

# **Design Process Report**

Course Code: DECO3500/7350

Course Name: Social&Mobile Computing

Team Name: Triple Kill

Team Members:

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## Research

In order to establish requirements for our design, our team do a detailed research involving academic studies, other documents, primary data and observations.

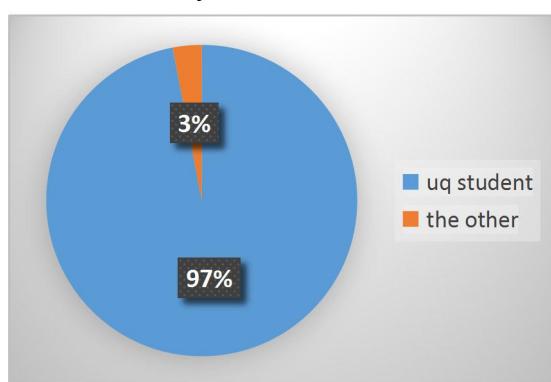
As for academic studies and other documents, we put them into references.

For observations, we find students at UQ frequently feel confused that which restaurants are thought highly when students are hungry. In addition, we also find that sometimes students, especially freshmen, feel alone and want to make new friends at UQ.

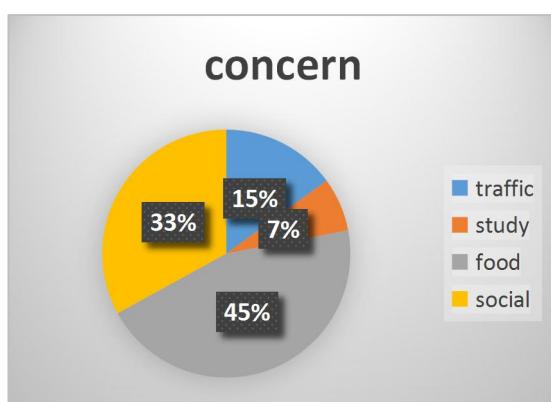
Turning to the most important part of our research, it is “Primary Data”. In order to collect primary data, we design a questionnaire survey (Note: the survey involved one hundred students as well as the managers of restaurants at UQ and is put into the appendix).

Here the result of the questionnaire survey is displayed in some pie charts.

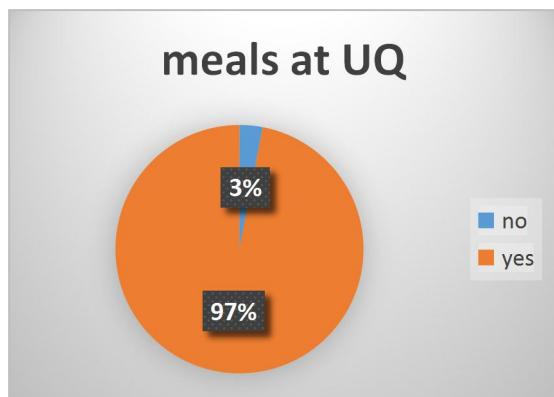
Question: Are you a UQ student?



Question: Which issues do you concern most?



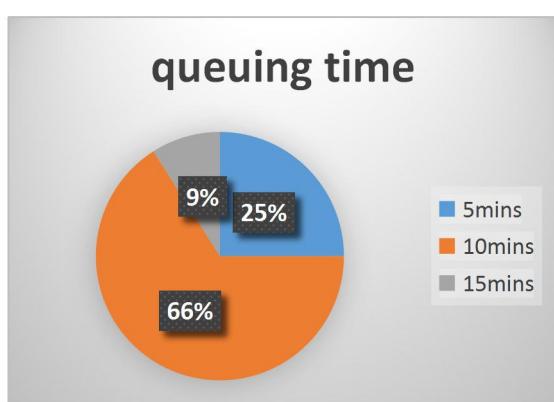
Question: Do you have meals at UQ?



