

1. Storyboarding

Persona:Alex

User Story:As Alex, I want to add my activities to my calendars, so that I can prevent missing the activities.

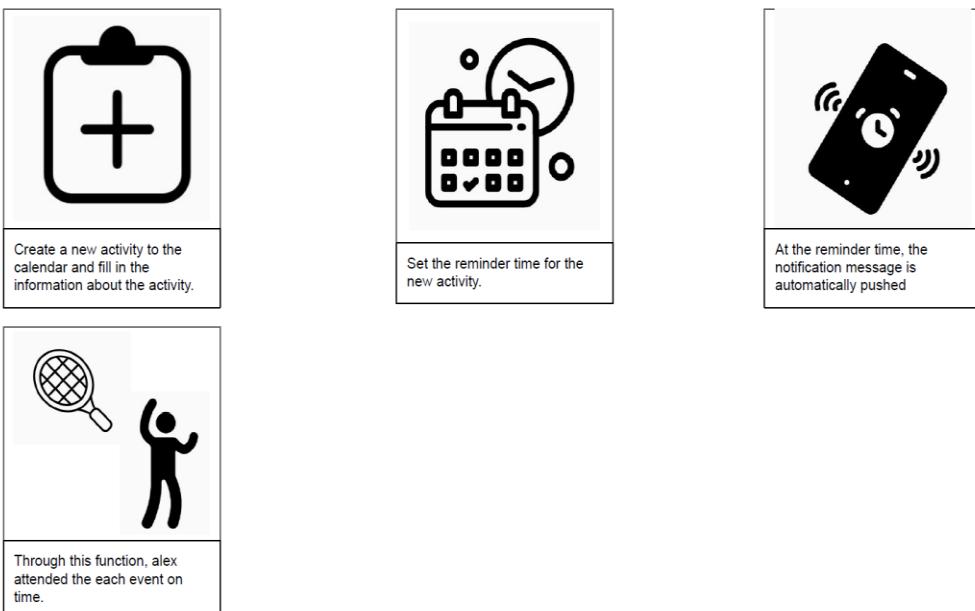


Figure 1. Storyboarding 1

Persona:Alex

User Story:As Alex, I want to create my profile with preference on types of activities, so that I can easily find more entertainment activities which match with my interest.



