# GetLost

*Prototype and Usability Evaluation - Milestone 3*

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# Interactive Prototype Instructions

We developed our prototype using Marvel app. We showed the interactive features in class during the Milestone presentation and included a link in our slides to interact with the app. A link to the prototype is also included on our team project website, charliemarlow.github.io/GoodVibes. Here, we will include detailed instructions in order to have the best possible experience interacting with our application.

**Link: https://marvelapp.com/ch4jgf7**

There are two main ways to interact fully with the app. The preferred way is to download the Marvel iOS app or android app, and then open it on your iPhone or Android device. This works best if you have an iPhone X or newer. Alternatively, the link can be opened in a web browser. Note: in a web browser, all user input is through clicking, swiping only works through having a downloaded version of the Marvel app on a phone.

**To view on the Marvel smartphone app:**

1. Download the Marvel app from the Apple App Store or Google Play Store
2. Enter the link on your preferred web browser
3. Tap on the green button that says “Open in App” (viewing the prototype on a mobile web browser doesn’t provide the full experience of the prototype)
4. Tap, “I already have the app”
5. The Marvel app should open so you can use the prototype

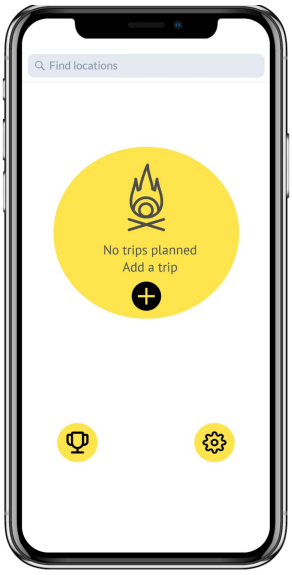
**To view on a desktop web browser:**

1. Enter the link above into the web browser
2. Click using the mouse to interact with the prototype directly

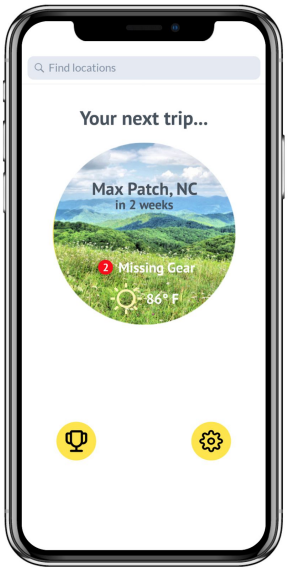
# Prototype Screenshots and Narrative

Default Pages

As the user opens the app there are two options for default pages. If the user has no trips planned they are shown the following default page. From this page, users can click the plus icon to start creating their own trip.



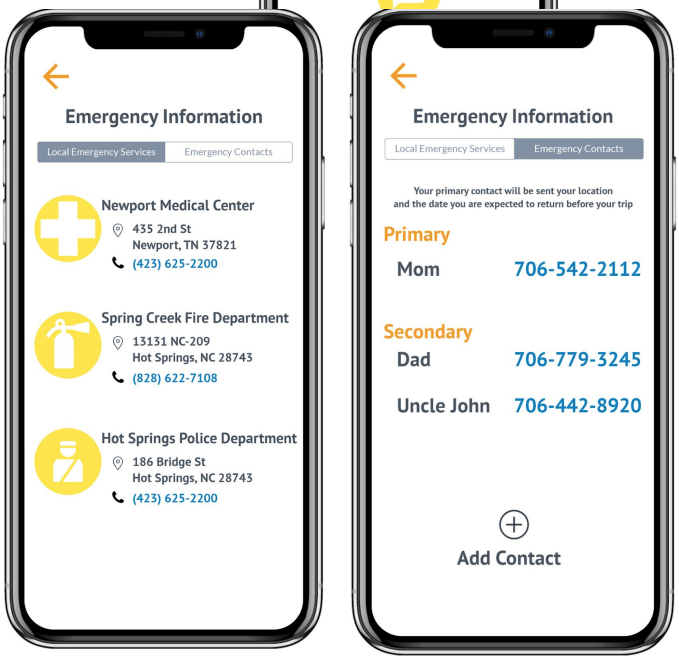
For users that already have a trip created they are prompted to another screen. By pressing anywhere on the circle containing trip information, the user is taken to another screen with more information about their trip.



