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## Rock Climbing Mobile App

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# Research & Insights

## Research Questions/Goals

The goal of our research is to gain insight into the current challenges rock climbers experience while trying to select their outdoor climbing adventures. Furthermore, we want to gauge the potential users' willingness to travel, thus we can focus on our overall geographical scope.

The structure of our interviews was based on specific questions to learn more about these challenges as below:

## Interview Questions

- How accessible are the local crags for people?
- Are there travel restrictions? How far are they willing to travel?
- How experienced are they with outdoor climbing? Do they climb outdoors enough to warrant downloading an app?
- Are users willing to pay for quality information? If so, how much would they be willing to pay for an application?
- What kinds of devices do people have? Do they have a mobile device to access this application?
- Do other climbing communities and areas have a use for a rock climbing app?
- How skilled are they climbing outdoors? Indoors? Bouldering vs Trad vs Lead?
- How willing is someone to go outdoors to climb if a gym is just as accessible?
- How willing are people to find and search for information?
- Would people like having physical maps/books?
- How often do people mark down a completed route and their own rating in a guidebook?

## Process for Answering Questions

The process by which we answered our questions was conducted through one-on-one interviews and field observations. Our main interviews were performed in the field at the

Bend Rock Gym with one of our interviewers climbing and participating with the interviewees. To enhance triangulation, we conducted two additional one-on-one interviews performed in public, casual settings including the Oregon State University-Cascades campus and outside. These casual settings attempted to mimic peer to peer conversations. This included 3-4 members of our interviewing committee so that each person could track one specific segment of the interview including one person designated to each of the following: interviewer (asking questions), writer (noting responses), and an observer (recording student's non-verbal behavior.)

This data was collected throughout the week of October 20th, 2019. To gather consistent data with people, we asked similarly phrased questions to each interviewee. We also had one of our interviewers climb with the participants. This triangulation helped arrive at similar conclusions and help collect accurate information by splitting up the interviewer's roles.

## **An Exhaustive Inventory of Elements**

### The people in the space

#### **1. Who are they, what are they like?**

The people in this space we are studying are rock climbers. They are ages 25-35, active people. They are passionate about rock-climbing and it's an important facet of their daily lives.

#### **2. What are they doing?**

In the Bend Rock Gym interviews, the people are either rock climbing, chatting or working.

#### **3. How are they doing it?**

Very relaxed atmosphere, super welcoming environment.

#### **4. What do their emotions, purposes, reactions seem to be, and (if field interview) what did they say?**

They seemed joyous and like they were having a good time. Interviewees had well-formed opinions about the problems we asked about.

#### **5. What problems do they encounter with their activities?**

They struggle to climb routes that are hard. There is often an element of uncertainty before going to a new route.

### The objects (technological and otherwise) in the space and with the people

#### **1. What are the functional elements of the objects?**

No interaction between any objects. Everyone interviewed only had their rock climbing gear on them.

#### **2. What are the decoration elements?**

There are rock climbing history panels and printed pictures of climbing areas up on the walls.

3. **Which objects do people look for (perhaps to somehow interact with)?**  
Rock climbing gear, the actual rock climbing wall, and other people.
4. **Which objects do people bring with them that matter to the activities they are trying to do?**  
Shoes, clothing, carabiners, ropes, chalk.

The environment: spaces, architecture, lighting, etc

1. **What is the layout?**  
It's a large and tall room. The walls are all climbing walls and there is a large boulder-shaped item in the middle of the room.
2. **What is the environment like?**  
The environment is relaxed and friendly.
3. **How does it influence the activities that people engage in?**  
People are likely to socialize when not actively climbing. Conversations might be about climbing or just a friendly chat.
4. **How does the environment support the objects above?**  
The objects above are all specialized to help people engage with the environment.

## Results

### Student Rock Climber #1

#### 1 on 1 interview

- How accessible are the local crags for people?
  - Rock Climber #1 stated that their local crags are easily accessible, especially in the area we live in, in comparison to other regions.
- Are there travel restrictions? How far are they willing to travel?
  - They stated that the accessibility varied when choosing between rope climbing and bouldering. Rope climbing could vary in travel to like Smith Rock (about 45 minutes from town) whereas bouldering can be found fairly close locally in the area within about 15 minutes of travel distance.
- How experienced are they with outdoor climbing? Do they climb outdoors enough to warrant downloading an app?
  - They had climbed for a total of 8 years, with many breaks in between. This student has been climbing for 5 years straight now without a major break. In regards to a mobile application, they did say it would be nice to have this option, especially when visiting new climbing areas.
- Are users willing to pay for quality information? If so, how much would they be willing to pay for an application?
  - Student #1 claimed that they "don't usually pay for apps." They may be willing to pay a couple of dollars to have access to local climbs.