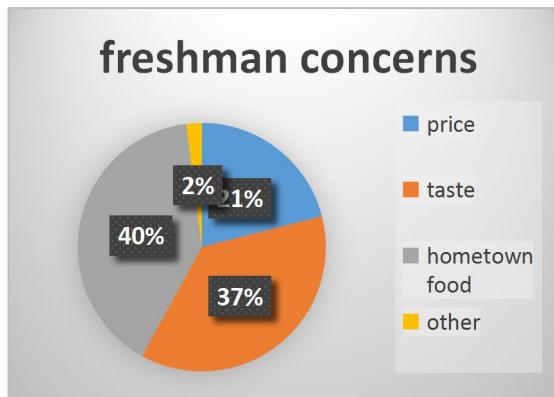
Question: What do you think the food at UQ?



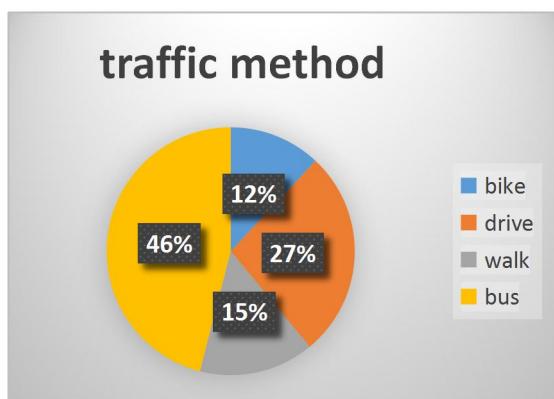
Question: How much time can you stand queuing for food?



Question: What is the top food issue for the freshman?



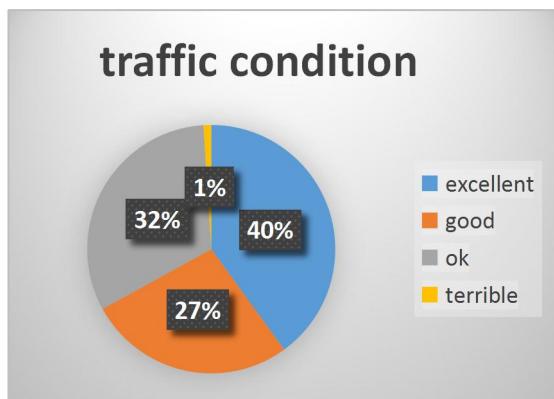
Question: How do you come to school?



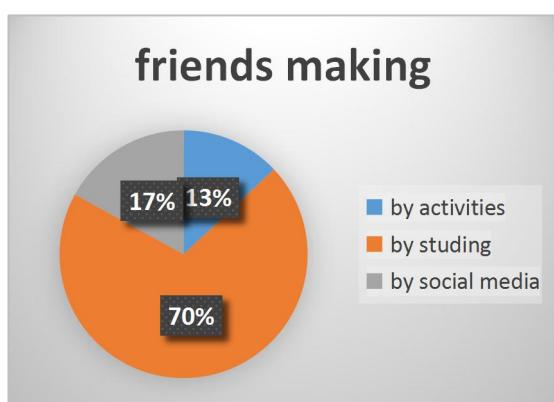
Question: Do you think it is easy to park (if drive)?



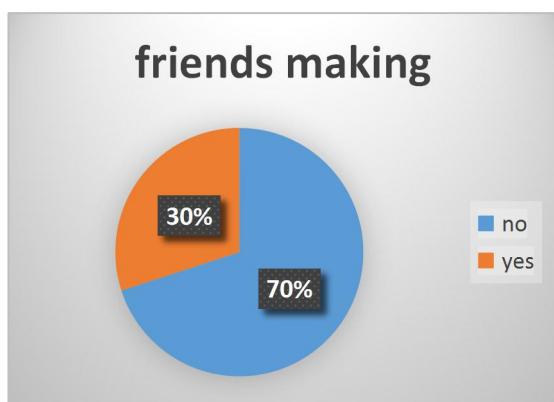
Question: What do you think of the traffic condition around UQ?



