

PROJECT 1

TERRAIN TREKKERS



Photo by [Zhaocan Li](#) from [Pexels](#)

Objectives

This is an individual assignment. In this assignment, you will:

- Practice the iterative design loop
- Deliver and receive constructive, actionable design critiques
- Practice paper-centric prototyping skills (Sketching, Wireframing)
- Practice programming prototyping skills (HTML, CSS, GitHub)

Deliverables

All deadlines are at 11:59pm PST on the listed dates.

Due Date	Deliverable	Time Estimate ¹
Wed, 06/22	Deliverable 1.1 — Mood Board	< 1 hour
Thur, 06/23	Deliverable 1.2 — Interaction Sketches	1.5 hours
Fri, 06/24	Deliverable 1.3 — Peer Critique of Sketches (via Slack)	30 minutes
Mon, 06/27	Deliverable 1.4 — Hand-Drawn Wireframe	1.5 hours
Tue, 06/28	Deliverable 1.5 — Interactive Prototype	4 hours

¹ This is an approximate estimate of the expected time for completion of each deliverable. You may spend more or less time as you wish! The estimates are provided in non-DSP terms. If you are a DSP student who would like help estimating the time per deliverable, feel free to reach out to Shm!

Wed, 06/29	Final Report	30 minutes
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Design Brief

Hello and welcome! We, the park rangers of TERRA INCOGNITA NATIONAL PARK, have hired you to create a **mobile** trail website for hikers. We already know the situations, tasks, and users — that is, the STUs. We want you to design and implement a mobile website that supports the given *situations* and *tasks* for one type of *user*.

First, pick only ONE of the following types of *users* to support, for the rest of the assignment:

(A) Sightseer

A sightseer cares little for cardiovascular exertion or endurance training. They're here to drink in the stunning views, flex their photography skills, meditate on our place in the universe, and then maybe cry a little. They'd prefer a calm, inviting interface that highlights the park's visual offerings.

(B) Backpacker

A backpacker is here for a good time and a long time, and will need all the help they can get to survive and set up camp along the way. The backpacker is up for a challenging workout, and wants to reach extreme locations that the layperson cannot. They'd prefer a sleek, exciting, and practical interface that keeps them informed and engaged.

Your task is to design a mobile website for your chosen user that supports ALL of these *tasks*:

- **Search**

A user can query the overview for a single trail. The website's trail overview shows the difficulty, length, elevation gain, picture(s), and important features (i.e. a pretty lake, steep cliff, bathroom) of the trail.

- **Comparison**

The user compares the overviews for several trails at once.

- **Alert**

Your website notifies the user when a feature of interest enters a <2 mile radius.

The website should work in ALL of the following three *situations*:

- **Planning the trek**

At the beginning of the hike, a user considers a trail overview to prepare for their outing and decide where to go for this trip.

- **Fork in the trail**

While on a hike, the user is faced with several choices and considers several trail overviews to decide where to head next.

- **Newly discovered feature**

While scanning the area or checking the website, an unexpected feature enters the user's vicinity, potentially impacting their hiking plans.

You can design and prototype the hiking website for a single mobile phone, with identical dimensions to your own mobile phone.

1.1 Mood Board · due Wednesday, 06/22

Your very first job is to make a mood board to consider a color palette and design themes for your website. Your mood board will be a collection of images, graphics, words, and color swatches around a central keyword inspiring the design of your website.

Size

Your moodboard should be a rectangle of 16:9 aspect ratio (1920 x 1080 pixels). (This is the default size of a slide on Google Slides. You can use Google Slides to make your mood board!)

Keyword

Come up with a keyword (ex: “calm”, “extreme”) that fits your selected user type (*Sightseer* or *Backpacker*). Be creative! The visual elements of your mood board will be centered around this keyword. Include your selected user type and your keyword at the top of your mood board.

Visuals

You are allowed to find visuals using search tools like [Google Images](#) or [Pexels](#). Focus on getting the right “feel” with the graphics you choose. This exercise is intended as an exploration to figure out how you want your website to feel. Don’t focus on making a clean, good-looking layout. Try to not spend longer than 1 hour on it!



An example mood board for the keyword “stress”

Reflection (≤ 200 words)

Describe 3 *motifs* in your mood board. A *motif* may include design factors like color (saturation, hue), lines (jagged edges, smooth curves), light (contrast, brightness), shapes, etc.

To Submit

1. Under the bCourses assignment titled **1.1 Mood Board**, submit a PDF with your visual mood board and written reflection.

2. On the Slack channel **#p1-1-moodboard**, send one message with an image (.jpg, .jpeg, or .png) of your mood board. You can include a short text description if you want, but it's not required!

1.2 Interaction Sketches · due Thursday, 06/23

Now that you have a mood board for inspiration, you can make some *low-fidelity sketches* of the user interaction. You'll start with 5 rough sketches and pick 2 of them to refine.