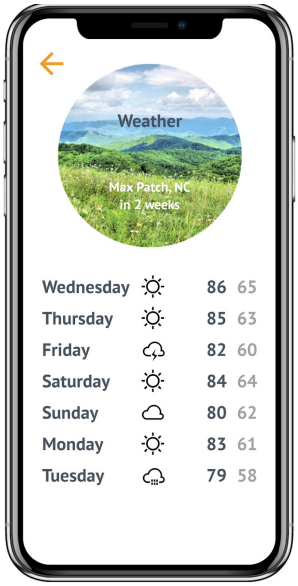

Trip Details

By selecting their already planned trip from the second default page users are taken to this trip details page, which has 6 buttons allowing them to access different information about their trip. In addition, users can select “learn more” to get more information about the hiking or camping site they are visiting.

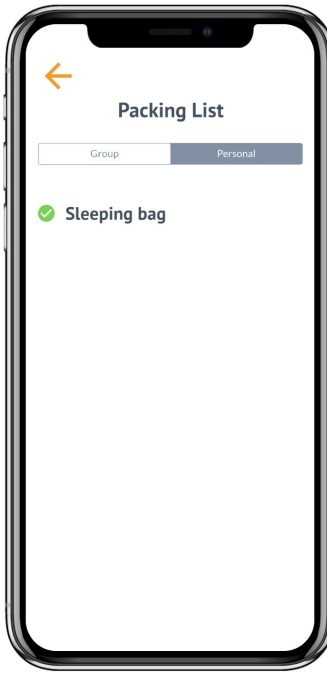

By selecting the “Emergency Info” button users access two pages, which can be selected between at the top of the page. Users can view information about nearby emergency services as well as view their own emergency contacts that they entered.

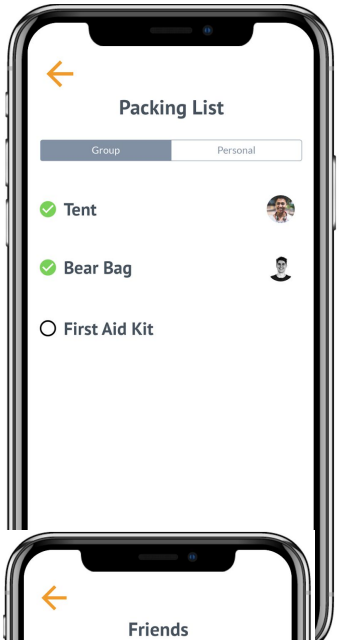


Selecting the weather icon from the home screen brings a 7 day forecast for the location of the trip.

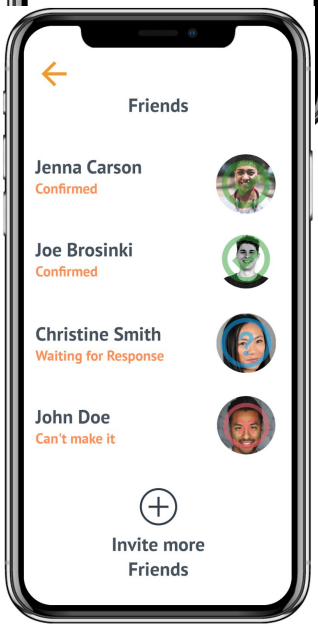



Selecting the packing list button brings up two pages, one with a group packing list and one with individual needs. On the group packing list, friends that have agreed to go on the trip can select the items they are bringing. The entire group can then see who agreed to bring what item. The personal packing list lets the user check off items they will need for themselves. Users can toggle between the two pages by selecting which one they want to view at the top of the page.