- What kinds of devices do people have? Do they have a mobile device to access this application?
  - They only have access to a cellphone when they go out to climb. They would most likely use this rock climbing application *if* they thought to download the maps, routes, and other information in our app ahead of time.
- How often do people mark down a completed route and their own rating in a guidebook?
  - Student #1 mentioned that they do not normally mark a completed climb in a guide book. They also do not record their rating when they have completed a climbing route.
- Community aspect
  - This student would appreciate a community aspect that would provide community updates or reviews about a climbing route they are interested in visiting. An example they provided includes if there is construction on a current route and what the handhelds are like.
- Climbing info.
  - Currently, this student analyzes climbing routes from their personal knowledge and local guide books they have acquired.
- Prefer a book or app
  - The climber noted that cellular service is an issue but as long as they could have access to that data when offline then it would not be an issue. The amount of technology they have at the time is also a thought.

## Student Rock Climber #2

### 1 on 1 interview in the field

- How accessible are the local crags for people?
  - Climber said that local climbing areas are fairly accessible in comparison to other popular climbing areas in the region. Others might drive 1-2 hours in other parts of the region while Bend and Redmon have many spots within a 15 minute drive.
- Are there travel restrictions? How far are they willing to travel?
  - Although this climber claims that they are willing to travel around 10 hours for climbs, there are “definitely restrictions” to getting to climbing areas. Even accessing local crags can be difficult if the approach requires an off road capable vehicle.
- How experienced are they with outdoor climbing? Do they climb outdoors enough to warrant downloading an app?
  - This climber is incredibly experienced with bouldering...

- The climber has a bunch of experience with bouldering and some moderate experience with sport and multi-pitch climbing. They liked the idea of an app and would definitely download one if it had the right information.
- Are users willing to pay for quality information? If so, how much would they be willing to pay for an application?
  - Paying for an application depends on the information on the app. The climber stated that if the app fills out bouldering areas, then it would definitely be worth the purchase. This climber prefers to explore and find their own routes, however.
- What kinds of devices do people have? Do they have a mobile device to access this application?
  - Brings out a phone for music, emergency, and communication
- Do other climbing communities and areas have a use for a rock climbing app?
  - One thing this climber noted is that many locals want to keep their climbs and climbing routes mostly for locals. They do know that there are more popular climbing communities that would love to take advantage of accessible data.
- How skilled are they climbing outdoors? Indoors? Bouldering vs Trad vs Lead?
  - Prefers bouldering, just getting into trad and has some fair sport experience. Can climb harder indoors than outdoors, but still is very skilled when bouldering outdoors.
- How willing is someone to go outdoors to climb if a gym is just as accessible?
  - Despite gym accessibility, this climber claims they are willing to go a couple of hours away (max. ~4 hours.)
- How willing are people to find and search for information?
  - If this climber finds themselves in a new place, then they will usually checkout internet forums to see if there is any climbing in the area.
- Would people like having physical maps/books?
  - This climber prefers physical books as they are not reliant on their phone. They said they like to stay away from using their phone as much as possible when out in the wilderness.
- How often do people mark down a completed route and their own rating in a guidebook?
  - The climber has three different local bouldering books and marks half of the climbs participated outdoors. They don't mark down their own rating for local routes so they weren't able to answer the second part.

