23--00:40 27. The system automatically identifies food and enters it into the system **User comment**: The page is simple, and various operation functions can be known at a glance.
Summary of key problems observed	Notes about errors observed and how the participant recovered from them No errors were found.
Other notes	eg problems with the equipment The user said there were no other problems.

Appendix - Qijing Zhang (Cognitive Walkthrough 1)

CW for Task1

Task1: Suppose you want to log your dinner's vegetable intake, what should you do?

User operation: 1. Enter the home interface

2. Click the *dinner* button
3. Enter the food name in the search box
4. Select the food the user ate
5. Enter the time and amount of food to eat
6. Click the *Save* button

Will user understand instructions?

Yes, all buttons are obvious and marked. Users can easily understand the function of each button.

Will user interpret machine action correctly or Will the user associate and interpret the response from the action correctly?

Yes, all interface jumps are correct. Users can interact well with the system and finally complete the task.

Appendix - Qijing Zhang (Cognitive Walkthrough 2)

CW for Task2

Task2: Suppose that, on reflection, you realize that you have over-estimated the vegetables you ate for dinner. So, for today, you now think you actually ate only 2 serves(now is 4). Correct the logged record for today.

User operation: 1. Enter the vegetable intake interface

2. Click the *record* button
3. Click *edit* button
4. Modify the numble of potato from 4 to 2
5. Click the *Save* button

Will user understand instructions?

Yes, all buttons are obvious and marked. Users can easily understand the function of each button.

Will user interpret machine action correctly or Will the user associate and interpret the response from the action correctly?

Yes, all interface jumps are correct. Users can interact well with the system and finally complete the task.

Appendix - Qijing Zhang (Cognitive Walkthrough 3)

CW for Task3

Task3: Suppose you now remember about two cups of lettuce you ate at lunch, but you cannot recall how many serves that would make. Find out how many serves 2 cups of lettuce is. Then log this.

User operation: 1. Enter the calculator interface

2. Click the *health tips* button
3. Enter the lettuce in the search box
4. Find the lettuce serve
5. Jump to the relevant information interface and read the relevant information

Will user understand instructions?

Yes, all buttons are obvious and marked. Users can easily understand the function of each button.

Will user interpret machine action correctly or Will the user associate and interpret the response from the action correctly?

Yes, all interface jumps are correct. Users can interact well with the system and finally complete the task.

Appendix - Qijing Zhang (Cognitive Walkthrough 4)

CW for Task4
Task4: Please check the information you have read before and let me know.

User operation: 1. Enter the information interface
2. Click the *menu* button
3. Select the current chapter
4. Click the white book button
5. Read relevent information

Will user understand instructions?
Yes, all buttons are obvious and marked. Users can easily understand the function of each button.
Will user interpret machine action correctly or Will the user associate and interpret the response from the action correctly?
Yes, all interface jumps are correct. Users can interact well with the system and finally complete the task.

Appendix - Qijing Zhang (Open questions at the end of the think-aloud)

1. How dose this system compare with other systems?

Compared with other systems, this system contains very comprehensive functions and simple pages. I like this style of system very much.

2. How do you feel about this system?

I think this is a very suitable system for me and meets all my requirements. I am very interested in this kind of system.

3. How would you describe this system?

The system page is concise and fully functional.

4. What is your opinion of reflection about food?

I think reflection is very useful, and I am willing to follow reflection.

5. What would you do differently?

I didn't find anything difficult, but felt that it would take some time for the camera function to recognize the correct food.

6. What could improve in this system, please give us some ideas.

I hope that the system can add foods other than breakfast, lunch and dinner, such as afternoon tea and supper.

Appendix - Qijing Zhang (SUS)

	Strongly Disagreen				Strongly Agree
1. I think that I would like to use this product frequently.	1	2	3	4	5
2. I found the system unnecessarily complex.	1	2	3	4	5
3. I thought the system was easy to use.	1	2	3	4	5
4. I think that I would need the support of a technical person to be able to use this system.	1	2	3	4	5
5. I found the various functions in this system were well integrated.	1	2	3	4	5
6. I thought there was too much inconsistency in this system.	1	2	3	4	5
7. I would imagine that most people would learn to use this system very quickly.	1	2	3	4	5
8. I found the system very cumbersome (*awkward) to use.	1	2	3	4	5
9. I felt very confident using the system.	1	2	3	4	5
10. I needed to learn a lot of things before I could get going with this system.	1	2	3	4	5

Score:

4 5 4 5 4 -1 3 4 3 4 3

1 3 2 1 2 5- 4 2 3 4 3

3+4+3+4+3+4+2+3+4+3=33

33*2.5=82.5

Appendix - Qijing Zhang (SEQ)

Task1: 5

Task2: 6

Task3: 6

Task4: 7

Task5: 6

Task6: 5

Task7: 5

Task8: 6

5+6+6+7+6+5+5+6=46

46/8=5.75≈5.8

Role in the Assignment 2

Member Name	Contact Details	Roles
Dongrui Wang	dwan7325@uni.sydney.edu.au	Leader
Jingqi Ma	jima4984@uni.sydney.edu.au	Recorder
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Qijing Zhang	qzha7115@uni.sydney.edu.au	assistant
Ruixian Liu	rliu0898@uni.sydney.edu.au	assistant
Yuhao Xu	yuxu9943@uni.sydney.edu.au	assistant