Figure 2. Storyboarding 2

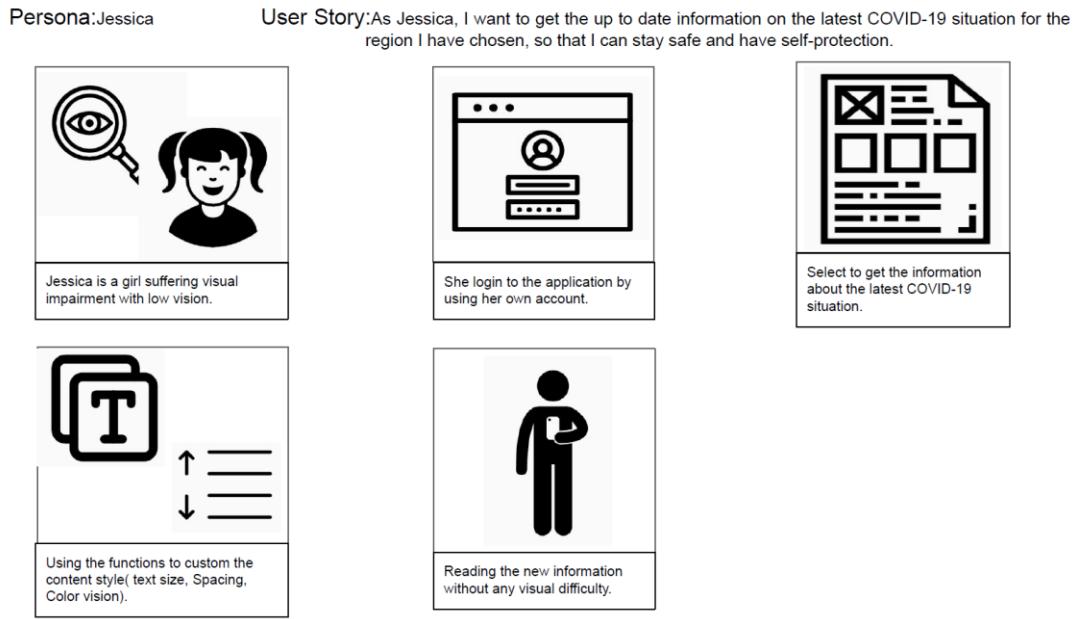


Figure 3. Storyboarding 3

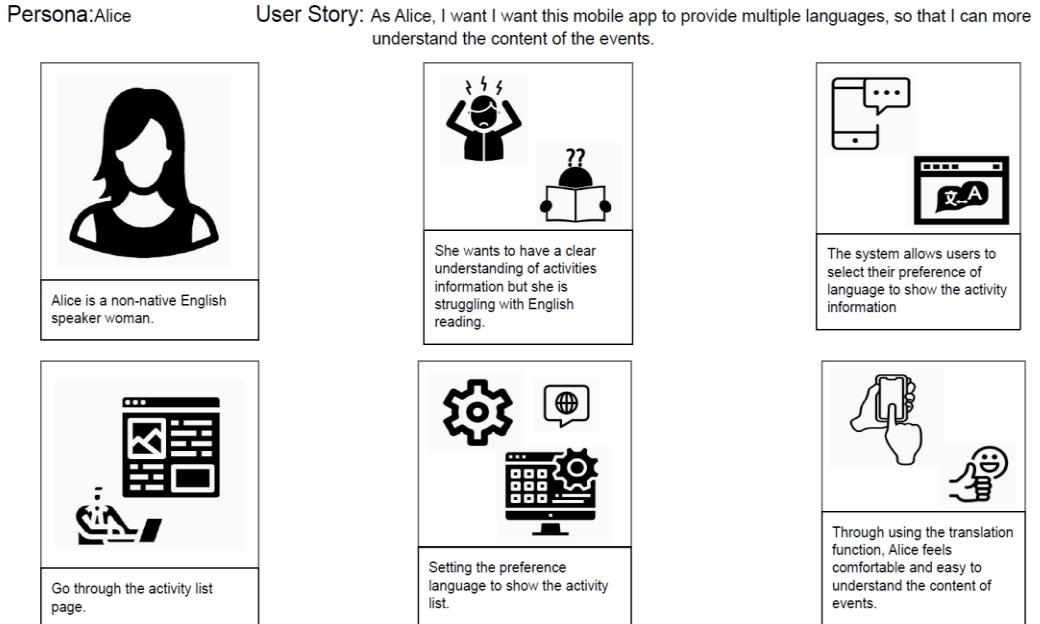


Figure 4. Storyboarding 4

2. Low fidelity prototype

2.1 Kanban task board

User Story	To Do	Doing	Done
As a user, I want to add my activities to my calendars, so that I can prevent missing the activities.	<ul style="list-style-type: none"> ● Notification for upcoming activity. 		<ul style="list-style-type: none"> ● Create a new activity and fill in the information about activity to the calendars. ● Set a reminder time for the new activity.

User Story	To Do	Doing	Done
As Jessica, I want to get the up-to-date information on the latest COVID-19 situation for the region I have chosen, so that I can stay safe and have self-protection.	<ul style="list-style-type: none"> ● Create account and login to the application. 		<ul style="list-style-type: none"> ● Go through the information about COVID-19 page. ● Using the functions to custom the content style.

User Story	To Do	Doing	Done
As a user, I want to create my profile with preference on types of activities, so that I can	<ul style="list-style-type: none"> ● Create account and login to the application. ● Fill the profile and preference 		<ul style="list-style-type: none"> ● Get the activities recommendation list.

easily find more entertainment activities which match with my interest.	types of activities.		
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User Story	To Do	Doing	Done
As Alice, I want I want this mobile app to provide multiple languages, so that I can more understand the content of the events.	<ul style="list-style-type: none"> ● Create account and login to the application. ● The content of language changes to preference language. 		<ul style="list-style-type: none"> ● Go through the activity list page. ● Select the preference language to show the content.