## Field Rock Climber #3

### 1 on 1 interview in the field

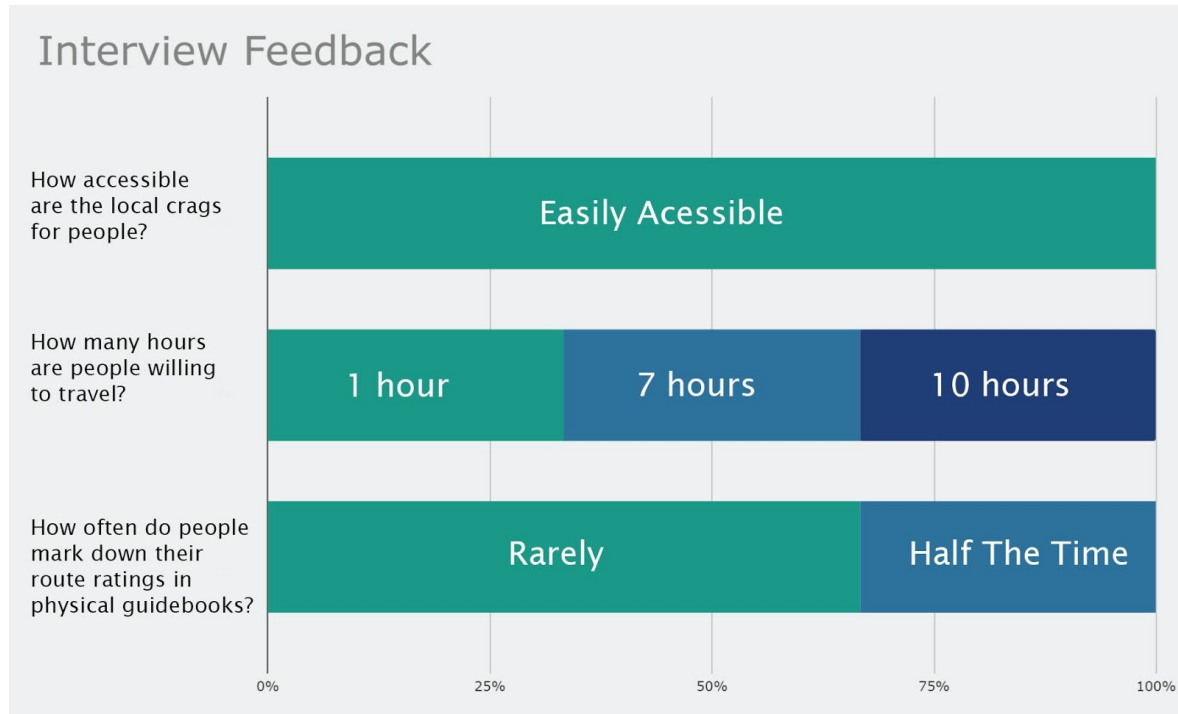
- How accessible are the local crags for people?
  - The climber stated that his local crag spots are very accessible for his type of climbing. He primarily focuses on bouldering (solo) and sport climbing at Smith Rock.
- Are there travel restrictions? How far are they willing to travel?
  - For the most part, the interviewee didn't have any travel restrictions when it came to accessing his spots.
  - The first thing that came to mind was overpopulation at certain spots during peak climbing season.
  - He used the term, "Creative parking" for key local spots like, "The Depot" that don't have ample readily-accessible parking.
  - The climber has traveled up to 6-7 hours (Redding to Yosemite, and Redding to Bend). It's safe to assume Bend gets a lot of traffic for Smith Rock, based on his extended responses.
- How experienced are they with outdoor climbing? Do they climb outdoors enough to warrant downloading an app?
  - The climber has roughly 8-10 years of climbing experience, on and off. He mainly focuses on solo bouldering around here but enjoys sport climbing at Smith and the occasional "trad" climb.
  - The climber would utilize a mobile application
- Are users willing to pay for quality information? If so, how much would they be willing to pay for an application?
  - The interviewee stated he would, "Definitely" pay a stand-alone price for a local guidebook that could be downloaded as a .pdf or similar file. The main focal point being accessible without cell service. That being said, that guidebook must contain sufficient data on local spots.
- What kinds of devices do people have? Do they have a mobile device to access this application?
  - He primarily uses a cell phone. With occasional laptop/desktop usage.
- Do other climbing communities and areas have a use for a rock climbing app?
  - His response was a bit hesitant, but yes. You could tell he wanted to keep his own "local" spots as hidden as possible, but it was evident there is a need for an application among communities.
  - The age group of the community may also be important.
- How skilled are they climbing outdoors? Indoors? Bouldering vs Trad vs Lead?

