# GetLost

***Evaluation - Milestone 4***

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## Introduction

GetLost is an app that makes planning hiking and camping trips with friends easier and safer. In order to test our working prototype we performed a multifaceted usability evaluation. Elements in our evaluations included a heuristic evaluation, cognitive walkthrough, KSLM evaluation, retrospective testing, and think aloud testing. Heuristic evaluation is the inspection of the user interface by developers in order to identify potential issues, categorize them into a certain heuristic, and assign a severity rating determining how important or damaging the issue could be. Cognitive walkthroughs evaluate the systems learnability potential by stepping through specific tasks. KeyStroke Level Model (KSLM) evaluation can assign a time value to each task by determining how many actions a user must take to complete the task. Finally, the retrospective test and think-aloud tests were both performed by test users with a designer present. This was a way of seeing how outside users would interact with the system without any prior knowledge of it. The combination of these test elements allowed us to evaluate the system as designers as well as analyze information from real users.

## Heuristic Evaluation

For the heuristic evaluation we met up in a group and walked through the entire application together. As we went, we took note of issues and wrote them down on the list. We passed through the app 3 times until we felt like we had caught most of the usability issues.

Then, we took that list and voted on how to categorize each issue. Generally, it was unanimous. Next, we walked through this list again and assigned a severity to each issue:  1 is not severe and 4 is extremely severe. The results of this process are below.

1. Visibility of System Status
    - No indication that you must select a date, temperature preference, driving distance, or activity before moving to the next step of trip creation. User will likely try to move to the next step without understanding why the app appears to be unresponsive.
      Severity: 3

2. Familiar Metaphors and Language
    - There are areas where outdoor jargon could be better explained. For example, when the user is asked to choose between backpacking, camping, and hiking, there could be an info button that explains the difference between the three to the user.

      Severity: 1
3. User Control and Freedom
    - Under search locations, it isn't clear what happens when a user selects a location from list, no way of knowing that it potentially leads them to more functions. Can easily by making the location's listed have some design element that makes it clearly clickable.

      Severity: 2
4. Consistency and Standards
    - In the plan a trip process the arrow and title on each page should be in the same place for consistency. Right now the arrow and title sometimes move from page to page.

      Severity: 1.
    - Buttons for weather preferences and in the budget use a red-green-blue color scheme (or orange-green-blue) instead of matching with the overall design colors of the system. These should be more consistent with the rest of the design.

      Severity: 2
5. Error Prevention
    - When selecting dates not clear how to do to a range. Does the user drag over preferred dates or select start and end Could be an issue if user selects the wrong date and wants to undo.

      Severity: 2
6. Recognition Rather than Recall
7. Flexibility and Efficiency of Use

- During the trip questionnaire, if you need to change an answer you have to go back through a lot of pages. Instead, there should be a shortcut for skipping through sections of the questionnaire.
  Severity: 3
- Questions should also have an option for “Don’t care”.
  Severity: 1

8. Aesthetic and minimalist design
   - The estimated budget page has a lot of text that is almost on the edge of the screen, minimizing the text and adding margin space would help the aesthetic of the page.
     Severity: 2
9. Help Users Recognize, Diagnose, and Recover from Errors
   - When selecting temperature preferences user can select all the options: Cold, Temperate, and Warm. Perhaps there should just be an added option for No preference because it’s confusing to be able to select all of them.
     Severity: 1
     - Idea: Maybe there should be a temperature range instead
10. Help and Documentation
    - There could be some documentation or help page explaining how GetLost is different from other hiking apps and why the trip flow uses a questionnaire instead of having the user look up locations.
      Severity: 1

***Heuristic Evaluation Summary***

Through this process, we noticed a lot of issues in our application which were also later mirrored in the results of our user studies. The biggest issues we noticed were issues with feedback from user actions and issues with navigating between pages during questionnaires. Some user actions don’t have feedback. For example, during the trip questionnaires there are times when the user must select an option. There is nothing noting what is required and what is

not. Furthermore, if the user tries to proceed by clicking the arrow, there is no feedback indicating that they need to select an option before proceeding. This could be easily improved.

Another major issue we identified is that it is hard to efficiently navigate through questionnaire items. We have two questionnaires: one for creating a trip, and one for determining a trip budget. If a user needs to change one of their answers, they must go back through all of the questions in between their current location and that question. A better solution would be to have a drop down menu with the titles of each question, so the user can quickly jump between questions.

Along with some of the smaller issues identified in our heuristic evaluation, these changes could vastly improve the usability of our application.

## Cognitive Walkthrough

We also performed the cognitive walkthrough together, as a group, before we tested users using the retrospective testing and "Think Aloud" tests. We decided to perform the walkthrough for each of the tasks that we later asked our participants to complete. For each task, we asked the same set of questions:

- Will the user try and achieve the right outcome?
- Will the user notice that the correct action is available to them?
- Will the user associate the correct action with the outcome they expect to achieve?
- If the correct action is performed; will the user see that progress is being made towards their intended outcome?

After much research into different methods for cognitive walkthroughs, we decided to use the questions provided by the Interaction Design Foundation, a non-profit focused on improving user experience design. The link is below:
https://www.interaction-design.org/literature/article/how-to-conduct-a-cognitive-walkthrough

The questions essentially test the following criteria:

- Will the user try and achieve the right outcome?

    - Are we, as designers, making any assumptions about what the user would expect or how they would act?
- Will the user notice that the correct action is available to them?
    - Are the selection items easy to find? Or are they hidden and difficult to get to.
- Will the user associate the correct action with the outcome they expect to achieve?
    - Is the action we want the user to carry out intuitive to complete?
- If the correct action is performed; will the user see that progress is being made towards their intended outcome?
    - Does the user receive any feedback for their actions?

Below is the product of our cognitive walkthrough:

1. Create a New Trip without searching for a location
    a. Will the user try and achieve the right outcome?
        i. Yes, but for choosing an activity it says choose “an” activity when you can choose multiple, so that might limit users to picking more activities.
    b. Will the user notice that the correct action is available to them?
        i. It is not always clear if you need to select something to move forward or not.
    c. Will the user associate the correct action with the outcome they expect to achieve?
        i. Yes.
    d. If the correct action is performed; will the user see that progress is being made towards their intended outcome?
        i. Yes, green check marks on selected buttons, note that something is selected.
2. Check the weather for your trip
    a. Will the user try and achieve the right outcome?
        i. Yes, it’s at the top and a sunshine with the temperature. Which is obviously weather.

   b. Will the user notice that the correct action is available to them?
      i. Yes, it's one of only 6 options.
   c. Will the user associate the correct action with the outcome they expect to achieve?
      i. Yes, the sunshine symbol is usually associated with weather.
   d. If the correct action is performed; will the user see that progress is being made towards their intended outcome?
      i. Yes, it will change the page
3. Sign up to bring a first aid kit for the group
   a. Will the user try and achieve the right outcome?
      i. Some users might check the emergency info because of the word first-aid kit. Maybe the emergency info should tell the user if the first aid kit is packed.
   b. Will the user notice that the correct action is available to them?
      i. Yes, there is a clear packing with a red notification.
   c. Will the user associate the correct action with the outcome they expect to achieve?
      i. Yes
   d. If the correct action is performed; will the user see that progress is being made towards their intended outcome?
      i. Yes, page changes.
4. Check the budget for the trip
   a. Will the user try and achieve the right outcome?
      i. Yes, it's clearly labeled.
   b. Will the user notice that the correct action is available to them?
      i. Once they start the questionnaire, there are only a few options available, so yes.
   c. Will the user associate the correct action with the outcome they expect to achieve?