Please follow [these guidelines](#) for the materials to use in your sketches. We will be flexible on the materials for this particular checkpoint if you haven't had a chance to get them yet.

5 Rough Sketches

Make initial sketches for **5 individual mobile website designs**, catered to your selected user type (*Sightseer* or *Backpacker*). Each sketch may have one or multiple screens. Each sketch should cover at least 1 *situation* and 1 *task*, described in the [Design Brief](#).

Tips:

- Try to cover a breadth of ideas — different interactions, information layouts, etc! Each of the 5 sketches should be unique. (i.e. don't make 5 sketches all about the same *task* and *situation*)
- Remember that we are designing for the dimensions and user experience setting of a mobile website that hikers can access on the go.
- Reference your mood board to inspire your visual design.
- Focus on quantity over quality. Don't use a ruler, and don't spend longer than 7-10 minutes on any one sketch. This is your time to experiment and explore — it's okay if a sketch doesn't "look good" or turn out exactly how you envisioned it, as long as it conveys your idea!

2 Refined Sketches

Select 2 of the 5 initial rough sketches. For each of the 2 selected rough sketches, think of ways to improve the designs and make them clearer for your peers to understand in the upcoming peer critique.

Tips:

- Pick 2 sketches that showcase different ideas, so that you can get a variety of feedback.
- The sketches need not be pristine — try not to spend longer than 20 minutes on each of the refined sketches. Focus on the essence of the idea, not cleanliness of presentation.

To Submit

1. Under the bCourses assignment titled **1.2 Interaction Sketches**, submit a PDF with all 5 rough sketches (labeled 1 through 5) and 2 refined sketches (labeled 1 and 2).
2. On the Slack channel **#p1-2-sketches**, send one message with an image (.jpg, .jpeg, or .png) including your **2 refined sketches**, labeled 1 and 2. In the text portion of your message, mention the user type you are designing for (*Sightseer* or *Backpacker*).

1.3 Peer Critique of Sketches (via Slack) · due Fri, 06/24 (by 11:59PM, but preferably during Studio)

You've spent some time thinking about and sketching out your designs individually. Now it's time to get some feedback from your peers and share your feedback on their designs.

If you **DO** attend Friday's Studio session:

- You will have the opportunity to participate in a synchronous peer critique. Your assignment is to provide feedback to at least **2 of the peers at your table**. Once you've discussed in person, please summarize what you (the person giving feedback) talked about in the Slack channel **#p1-2-sketches** in a [Slack Thread](#) nested under their message with the image of their sketches. You can also include a selfie if you want :)

If you **DO NOT** attend Friday's Studio session:

- Your assignment is to provide feedback to at least **3 of your peers**. Find peer sketches in **#p1-2-sketches** that have **less than 2** responses (if they all have 2 or more, find random ones to critique), and share your feedback in a [Slack Thread](#) nested under their message with the image of their sketches.

For either format, your feedback to your peers' sketches should respond to the following questions, to help them discover what is working well in their designs, issues in designs they are actively pursuing, and potentially fruitful directions they could take their designs in the future.

- What parts of their sketches are compelling and why?
- Can you think of any good ideas that they haven't discovered yet, but are maybe hinting at in their sketches?
- What are some aspects of their sketches that seem confusing?
- What aspects of the sketches should your peer keep in future iterations of their design?

To Submit

By the deadline, make sure you've sent your feedback via Slack messages in **#p1-2-sketches**, threaded under the sketches shared by the 2 or 3 peers according to the guidelines above.

Note: Slack allows you to edit messages, and if you edit your feedback message we'll look at the "last edited" timestamp as your final submission time. After you send at least one message with feedback in each required thread before the deadline, **feel free to continue with free-form conversations in the threads under your work and your peers' work!**

You are welcome to react and share feedback on other peers' work as well! Have fun, and use this opportunity to think of ways to improve your designs! 💡

1.4 Hand-Drawn Wireframe · due Mon, 06/27

(We recommend not procrastinating on this – you probably want to get started on your Interactive Prototype due Tuesday, 06/28, and you'll want this wireframe to work off of)

Now that you have some sketches and feedback from your peers, you can transform your ideas into a hand-drawn *wireframe*, which is a sketch of your interface and user interactions at a higher fidelity than before.

10-minute Reflection

Before creating the wireframe, reflect on feedback from your peers. Spend about 10 minutes writing a short (≤ 150 words) reflection on the following topics. Your reflection can be in bullet points.

- What ideas do you want to preserve from your sketches?
- What ideas did your peers offer that you think are worth pursuing?
- What are some usability problems that you need to iron out from your past sketches, if you're reusing parts of the design from those sketches?