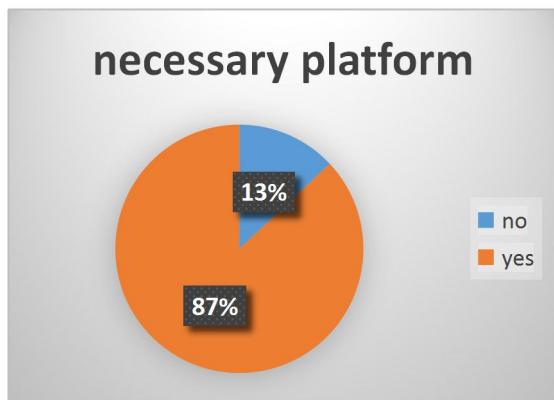
Question: How do you make friends at UQ?



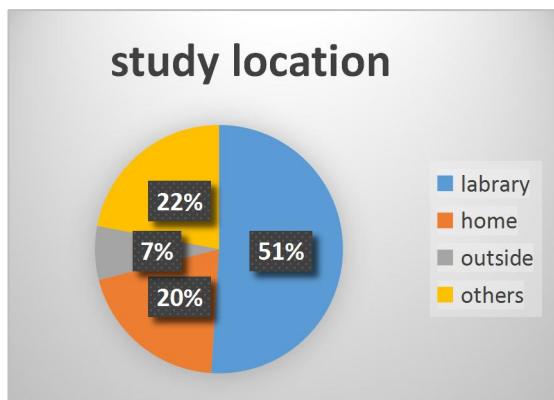
Question: Do you think it is easy to make friends at UQ?



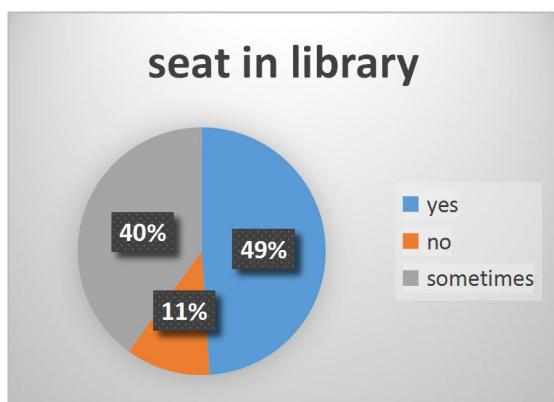
Question: Do you think it is necessary to supply a platform for students to make friends?



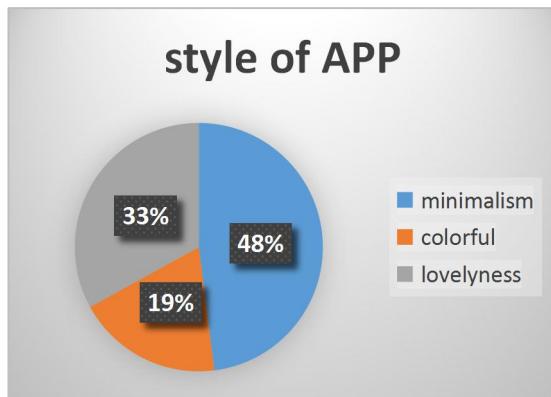
Question: Where do you study as usual?



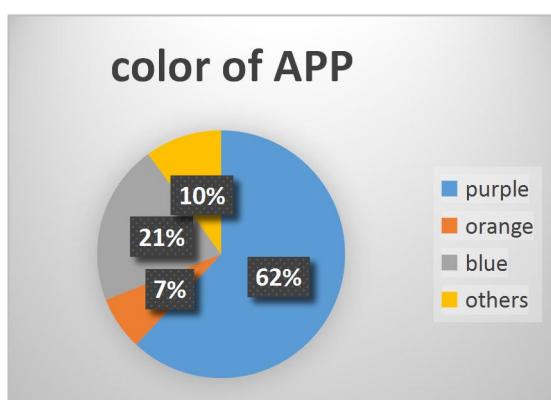
Question: Do you think it is easy to find a seat in library?



