CPSC 481
P4: Final Report
Group 3

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1. Executive Summary

The application we are developing for this project is primarily for the use of people who are planning to travel. An app that can be found on a smartphone which lets the user browse through possible destinations, set destinations, set prices of the costs, create a sense of the finances needed for this vacation, and to help people budget accordingly. This app is designed so that it can be used by anyone in some way, from people with low-level understanding of technology to people who are fully proficient in the use of technology. This can be used by groups of travelers to easily plan and organize trips, or be used by an individual to set and budget their own vacation.

Some problems that led us to decide on this app was that we could not find other apps which does everything we think are necessary in planning a vacation in one app. Having to install and/or use multiple apps increases the chance of confusion among groups, especially bigger groups in my personal experience, so we decided that we need an app which focuses all the information in one area. Using communication methods outside of the app may pose problems and confusion so we are also planning to implement a chat feature that lets members communicate within the app.

2. Introduction

When planning a vacation, the more people there are that is included in the planning stage the harder it is to keep the group organized. Everybody has their own imagination as to what the vacation is going to include and what activities there are, and the more people there are, the more variations there are in these ideas. To add fuel to this fire, when there is no single dedicated place to place the information and communicate for the vacation plans, things tend to become very unorganized and confusing, with some people missing some information, people missing important messages that need immediate action, etc., In my experience, without proper planning and getting all necessary information out about the vacation, unnecessary stress is added to what was suppose to be a time to relax and enjoy yourself. What we are proposing is an app which lets groups, or individuals, easily group all important information on a single vacation in one place, organizing and making the planning stage of a vacation much simpler. We are hoping that this app helps with organization, communication, and efficiency in planning a vacation. This app is made to be simple and intuitive to use and we hope that this app will be used to alleviate some of the stress that comes with planning a vacation.

3. Design problems

Design problems that we found are that many apps that we looked at do not have all the the necessary features and this makes it so that a group will have to use multiple applications to plan their trip which adds more sources of error and confusion. Another design problem we have found is that although there are some apps that work pretty well in covering features, they can be intimidating for users who are not well-verse with technology, and since we are designing our app for a wide

range of user, we had to address this. We addressed this problem by creating a more intuitive and simple UI which can be easily navigated by the user, and we tried to reduce as much confusing UI elements as possible.

4. User Research and Findings

We used two different user research methods for our project. The two research methods we decided to go with were: survey/questionnaire and fly on the wall. These two methods complemented each other very well, since they allowed us gain information from two different perspectives: the user's perspective (through the survey) and our own (through fly on the wall). Gathering information and insight through these two different methods was important, because we could see what information overlaps and what is different among these two perspectives.

Survey/Questionnaire:
For this research method, we gave our users a short survey with questions related to travel planning and ideas which pertained to our project. The purpose of this was to probe and see if users had a need for what we had in mind, and to essentially see if we were planning to build the **right** system.

1. Do you usually struggle to create organized travel plans?
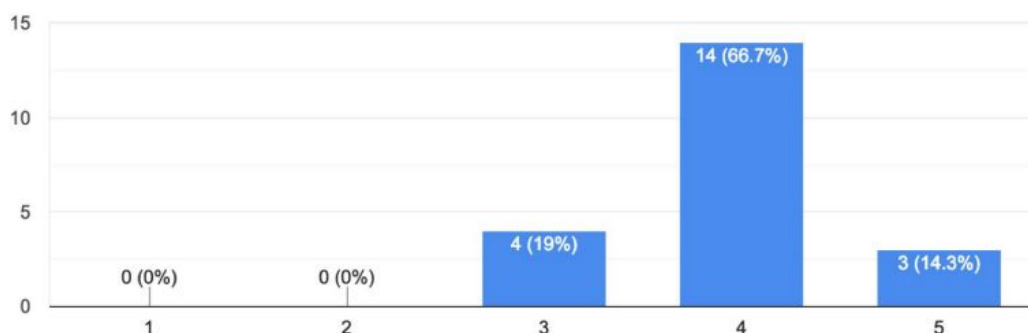21 responses
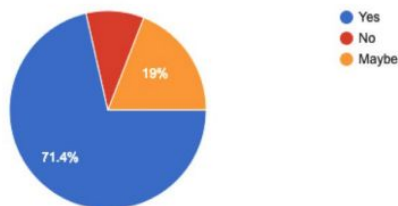
2. Do you think an app that helps you organize your trips would be useful?
21 responses

6. How satisfied are you with trips when you plan them out carefully beforehand?

21 responses

Above: Various examples of questions we asked which intended to give us data on whether or not users have a need for or problems that could be solved by our project

As we can see from the results above, the people who participated in our survey seemed to generally have a need for our travel planner app. We can see that in general they believe they struggle to create travel plans, and would like the idea of planning our their trips and using an app for this could make this easier for them.