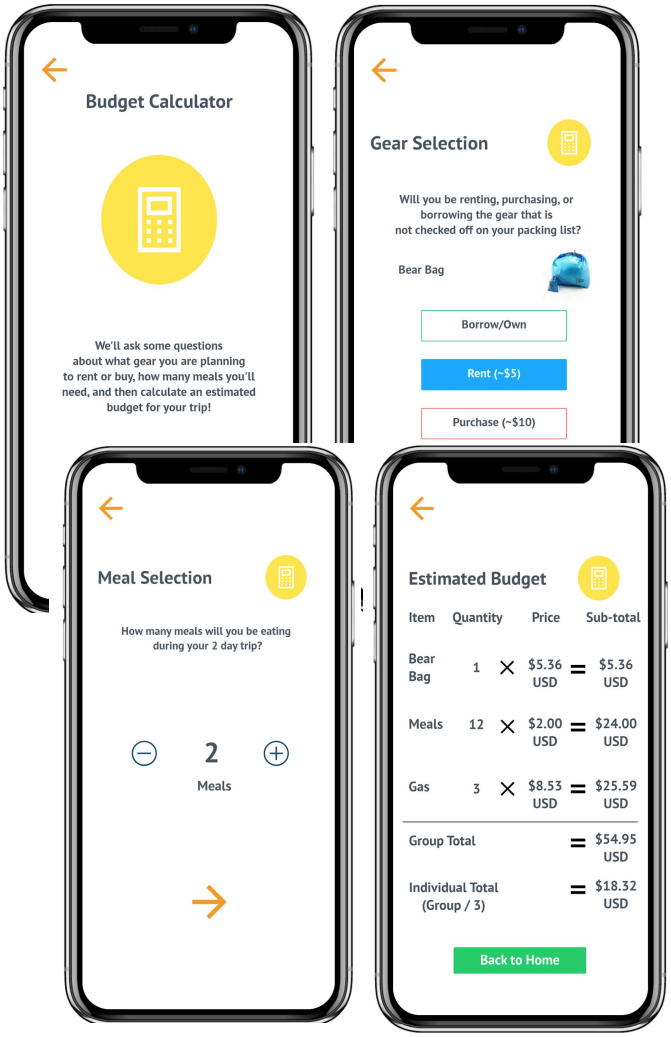




The Friends Going button allows users to invite their friends to a planned trip as well as view who has agreed to going (a green check over their profile picture), who hasn't responded yet (blue question mark over their profile picture), and who has declined the trip (red x over their profile picture). Users have the option of adding more friends after the trip is created by selecting the plus icon above "Invite more friends".



The chat icon takes users to a chat room where all friends that have accepted the trip can send messages, pictures, and videos.

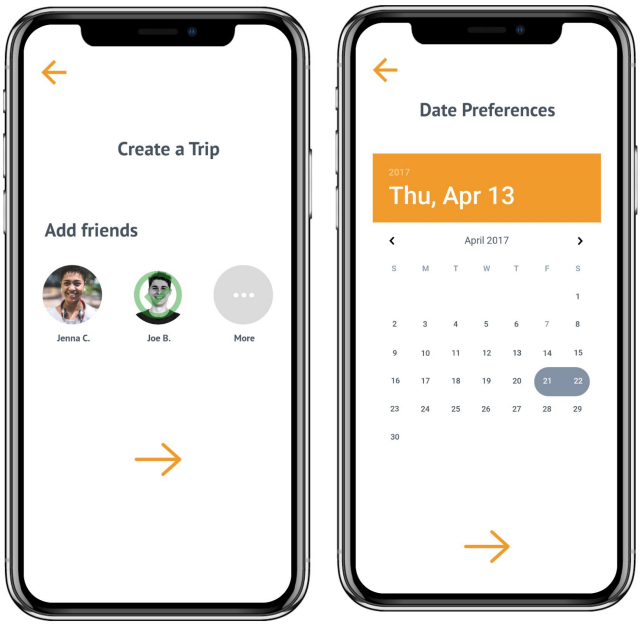

The budget calculator is a way for users to determine how much it will cost for them to complete their packing list and plan meals for the entirety of their trip. The calculator takes items that are not checked off on the packing lists and allows users to select if they will borrow/own that item, if they will rent that item (with estimated cost of renting), or if they will buy that item (with estimated purchase price). The calculator also asks how many meals total the user would like to have on the trip. The calculator than creates a breakdown of expenses using users input of gear needed, meals planned, and gas based on how far the location is and provides a total cost, as well as an individual cost based on an even split between the number of friends who have already accepted the trip.