2.2 Prototype Design

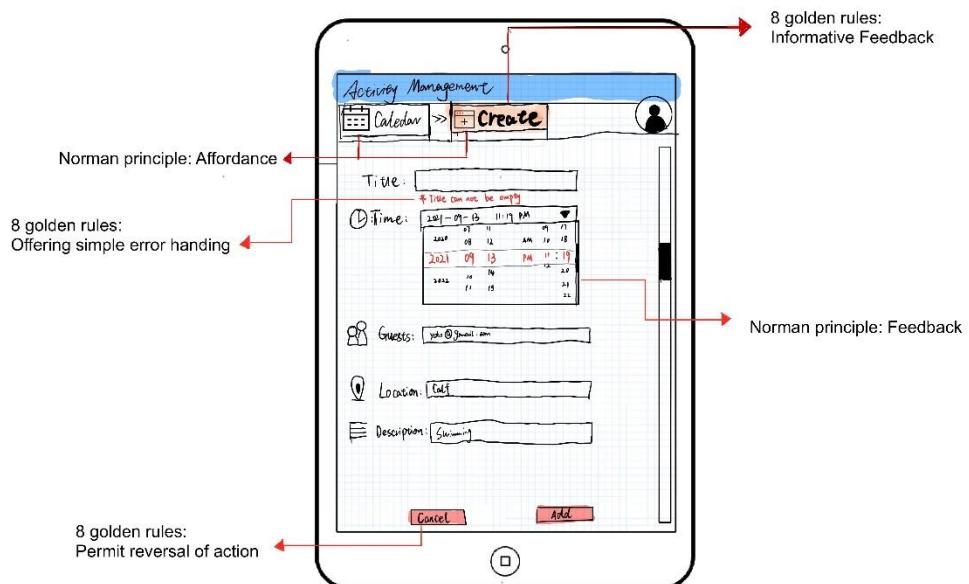


Figure 5. Screen 1

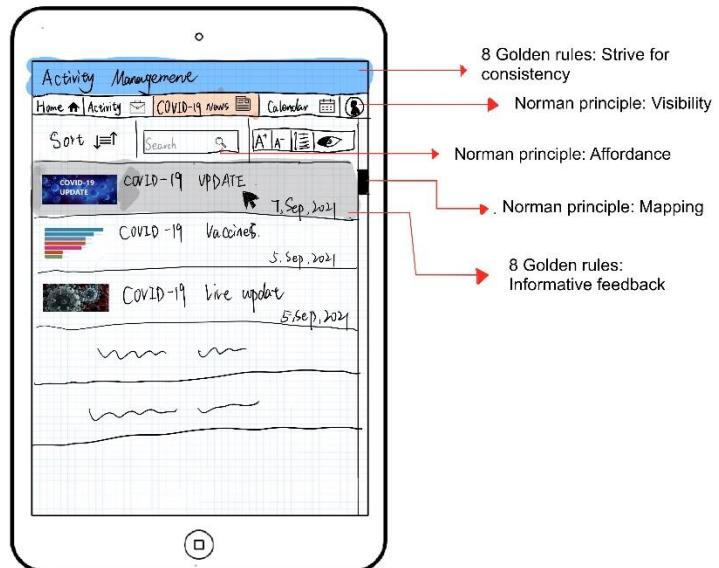


Figure 6. Screen 2



Figure 7. Screen 3

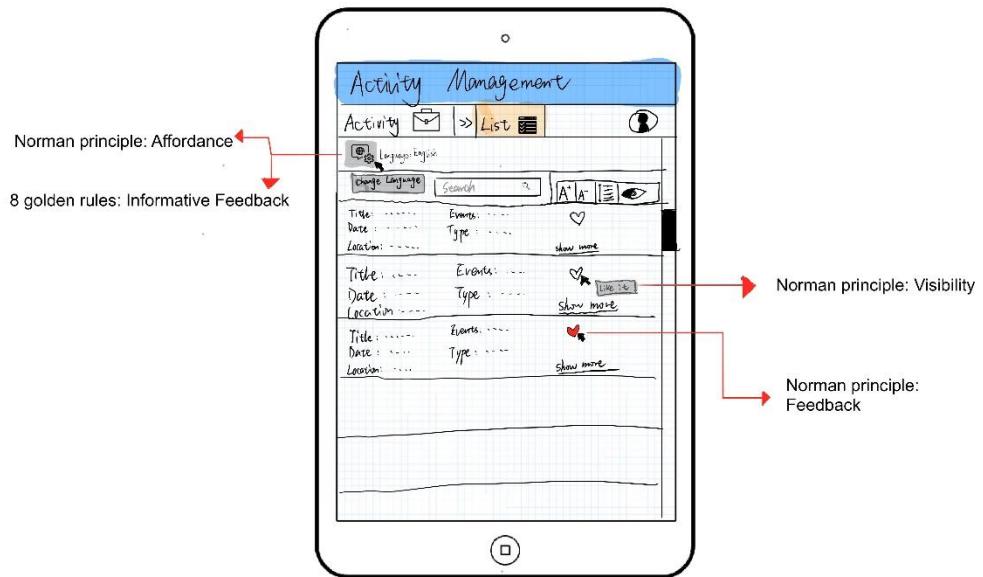


Figure 8. Screen 4

3. Report

For 1st user story, the acceptance criteria could implement on two screens. One for create the activity and set reminder time, and the other for getting the notification at the reminding time. the main feature of this function likes to set an alarm. The basic and important part is setting. Thus, I decided to apply the create the activity and set reminder time screen. The purpose of the 2nd user story is to get the information from the applications. So, combine with the login and register part, the interaction page or get information page would be a significant part. For the 3rd user story. Get the recommendation activity list screen can show more unique features and one of the main functions for this application. So, it is important to implement first. The aim of the 4th user story is to illustrate a translation function to improve the usability performance of the application. It can show on two screens. One is the preference language setting page, and another is the apply setting page. The former will illustrate how to use it and it is the main function for this user story.