        i. Yes, individual total and group total are larger to make it obvious what does what.
    d. If the correct action is performed; will the user see that progress is being made towards their intended outcome?
        i. Yes, a page or item changes for every button press.
5. Check the status of your friends on the trip
    a. Will the user try and achieve the right outcome?
        i. Yes, there is a Friends going button.
    b. Will the user notice that the correct action is available to them?
        i. The icon is the number of friends, so that could confuse users since everything else has an icon. They might not know that it is clickable.
    c. Will the user associate the correct action with the outcome they expect to achieve?
        i. Yes, there is only one friends going page.
    d. If the correct action is performed; will the user see that progress is being made towards their intended outcome?
        i. Yes, because the page changes.
6. Write down emergency contacts for your trip
    a. Will the user try and achieve the right outcome?
        i. This is the clearest because the First-Aid symbol is well known in the U.S.
    b. Will the user notice that the correct action is available to them?
        i. Yes, it is one of the 6 buttons.
    c. Will the user associate the correct action with the outcome they expect to achieve?
        i. Yes, it is worded in very plain language.
    d. If the correct action is performed; will the user see that progress is being made towards their intended outcome?
        i. Yes, the page changes.
7. Find more information about your trip location

a. Will the user try and achieve the right outcome?
    i. It might be a little confusing because all of the other buttons are in yellow, but there is a “Learn more >” section that would help the user learn more about the location.
b. Will the user notice that the correct action is available to them?
    i. It is the largest button, and the easiest one for the user to click.
c. Will the user associate the correct action with the outcome they expect to achieve?
    i. Yes, the picture helps associate the image of the site with the actual outcome.
d. If the correct action is performed; will the user see that progress is being made towards their intended outcome?
    i. Yes, the page changes.

***Summary of Cognitive Walkthrough***

We walked through the tasks we created and thought about what was obvious and what was not. We found that while many of our symbols were intuitive and well-known, others could have been better, like the friend icon. For some pages in the create a trip process it is not clear whether users can select one or multiple options, like on the “Choose an Activity” page. Overall, our app is intuitive and easy to use, but the user experience would benefit from a few changes.

## KSLM Evaluation

The Keystroke level model evaluation was used to assign times to basic tasks that will be asked of users. This evaluation accounted for keystroking, mouse button press (or tapping a button/icon), pointing (moving the mouse or finger), and mental processing. The Tasks evaluated were as follows:

| P | K | M |
|---|---|---|

| | | |
|---|---|---|
| Represents the user moving the mouse or their finger to point to a certain object. | Kinetic, represents the users clicking, swiping, or selecting an object on the page. | Mental, represents the user making a cognitive choice in what to do next. |

1. Create a New Trip without searching for a location

This task was evaluated to 27.72 seconds and consisted of 14P + 14K + 7M. Users have the most mental load during this task because they are selecting preferences that help the system generate a location. The combination of extra mental load plus more pointing and clicking make it the most time consuming task.

2. Check the weather for your trip

This task was evaluated to 2.58 seconds and consisted of 1P + 1K + 1M. From the homepage users have to find the weather icon, point, and select and then they can view the weather for their trip.

3. Sign up to bring a first aid kit for the group

This task was evaluated to 6.54 seconds and consisted of 3P + 3K + 2M. For this task users must identify the packing list icon, point and select it, then find the first aid kit on the list, point and select it.

4. Check the budget for the trip

This task was evaluated to 11.88 seconds and consisted of 6P + 6K + 3M. This task requires users to find the budget icon, point and select, read the directions, point and select the next arrow, identify how they are obtaining their missing items, point and select op[tion, point and select the next arrow, determine how many meals they will eat, point and select quantity, point and select next arrow, and then the budget will be displayed.

5. Check the status of your friends on the trip

This task was evaluated to 3.96 seconds and consisted of 2P + 2K + 1M. The user will find the friends icon, point and select, and then they can view friends invited to the trip and their status.

6. Write down emergency contacts for your trip

This task was evaluated to 6.54 seconds and consisted of 3P + 3K + 2M. To access their emergency contacts user will find the emergency contact icon, point and select it, find the tab indicating their personal emergency contacts, point and select it.

7. Find more information about your trip location

This task was evaluated to 3.96 seconds and consisted of 2P + 2K + 1M. Users will point and select their trip, then find the "learn more" button, point and select, bringing them to the information page of the location of their trip.

Overall, we were satisfied with the results of the KSLM evaluation. As expected the task of creating a trip took the longest, but still only took right around 30 seconds. Other smaller tasks such as accessing information were a matter of a minimal clicks and cognitive load.

## Study Protocol

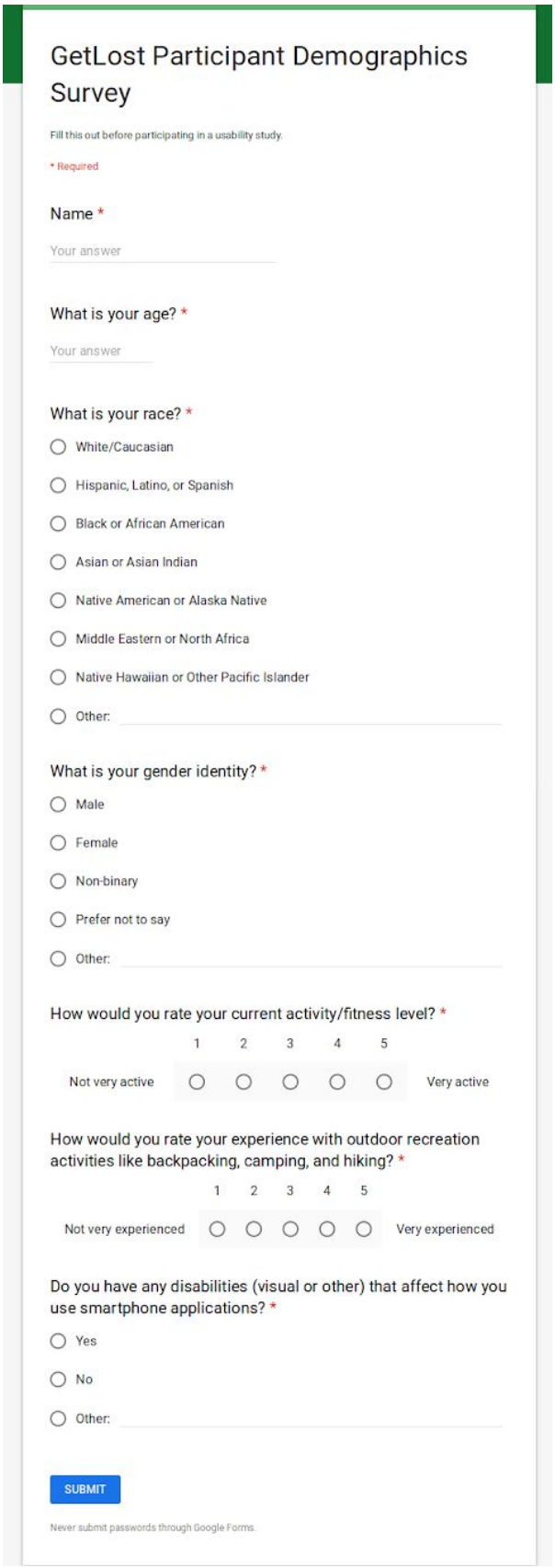
### *Protocols for Both Studies*

For all usability tests, we have a set of questions to ask before and after testing. Before participating in any test, users are asked a set of interview questions. Screenshots of these forms are included below. These primarily deal with their previous outdoor experience and other demographics for statistical purposes. The user then either participates in a retrospective study, or a think aloud study. The protocols for these separate studies are listed below.