- The interviewee is mostly experienced with outdoor climbing. With that being said, bouldering is his climb of choice around this area.
- How willing is someone to go outdoors to climb if a gym is just as accessible?
  - It really was dependent on outside circumstances for him. For example, was the weather permitting, local overcrowding at spots, or just time management.
  - However, with that being said, climber still mainly focuses on outdoors and will only utilize indoor climbing as a last resort.
- How willing are people to find and search for information?
  - It depends on context and location. If he's traveling to a new area and doesn't necessarily know the spots or details, he's more likely to seek out outside information.
- Would people like having physical maps/books?
  - He actually uses physical books currently and doesn't care for them. This idea of a downloadable .pdf guidebook file would be perfect.
- How often do people mark down a completed route and their own rating in a guidebook?
  - The climber will only personally rate a course if he's climbing with the intention to rate routes.

## Insights

### From Field Interview Responses

- Target users bring a mobile device climbing with them
- All interviewees would be willing to pay for an app with the proposed features
- Users may be reluctant to share information on their favorite routes but are very interested in the insight of other community members
- Interviewees all had some guide books, but only one actually marked ones they visited
- Most interviewees felt the books are inconvenient
- Interviewees prefer outdoor climbing when conditions allow
- Climbers are willing to travel up to a few hours for a new route
- Considerations like parking, crowding, and vehicle capability are relevant when choosing a route

