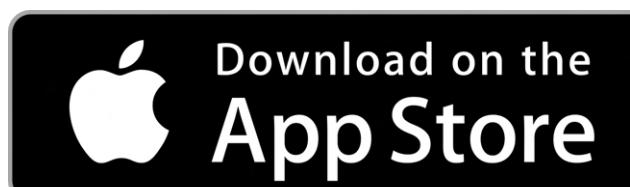
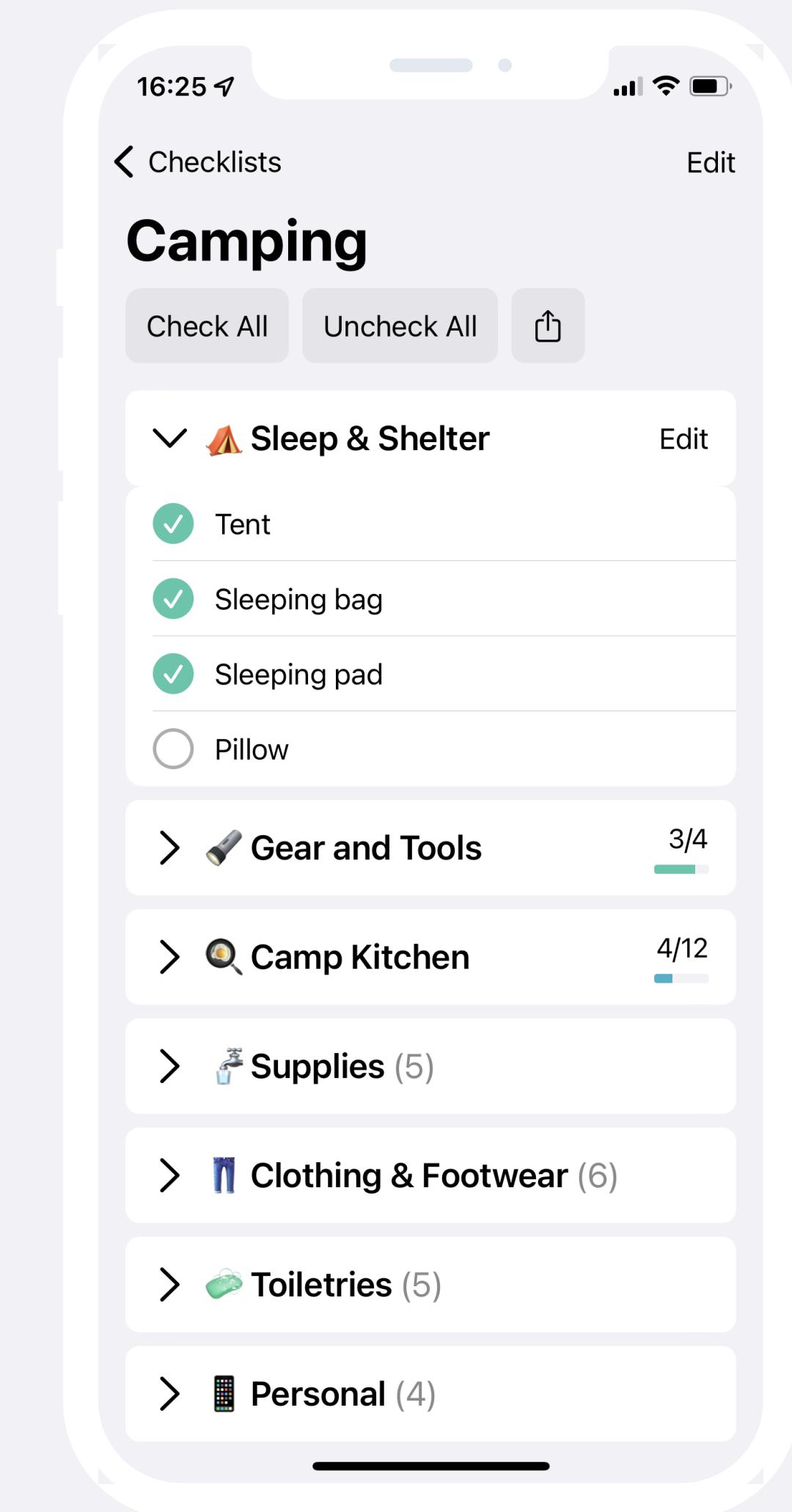


Camping Checklist Pro

How I designed and built the #1-ranked camping checklist in the App Store.



