



Second Paper Prototype and Heuristic Evaluation Report

4967

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1. Introduction

This paper describes a methodology based on the use of usability evaluation questionnaires and heuristic evaluation, applied in the MyPark application, showing the results of the experiments and comparing them. The results obtained with the experiments lead to the confirmation of the expectations that, the application needs to improve in terms of usability. Focus mainly on the aspects of adaptation to the needs of users, grouping of tasks most used for each user, and also to describe what the icons that are in the categories of facilities mean.

2. User Testing

The user test was conducted with 6 users, of these 3 have already participated in the first test. The usability was tested after the changes made to the prototypes test.

Usability is an extremely important factor in delivering profitability and reliability to an application, which is extremely important when dealing with software development companies. An application easy to use and learn is an easy to sell application, because the user is interested in an application that makes life easier for him. Every minute the users spend trying to find a role is wasted time, precious for him to accomplish the task. In that time, instead of being able to finish his work, he ends up looking for outside information, subsidies that can help him (read: Google and forums, because very few seek the application's help system). So your income goes down, your patience is running out and the user, when they find some application easier to use in that area, will end up changing.

2.1. Respondent 1

The first user navigated the application very easily. He suggested just putting a search button along with the other buttons that are located in the park photo.

The user completed all tasks (Appendix 8 Task Scenarios for Usability Testing) accurately, and without hesitation.

2.2 Respondent 2

The second respondent navigated through the application, seeming to know the application already. The user is confused only with the icons of the facilities that are in the park. The user suggested indicating the meaning of the icon to the side, in order to facilitate the understanding.

2.3 Respondent 3

The third respondent had already taken the test previously. The user navigated through the application, to find out if a change was made to the parking information, as he had requested to see how much the parking costs, before going to the park. The user was satisfied with the application and did not suggest any changes.

2.4 Respondent 4

The fourth respondent had already taken the test previously. The user previously suggested modifying the main menu and choosing more than one option. For example, select Parks that have a swimming pool that is also great for a barbecue. The user was very pleased with the changes and would like to use this application.

2.5 Respondent 5

The fifth respondent had already taken the test previously. The user had previously enjoyed the navigation and had not suggested any changes. In the second test he was confused with the icons of the park facilities, he questioned what one of the icons meant, and it was a table. The user suggested to put the information next to the icon.

2.6 Respondent 6

The fifth respondent navigated easily through the application and missed a welcome message after logging into the application. Also suggest putting a back button on park information at the bottom of the page.

2.7 User Analysis

Based on the tests performed with the users, only 3 changes will be made. Due to the efficiency of the changes already made and the usability that has been improved. No further testing is required.

Below are the changes that will be implemented:

- Add a search button, along with the others that are located in the bottom of the park picture.
- Add information next to the icon to improve understanding of the facilities.
- Add a welcome message after login or register.

3. Heuristic Evaluation

3.1 First Evaluation

The first heuristic evaluation was conducted with Johannes Muljana. The participation of this professional was very important, because this study is based on the use cases and the best practices of the User Experience. An experienced professional can help you find new opportunities and new ways to deliver a new experience with more qualities that may surprise the user.

He pointed out two new features to implement and one change.

To implement:

Inform the hour that the people most near the park.

Show reviews and have space to write reviews about the park. Both of these information can be used through Google and implemented in the application.

To change:

He believes it would be more interesting to show the facilities of the park, before the photos and other information.

The usability score is 85.00%.

3.2 Second Evaluation

The first heuristic evaluation was conducted with Kriss Mahatumaratana.

He commented that the application is in accordance with IOS 10. All icons are in perfect size and also the size of the texts. He found it easy to navigate and has relevant information. Kriss just commented that it would be interesting to comment on the Park, having a field for people to comment on their experiences at the park.

The usability score is 97.50%.

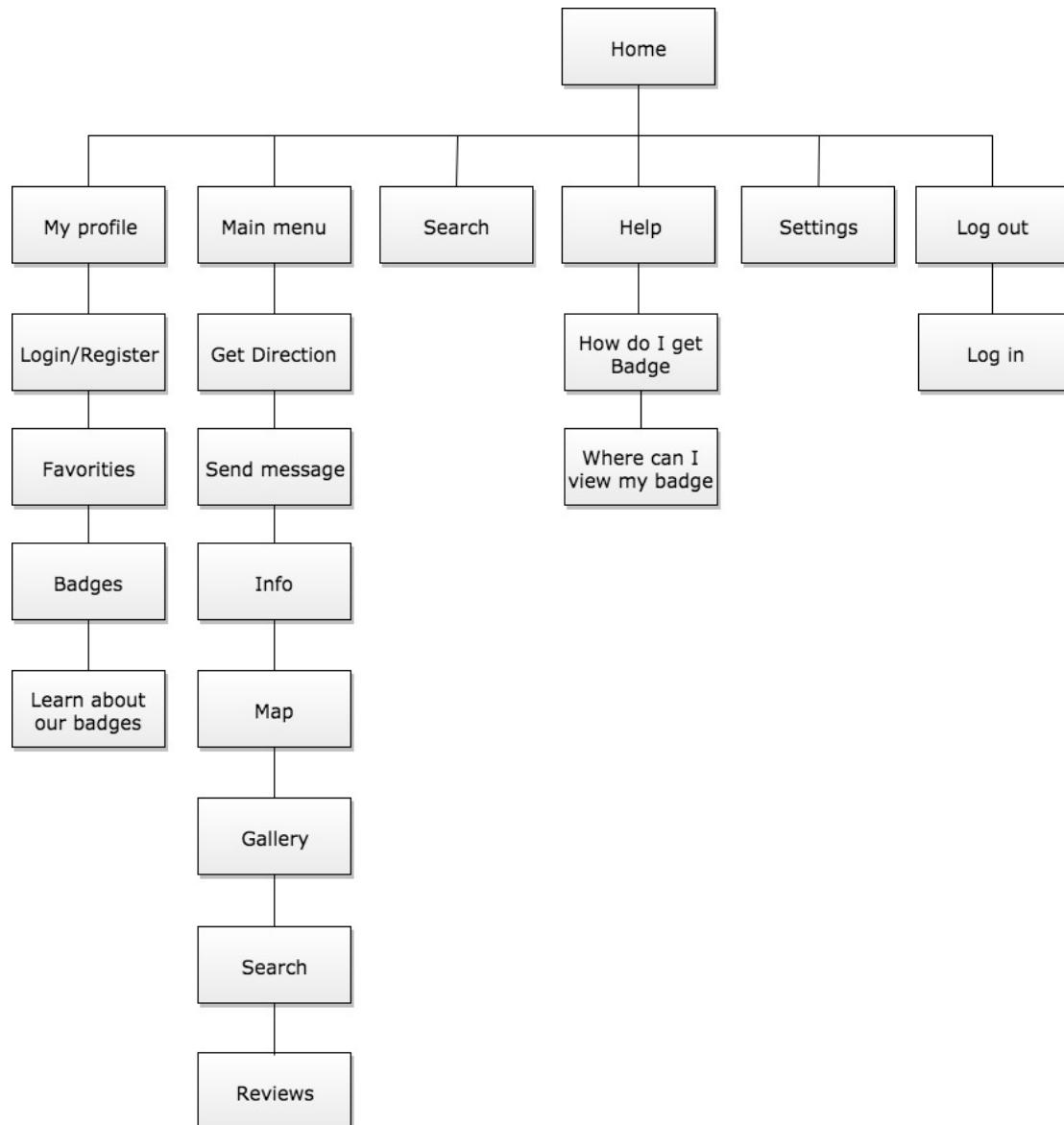
3.3 Professional analysis

This document described the main results of a usability study of the MyPark application, to identify and fix problems even during the development process. The results of the heuristic evaluation demonstrate the efficiency of the design, evaluation and redesign strategy applied to an application's development lifecycle, given that the vast majority of usability issues identified in the initial versions of the application have been resolved. However, improvements must still be considered and implemented before application development.