Question: Which design style of social & news APP do you like most?



Question: Which color do you like most for News and social APP?



*Conclusion from the research:* the top issue of UQ students is food and the second important issue is social isolation.

## Requirements

Based on the above-mentioned research, we have a good understanding of the need of UQ students in social contact as well as the news around them. We know what are the problems and how to develop our design to address them effectively. To be more specific:

### What are the problems of UQ student?

Based on the data from the research, especially questionnaire survey, the top issue of UQ students is food. Specifically, because of the geographic position of UQ, there are not too many restaurants at UQ campus and the food is monotonous. In addition, during the peak hours, like noon 12 o'clock and evening 6 o'clock, there are

too many people rushing into these limited restaurants, which can lead to long waits. Moreover, for new students, they know little about which restaurants can meet their tastes since UQ students are from all around the world. All in all, all above-mentioned problems are able to be regarded as the food issue.

Furthermore, based on the data from questionnaire survey and academic studies, another important issue is social isolation. That is, in daily life, every day we meet almost same people and we make friends mainly by work, study, etc. As a result, it is not easy for students to meet new people around them and make friends.

### **How can our team develop our design to solve these two issues? (the aim of our design)**

Aiming to these issues, our team plan to develop an APP based on GPS technique, which mainly includes two main functions, the Food News and Social. In terms of the food news, businesses can post information like dishes by this app and students can see these information and also can comment and give star. As for social function, students are able to find other people around them and say hi or chat with them, which can make it easy for students to make friends.

## **Design**

*Note: We number every interface in our paper(physical) application as well as digital application and all numbers are corresponding with the dictionary in the appendix.)*

With mention to the details of our design, as mentioned above, the APP mainly includes two parts, the Food News and Social. To be more specific:

### **The Food News**

After logging in, businesses can post information like new dishes, promotion activities, etc. by this app and users are able to see these information. What is more, users can comment and give star to businesses, which can provide a guidance to other users.

### **Social**

After logging in, users can find other people around them and say hi(greeting) or chat with them. Additionally, users can update status or upload photos which can be seen and commented by others.

Turning to the unique design of the APP, there are three important designs.

### 1. Interface Switching Design

In order to meet the needs of different users, the main interface of the APP can be switched between “Google Map Form”(Interface NO.11) and “List Form” (Interface No.21)

### 2. Administrator Design

Aiming to avoid malicious comments(users to businesses) or false information(businesses to users), this APP sets up “Administrator Function”. Besides, if users or businesses have some suggestions that can improve the APP or there are some problems of this APP, they can have a real-time chat with the administrator.

### 3. Checking Self-status Design(Interface NO.13)

The APP has an interface only for users to check their own previous status or photos. As for why designing this interface, here is an example. If an user update status or upload photo, the user can see recent comments from other users in the upper-half part of interface No.34. However, it is difficult for the user to check historical comments, status or photos. This is the reason to design this interface(Interface NO.13). In this interface, users can check their own historical status, photos and comments easily.

In term of significant theoretical concepts about social and/or mobile aspects, we primarily involve and demonstrate Mobile social software, CSCW, Workspace awareness and Groupware. The details can be found in the Appendix.

*Note: Apart from above content, we also construct an appendix at the end of this document involving “Core concepts demonstrated about social and/or mobile aspects”, “Interface function dictionary”, “Users privacy guarantee”, “How to build*

*the trust between the users(including students and business manager) and the APP”, “APP Promotion Strategy”, “User story”, “Feedback from the testers”, “How to connect two functions(Social&Food News) together”, “The future of the APP”, “Questionnaire survey” as well as “The photos of physical application”.*