Create Trip Flow

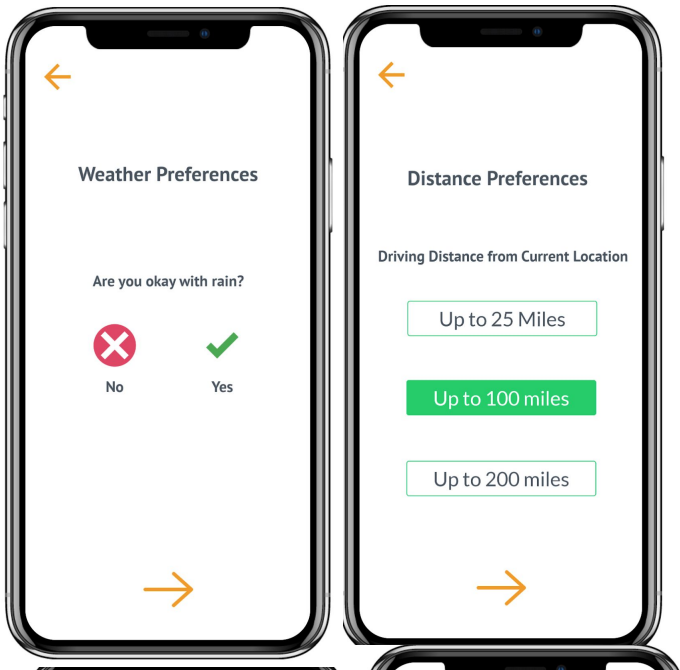
This is the entire flow of actions that allow a user to create a trip, starting from the default "add trip" homepage.

To begin, users select friends to add to the trip. After adding friends, the next page allows users to choose dates. If they select only one day and then proceed to the next page that will result in a one-day trip. By selecting two separate days, the trip will highlight the range selected and create a multiple day trip.

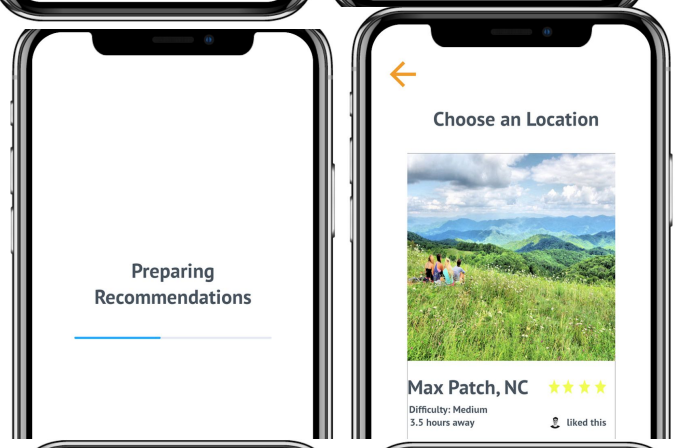



At the next page, users select which activities they are interested in having at the location. They can select multiple, one, or none. Next is temperature preferences. Users select the range of temperatures they would prefer for the trip. This preference does have the possibility of being ignored depending on the time of year/distance the user is willing to travel.

Users are asked in Weather Preferences if they are okay with rain during their trip that way they can be alerted if the weather isn't something they are comfortable with. Continuing through trip creation, the user is asked how far they are willing to travel to a location.