3.4 Links

- Click the link to watch the Heuristic Evaluation test: <https://www.youtube.com/watch?v=IKgLKgCQrgU>
- Click the link to watch the record interactions in prototype (Heuristic Evaluation).<https://www.youtube.com/watch?v=4cjzFFpSzVE>
- Click the link to test the application on IPhone 6 Plus: <https://xd.adobe.com/view/d3dd0e08-b380-4832-a86fdc4292e62530/>
- Click the link to test the application on Ipad: <https://xd.adobe.com/view/bdda199d-8f8a-4dc7-9be2-8f7492dad7a5/>

4. Information architecture



5. Appendices

5.1.1 iPhone 6 Prototype

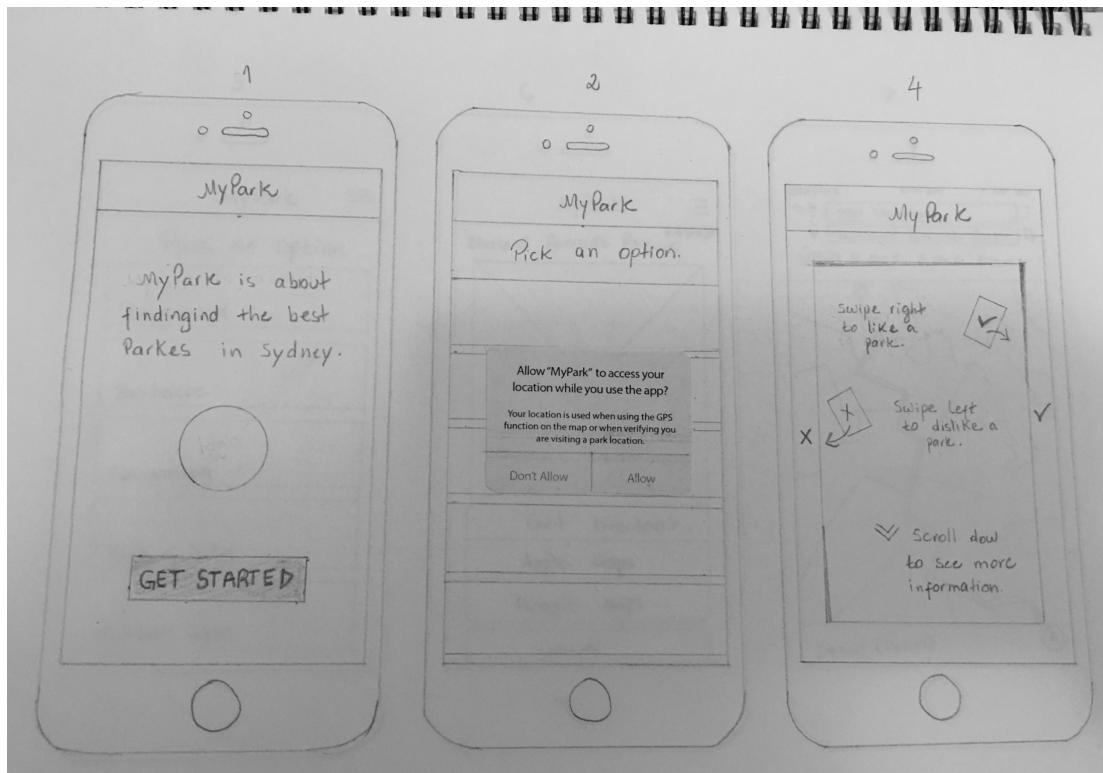


Figure 1: Get Started, Allow GPS and Swipe Pictures

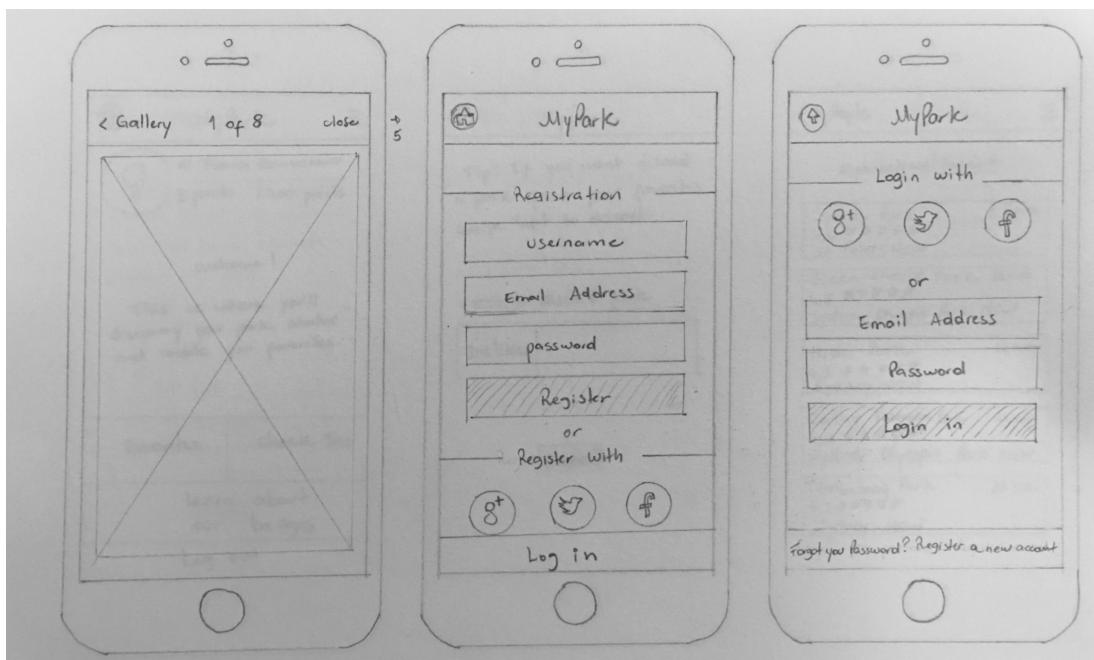


Figure 2: Gallery Pictures, Register and Log In

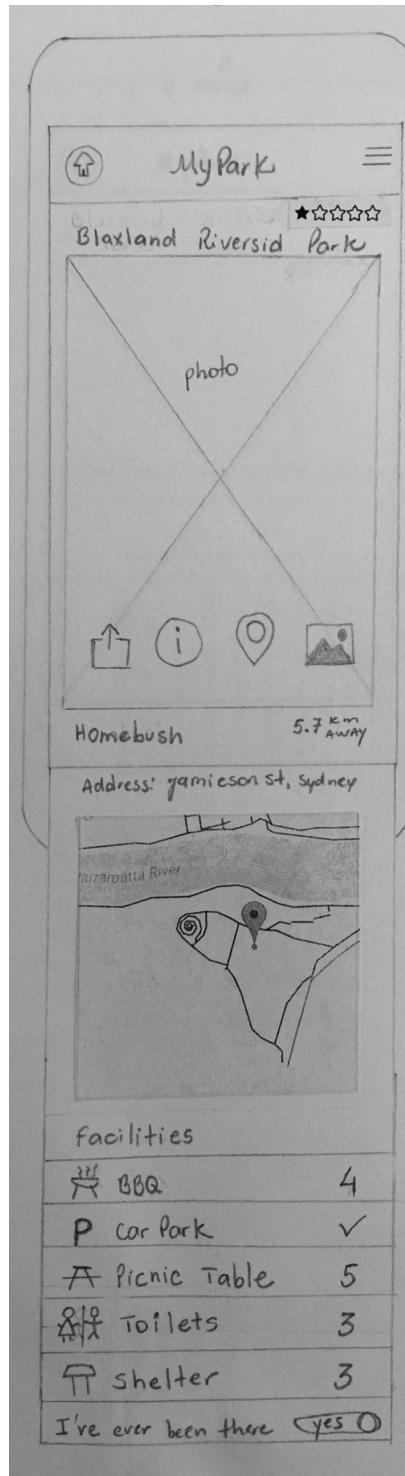


Figure 3: Park Pictures and facilities

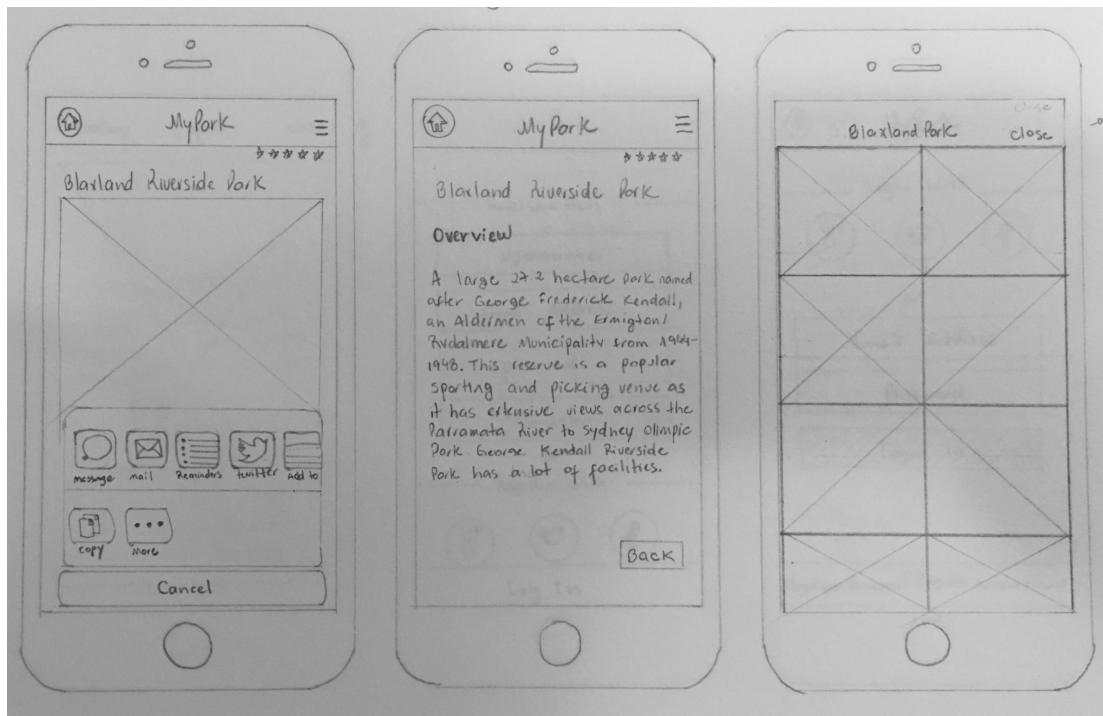


Figure 4: Send Message, Park Info and Gallery

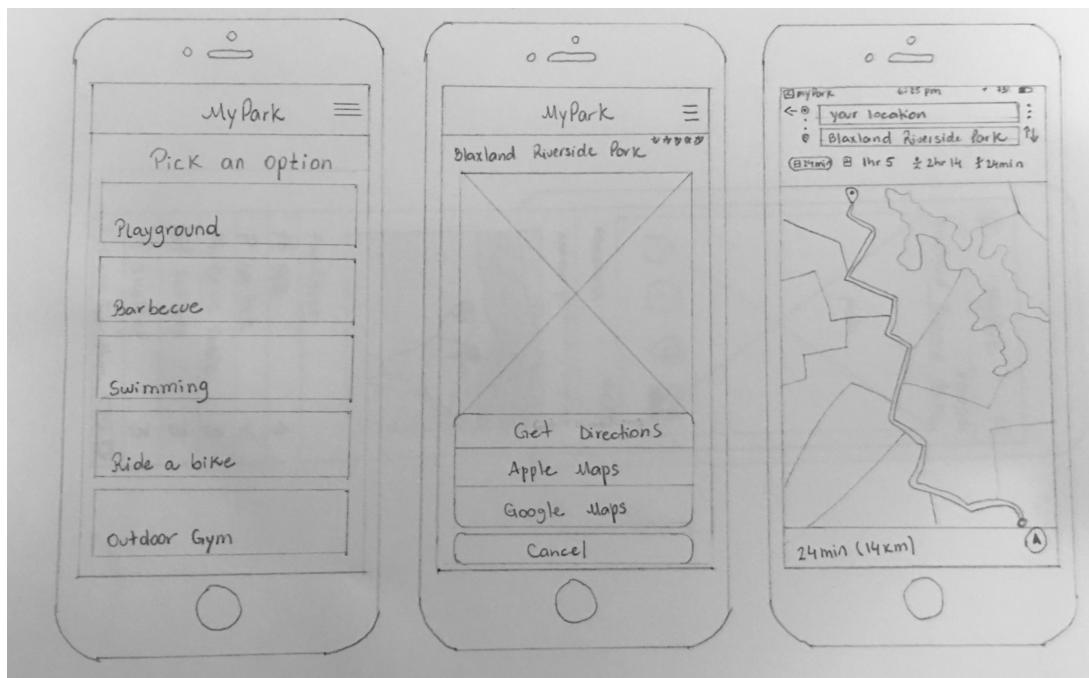