7. What part of planning out trips is the hardest for you?

21 responses

The schedule for activities
Finding the best deals
Finding place to stay
Getting everyone to agree on something
With friends, getting everyone organized
Having everyone join in on the planning at the same time.
Keeping it organized and getting everyones info
budget for trips
Getting people to commit
Keeping up to date with other's schedule and continuously changing the plan to make the best outcome.

Above: An example of an open ended question from the survey

Open ended questions were also utilized to gain specific user feedback. From the results of this question, it was further reinforced that most people struggle most with organization and the actual planning of our trips. We can also see that budgeting/finance problems occur twice in this particular answer set, and therefore we used this information to guide our design and help us decide what features were the most important.

<u>Fly on the wall</u>
For this research method, we observed one of our group members and his friends as their attempted to plan one of their vacation trips over Facebook. We chose this as our second user research method, since we had already gained information from the users perspective through our survey (ASK), and at this point we wanted to generate information through our own perspective and observations (LOOK).

Above: Various screenshots of the people being observed attempting to plan their trip over Facebook

From what we observed (examples pictured above), the overall planning process for the observees was extremely messy and unorganized. From our observations, we saw that their planning did not go very well due to the fact that Facebook/Messenger are applications which are simply very general and not good for detailed planning which needs to be done for things like vacations. A lot of information was drowned out and became harder to find as people continued to make new posts on the wall. The messenger chat was also flooded with various different things,a dn as as result the same thing happened there as well. The lack of structure made it harder and difficult for them to find information when they needed to. Our observations through this fly on the wall research method also reinforced that our app idea was on the right track, and could be useful for users.

5. Design and Justification

While designing our project, a large amount of our design decisions were based off of various factors. Things that we considered included: user research results, easy user usability, and features which we decided were crucial and "must-haves" for our application.

<u>User Research Results</u>
Through our user research we were able to gain a lot of information from the perspective of our users and our own observations as well. As discussed before, since some of our survey results indicated that users wanted a feature to help them plan out their budgets/finances during trips, we implemented this into our design.

Usability

In terms of usability and making things easy to understand and use from the user's perspective, we implemented features such as back buttons and icons to ensure users had a smooth and easy experience when navigating the app.


Our choice of colors was also carefully determined, so that important features would pop out to users so they could have an easy time finding them. We used a bright blue/cyan color to contrast our dark blue background. As a result, buttons and other important features appeared to really stand out well.
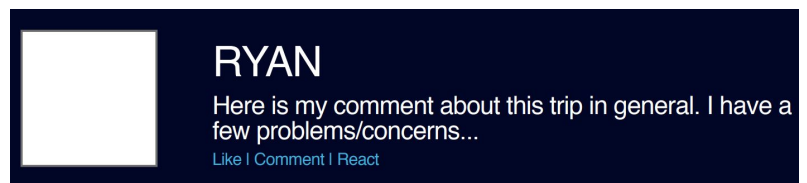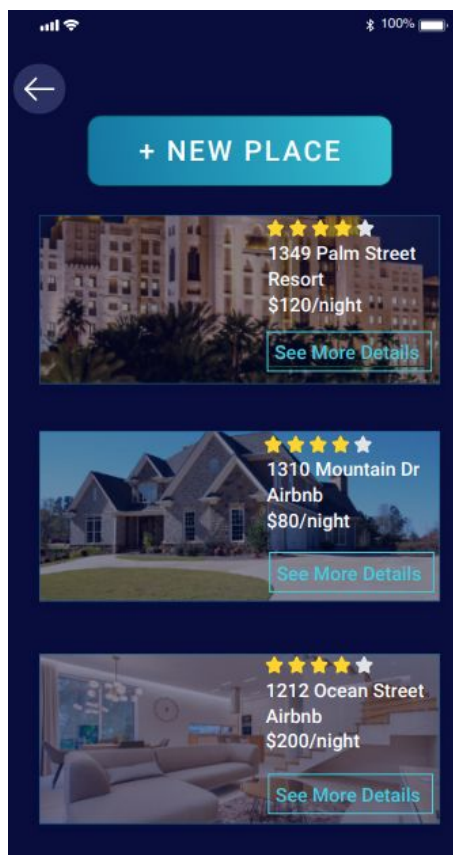
Must-Have Features vs Should-Have