After completing the usability test, users were asked questions on a post-evaluation subjective questionnaire. These questions focus on their subjective experience of the application.

***Questionnaires***

*Pre-test Survey*



GetLost Participant Demographics Survey

Fill this out before participating in a usability study.

* Required

Name *

Your answer

What is your age? *

Your answer

What is your race? *

- White/Caucasian
- Hispanic, Latino, or Spanish
- Black or African American
- Asian or Asian Indian
- Native American or Alaska Native
- Middle Eastern or North Africa
- Native Hawaiian or Other Pacific Islander
- Other:

What is your gender identity? *

- Male
- Female
- Non-binary
- Prefer not to say
- Other:

How would you rate your current activity/fitness level? *

| | 1 | 2 | 3 | 4 | 5 | |
|---|---|---|---|---|---|---|
| Not very active | ○ | ○ | ○ | ○ | ○ | Very active |

How would you rate your experience with outdoor recreation activities like backpacking, camping, and hiking? *

| | 1 | 2 | 3 | 4 | 5 | |
|---|---|---|---|---|---|---|
| Not very experienced | ○ | ○ | ○ | ○ | ○ | Very experienced |

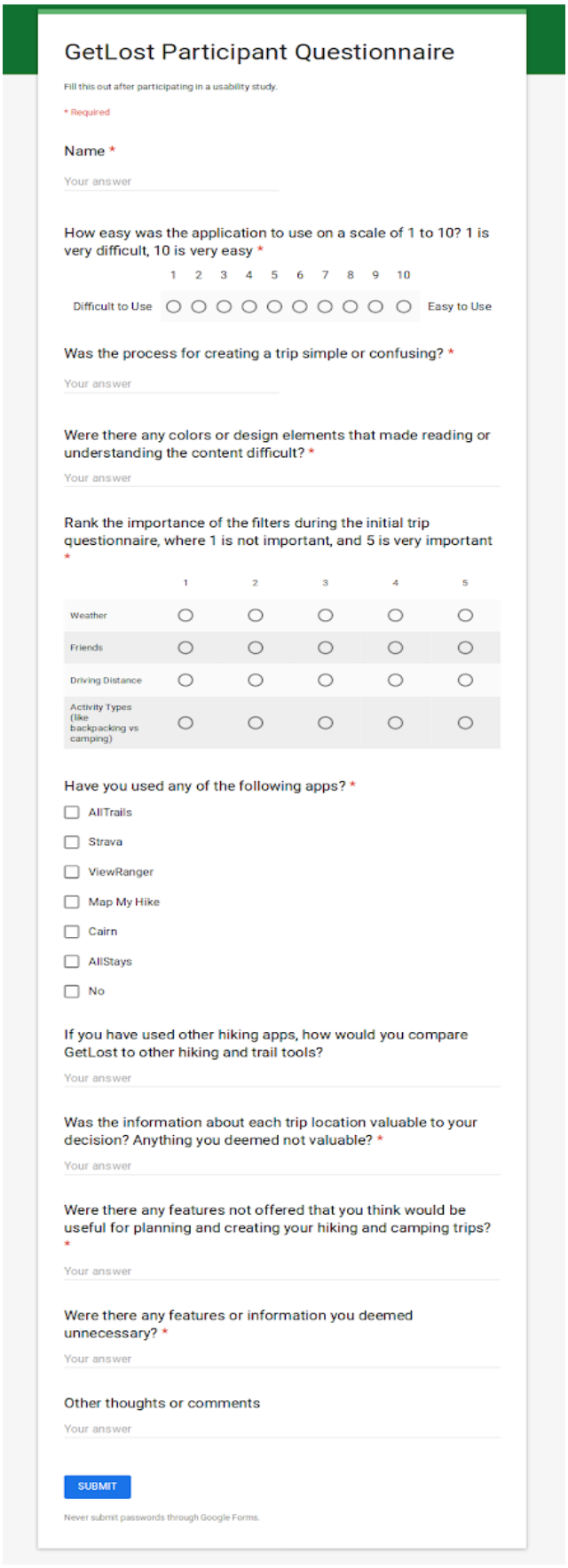
Do you have any disabilities (visual or other) that affect how you use smartphone applications? *

- Yes
- No
- Other:

SUBMIT

Never submit passwords through Google Forms.

*Post-test Survey*



GetLost Participant Questionnaire

Fill this out after participating in a usability study.

* Required

Name *

Your answer

How easy was the application to use on a scale of 1 to 10? 1 is very difficult, 10 is very easy *

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Difficult to Use | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | Easy to Use |

Was the process for creating a trip simple or confusing? *

Your answer

Were there any colors or design elements that made reading or understanding the content difficult? *

Your answer

Rank the importance of the filters during the initial trip questionnaire, where 1 is not important, and 5 is very important *

| | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| Weather | ○ | ○ | ○ | ○ | ○ |
| Friends | ○ | ○ | ○ | ○ | ○ |
| Driving Distance | ○ | ○ | ○ | ○ | ○ |
| Activity Types (like backpacking vs camping) | ○ | ○ | ○ | ○ | ○ |

Have you used any of the following apps? *

- ☐ AllTrails
- ☐ Strava
- ☐ ViewRanger
- ☐ Map My Hike
- ☐ Cairn
- ☐ AllStays
- ☐ No

If you have used other hiking apps, how would you compare GetLost to other hiking and trail tools?

Your answer

Was the information about each trip location valuable to your decision? Anything you deemed not valuable? *

Your answer

Were there any features not offered that you think would be useful for planning and creating your hiking and camping trips? *

Your answer

Were there any features or information you deemed unnecessary? *

Your answer

Other thoughts or comments

Your answer

SUBMIT

Never submit passwords through Google Forms.

***Instructions for Retrospective Testing Evaluation***

1. Have the participant complete the google form regarding their demographics: https://forms.gle/fd2qtgthL2Cu6f9w8
2. Perform the Evaluation

   For the retrospective study, give the user a list of tasks to complete and takes notes without interrupting while they are completing these tasks.