Figure 5: Gallery Picture, Register and Log In

5.1.2 IPad Prototype

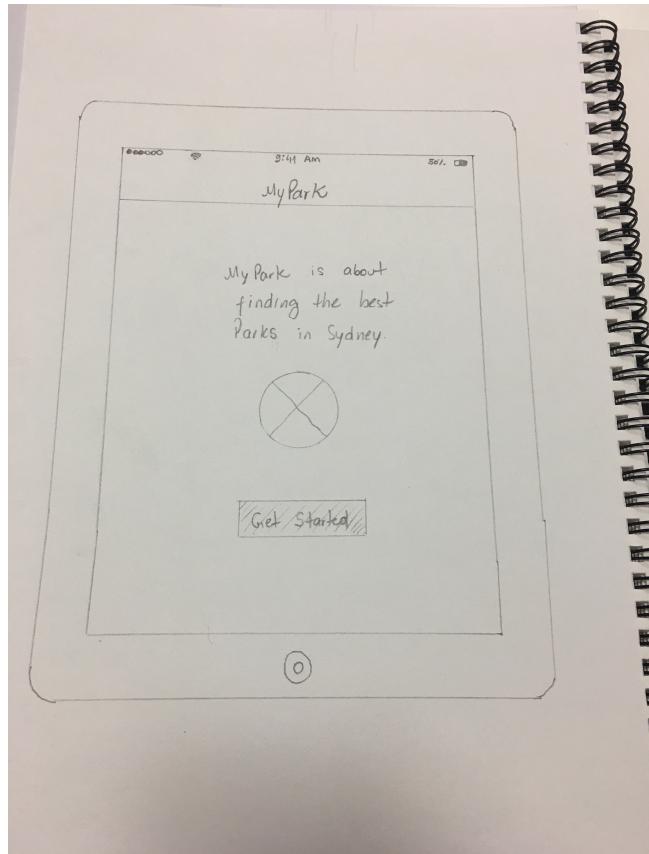


Figure 6: Get Started

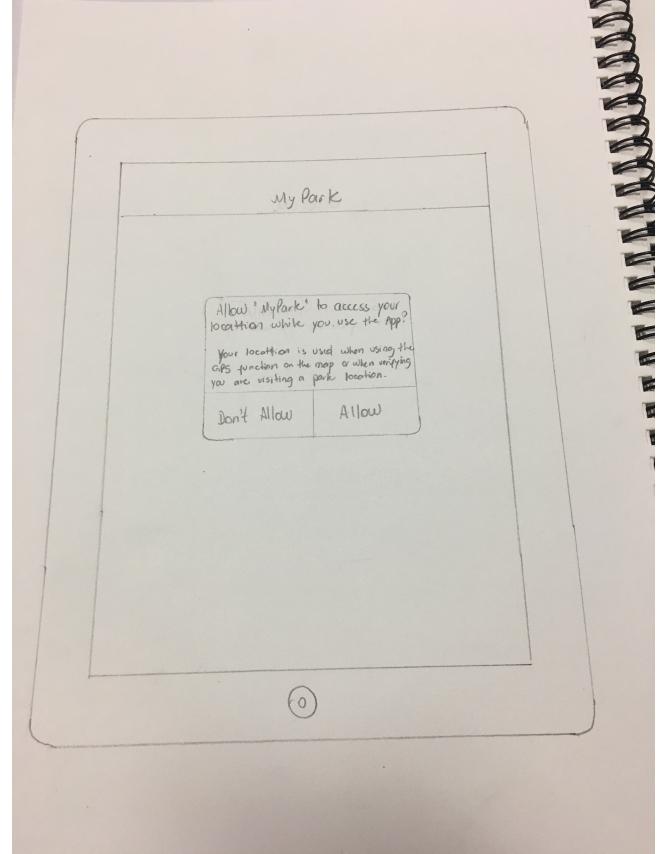


Figure 7: Allow GPS

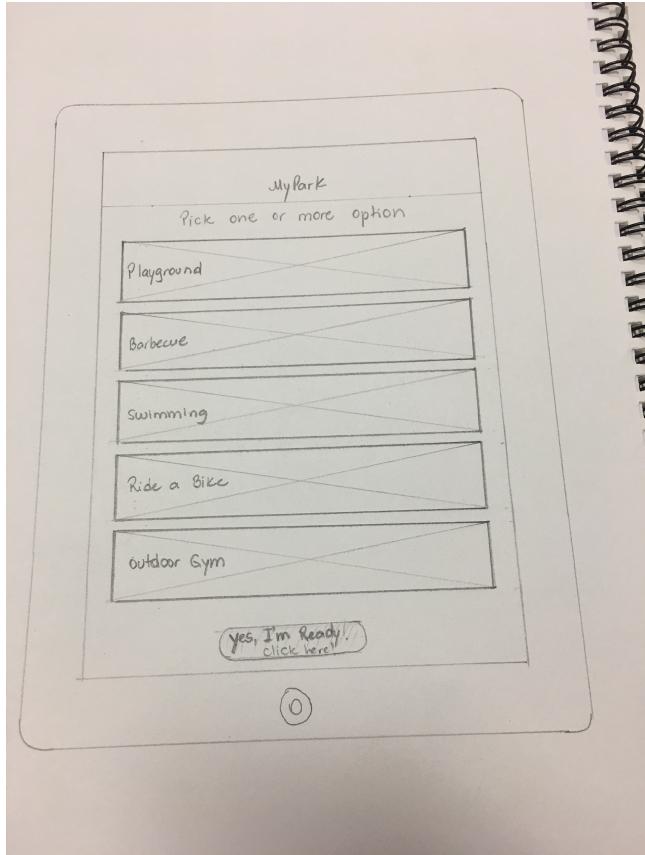


Figure 8: Home

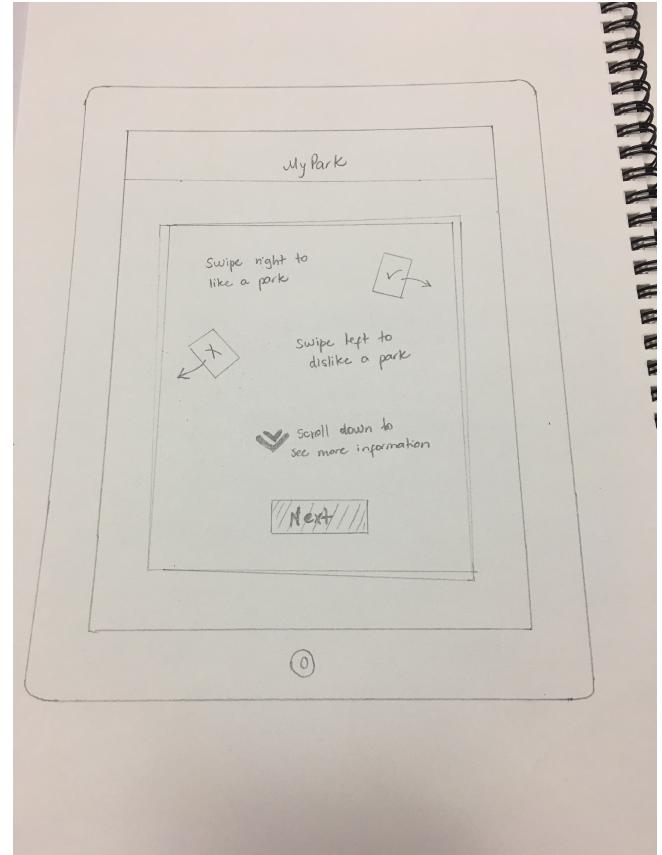


Figure 9: Help Swipe

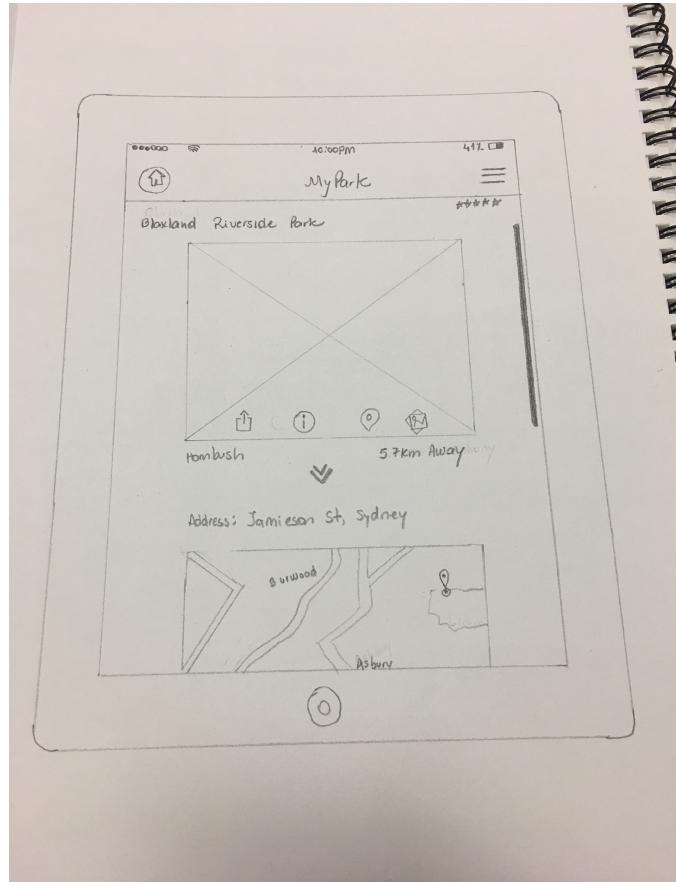


Figure 10: Park Facilities

5.2 Wireframe

5.2.1 iPhone 6 Wireframe

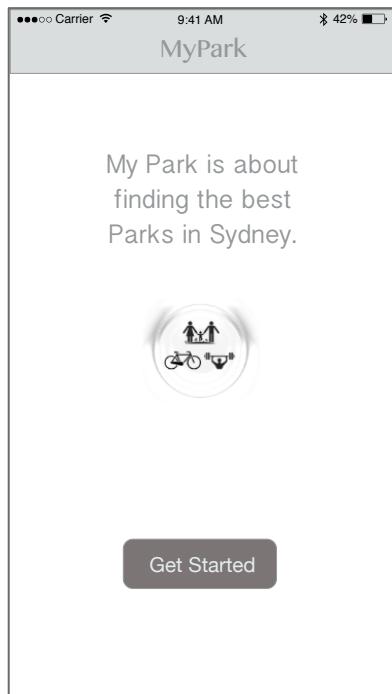