Analyzing the low-fidelity prototype, the four of Shneiderman's golden rules and FOUR of Norman's design principles have been implemented. To be specific, for the 8 golden rules design principle, the principle of Informative Feedback, offering simple error handing, Permit reversal of action, and strive for consistency have been considered.

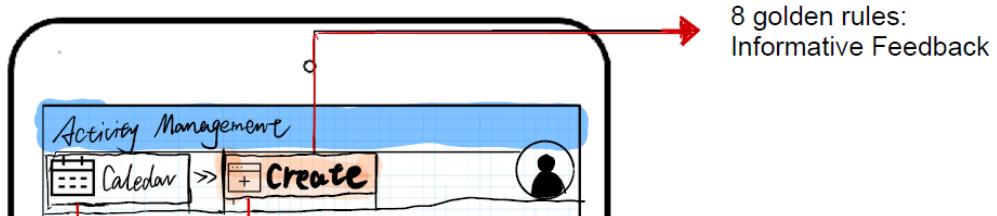


Figure 9. Informative Feedback

The application provides a clearly tab-bar with highlighted the current page for users. It can be considered as visual feedback. The navigation bar gives support for the viewer and instructs people on what action the user did do (See figure 9).

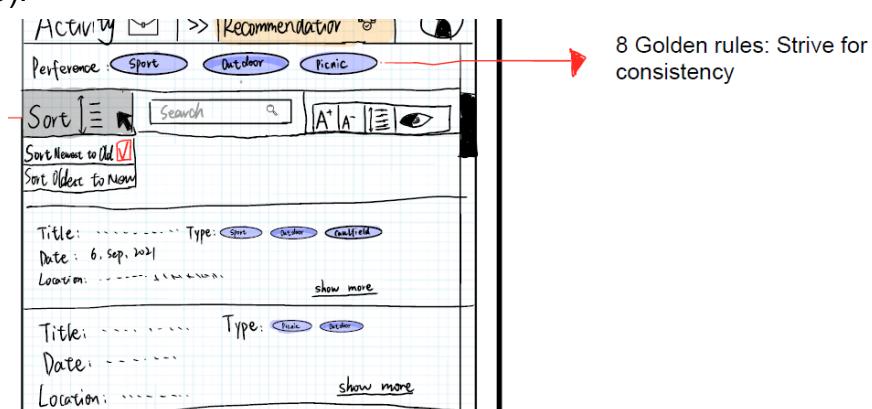


Figure 10. Strive for consistency

On the activity recommendation page, the preference of activity types and the type of the recommendation activities have been assigned the same mark and color. For the same actions, allocating the same signs or identities is support the consistency principle which can make the content easily navigated by users.