   *Tasks:*

   - Create a New Trip without searching for a location
   - Check the weather for your trip
   - Sign up to bring a first aid kit for the group
   - Check the budget for the trip
   - Check the status of your friends on the trip
   - Write down emergency contacts for your trip
   - Find more information about your trip location

   These are the same tasks that users complete for the think aloud test. Once done, ask the users questions about their use of the application, especially if they get stuck on anything. Also ask the following questions in person after the tasks are finished:

   - What did you struggle with the most?
   - What seemed most intuitive/natural?
   - Was there anything that was hard to read/understand?
   - Could you see yourself using this app on your own? Why or why not?
3. Take notes the user's behavior, ask any questions about their actions
4. Afterwards, have participants complete the post task questionnaire: https://forms.gle/XyNqoWb9S5bbKhni6

***Instructions for Think aloud Testing Evaluation***

For the think-aloud, we prepared a script to talk the user through each task. As the user is completing a task, continually ask them to verbalize their thought processes.

1. Have the participant do this google form about their demographics: https://forms.gle/fd2qtgthL2Cu6f9w8
2. Perform the Evaluation
    - Read them this script:

*Think Aloud Script*

"Today we will be using the GetLost app to do typical transportation tasks like finding planning a trip, or locating information regarding your trip. GetLost is an application that makes it easier to plan trips with your friends.

The application helps plan the trip for you, suggesting locations and ensuring safety by providing phone numbers for emergencies among other functions. The purpose of this exercise is to identify issues with the GetLost App. Please remember we are testing the application, we are not testing you. In this observation, we are interested in what you think about as you perform the tasks we are asking you to do. In order to do this, I am going to ask you to talk aloud as you work on the task. What I mean by "talk aloud" is that I want you to tell me everything you are thinking from the first time you see the statement of the task until you finish the task. I would like you to talk aloud constantly from the time I give you the task till you have completed it. I do not want you to try and plan out what you say or try to explain to me what you are saying. Just act as if you were alone, speaking to yourself. It is most important that you keep talking. If you are silent for a long period of time, I will ask you to talk. Do you understand what I want you to do?

Good. Now we will begin with some practice problems. First, I will demonstrate by talking aloud while I solve a simple problem: "How many windows are there in my mother's house?"

[Demonstrate talk aloud.]

Now it is your turn. Please talk aloud as you multiply 120 * 8.

[Let them finish]

Good. Now, those problems were solved all in our heads. However, when you are working on the computer you will also be looking for things, and seeing things that catch your attention. These things that you are searching for and things that you see are as important for our observation as thoughts you are thinking from memory. So please verbalize these too.

As you are doing the tasks, I won't be able to answer any questions. But if you do have questions, go ahead and ask them anyway so I can learn more about what kinds of questions the app brings up. I will answer any questions after the session. Also, if you forget to talk aloud, I'll say, "please keep talking."

Do you have any questions about the talk aloud?

Now I have some tasks printed out for you. I am going to go over them with you and see if you have any questions before we start."

Then, ask the users to do each of the following tasks:

- Create a New Trip without searching for a location
- Check the weather for your trip
- Sign up to bring a first aid kit for the group
- Check the budget for the trip
- Check the status of your friends on the trip
- Write down emergency contacts for your trip
- Find more information about your trip location