Figure 11: Presentation

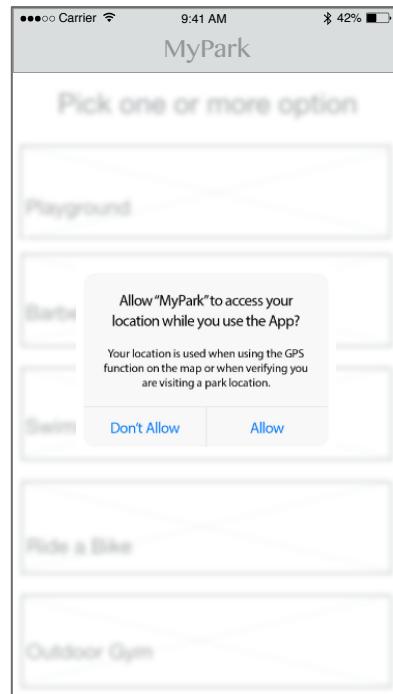


Figure 12: Allow GPS

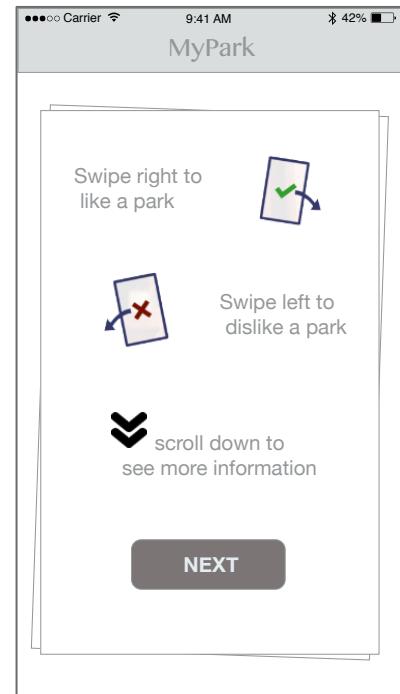


Figure 13: Swipe

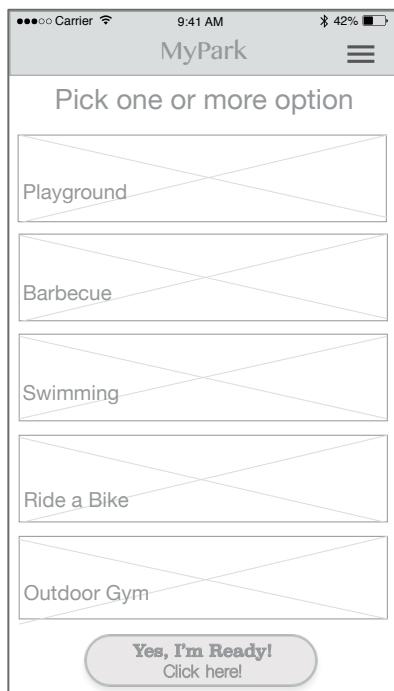


Figure 14: Home

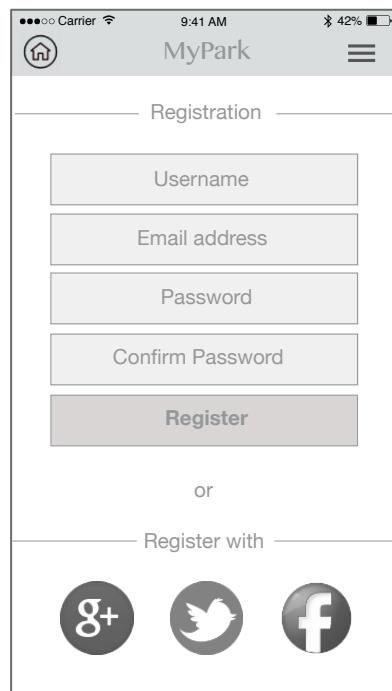


Figure 15: Register

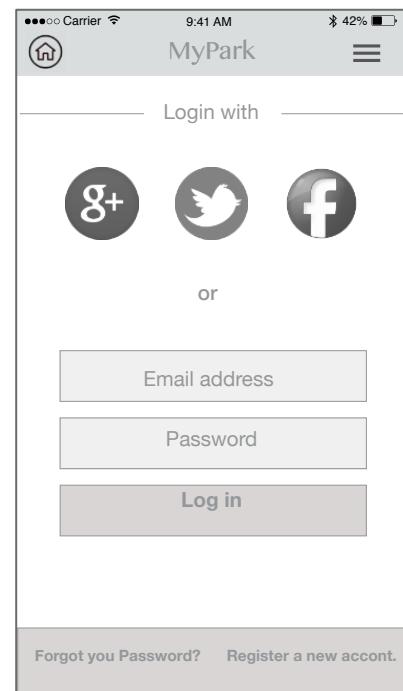


Figure 16: Log In

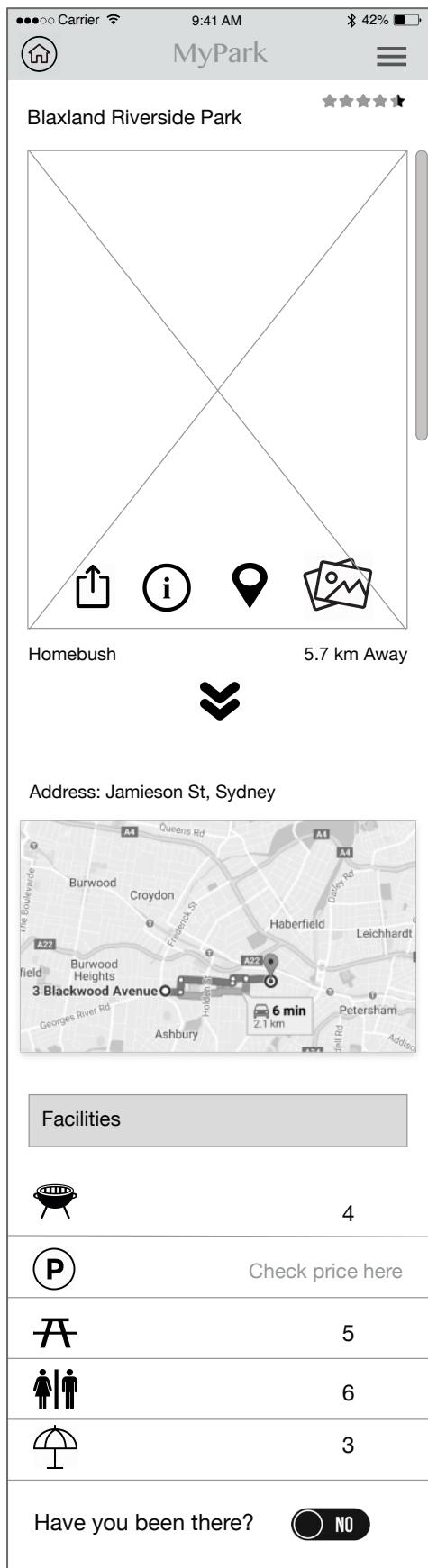


Figure 17: Park Facilities

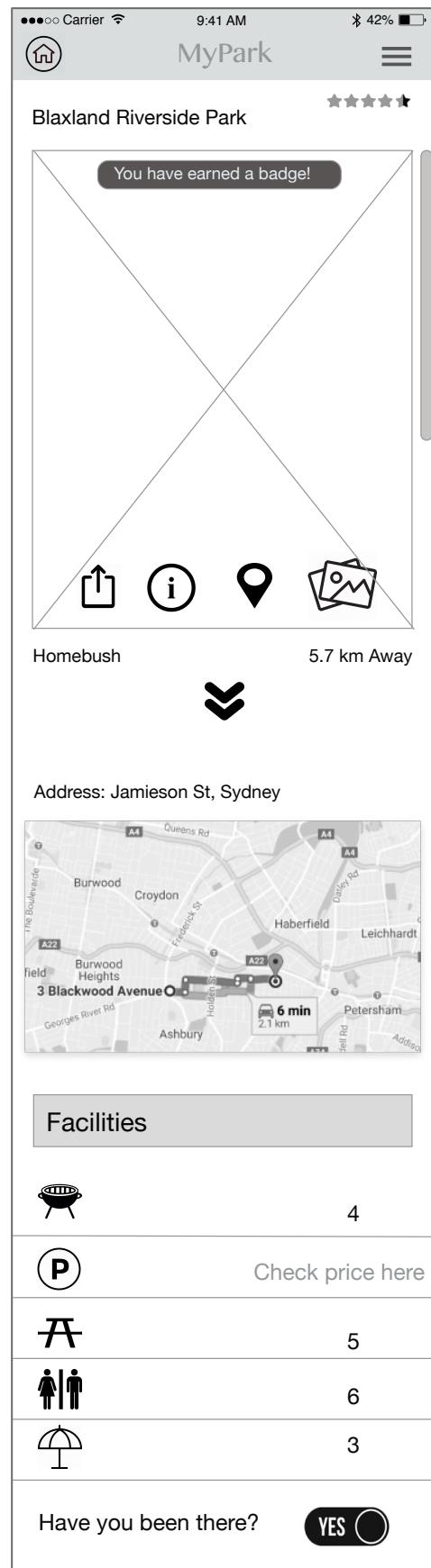


Figure 18: Have you been there?