We generally prioritized designing features which were the most crucial and central to our idea for the app. In our case, we prioritized designing things like: adding new places to stay, search bars, chat, budgeting, etc. Designing these features was a priority because they are very important when it comes to planning trips. Additionally, since we saw from our user research that potential users struggled with things like organization, having these features was crucial to making things easy for them as well.
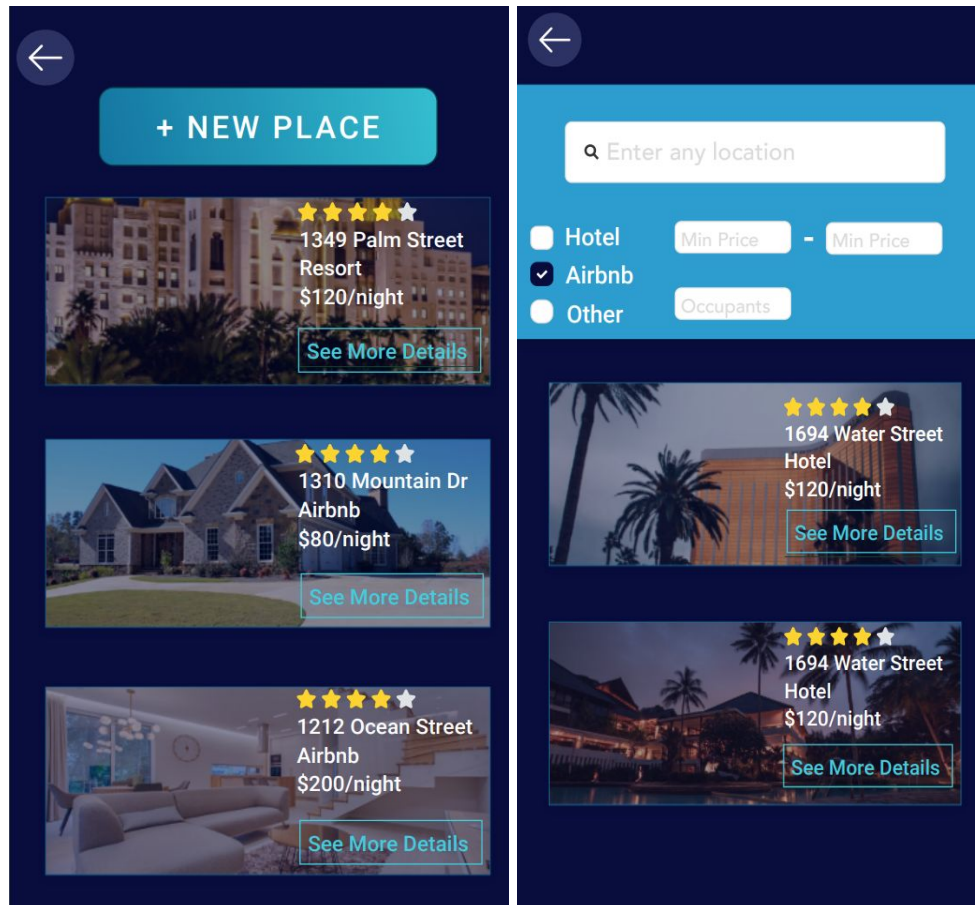
Design features which were important but not extremely crucial were prioritized less, and designed later. This was done so that we could ensure we got the most important things done first, and if time permitted we could design these less important features. These included designs for things which were mostly intended to enhance quality of life, such as voice recording in the chat, and self-notes.
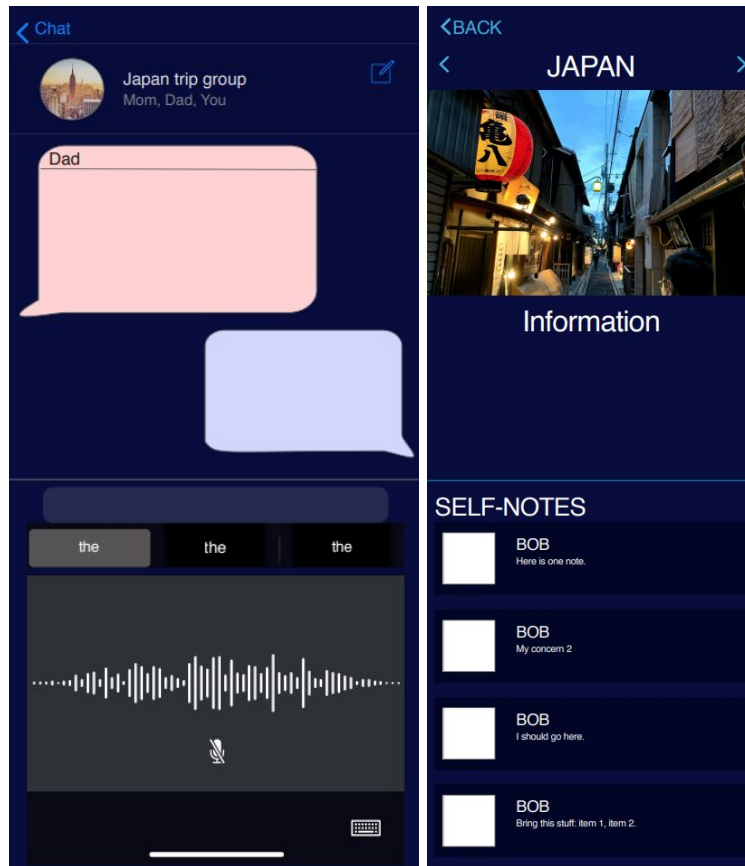
6. Heuristic Evaluation and Findings