## List of tasks assignment

|             |  |
|-------------|--|
| ZHIYAO LI   | <ul style="list-style-type: none"> <li>1.Research(including searching data like academic literature and designing questionnaire survey )</li> <li>2.Establish requirements</li> <li>3.Inform wireframe by using Balsamiq</li> <li>4.Produce a physical application</li> <li>5.Write design process report</li> <li>6.Make a promotion video</li> </ul> |
| ZHENYU CHEN | <ul style="list-style-type: none"> <li>1.Sort out the result of survey</li> <li>2.Produce interface function dictionary</li> <li>3.Produce APP promotion strategy</li> <li>4.Build trust between users and APP</li> <li>5.Produce user story</li> <li>6.Do the APP test</li> </ul>   |
| SHANGJIE DU | <ul style="list-style-type: none"> <li>1.Hand out questionnaire survey</li> <li>2.Inform wireframe by using Balsamiq</li> <li>3.Construct users privacy guarantee</li> <li>4.Produce interface function dictionary</li> <li>5.Produce the digital application</li> <li>6.Produce the future of the APP</li> </ul>                                      |

## References

- [1] A. Bohn, C. Buchta, K. Hornik and P. Mair, "Making friends and communicating on Facebook: Implications for the access to social capital", *Social Networks*, vol. 37, pp. 29-41, 2014.
- [2] Analyzing Social Media Networks with NodeXL: Insights from a Connected World by Derek Hansen, Ben Shneiderman, and Marc A. Smith
- [3] E. Somerville, S. Stark, S. Li and W. Winston, "Feasibility of Using Global Positioning System (GPS)-Enabled Cell Phones to Characterize Community Participation in Older Adults", *Am J Occup Ther*, vol. 69, no. 1, pp. 6911500101p1, 2015.
- [4] J. Donath, The social machine..
- [5]Mior Azhar,Malaysian Business (Jul 16, 2011): n/a

## Appendix

### Core concepts demonstrated about social and/or mobile aspects

#### 1. Mobile social software

the APP we design only can be used by mobile phone. It is a location-based MOSOSO Application. Users can use this APP to contact with people around them. It also has a close connection with some popular MOSOSO, like Twitter, Facebook and etc.

#### 2. CSCW

About CSCW concept, here is a clear explanation: how collaborative activities and their coordination can be supported by means of computer systems.

As for our design, based on GPS technique, it mainly focuses on "Social" and "food news" at UQ. Specifically:

Social: users can find people around them and then say hi or chat with them.

News: restaurants can post their dishes or other information and users can browse these information and find something useful.

As a result, it is clearly seen that all people (common user and business) work and coordinate (chat, greet, reply..) by the app.

#### 3. Workspace awareness

It refers to the sense of what others are doing in the system. As for our design, it includes "Chat Function" and "Post and Reply Function". Users can chat with other users, businesses or administrators. Users also can post states and then other users can see these information synchronously. In addition, users are able to reply the state of other users. As a result, users can have a sense of others.

#### 4. Groupware

For our design, when restaurants post new information, like new dishes, every users can see there information and reply them. With mention to the Post Function", every user can post state or photos and others can see them. It means every user can see and display information to others.

**Dictionary (the following numbers are corresponding with the numbers in the paper application as well as the digital application)**

- 1.1-1.6 Log in with different types of users (users business administrator).
- 2.Sign in as a user manager.
- 3.Sign in as a business manager.
- 4.If users forget password,how to reset the password.
- 5.Able to log in as Facebook account.
- 6.Able to log in as Google account.
- 7.Able to log in as Twitter account.
- 8.Able to log in as LinkedIn account
9. Successfully log in.
- 10.1-10.3.Different types of users fail to log in.
- 11.This page aim to show all the probable issues in the main view including users,the other users,and restaurants.
- 12.1-12.2.After clicking the account button the following selection will appear.
- 13.Aim to give a brief view of friend circle which is a page for showing the all post users have post before.
- 14.1-14.3Able to change Display Picture and update personal information such as date of birth and contact number addition those privacy information are not allowed to be seen by other users.
- 15.1-15.2.Able to post personal state. Also user can choose different types of people to see.
- 16.Able to see friends who are online and chat with them by clicking it addition this view own sort order.
- 17.Display message button means if users want to see the detail of the message.For example: you got a new message or Lisa said that you looks nice today. Click black user icon to connect with administrator.
- 18.User talk to user.
- 19.Main view of search function
20. The result if search pizza.