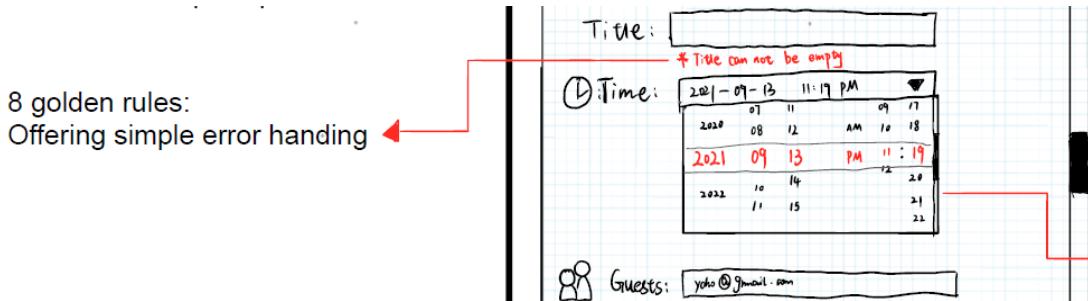


Figure 11. Offering simple error handling

During the application running period, the user inputs some invalidated information or actions that are common. So that, providing some error indicator is significant for designing which can let the user know what they got wrong. This application, for the content input action, provides some hints below the input dialogue with the highlight color.

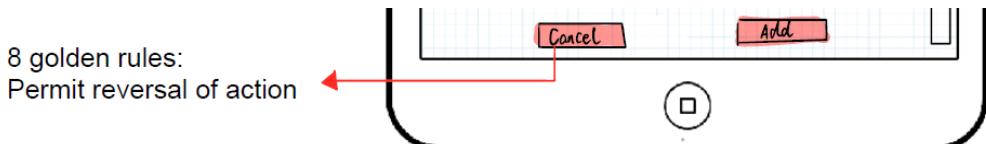


Figure 12. Permit reversal of action

The principle of Permit reversal of action is defined that users should always be able to quickly undo or cancel what they are doing. In this application, the user can cancel the events or inputs whenever they want. Applying this rule that can support the goal of a positive user experience.

In addition, the principle of Visibility, Feedback, Affordance, and Mapping also have been implemented in this application designing.

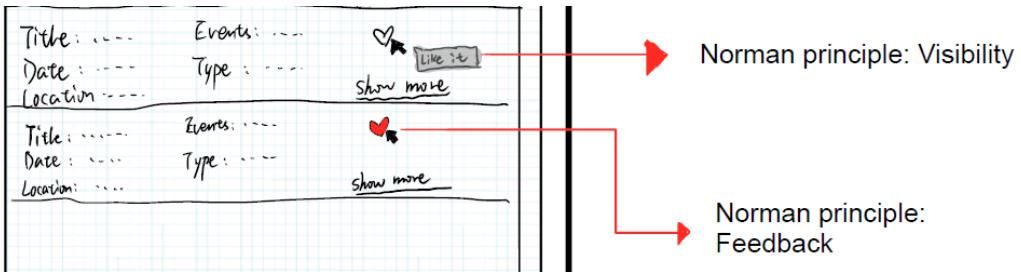


Figure 13. Feedback & Visibility

Users need to know what the action is and know how to use them. So, considering the visibility principle is important during the designing period. For this application, when the user mouse hovers the action or option, the information of the target will be immediately shown below. It will directly teach the user what action it is.

Feedback is used for making it clear to the user what action has been taken

and what has been accomplished. In the application, after the user click the Like sign (heart shape), it will fill in the red color that indicates this activity has been selected.

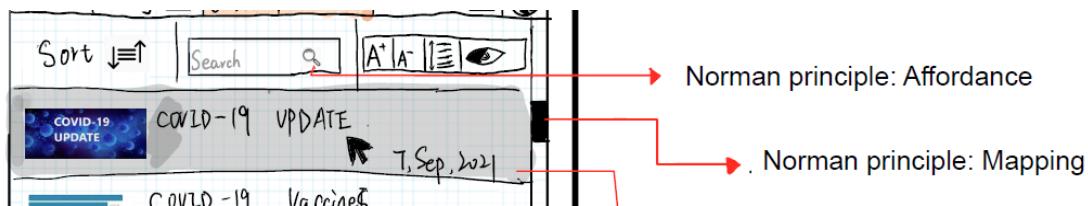


Figure 14. Affordance & Mapping

Affordance is an action possibility in the relation between users and objects. In this application, each action or page has been provided with some relative marks beside it. For example, the search bar has been assigned a magnifier that indicates this box is used for searching.