Wireframing

You should draw your wireframes using paper and pen. You may use pencil to add shading or gray tones to your wireframe. Your wireframe should support **ALL** three of the given tasks and should work in **ALL** three of the given situations (see the [Design Brief](#) for a list of the situations and tasks).

Recall the [guidelines](#) for wireframing from lecture. Here are some tips:

- Remember that we are designing for the dimensions and user experience setting of a mobile website that hikers can access on the go.
- Clearly demarcate space for onscreen components like text, buttons, and icons.
- You do not need to make fine-grain decisions about color, icon style, or typography.
- Use realistic and believable text in your wireframe (ex: instead of using placeholder text like "XXkm" for a distance write "20km" or something believable)
- Include any arrows for interactions that the user may perform.

To Submit

1. Under the bCourses assignment titled **1.4 Hand-Drawn Wireframe**, submit a PDF with your short reflection and pictures of your hand-drawn wireframe.
2. On the Slack channel **#p1-4-wireframe**, send one message with an image (.jpg, .jpeg, or .png) including your hand-drawn wireframe. In the text portion of your message, mention the user type you are designing for (*Sightseer* or *Backpacker*).

After you submit, take a look at others' hand-drawn wireframes in the Slack channel! Be ready to share what you learned from iterating on your design, and see what your peers produced.

1.5 Interactive Prototype · due Tues, 06/28

In this part of the assignment, you will create a mobile web prototype of your Terrain Trekkers interface.

Setup

Follow [these instructions](#) to set up your development environment and to deploy a Node.js+Express server running with some starter code for your prototype. Make sure to track your code on GitHub.

Using our [GitHub classroom and starter code](#) is optional - feel free to use your own set-up - as long as **(and this is very important)** we are able to access your code via a GitHub repo link, and we can run your code with little additional effort on our part. *If our course staff can't view it, they can't grade it* - following the given setup instructions is the most straightforward way to ensure we can access and grade your work.

Prototype

Based on your wireframes from [Deliverable 1.4](#), mock up the visual appearance of your website using HTML/CSS.

If you have not prototyped websites before, we recommend you try using a toolkit like [Bootstrap](#) to help you experiment with layout and style.

We encourage you to implement navigation between screens. If you already know HTML, CSS and JavaScript, we encourage you to prototype more “realistic” interactions. This practice will come in handy for your final project. However, although we should be able to view each of your pages for grading purposes – **working/high-fidelity navigation and interactivity are not required for this assignment**. We’re looking for an effectively designed mock-up that communicates your UI/UX vision for the app – we are not grading for function or technical implementation.

Visual Design

You may create graphics (e.g., icons, a background image) using digital software (e.g., Illustrator, Figma, Photoshop). You can also use third-party images and icons, as long as you attribute them properly. All text, buttons, and solid backgrounds should be created with HTML/CSS (i.e. they should not be images).

Documentation

To present your final web prototype, add the following to a PDF:

- Come up with a name for your website that reflects its unique design.
- Write a brief tagline of what the website does (20-words or less).
- Write a project description of the situations, tasks, and users your website addresses for the stakeholders at TERRA INCOGNITA NATIONAL PARK (100 words max).
- Write a description of the interface and interactions you designed (100 words max).

- Add a link to your GitHub repository.
- Add screenshots of the major screens and interactions in your website.
- Add links to animated GIFs (see [submission guidelines](#)) or a 30-second demo video.

To Submit

1. Under the bCourses assignment titled **1.5 Interactive Prototype**, submit the PDF with all documentation.

Final Report · due Wed, 06/29

Reflection

The [Universal Principles of Design](#) guide collects design guidelines in order to guide designs and discuss the effects of various design choices. Choose one screenshot of your website and two of the following principles that are relevant to that screenshot: Alignment, Color, Iconic representation, Legibility, Proximity, Signal-to-noise ratio, Similarity.

For each principle, analyze the presence of the principle within your screenshot (using the language of the principle discussion) and discuss the effect of the principle application within your design. Write up your analysis in 200 words or less.

Final Report PDF

Create a PDF with the following components:

- Mood Board
- Interaction Sketches
- Hand-Drawn Wireframes
- Feedback that you gave to someone else
- Documentation of the HTML/CSS prototype
 - Name
 - Written summary of how it works
 - Description of STUs
 - Description of interface and interactions
 - Screenshots
 - Reflection of two Universal Principles of Design
- Links to your
 - GitHub repository
 - Animated GIFs or video

You have creative control over how you format your PDF for this submission! Consult the CS 160 [Submission Guidelines](#) for basic guidelines. Use consistent and tasteful visual style, headings, and fonts. Start with a “hero” screenshot or set of screenshots of the website and the description of what the website does. All other sections should be included in chronological order. Have fun with designing your final report!

To Submit

Under the bCourses assignment titled **Project 1 Final Report**, submit the PDF of your final report.