- 21.Different view and able to switch back.
- 22.More option for the view.
- 23.More option for the view.
- 24.Greeting
- 25.Option for the setting
- 26.View of restaurants.
- 27.If one click the restaurants on the map the basic information of restaurants will be shown.
- 28.If double click the restaurants on the map the detail information of restaurants will be shown, and users can chat with restaurant.
- 29.Able to see menu of selected restaurant and give comment by clicking plus icon.
- 30.Give a star to restaurant
- 31.Chat with restaurant manager
- 32.Only users will be shown on the map
- 33.Notification pop out.(any message will related to user)
- 34.All the notification will be appeared on this page
- 35.Friend request.
- 36.Option for friend request
- 37.Able to see strange user's state and reply also can send add friend request and greeting.
- 38/38(2). Able to see friend's state and reply.
- 39.1-39.2 Able to see other user's state by clicking Display Picture also can follow through multiple social software.
- 40.1-40.2 If not allowed
- 41.1-41.4 Able to see other user's state by clicking Display Picture and send friend request by click "add friend" icon.
- 42.1-42.3 Able to add friends on Facebook.
- 43.1-43.3 Able to add friends on Twitter.
- 44.1-44.3 Able to add friends on LinkedIn.
- 45.1-44.3 Able to add friends on Google.

46. Able to update business display picture and information of restaurant.
47. Notification for business owner. (Any message related to business user).
48. Able to reply user comment.
49. Able to replay user chat.
50. Able to reply user comments.
51. The view of the reply comments.
52. Able to reply user chat message.
53. The view of conversation with user.
54. Users replay the others post page.
55. The complaint of Business. There are basically all the message about complaints offered by restaurants managers.
56. Information page will be extended showing all the complaint information.
57. Administrator gives reply to business manager.
58. There are basically all the message about chatting offered by restaurants managers
59. Information page will be extended showing all the chatting information.
60. Administrator chats with restaurants manager.
61. There are basically all the details of restaurants which will be shown in this page.
62. The complaint of users. There are basically all the message about complaints offered by users.
63. Information page will be extended showing all the complaint information.
64. Administrator gives reply to users.
65. There are basically all the details of users which will be shown in this page.
66. There are basically all the message about chatting offered by users.
67. Information page will be extended showing all the chatting information.
68. Administrator chats with users.
69. User(or business) connects administrator in order to provide a complaint.
70. User(or business) connects administrator in order to chat with administrator.
71. User chats with administrator.
72. Business chats with administrator.

- 73.Users greeting to other users.
- 74.Users did not greeting other users
- 75.Users switch interface
- 76.Main view with notification
- 77.One click of restaurant
- 78.Users click their friends on the map.
- 79.Option for social needs
- 80.Option view with clicking a stranger
- 81.Option view with clicking a friend
- 82.Same to 79.
- 83.All restaurants in list interface
- 84.79 with a notification
- 85.Option view with a click of restaurant
- 86.All pizza in list interface
- 87.All people in list interface
- 88.Just users with option view
- 89.A type page of main view in searching pizza
- 90.Users and restaurants in list interface
- 91.Main view with restaurants and users
  - 92.1.Main view(just users in map) click a stranger who has been greeted
  - 92.2.Main view(users and restaurants in map) click a stranger who has been greeted

### **Users privacy guarantee**

First of all,in our account detail section,although we asked users to fill their phone number,the phone number can not been seen by other users. The reason why we ask for the phone number is that it can be convenient in case users forget their password.

In addition,talking about our domain issue,location sharing,we would like to mention that we have an option for users to choose whether they want to show their location in

the map. It is because the feeling of users are mainly consideration of our design and their selection are also need to be highly respected.