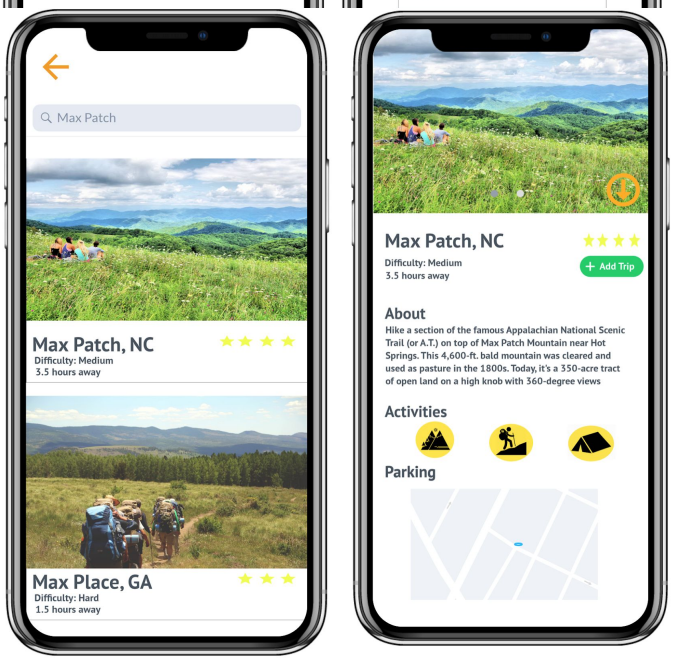



To keep the user informed of the process, a loading page with a progress bar is displayed while the app creates a list of possible locations. GetLost then provides the user and friends invited with a list of possible locations that match their preferences. They can like or dislike locations, and the most liked location is made the trip destination.




Search Locations

Instead of entering preferences and then picking a location, users have the option of searching locations, and then starting the create trip flow from the searched location.



## Full System Narrative

GetLost is designed to simplify planning an outdoor recreation trip. Currently, it focuses on hiking, camping, and backpacking trips. There are plenty of related apps that help users look at new locations and find information about campsites. What is unique about GetLost is that it takes a holistic approach to planning a trip. It helps the user with the full range of planning an outdoor trip. Other apps help users find locations when they know where they want to go. Our insight as a design team was that most people plan trips to spend time with their friends. Most people don't care as much about a specific location, as they do about the friends they go with and the weather that weekend. People who are inclined to plan backpacking trips are also more inclined to be adventurous and willing to try out new locations.

The flow for other apps is for the user to first pick a location, then consult the app for information. With GetLost, we flipped the script. Users come to the app with a vague idea about the type of trip they want to take. When a user creates a trip, they are first asked a series of questions about the trip. First and foremost, we ask the user about what friends they want to invite. This is because we believe the people around you will make all the difference on an outdoor trip. Next, we ask about what dates the user wants to go. We follow this up with questions about the activities users are looking to participate in on their trip, the weather they are willing to experience, and how far they are willing to drive. We crunch this data to prepare a list of recommendations for the user. Users can like or dislike locations, and see which locations their friends have also liked. This makes the trip planning a truly collaborative decision.

Once a location has been selected, the user is presented with a trip page that gives them access to more features for safely planning for their trip. Their homepage is also updated to show a picture of their next trip with information about the status of the trip. In the center, there is a picture of their location with its name. This also works as a button to take the user to the trip page to learn more about the location. Users also have access to emergency information, including the phone numbers of local emergency services and a user's personal emergency contacts. They can also view the weather, packing lists (both group and individual), which friends are going on the trip, a group chat page, and a budget calculator. Each of these features are more fully explained in the below list of features. Tools like the emergency information make

sure the user is taking all the correct precautionary steps to stay safe on the trail. The packing lists and chat help organize the group and remind users about trip essentials. The budget calculator makes planning each member's financial contribution easier.

As previously stated, one of the main features and innovations of our design was to make the trip planning experience more social. The social aspect is at the core of our design, instead of being an afterthought. Visually, our design focuses on simplicity. Our main color scheme is yellow, orange, and light. This is meant to remind the user of light, the sun, and give the app an energetic vibe. We also use green, red, and blue sparingly to draw the user's eye and represent different selections. Different elements are grouped by similar size and shape throughout the application. The rain preference question implements the Gestalt principle of closure for the checkmark and red X (when selected). Overall, we have created a design that is both visually and experientially unique and easy to use.

## Full List of Features with Brief Descriptions

Below is a list of features in the application. **Every** feature available in the prototype is listed below, and includes a brief description for each feature.