The heuristic evaluation method helped us identify and find usability problems in our user interface design. The evaluation done by our fellow students shed light on some features and functionality that was missing from the prototype along with some cosmetic and design issues.

1. Visibility of system status. SEVERITY - 2
   The prototype did not inform the user whether or not they had successfully logged in or not. The chat function of the prototype also.

2. Match between System and real world. SEVERITY - 3
   Some inconsistencies between the system and real world come to our attention. The dollar amount was displayed differently from the way it is in the real world. A major issue observed here was the lack of a complete itinerary that displayed all the important information for each trip such as flight picked, hotel, etc. (A final summary for the trip)

3. User Control and freedom. SEVERITY -4

This evaluation provided us with some important feedback that helped us recognize problems in our prototype. The prototype developed was not able create new trips on the fly. This function along with ability to delete the trips previously planned will be added in future iterations. Once an account is created the user does not have the control or freedom to change their previously

4. Consistency and Standards. SEVERITY -1

Consistency was kept in prototype by using a uniform colour scheme throughout the prototype. There were certain cosmetic issues found. The use of different back buttons on some of the pages. The profile pictures for the users was displayed in a circle on the chat pages and in squares on the individual trips page.

5. Error Prevention. SEVERITY - 2

Error prevention was lacking in our prototype. When selecting a hotel from the various listings present the user is not given any sort of confirmation of the booking going through. This lack of prompt could lead to issues if the user selects something by mistake.

6. Flexibility and efficiency of use. SEVERITY -2

7. Aesthetic and minimalist design. SEVERITY -1

The design and aesthetics of the prototype were well received except some minor issues where the text was not lined up properly with the background leading to some visibility issues on one page.

8. Help and documentation. SEVERITY -4

Documentation and help document were not developed at the time of the prototype.

The heuristic evaluation highlighted some the issues that arose during the prototyping phase and some features and functionality that might have slipped our attention earlier.

7. User Testing and Findings

In our user testing, we had used think-aloud protocol and we asked 5 potential users to complete main 3 tasks.
Here is the tasks that we asked the testing users to perform:
1). Create a trip in the app and create a chat room of that specific trip
2). Invite specific register users to join the existing trip
3). Delete the trip that is already finished

During the user testing, our whole team was observing how the users did, and we had asked them what they felt about the app and what they think we need to improve for the app. After finishing the user testing, we found several issues that need to be improved or fixed.