Furthermore, when users post some comments to restaurant, only the restaurant manager can see is the evaluation users have post and the first three letters of users name in order to guarantee the privacy of the users.

### **How to build the trust between the users(including students and business manager) and the APP**

Since our APP are designed by individuals. In our opinion, as a APP only to provide service to the UQ students, we may obtain the permission of our university. It means that we are looking for the support of university to make our APP as an official one in order to get the trust of users. Furthermore, personally a good users experience can also be helpful to make users comfortable and get their trust.

### **APP Promotion Strategy**

1. We would like to propaganda our APP in social media such as Facebook and Twitter since our App is established for UQ students mainly, which means easily to make it well-known from social media.
2. When the first step has done, we will put up some posters around the campus especially in Food court to let students know that our own UQ food and social has been completed.
3. As the manager of the APP we are going to communicate with the restaurants managers and ask for some help to promote the APP which can also be beneficial for themselves. (including some coupon to advertise their restaurants)
4. After we did the conversation with business managers, we will offer some lollies to users. For example, we can set up a lottery activity for users who give some evaluations to the restaurants.  
And reward can be the discount coupon we asked before.

## User story

As a user, I need to be able to log in to the application.

As a user, I would like to be able to log in with Face book account.

As a user, I need to be able to log in with Google plus account.

As a user, I need to be able to log in with Ins account.

As a user, I would like to be able to set a new password if I forget the password

As a user, I would like to be able to find my location in the map.

As a user, I would like to be able to see users nearby me in the list.

As a user, I am able to search based on key words.

As a user, I should be able to log out.

As a user, I need to be able to check and update my account detail.

As a user, I need to be able to send message to my friends

As a user, I am able to see the restaurants located in the map.

As a user, I should be able to use Setting function to turn on or turn off location shared and display message .

As a user, I should be able to know the detail of the restaurant and communicate with manager of the restaurant.

As a user, I would like to be able to choose the gender who I would like to see in the map

As a user, I would like to be able to say hi to strangers.

As a user, I would like to be able to justify which is my friend and which is stranger in the map depending on different color.

As a user, I should be able to post some comments in friend circle.

As a user, I would like to be able to see a prompt of new notice.

As a user, I need to be able to add strangers to friends.

As a user, I would like to be able to check how many of my friends are online.

As a user, I would like to be able to check the total number of my friends

As a user, I should be able to follow my friends with other social media accounts.(fb,tw,ins,gg)

As a user,I need to be able to select which kind of users I would like to see in the map.

As a user, I should be able to select who can see my post.

As a user, I would like to be able to check my own post history

As a user, I would like to be able to reply on my friends post.

As a user, I would like to be able to know the distance between myself and my friends.

As a user, I need to be able to check the menu of the restaurants and post comments to the dishes.

As a user, I would like to be able to give an star evaluation of restaurants.

As a user, I need to be able to chat with administrator.

As a user, I need to be able to submit a complaint to administrator.

As a business manager, I need to be able to log in to application.

As a business manager, I need to be able update the account details.

As a business manager, I am able to chat with users.

As a business manager, I would like to be able to reply users comments.

As a business manager, I am able to post comments to attract customers.

As a business manager, I would like to be able to give an star evaluation of restaurants.

As a business manager, I need to be able to chat with administrator.

As a business manager, I need to be able to submit a complaint to administrator.

As a administrator, I am able to chat with users.

As a administrator, I am able to chat with business manager.

As a administrator, I am able to see the complaint from users.

As a administrator, I should be able to see the complaint from users.

As a administrator, I should be able to reply the complaint from users.

As a administrator, I should be able to reply the complaint from business manager.

As a administrator, I should be able to see the users account information.

As a administrator, I should be able to see the business managers information.

## **Feedback from the testers**

In order to guarantee the correctness and integrity, our group has invited 23 testers to test the App idea we have complete. The 3 testers are restaurant manager nearby St.Lucia campus and 20 testers are normal UQ students. Especially, there are 5 freshman among these 20 testers, since we really care about the new UQers opinions. Here are some of the useful feedback they have gave us.