A. Planning a Trip: The main functionality of this service is to help users plan outdoor trips, like hiking or camping. Users can either answer a questionnaire about their wants and desires for a trip and allow GetLost to suggest locations, or they can directly search for a location.
    a. Find New Locations: The app will have functionality to help users find new locations, backpacking routes, and camp spots to enjoy the outdoors in.
        i. Search: Users can search for specific locations
        ii. Personalized Recommendations: When a user creates a trip, they will be asked a series of questions about the trip to create a list of recommendations that a user and their friends can like or dislike. Users will be asked questions about which friends they would like to invite, what dates they are interested in, types of activities they are interested in, what

kind of weather they prefer, and how far they are willing to drive to a location.

b. View Locations: After finding a location through search or recommendations, users will be able to view and compare different sites and activities.
    i. Ratings: Locations and routes will have ratings and reviews by other users so that people can share their personal experiences.
    ii. Pictures: Campsites and hiking routes will have pictures to give users an idea of where they are going, and make it easier to find when they get there.
    iii. Parking Information: Each location will have clear information on parking. This includes directions to the parking spot, and about how many spots are in the trailhead parking.
c. Preparing for the Trip: Once a trip has been created, GetLost will prepare different sets of information for them to fill out or view in order to be prepared to get outdoors.
    i. Inviting friends: Friends are invited during the trip creation flow. From the trip page, users can tap on the Friends button and invite more friends or check the status of invited friends.
    ii. Chat: Friends who have accepted the trip will be placed in a group chat with each other to facilitate planning for their trip.
    iii. Packing lists: GetLost will provide activity-dependent and weather-dependent packing lists to cover everything the user will need in the outdoors. These lists will be checklist the user can mark off as they gather their materials. The content will change as more users join a trip.
        1. Group packing list: When camping, there are some items you only need one or two of. For example, in a group of four people, only one person needs to bring a camping stove, and you might need only two 2-person tents (or one 4-person tent). These items will be

put into the group packing list, and when a group member updates the list all members will be able to see that change.

2. Individual packing list: Other items are inherently individual (think clothing, a backpack, or toothpaste). Each individual will have an individual checklist of the items they personally need to bring.

iv. Emergency services

1. Local services: Users will be provided with local emergency services near their location.
2. Emergency contact: Users will be prompted to create an emergency contact for their trip. This user will receive an automated text message with the details about the trip including the location and planned trip duration. This ensures that if something goes wrong, there will be someone notified and capable of contacting emergency services.

v. Budget calculator: Trips will have an optional budget calculator. Users can select items on their packing list (like food, sleeping bags, tents, etc) that they will either need to rent or purchase. The calculator will also take into account the cost of gas from the users home location to the campsite. It can then provide all the group members an estimated cost for the trip.

vi. Weather: Users will be able to view the weather for the weekend they are planning on going to that location. If the weather suddenly changes that weekend, the user will be notified.

vii. View more Information: From the trip page, users can quickly access more information about the location by tapping on the center button to open up a page with trip information.

B. Settings: There is a settings page for users to update information about their user account and notification settings.

## Usability Specification

Our goal is to have a system that is at or above the desired level in terms of learnability, errors, and subjective satisfaction. We want a coherent, easy to follow design that is more than just functional, but also enjoyable for the user. By proctoring a usability evaluation with several points of examination such as a "think aloud" observation and a questionnaire, we can evaluate the usability of the application and use that data to improve the overall design. Some metrics we will measure our usability against include:

- Length of time for a new user to create a new trip through the questionnaire trip flow is under 3 minutes
- A user, starting from the home page, is able to find the chat page in under a minute
- New users can fill out the budget calculator and figure out how much money they will need for a trip in under 2 minutes
- Users can correctly answer which friends will be joining them on their trip in under 2 minutes
- Users can mark personal items off of their packing list in under 2 minutes
- >85% of users tested mark system simplicity as a 7 or above, where 10 is very simple and 1 is complex

## Evaluation Plan

For our evaluation plan, we are planning to do a range of usability tests to fully ensure our product complies with our usability specification. We want to find all pain points in our current prototype. As a group, we plan on doing a heuristic evaluation using the ten design principles discussed in class. We will meet in a group and go through the application looking for instances where any of the ten principles are violated. We may need to take multiple passes through the app to catch all of them. We also plan to execute a cognitive walkthrough as a group to discover any hidden pain points we missed during the heuristic evaluation.