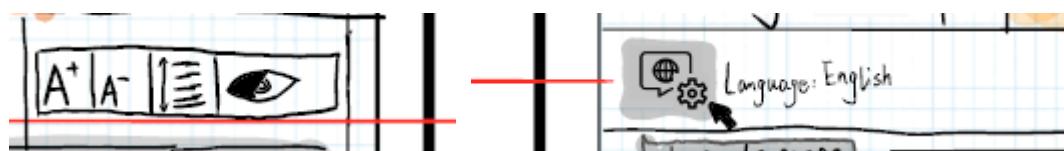


Figure 15. Accessible and inclusive design

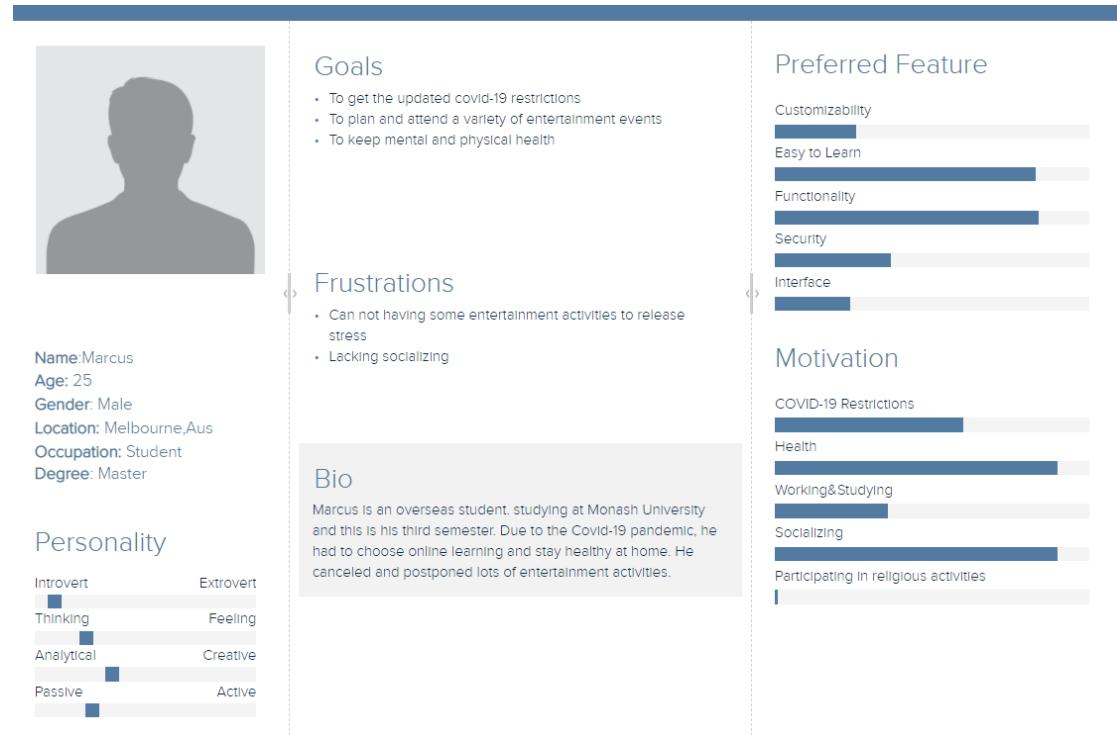
Accessible design and inclusive design go hand in hand to lower the barriers to the effective use of digital products. Applying those theories in products by considering the variety of human needs in various environments, it makes the product that is used for the widest swath of the population possible.

To consider the people who are suffering the visual impairment with low version. They may feel uncomfortable and hard when they are reading the content. So, the application provides some functions for users that allow them to custom the text style. For example, font size, line space and color version. They can change the format and style to whatever they prefer. Through this way, they may feel comfortable and easy to go through the article.