We asked the users to complete the task which is inviting specific register users to join the existing trip. One of the user invited a wrong person by misclicking the friend list in the app and that person who got invited was actually got enrolled in the trip. This inspired us that random people may get invited to random trip or chat room without asking their permission. Also, after the testing, we asked the users how they felt about the app, and some of them were telling us that there is nothing about notification under the setting and they also told us that usually when they are going on a trip, they have limited access to the internet, and they would like to retrieve all the information that they had in the app when they are offline; therefore, we addressed 3 significant findings:

1). The system will not ask for permission to people who got invited to the planned trip. (people may be randomly invited to the planned trip where they are not suppose to be or a wrong trip)

2). The system does not provide notifications to users. (there will not be a notification to the users if there is any new messages happened in the chat room or the trip planning)

3). The system should be able to use when there is no internet access.

8. Recommendations for Next iteration of Design

After we addressed the problems in the user testing, we started thinking about the improvements to make for the next iteration. Here are something that we can definitely do in the next iteration of design:
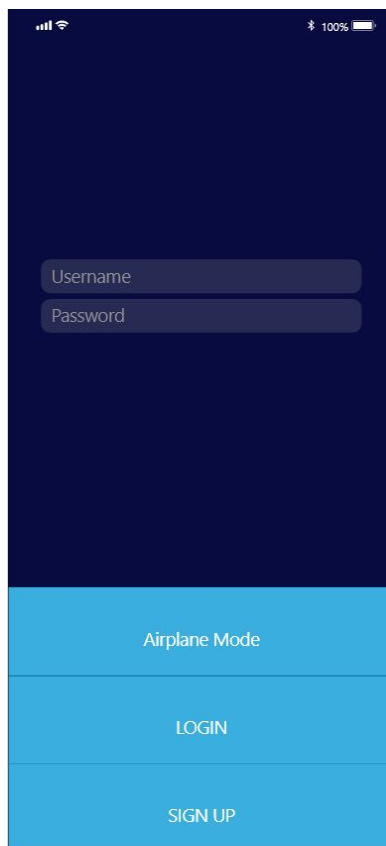
For the first issue that we found which is the system will not ask for permission to people who got invited to the planned trip (people may be randomly invited to the planned trip where they are not suppose to be or a wrong trip). We will make our system send out an invitation email with an invitation link to people who got invited to the trip. If people who got the invitation email are actually the members of the trip, they can just click the invitation link inside the email to join the trip and chat room; otherwise, they can just ignore the email. This improvement can actually prevent random people getting invited to random trips and chat rooms.
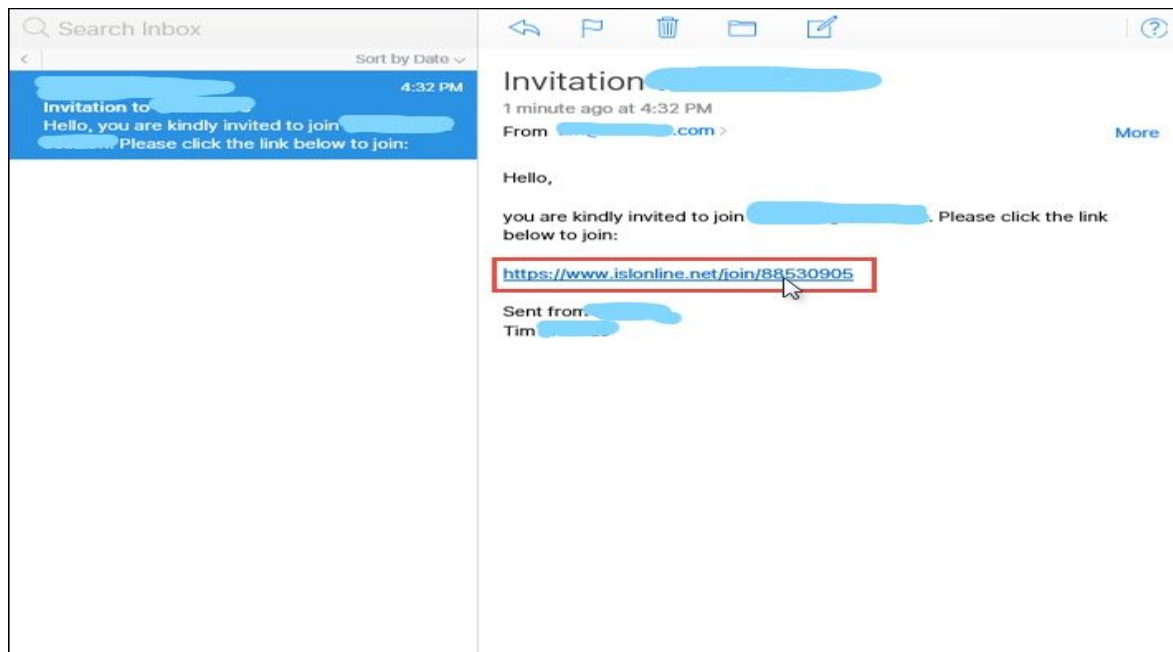
The second issue is that the system does not provide notifications to users (there will not be a notification to the users if there is any new messages happened in the chat room or the trip planning). We plan to implement a notification function to the app under the setting, so the users can turn on the notification to receive new messages simultaneously.
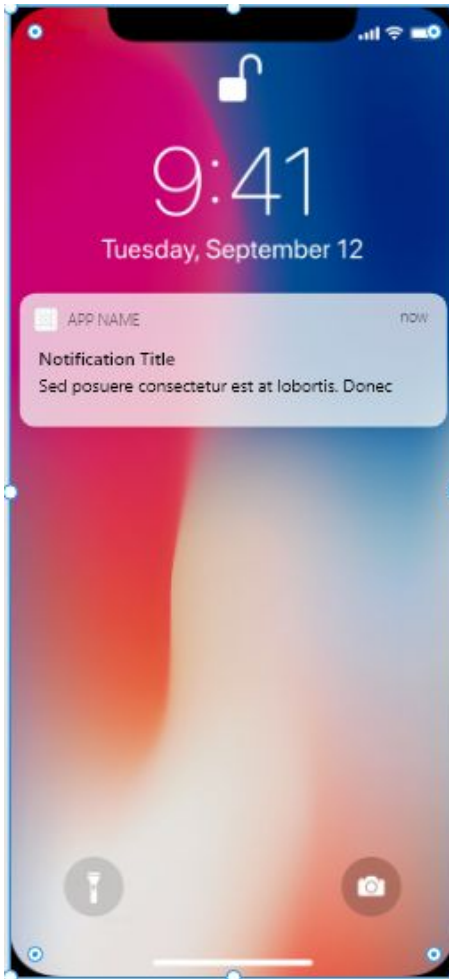
Finally for the last recommendation, Instead of regular login to the app under internet access environment, we should implement an airplane mode which can help the users to retrieve all information that they stored in the system when the devices are offline. This improvement can help the users to reload everything that they had in the system and reuse it when there is no internet accessibility which means that the system will automatically store all up to date data to cell phones memory while the devices are connected to the internet.