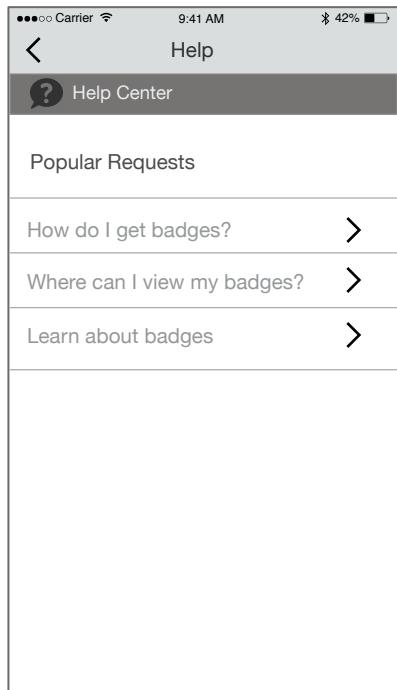


Figure 19: Help

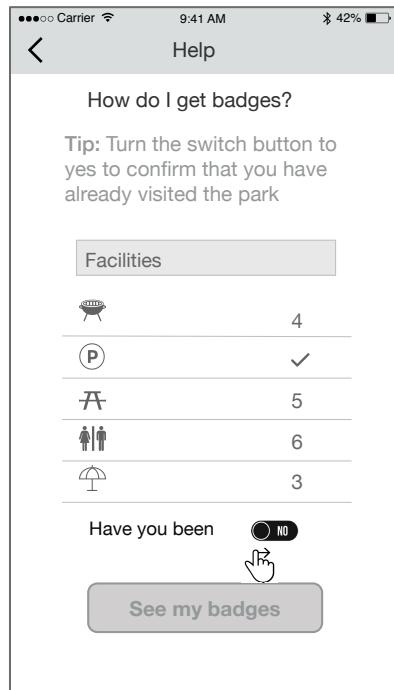


Figure 20: Help Get badges

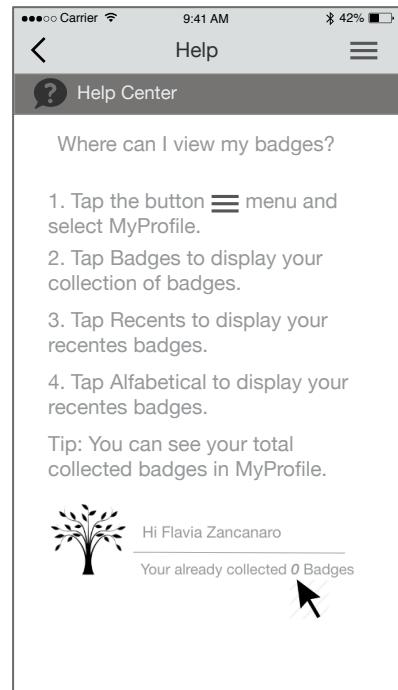


Figure 21: Help View

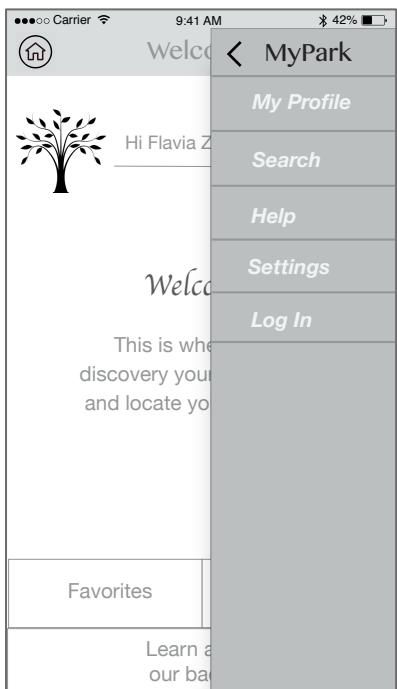


Figure 22: Menu

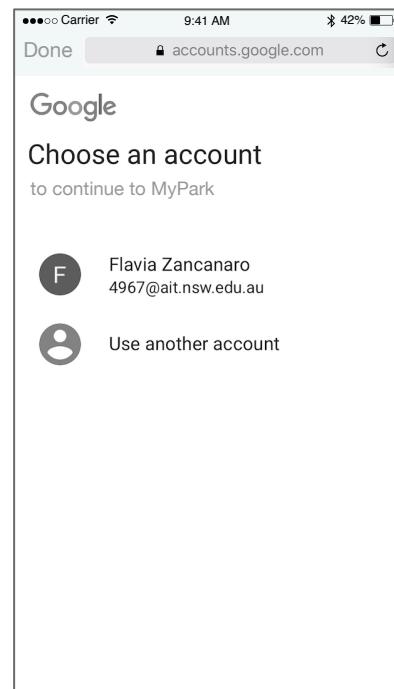


Figure 23: Login Google

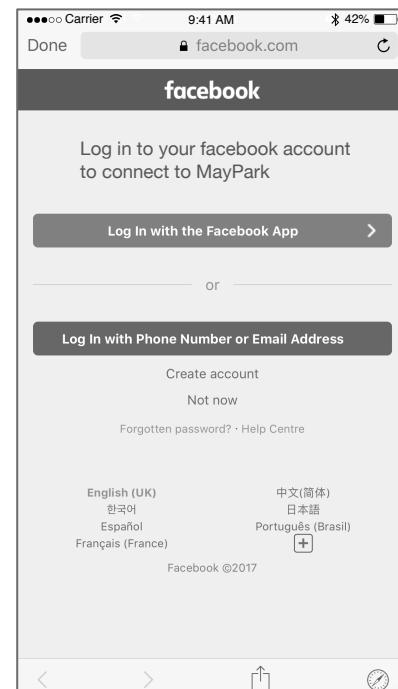