3. Have them do this questionnaire: (same questions from retrospective) https://forms.gle/XyNqoWb9S5bbKhni6

# Data from Surveys

## *Pre-test Results*

Figure 1.1: Participant's Age

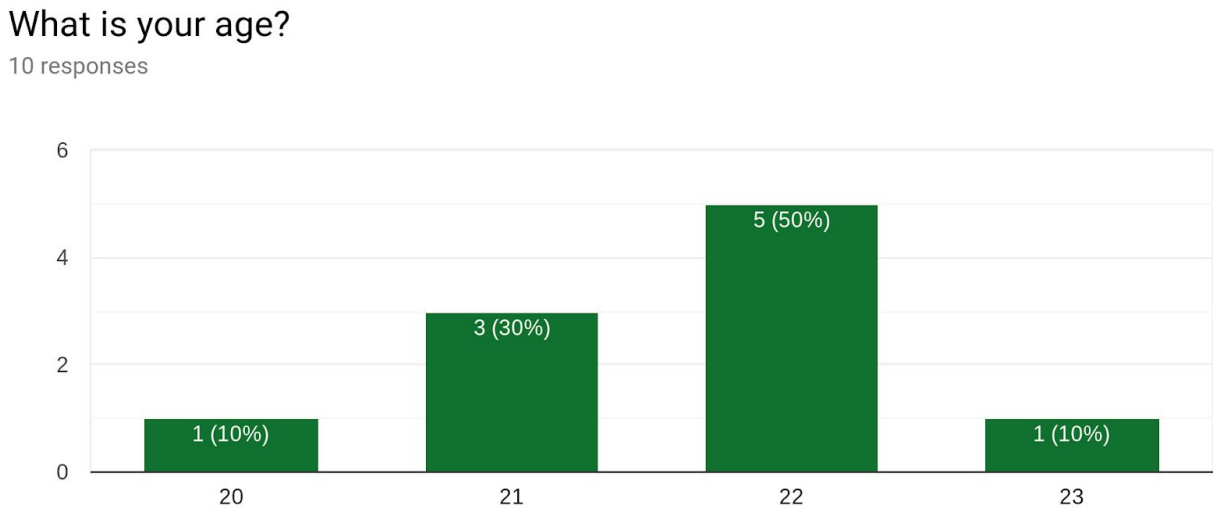



Figure 1.2: Participant's Race

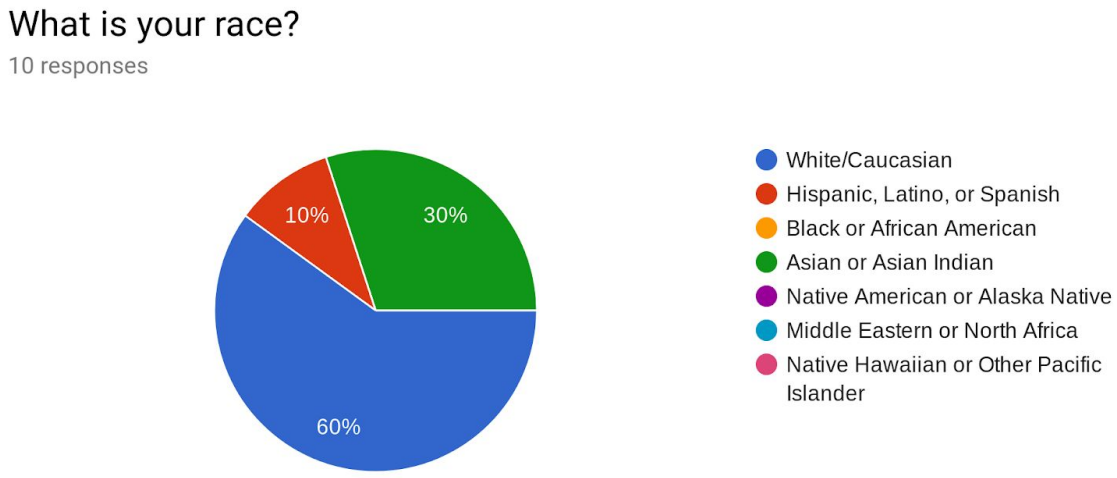


Figure 1.3: Participant's Gender Identity

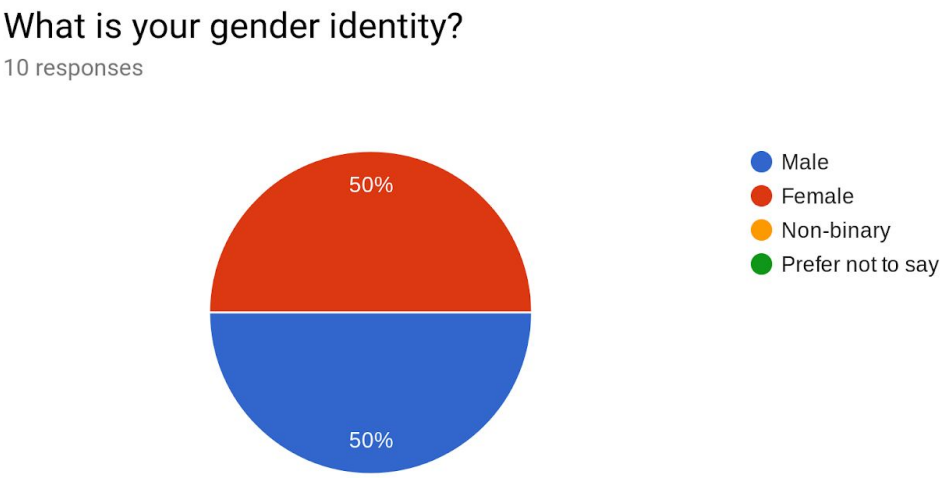



Figure 1.4: Participant's Activity Level

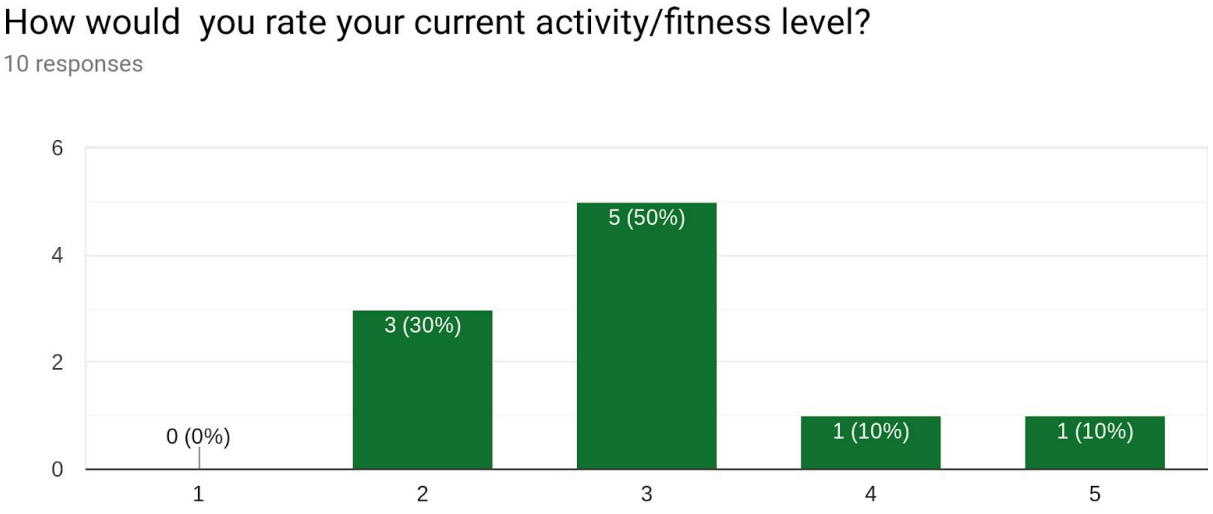
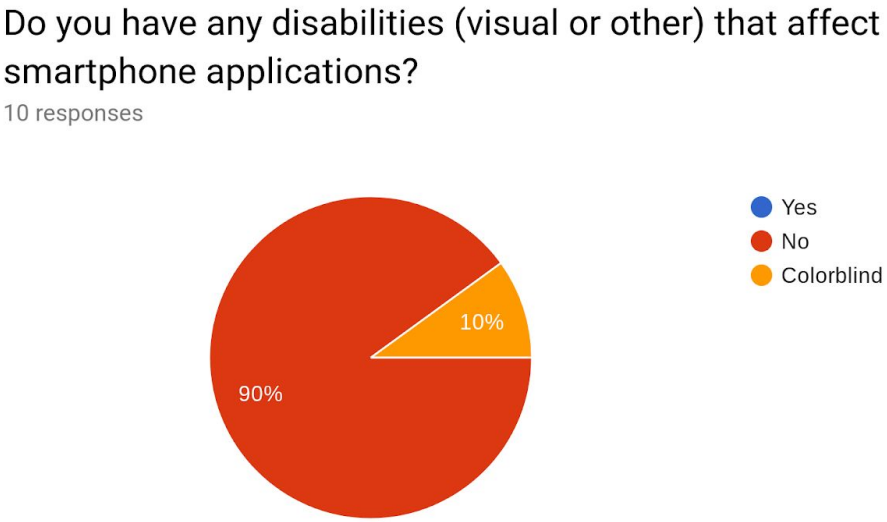


Figure 1.5: Participant's Outdoor Experience


Figure 1.6: Participant's Smartphone-Related Disabilities



***Post-test Results***

Figure 2.1: App's Ease of Use

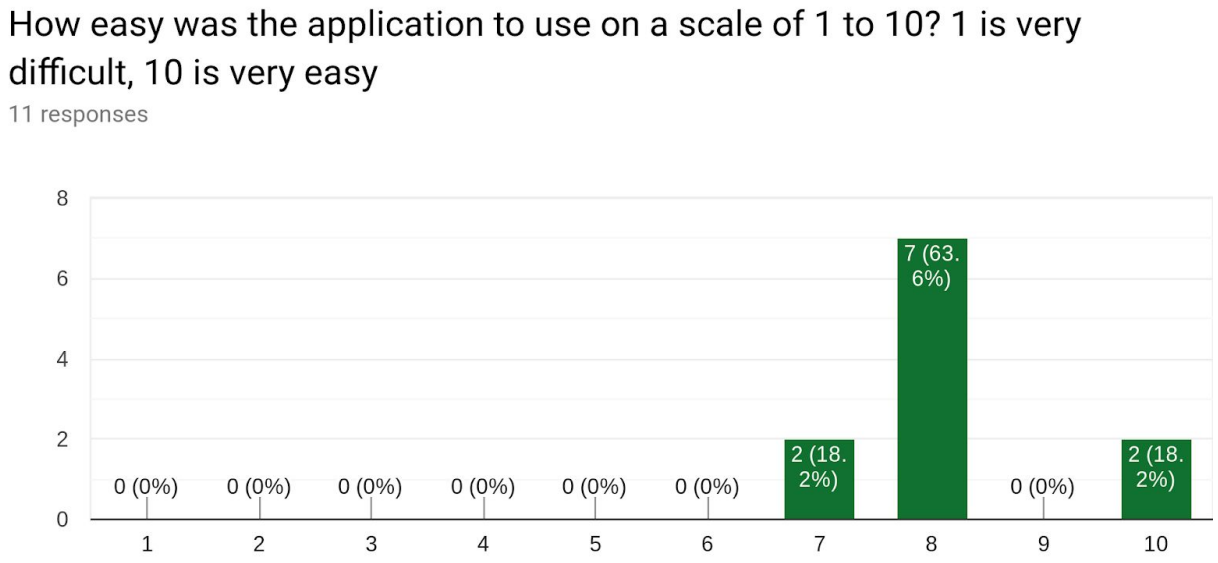



Figure 2.2: User's Subjective Assessment of Whether the App was Simple or Confusing