9. Conclusion/Summary

In conclusion, our project/app is intended to help users plan out trips and vacations in a clean and structured manner. It is intended to be used on a smartphone, and allows users to create detailed and structured plans for their vacation trips. They will be able to things such as add places to stay, chat with other group members, plan out dates on a calendar, and manage their budgets/finances. All of this information has the potential to be shared with others who are also a part of the same vacation/trip and therefore would allow for a collaborative and interactive planning process. The main reason why we chose to centre our app around this was because we found that there are currently no apps or tools to do this specific task of planning trips. Furthermore, apps that already exist for other planning reasons tend to be intimidating to those who are not well-versed with technology. Essentially, we wanted to create an application which is easy to use and has a meaningful purpose. Through our user research findings we were able to discover information which both reinforced we were on the right track, and also helped drive some of our major design decisions. While creating our design we considered many factors, with the main ones including: User usability, research method findings, and the importance of features to our idea. Many of our design decisions were influenced by some or all of these factors. Through the heuristic evaluation of another group in the class, we were able to gain valuable feedback on our design. We learned about major flaws in our design which need to be addressed in future iterations, and less severe ones as well. Through user testing, we also gained more information from potential users. After giving them our prototype and assigning tasks for them to do, we learned about other problems and also gained valuable feedback and constructive criticism. Through user research, heuristic evaluation and user testing we gathered a large amount of feedback and information. For example, we learned that our system was missing crucial features such as deleting trips, and notifying the user of the systems status. This information will be used to help us plan and design the next iteration of our app.