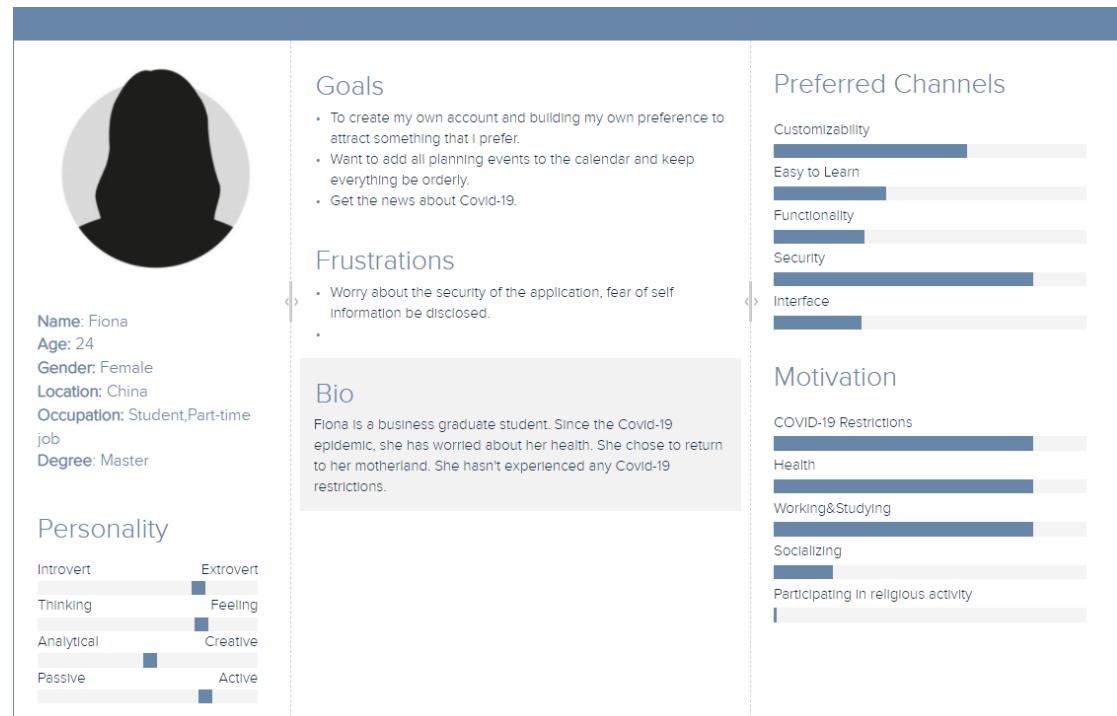
For the user who is from a non-native English speaker background. When they want to get some information from in the application, they may feel struggling or difficult. So, allowing the user to change the language to their preference is necessary. What' more, it is beneficial for them to have a clear understanding of information and improving their satisfaction and experience.

Appendix

1. Young people with introverted character and not having sufficient experience with the Covid-19 restriction.



2. Young people with extroverted personalities and having some negative effects during the Covid-19 pandemic.



3. A young student who loves outdoor activities. (Cannot attend school and go outside due to the restrictions of COVID-19.)



Name: Alex

Age: 24

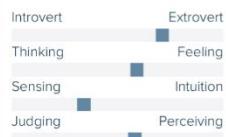
Gender: Male

Location: China

Occupation: Student

Degree: Master

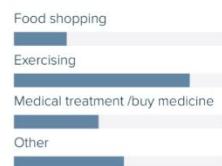
Personality



Goals

- Wants to be able to go out somewhat during the COVID-19 restriction period
- Wants to receive some psychological support
- Wants to learn something about epidemic prevention

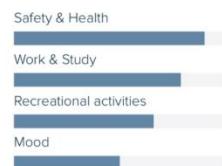
Essential Activity



Frustrations

- Cannot attend face-to-face classes and may require some study assistance

Motivation



Bio

As an International student stranded in China due to COVID-19, he is unable to meet and study with his classmates face to face. He wanted to go out but had to stay at home due to COVID-19 restrictions. As a young man who is used to being outdoors, this often leaves him feeling down and looking for someone to talk to. Importantly, as he lives with his family, he plans to know something about epidemic prevention to protect them.