Furthermore, we will lead several types of usability tests with actual users: benchmark (summative) testing, learnability testing, retrospective testing, and a think-aloud test. For the benchmark test, a user will be asked to complete each task mentioned in our usability specification (for example, create a new trip). We will time how long that task takes, and use it as a measure to see if our prototype lives up to the standards we set in our usability specification. For the learnability testing, we will take the same users and ask them to repeat the tasks several times. We will record the number of times that it takes them to complete these tasks, and compare those numbers to compute a learnability rate. This will allow us to see if performance improves from exposure to the application.

For the retrospective test, we will give the user a list of tasks to complete and takes notes without interrupting while they are completing these tasks. Once done, we will ask the users questions about their use of the application, especially if they get stuck on anything. We will 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?

For the think-aloud, we will prepare a script to talk the user through each task. As the user is completing a task, we will continually ask them to verbalize their thought processes. These will be video taped so we can reflect back on them later.

For **all** usability tests, we have a set of questions to ask before and after testing. Before participating in any test, users will be asked a set of interview questions (listed below). These primarily deal with their previous outdoor experience and other demographics for statistical purposes. These will be provided to the user as a Google form. The user will then complete a set of benchmark tasks, which are also listed below.

After completing the benchmark tests, users will be asked questions on a post-evaluation subjective questionnaire (which will be in a Google form). These questions focus on their

subjective experience of the application. These interview questions, benchmark tasks, and post-evaluation subjective questionnaires are all listed in more detail below.

A. Interview Questions

**Before** testing, these questions will be answered in either a Google form or asked in person:

**Questions about Hiking Experience**

- How do you typically go about planning a hiking or camping trip?
- How often do you go hiking or camping (alone or with friends)?
- What, if any, tools/apps/websites do you use when planning a trip?
- Who do you go hiking or camping with?
- When you are going to a hiking location you have never been to before what do you need to know before getting there?
- How experienced are you with smartphone apps?
- On a scale of 1-10, how familiar are you with camping supplies? Assume 1 is not familiar, 10 is very familiar.
- On a scale of 1-10, how confident do you feel in planning a 2 day camping trip? Assume 1 is not confident at all, 10 is very confident.
- On a scale of 1-10, how confident do you feel planning a 2 day backpacking trip? Assume 1 is not confident at all, 10 is very confident.
- On a scale of 1-10, what is your current fitness/activity level? Assume 1 is not very active, and 10 is very active.

**Demographics Questions**

- What is your race?
- What is your gender identity?
- What is your age?
- If you feel comfortable disclosing this, do you have any disabilities (i.e. color blindness) that affect how you use smartphone applications?

B. Benchmark Tasks

We will evaluate the usability and efficiency of these tasks to see if any steps are confusing or too time consuming. We can have a team member observe potential users (3 to 5 within-subjects) performing these tasks and have them "think out loud". We will also use these tasks for the retrospective testing. The team member can time how long it takes, count how many times they need help, and count how many clicks each task takes.

- Create a hiking trip with any preferences you like. Add at least 1 friend.
- From the homepage view the trip you have already created and view the weather for it.
- From the homepage search for locations. Select a location and read the details.
- View a trip you have created and check off on the group packing list that you will be bringing a first aid kit.
- View a trip you've already created and view emergency information.
- Check the budget you should personally allocate for this trip.

C. Subjective Questionnaires - Post-Evaluation Questionnaire

These questions will be asked **after** the user has participated in a study.

- We will use a Google form asking what they thought about the system's usability, learnability, design, reliability, and validity. Some possible questions could be:
    - On a scale of 1-10 how simple did you find the Get Lost interface to use? Assume 1 is not very simple, while 10 is very simple
    - How would you compare GetLost to other hiking and trail tools?
    - Were there any colors or design elements that made reading or understanding the content difficult?
    - Was the information about each trip location valuable to your decision? Anything you deemed not valuable?
    - Was the process for creating a trip simple or confusing?

- Were there any features not offered that you think would be useful for planning and creating your hiking and camping trips?
- Were there any features or information you deemed unnecessary?
- Rank the most important filters during the trip questionnaire
    - Friends
    - Weather
    - Activity type (backpacking vs. camping)
    - Distance