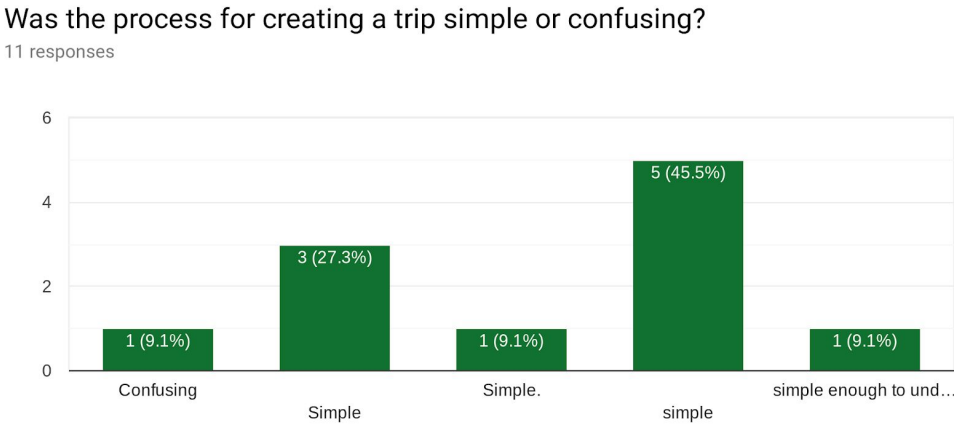


Figure 2.3: Importance of Trip Questionnaire Elements

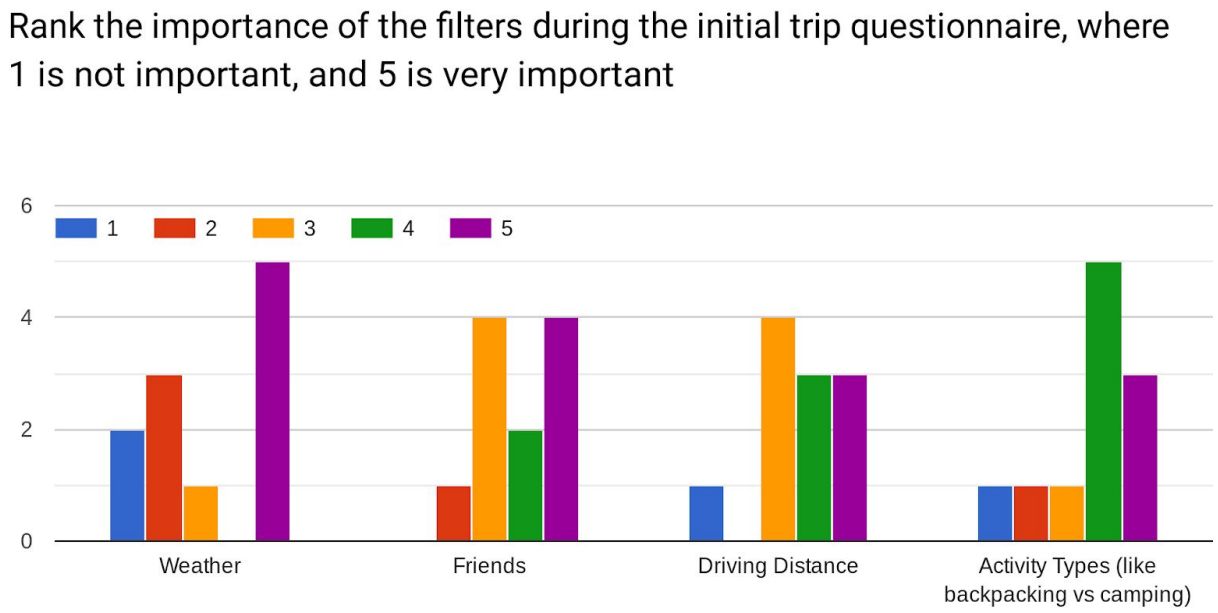
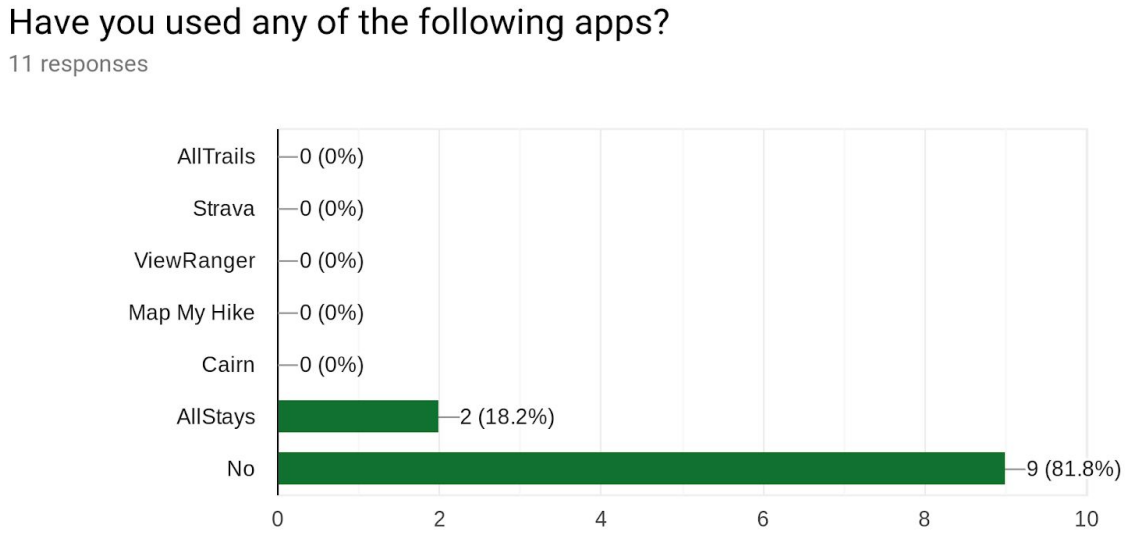



Figure 2.4: Participant Use of Other Apps



*Open-Ended Question (OEQ) Results*

OEQ 1: Were there any colors or design elements that made reading or understanding the content difficult?

*Results:*

no

change home page text color to black from gray

No

none

Not that I noticed.

colors were consistent

The yellow back button on green was hard to see.

OEQ 2: Was the information about each trip location valuable to your decision? Anything you deemed not valuable?