4. A young working woman living alone. (Facing unemployment)



Name: Alice

Age: 27

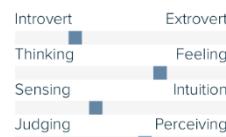
Gender: Female

Location: China

Occupation: Full-time staff

Degree: Master

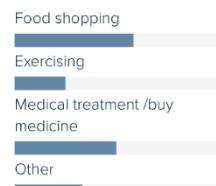
Personality



Goals

- Wants to solve the problem of having no vegetables to cook with
- Want to learn something about epidemic prevention

Essential Activity



Frustrations

- The effects of COIVD-19 led to her dismissal and may require some career recommendations
- Women living alone may need some security protection

Motivation



Bio

As a working woman living alone, she needs to take care of her meals, but due to the restrictions of COVID-19, she is unable to go out to buy groceries. And not being able to meet with her friends makes her feel insecure. Therefore, on the one hand, she wants to learn something about epidemic prevention to protect herself. On the other hand, she needs some psychological counselors.

5. Students studying abroad choose to stay in the country they go to for university.



Goals

- Wants to get up-to-date information about the COVID-19 in both countries.
- Wants all families to stay safe when going out.

Frustrations

- Anxiety for taking an on-time flight to another country that may have a serious COVID-19 situation.
- The situation in Melbourne has become all the more serious.
- The delta variant has become another serious problem in Melbourne.

Bio

Continue her master's degree in the same university as her undergraduate degree. When the COVID-19 first break-out, she chooses to stay in Melbourne to continue her study. Due to the extremely serious situation in Melbourne, she wants to get up-to-date information and stay safe.

Preferred Feature

Exposure Sites

Influence to the daily life

Medical Support

Motivations:

Family

Study

Safety

Name: Jessica Walt

Age: 26

Gender: Female

Location: Melbourne, Australia

Occupation: Current Master Degree Student

Degree: Undergraduate Degree Graduate

Personality

Introvert	Extrovert
Thinking	Feeling
Sensing	Intuition
Judging	Perceiving

6. First year new student to the university in China.



Goals

- Wants to get information on the restriction on the medium-scale or large-organized activities.
- Making new friends in the university and hang out with them.

Frustrations

- The rebound of the COVID-19 situation makes the outdoor activities seems has the potential to get infected.
- Too excited to get start with the campus life.

Bio

As a first year undergraduate student, he is excited to start his campus life by living in campus dormitories. This is the first time of him to live without parents, meanwhile entering the university makes him cannot wait to make new friends.

Preferred Feature

Chatting

News or Event

Social Activities

Big Data Statistics

Motivations:

Family

Study

Safety

Name: Jeffrey Nelson

Age: 18

Gender: Male

Location: Nanjing, China

Occupation: First-year University Student

Degree: High School Degree Graduated

Personality

Introvert	Extrovert
Thinking	Feeling
Sensing	Intuition
Judging	Perceiving

User story

- As a user, I want to get some hints about Covid-19 restrictions when I plan the activities, so that I can successfully create a new activity.

2. As Alice, I want to watch some daily news so that I can grasp the information I need.

Justification:

3. As Jessica, I want to login to my account in the mobile application, so that I can get the up-to-date information on the latest COVID-19 situation for the region I have chosen.

4. As Jeffrey, I want to get the latest restriction on holding activities both indoors and outdoors, so that I can plan to organize an activity to meet my social needs of meeting friends.

5. As a user, I want to add my activities to my calendars, so that I can prevent missing the activities.

6. As a user, I want to create my profile with preference on types of activities, so that I can easily find more entertainment activities which match with my interest.

7. As Alice, I want to solve the problem of going out to buy groceries so that I can secure my diet.

8. As Alice, I want I want this mobile app to provide multiple languages, so that I can more understand the content of the events.

9. As Jessica, I want to know if the lockdown policy or curfew policy has been dropped, so that she can plan to take a walk outside the house.

Justification:

10. As a user, I want access to see all the participants of events in detail, so that I can decide whether I prefer to join or not.

11. As Jessica, I want to add activities or events to my calendar with a notice of the health condition of the attendees, so that I do not need to worry about being infected or not by attending the activity.

12. As Jeffrey, I want to know if there are any instructions on when and where to wear a mask for safety, so that I can stay safe and have self-protection.

13. As a user, I want to set the status of activity to public or private, so that I can decide who can participate in my activity.

14. As Alex, I want to get news about permitted outdoor activities so that I can get out and exercise.

15. As Alice, I want some personal security so that I don't feel scared when I live alone.