Figure 24: Facebook

5.2.2 IPad Wireframe

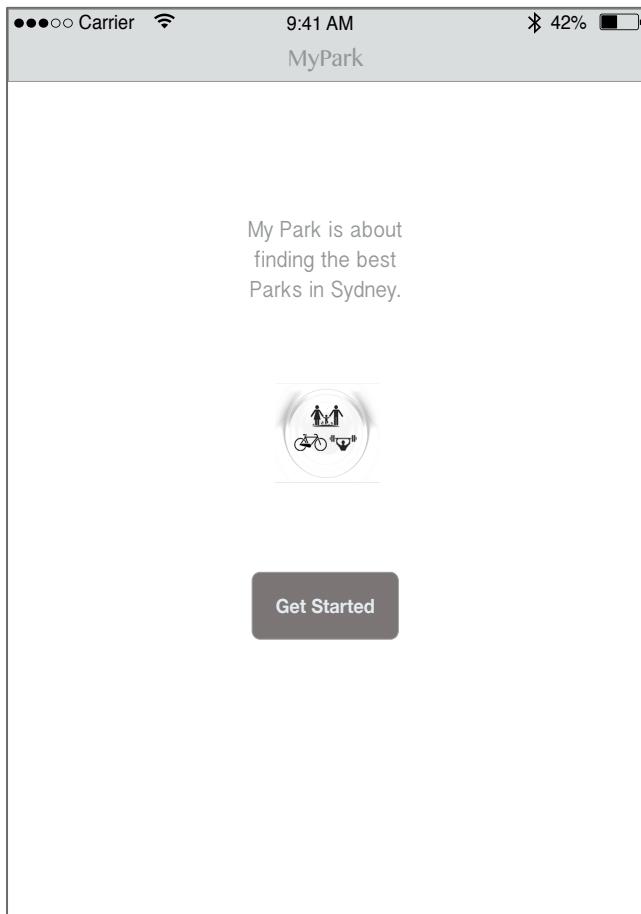


Figure 25: Get Started

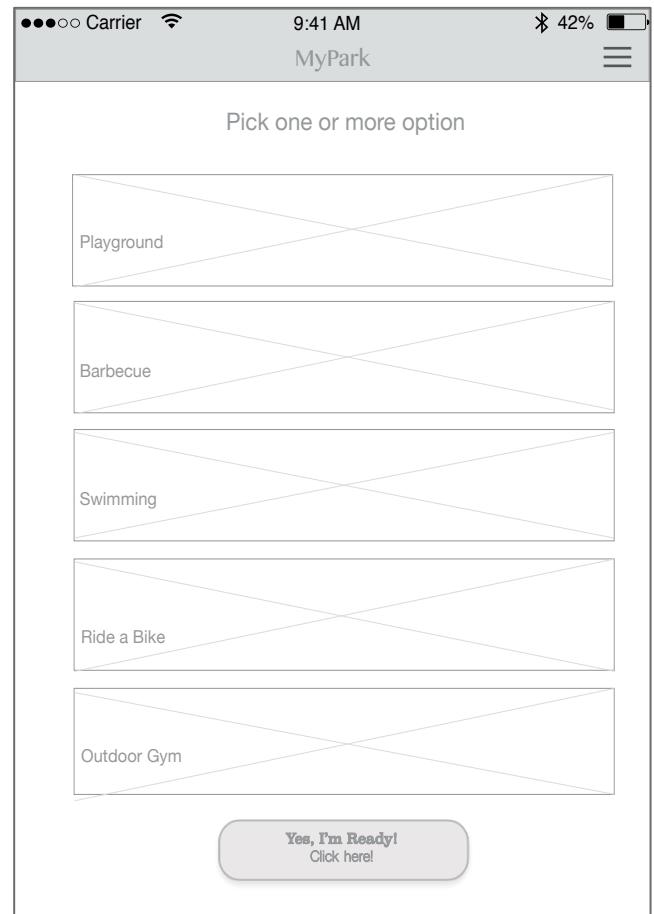


Figure 26: Home

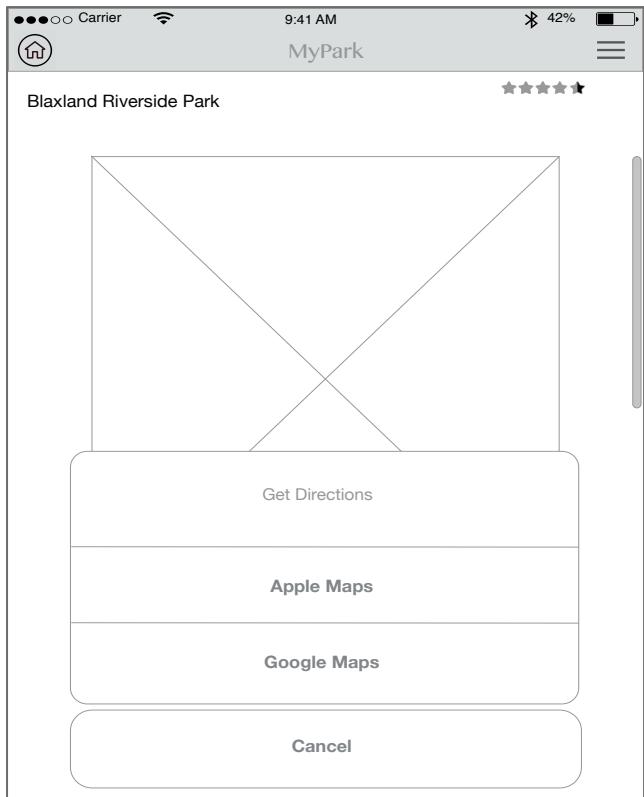


Figure 27: Get Directions

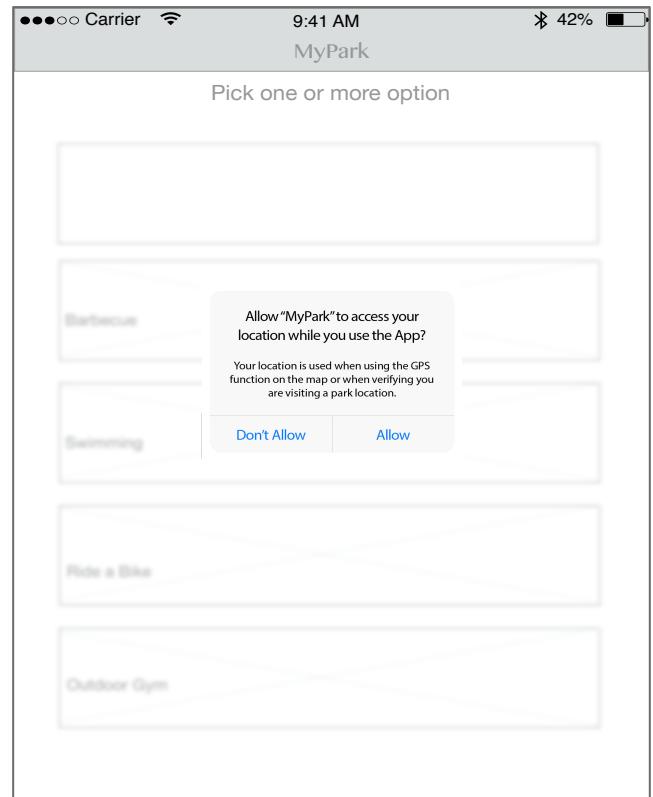


Figure 26: Allow GPS

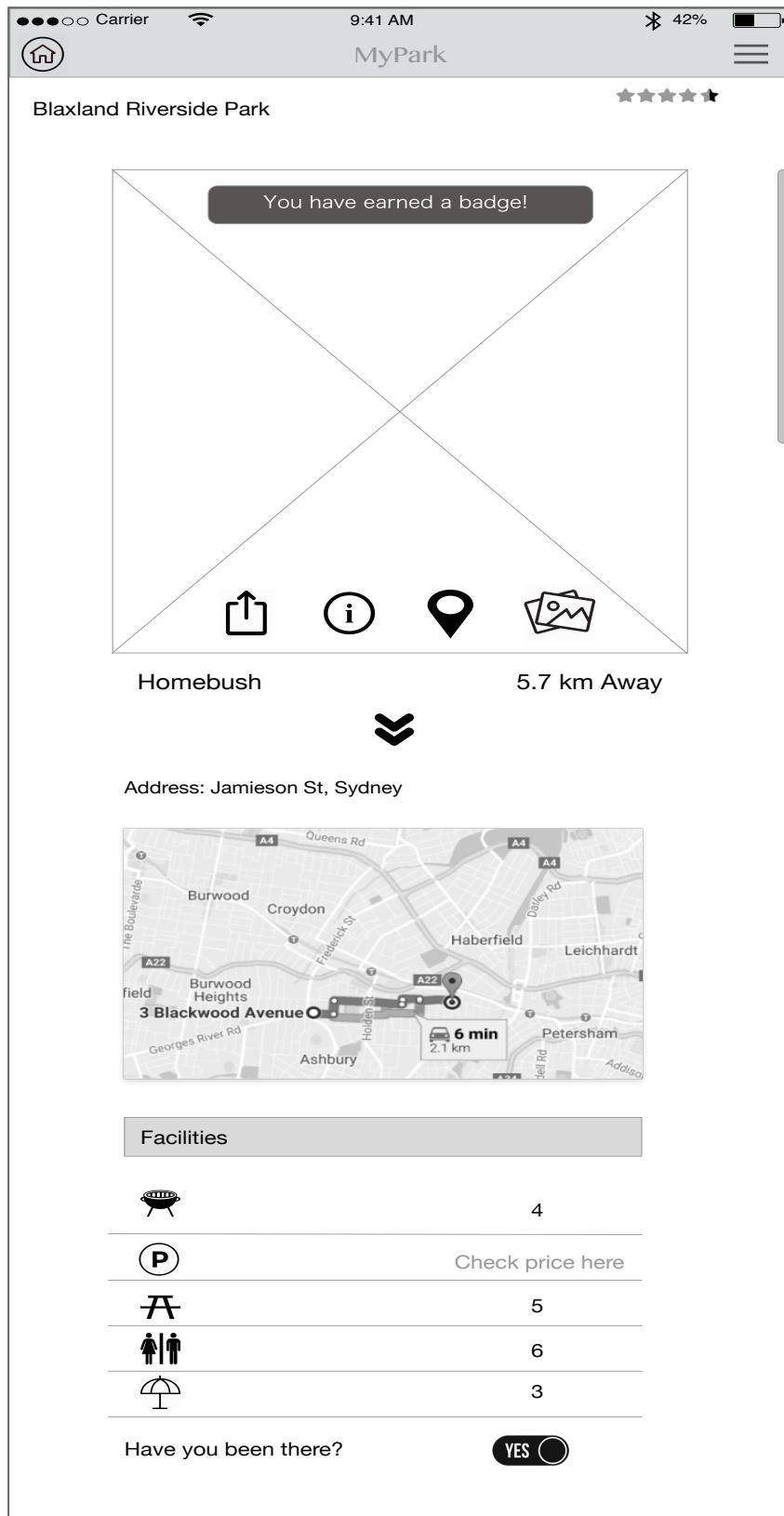


Figure 29: have you been there?