*1) Feedback from the students*

- 1.(accepted) In my opinion. It is necessary to design a part that we can log in with the other social media account.
- 2.(accepted) It is good if we can add the other social medias account as friends.
- 3.(accepted) It will be useful that we can check our own comments we have post in friend circle.
- 4.(accepted) It is good that if we can hide ourselves from the map.
- 5.(rejected) Users can order the food in this App.
- 6.(accepted) Our privacy of information need to be ensured.
- 7.(rejected) We can delete others comments on my friend circle.
- 8.(accepted) Phone number of restaurants are necessary.
- 9.(accepted) I think we are able to add photo in social part.
- 10.(accepted) It can be helpful that before we go to restaurant, we need to know if it is crowded there.

*2) Feedback from the restaurants managers*

1. (accepted) I think it will be better if we can post some promotion information in restaurant model
2. (rejected) I do not think it is a good idea that users can hide the restaurants in the map
3. (rejected) Our account also can add the strangers as friends.
4. (accepted) It is useful to add our restaurants phone number in restaurant detail
5. (rejected) If it is possible, we can refuse some unreal comments.

**How to connect two functions(Social&Food News) together**

Users can get in touch with others by the social function and choose a nice restaurant by the food news function and then invite each other for a meal at UQ.

### **The future of the APP**

1. The location can be extended, and more restaurants nearby UQ can be included so that students will get more choices of dining.
2. The food delivery service can be developed, and the App can earn some salary from the service.
3. Some activities can be held for social needs, such as a dating party.
4. The background music can be added to the app and UI will be developed to make the app more vivid.
5. Moreover, we would like to add more functions to the app facing what students are really concerned about. For example, how many seats are available in the library.

**Questionnaire survey****Questionnaire Survey**

|   |   |
|---|---|
| Are you a UQ student?   | <input type="checkbox"/> Yes <input type="checkbox"/> No  |
| Which issues do you concern most?   | <input type="checkbox"/> Food <input type="checkbox"/> Traffic <input type="checkbox"/> Social <input type="checkbox"/> Study   |
| Do you have meals at UQ?  | <input type="checkbox"/> Yes <input type="checkbox"/> No  |
| What do you think the food at UQ?   | <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> OK <input type="checkbox"/> Awful     |
| How much time can you stand queuing for food?   | <input type="checkbox"/> 5mins <input type="checkbox"/> 15mins <input type="checkbox"/> 30mins                                  |
| What is the top food issue for the freshman?  |   |
| How do you come to school?  | <input type="checkbox"/> Drive <input type="checkbox"/> Bus <input type="checkbox"/> Bike <input type="checkbox"/> Walk         |
| Do you think it is easy to park?<br>(if drive)  | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Sometimes                                     |
| What do you think about the traffic conditions around UQ?                             | <input type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> OK <input type="checkbox"/> Terrible  |
| How do you make friends?  | <input type="checkbox"/> By study <input type="checkbox"/> By activity <input type="checkbox"/> By social media                 |
| Do you think it is easy to make friends at UQ?  | <input type="checkbox"/> Yes <input type="checkbox"/> No  |
| Do you think it is necessary to supply a platform for students to make friends at UQ? | <input type="checkbox"/> Yes <input type="checkbox"/> No  |
| Where do you study as usual?  | <input type="checkbox"/> Home <input type="checkbox"/> Library <input type="checkbox"/> Outside <input type="checkbox"/> Others |
| Do you think it is easy to find a seat in the library?                                | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Sometimes                                     |
| Which design style of social & news APP do you like most?                             | <input type="checkbox"/> Minimalism <input type="checkbox"/> Colourful <input type="checkbox"/> Loveliness                      |
| Which colour do you like most for social & news APP?                                  |   |

Thanks for your participation !

Your opinions are really helpful to us, cheers!

## The photos of physical application