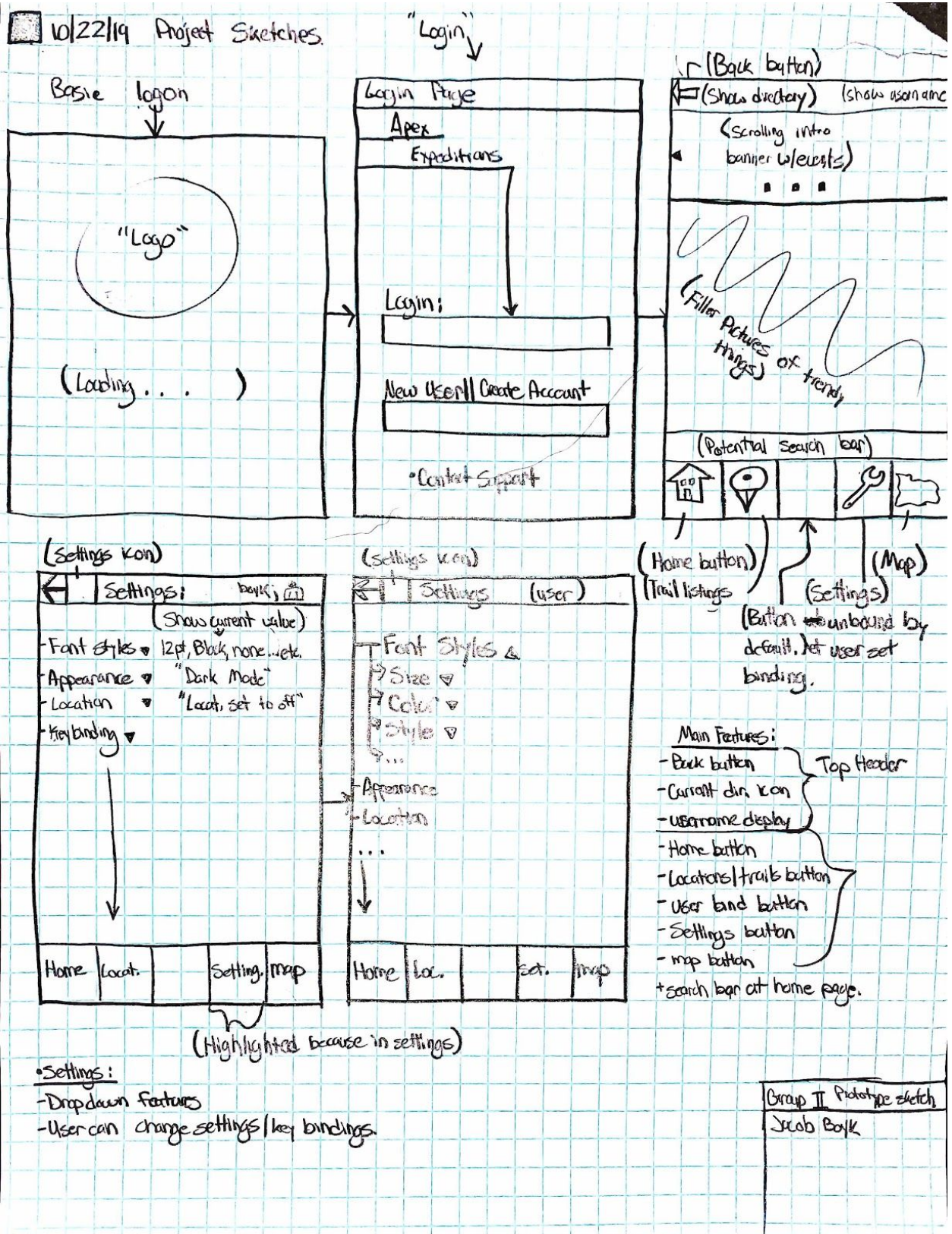


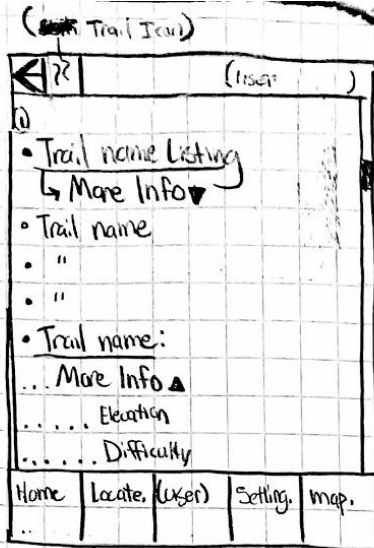
### Participation of Group Members

The majority of this project was done together in a group setting with a lot of communication. Interviews were conducted by Michael and Jacob and results were analyzed as a group. Jacob drew the sketches with group input. Kira set up the shared documents and took the lead on ensuring all requirements are met. Marji tailored the visual design of the layout and worked to interpret the interview data. The project was worked on in tandem with full group participation.



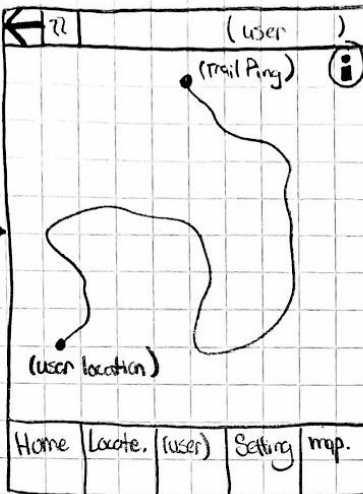
## Sketches





(Screen 1 ↑)

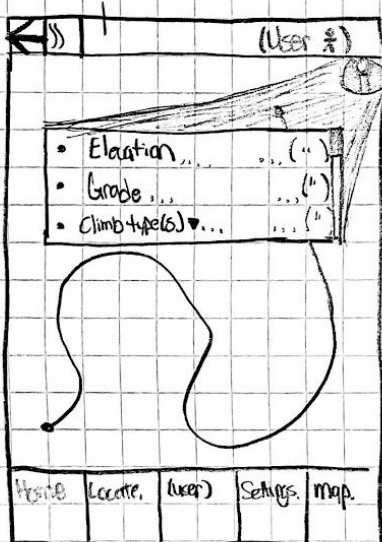
- 1). Trail names w/ hyper links to map page  
- Fl. drop down menu with more info
- 2). Clicking link leads to screen 2.



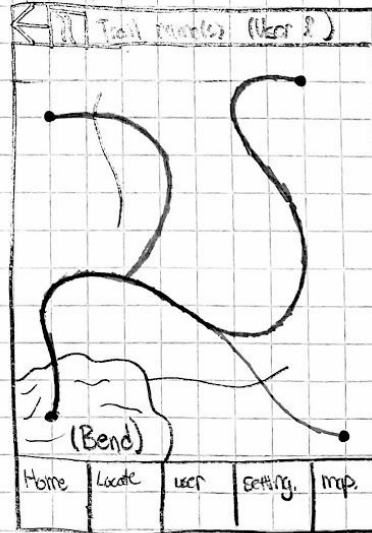
(Screen 2 ↑)

- 1). Clicking link will route to a map page.  
- Will feature info button for trail info  
- Will enable routing via location settings.
- 2). Map will feature colored pings

(name of trail being routed)



← info panel is selected



Multiple routes

- 1). User can select multiple routes
- 2). Path icon will open window with path locations ↓

(Additional tab for multiple routes)

← Trail name(s) (user)

- More than one route?
- Multiple directions?

• The Dofot (Red)  
• Meadow Camp (Blue)