6. Test Evidence

6.1 Respondent 1

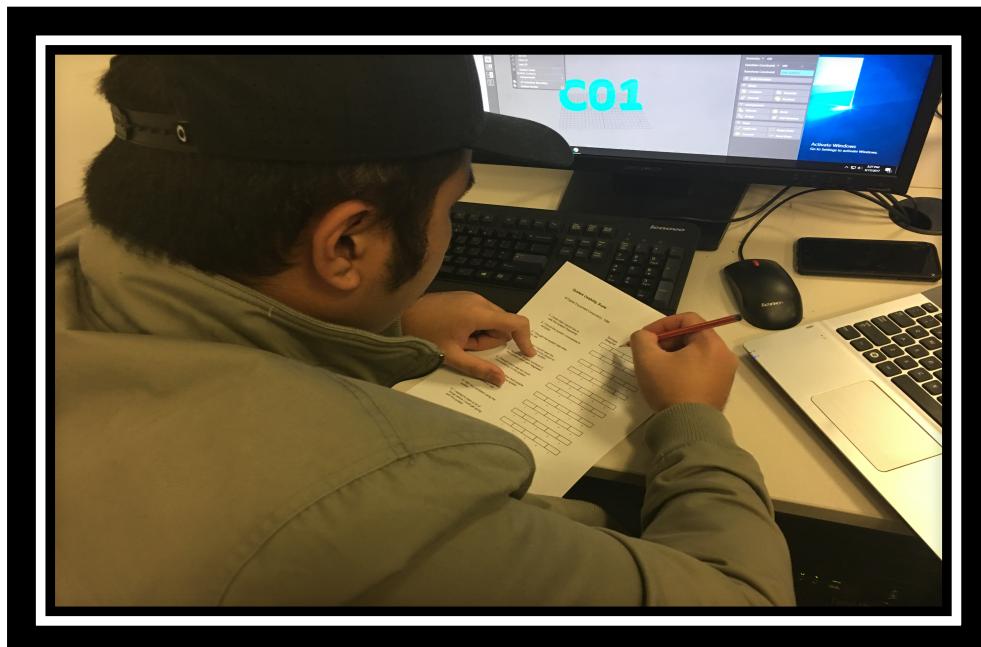


Figure 30: Respondent 1

6.2 Respondent 2

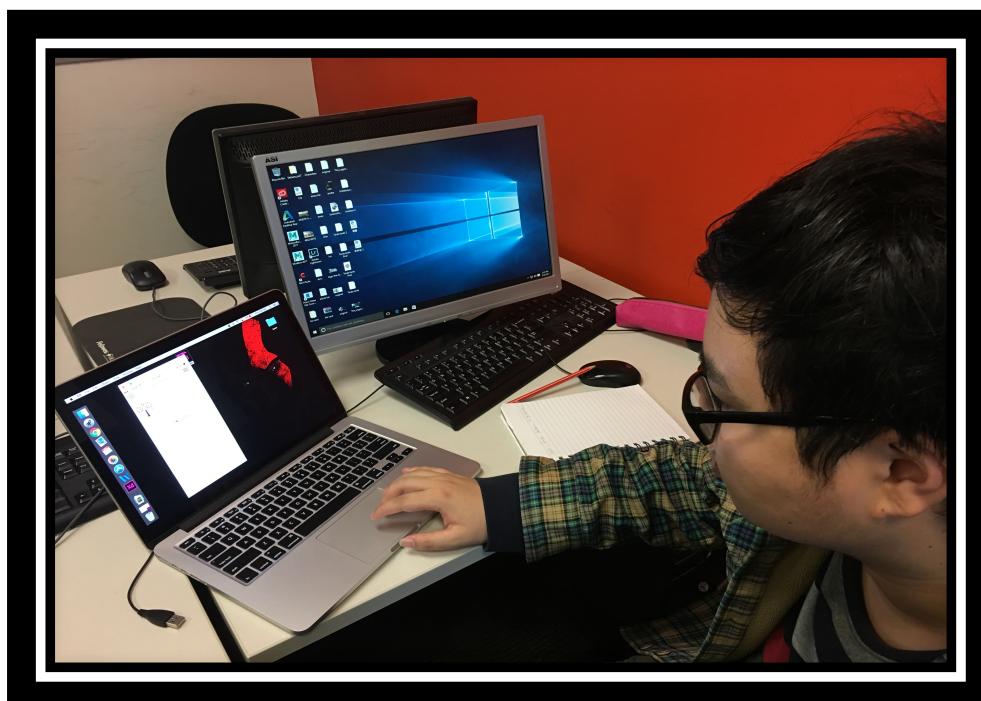


Figure 31: Respondent 2

6.3 Respondent 3

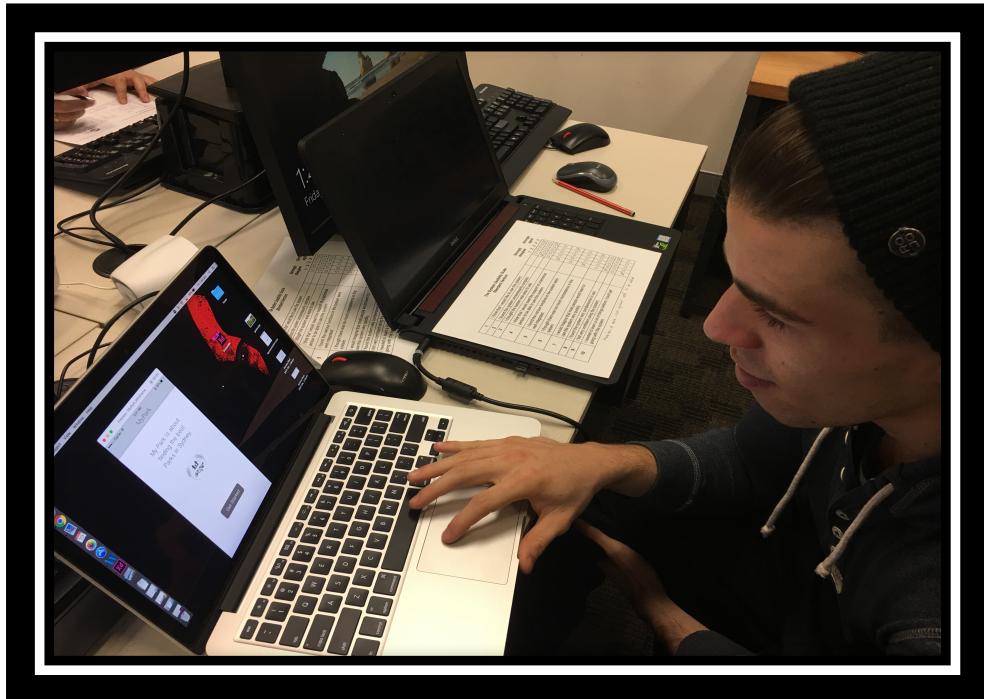


Figure 32: Respondent 3

6.4 Respondent 4

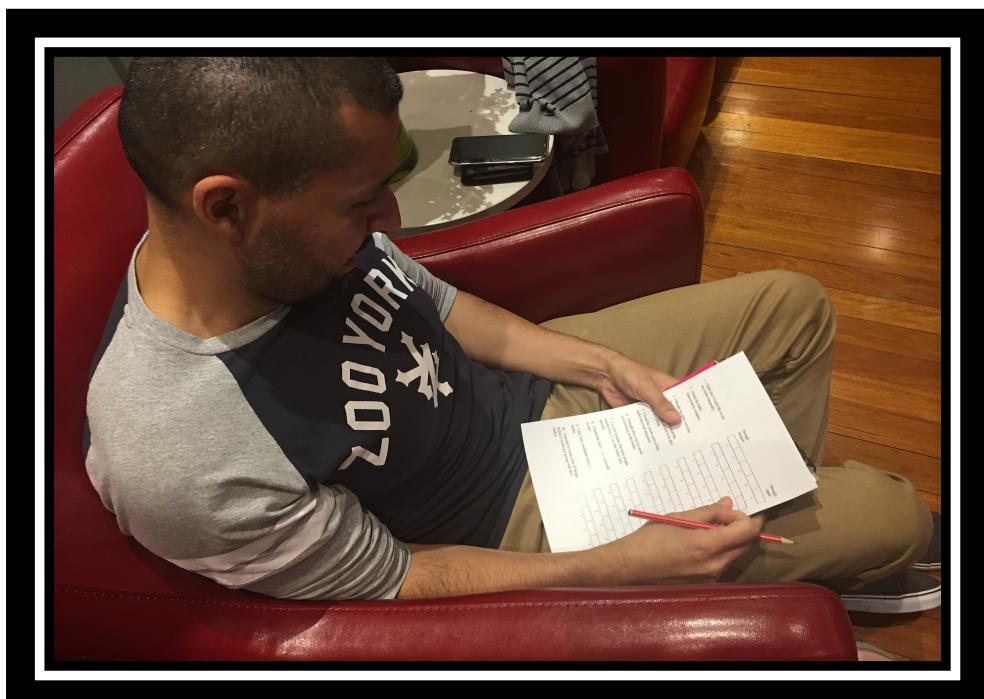


Figure 33: Respondent 4

6.5 Respondent 5

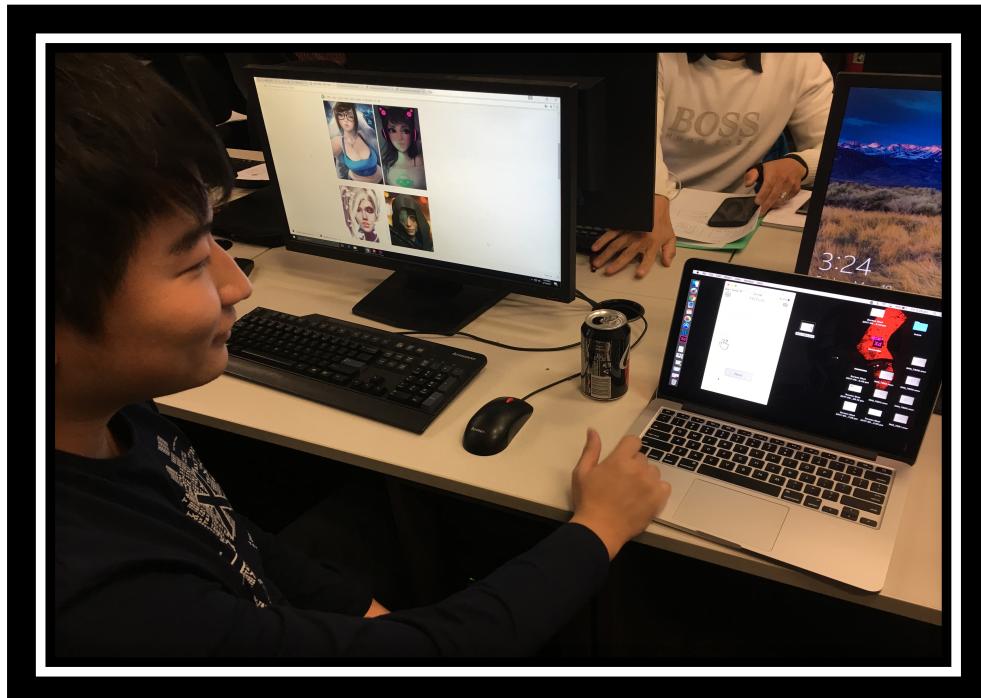


Figure 34: Respondent 5

6.7 Respondent 6



Figure 35: Respondent

7. Task Scenarios for Usability Testing

Nº	Tasks	User 1	User 2	User 3	User 4	User 5	User 6
1	Log out	x	x			x	
2	Log In		x				
3	Search for Park to have barbecue			x		x	
4	Search for Park to ride a bike		x				x
5	Search for Park for kids	x			x		
6	View all pictures in the gallery			x			x
7	Get directions		x			x	
8	Check badges	x					x
9	Check favourites				x	x	
10	Learn about badges			x			x
11	Help		x				
12	Go to Home	x					x
13	How to get badges			x			
14	Search for parks by postcode				x		
15	How far you are from the Park		x			x	
16	Where do you see all facilities in the Park?					x	
17	Have you been there?	x		x			x
18	Get info about the park			x			x
19	Turn on Push notification		x				
20	Add Park to your favourites				x		
21	Send link message to your friends	x			x		
22	View star rating					x	
23	How much does the parking in the park cost?			x			x
24	Get direction on Google maps by search park				x		
25	Turn on sync using mobile plan	x			x		
26	Where do you learn about badges?						x

8. System Usability Scale

Strongly
disagree

Strongly
agree

- I think that I would like to use this ballot frequently.
app
- I found the ballot ~~app~~ unnecessarily complex.
- I thought the ballot was easy to use.
app
- I think that I would need the support of a ~~poll official~~^{expert/technician} to be able to use this system.
- I found the various parts of this ballot were well integrated.
app
- I thought there was too much inconsistency in this ballot.
app
- I would imagine that most people would learn to use this ballot very quickly.
app
- I found the ballot very awkward to use.
app
- I felt very confident using the ballot.
app
- I needed to learn a lot of things before I could get going with this ballot.
app

would be good if app has comment feature for user to share their exp.

3 4 9

4 4 9

4 4 9

4 4 9

4 4 9

4 4 9

4 4 9

4 4 9

4 4 9

39 * 2,5 = 97,5%

Figure 36: System Usability Scale – Kris Mahatumaratana

System Usability Scale

© Digital Equipment Corporation, 1986.

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

$34 + 25 = 85\%$

Figure 37: System Usability Scale – Johannes Muljana