*Results:*

more pictures of the potential location

The weather, trail difficulty, burn permit times, and emergency services were vital to the app's functionality.

yes it was all valuable

yes, it allows the user to be able to know how they will be spending their trip

Info was valuable, though budget calculator isn't needed

yes

Yes

Yes.

no

Everything was valuable

OEQ 3: Were there any features not offered that you think would be useful for planning and creating your hiking and camping trips?

*Results*

external links to campsite website

General stores nearby/gas stations

incorporating google maps/apple maps with the driving distance; possible hiking trails

none

Trail maps and phone number of the place

A packing list already made for me that I can add and take away items from

Safety rating

Whether there are restrooms available at that site.

no

Shopping List directs to a vendor site

OEQ 4: Were there any features or information you deemed unnecessary?

*Results:*

n/a

Budget calculator

no

The friends and chat feature was cool, but isn't necessary and would need to have a Facebook integration for people to use it.

chat because i can just text peeps

none

I didn't think the weather needed to be shown because I could look it up on my own.

No

OEQ 5: Other thoughts or comments?

*Results:*

There could be more questions at the beginning to plan a better trip- like wanting a specific terrain (canyon, waterfall, valley, etc.), the difficulty (easy, medium, hard), and wanting to see specific animals (like deer, foxes, alligators, etc.).
Good app. Very well designed and colors matched app.

## Summary of Findings

Overall, there were no issues that users encountered that were detrimental to the app. Most issues were small confusions about where certain buttons were or requirements for tasks that users were able to resolve independently in a short amount of time. Our sample users consisted of a 50% male 50% female population, all of which were between 20-23 years old (Figure 1.1, 1.3). 50% rated their fitness level as moderate (3 on a scale of 5), 30% rated not very fit (2/5), and 10% rated fairly fit (4/5) and extremely fit (5/5) (Figure 1.4). Most users rated themselves as inexperienced with outdoor activities, with only 2 users rating themselves as fairly experienced with outdoor recreation activities (Figure 1.5). 2 users had previous experience with hiking/camping apps, particularly AllStays, while the other 8 had no experience at all (Figure 2.4). One of our users in the retrospective test was red green colorblind. As noted by the researcher, overall they thought the design had no major issues for someone who is red green colorblind. They did note that the yellow buttons with grey text could be higher contrast, and suggested changing the text to black.

Generally, participant's considered the application easy to use. 63.6% of users rated it 8 out of 10 on ease of use (where 10 is very easy), and 18.2% of users rated it a perfect 10 on ease of use (Figure 2.1). Only one user from our study (n = 10) said that the app was confusing (Figure 2.2). For our trip questionnaire, weather was the most important consideration for user when planning trips (Figure 2.3). Friends and driving distance were the next most important to the majority of users. This surprised us a little bit. We considered friends and activity types to be

the most important, with weather and driving distance to be marginally less important. This data could help us reorganize our trip questionnaire flow, so that the most important topics come first.

The issue participants consistently encountered when testing the app was trying to create a trip without entering preferences for weather, friends, or other steps. Users would usually click around the screen a couple of times before they realized they had to select an object before moving to the next page. Users could benefit in the addition of a “no preference” button, or some indication that they must select one of the options before moving on. In addition, users encountered various issues with date selection when creating a trip. Users who wanted to plan a multiple day trip struggled with how to select multiple days. Some tried to click and then drag their finger over the days, others tried to select everyday in the range they wanted. There were some inconsistencies with the placement of the return buttons (particularly on the trip information page) that caused some users issues. In order to prevent this going forward the buttons should look and be located in the same place on all screens.

The open ended questions (OEQ) in our post-survey also helped inform new changes. In OEQ #4 and OEQ #2 users indicated they likely wouldn't use the budget calculator, while being observed another user indicated that the budget calculator would have more information to be accurate and useful. A common theme in OEQ #3 is to add more map functionality. While we had this on our trip page, it may have not been clear enough. Several users noted in OEQ #4 that they would not use the chat functionality, so it may be worth considering replacing the chat feature with a more complete maps feature.

**Appendix A: User Test Notes**

These notes were taken as we performed the think out loud and retrospective tests. They are unedited and represent exactly what the tester wrote down.

1. **Think Aloud Test Notes**

    Tester: Maddi

    Notes: liked the color scheme, no trouble navigating, liked the options available for temp, distance, difficulty, friends, easy navigation from the home screen, no trouble completing tasks, easily recovered if a mistake was made

    Tester: Danny

    Transcript From Test:

Danny ▸00:00

All right. Your first task is to create a new trip without searching for a location.

Kaitlyn ▸00:07

Okay. No trips, plan a trip. Click on the plus button [inaudible]. Okay. I'll just click on these people. Next Tuesday. [inaudible] okay. A two day trip, I guess. Choose an activity. What do you...camping and hiking. Oh, you can choose more than one. That's nice. Um, I would like there to be a temperate temperature where I'm going, cause I don't like the cold. Are you okay with rain? No...Distance...I don't want to drive very far. I'm going to do 25 miles... Preparing. Okay. Oh, okay. So it looks like you have to choose Max Patch in North Carolina. Okay. And now I am on it.

Danny ▸01:21

All right, so your next task is to check the weather for your trip.

Kaitlyn ▸01:26

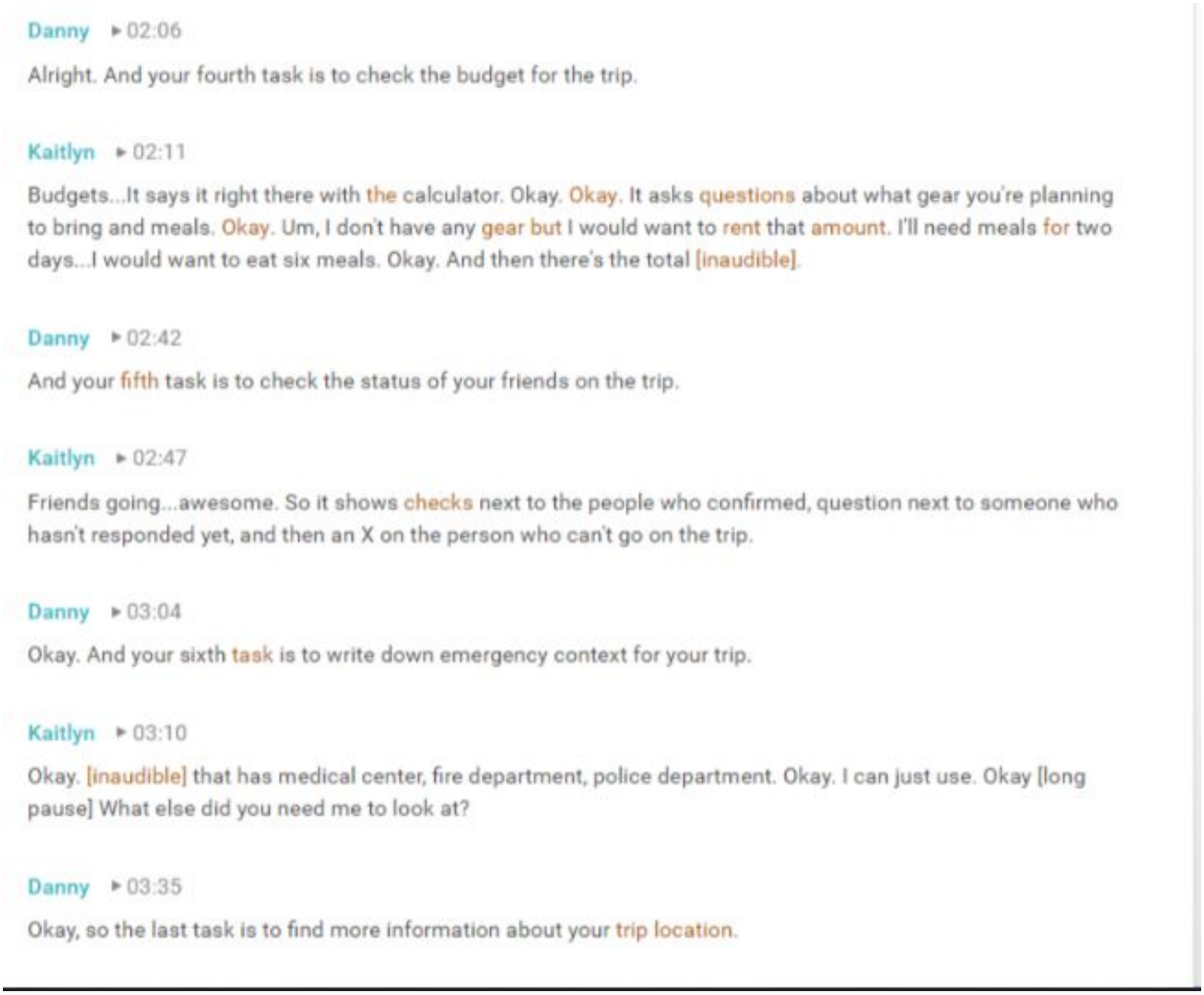
Okay. There's the sun, so that means weather. Weather for this week...okay.

Danny ▸01:36

All right. The third task is for you to sign up to bring a first aid kit for the group.

Kaitlyn ▸01:43

Sign up to bring one for the group...um, I guess packing, there's, Oh, I see it. Okay. I guess I just check it off as well. Work there.



Danny ▸02:06

Alright. And your fourth task is to check the budget for the trip.

Kaitlyn ▸02:11

Budgets...It says it right there with the calculator. Okay. Okay. It asks questions about what gear you're planning to bring and meals. Okay. Um, I don't have any gear but I would want to rent that amount. I'll need meals for two days...I would want to eat six meals. Okay. And then there's the total [inaudible].

Danny ▸02:42

And your fifth task is to check the status of your friends on the trip.

Kaitlyn ▸02:47

Friends going...awesome. So it shows checks next to the people who confirmed, question next to someone who hasn't responded yet, and then an X on the person who can't go on the trip.

Danny ▸03:04

Okay. And your sixth task is to write down emergency context for your trip.

Kaitlyn ▸03:10

Okay. [inaudible] that has medical center, fire department, police department. Okay. I can just use. Okay [long pause] What else did you need me to look at?

Danny ▸03:35

Okay, so the last task is to find more information about your trip location.

Notes: Some tasks took a bit more time. I found that users had some difficulty finding the right buttons. For a future prototype, we would want to arrange the buttons surrounded the trip page in an order of importance to the users. I also received feedback that a few of the features seemed unnecessary, such as the budget calculator. One user reported that they felt they would be better off keeping track of it on their own since it was more customizable. I feel as though they think that unless we cover every option, it would be better to just remove it for something more important. Users also reported that they liked the options available for narrowing down the trip. During the retrospective, one user asked where the number for the site was, not knowing that the site did not have one. I think we would want to include some alert or info in the emergency contact area as to

whether the hiking spot has a local office where travellers can contact them. Other than that, both users I tested it with seemed to not have too much difficulty using the app itself. They both liked the general idea behind it.

Tester: Kenzie

Notes:

- Keeps trying to go to next page without entering preference
- “what if I don’t care about the weather”
- Curious about taking a trip alone, she has to invite friends.
- Struggled to find return button from location information page.

Tester: Emily Matthews

Notes:

- Likes the yellow color circle on start page
- “What if I don’t have friends?” on add friends page
- Confused about what to do once she got the result
- Likes the heart or “x” options
- She wishes the weather function showed what day she had picked and like highlighted it, instead of just showing the whole week.
- It only lets you choose up to 6 meals but like what if someone wants more?
- Said it “Should link with Facebook so it can be a Facebook event”
- Figured out “learn more” is about trip quickly

Tester: Charlie

Notes:

- User asked can I click all of them?

- User was curious about the cost of gas when looking at the question about distance from current location
- User noted that it was easy to say what you'd want you trip to be like
- Task: Check the weather for your trip
    - User said it was very easy
- Task: Sign up to bring a first aid kit for the group
    - User originally went to the Emergency Info button because of the red cross symbol
- Task: Check the budget for the trip
    - 4 meals
    - Understood that 18.32 is the price of their individual contribution

Retrospective Questions

- What did you struggle with the most?
    - User reported not struggling
- What seemed most intuitive/natural?
    - Checking the weather and the learning more

**2. Retrospective Test Notes:**

Tester: Maddi

Notes: No problems creating a trip, confusion about how to leave the trip info page because of a back button not being present like it was on all the other pages, suggested having  opposite swiping motions for when pages transition (ex. Swipe left on going to a page and swipe right when going back to the home screen)

Tester: Emily Matthews

Notes:

- She tried to select multiple things when doing quiz, was successful on some of them but not on others. So maybe we should add some context to if they just select one or multiple options.
- "$2.00 on each meal? What kind of meal is that?"
    - What did you struggle with the most?
        - Things not being implemented, picking the dates. The concept of the tinder part didn't have swiping and that was instinct. The scrolling on the trip page was off.
    - What seemed most intuitive/natural?
        - The icons on the trip page, and the arrows
    - Was there anything that was hard to read/understand?
        - The parking because it doesn't actually show the street names.
    - Could you see yourself using this app on your own? Why or why not?
        - No, because I don't hike or camp enough to want an app for it, but she sees it being useful for people who do like to hike and camp.

Tester: Kenzie

Notes:

-missed some preference input

-honestly had no issues

Tester: Charlie

Notes:

1. Create a New Trip without searching for a location
    a. Got it immediately
    b. Struggled on dates
    c. Struggled to close the trip page
2. Check the weather for your trip
    a. Got it immediately

3. Sign up to bring a first aid kit for the group
    a. immediate

Comments:

- Prototyping is weird
- Wants more pictures of the location
- Budget is weird, too much text on one screen
- Doesn't think we need the USD on the budget page
- What did you struggle with the most?
    - Swiping is weird
    - White is which picture you are on, not grey in the trip page screen
- What seemed most intuitive/natural?
    - Friends going is very simple
        - Friends emergency contacts
- Was there anything that was hard to read/understand?
    - Hard to read: no
    - Nothing confusing or hard to read
- Could you see yourself using this app on your own? Why or why not?
    - intuitive , don't need instructions for it
- What's the difference between backpacking, hiking, and camping? (wants an info button)
- More intelligent temperature preferences
- Color scheme is RedGreen colorblind safe