Side Project // 25-40min Presentation



Overview

Role: “Founder”

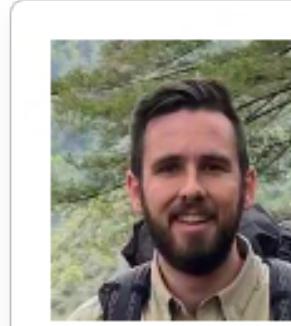
V0.0.0: Nov 2020 - Apr 2021

Platforms: iOS

Responsibilities

- Discovery & user research
- Concept & usability testing
- iOS engineering
- Beta testing & QA
- Growth & analytics

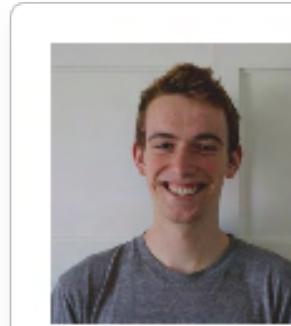
The Team



Nik (me)

Product Design @ SpotHero

Mentors



Macallan

Software Engineer @ Google



Brian

Staff iOS Engineer @ SpotHero

Background

During summer of 2020, I started going on weekend camping and backpacking trips to stay sane.

And I did a lot of them.

17

Trips

7

Months

6

States



The Problem

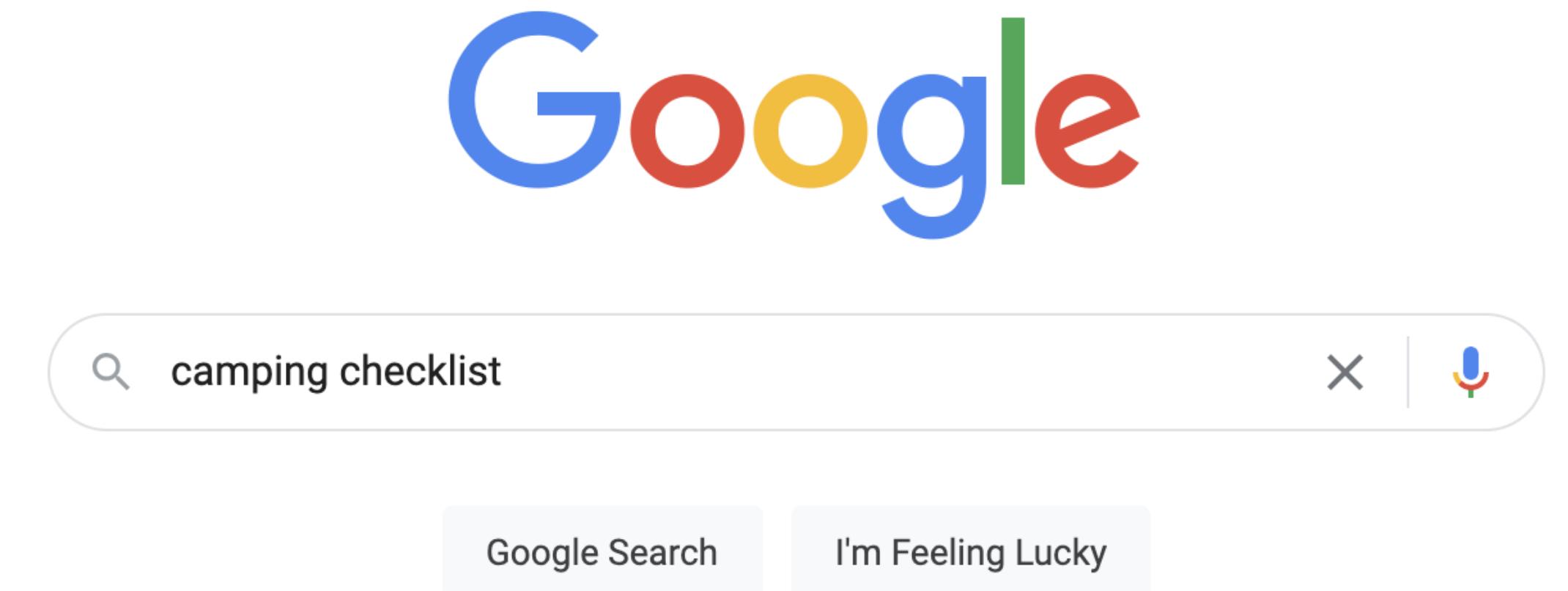
Going on trips every weekend meant that I **was constantly packing and unpacking** a lot of camping gear.

It was a **hassle**, and I often **forget things**. I didn't have room for plastic totes, so I went looking for a good checklist.



Searching for a Good Checklist

1. **Mobile:** I can use it while moving
2. **Checkable:** checklist, not a list
3. **Customizable:** easy make your own
4. **Purpose-built:** for the outdoors
5. **Well-designed:** intuitive & clear





Campsite

These are important items for your camping checklist:

- [Tent \(and footprint, stakes\)](#)
- [Sleeping bags](#)
- [Sleeping pads](#)
- [Camping pillow](#)
- [Headlamps or flashlights \(and extra batteries\)](#)
- [Camp chairs](#)
- [Camp table \(if no picnic table\)](#)
- [Lantern \(and mantles and fuel/batteries if needed\)](#)

Expert Advice / Camping

Camping Checklist

★★★★★ 6752 Reviews

This article is part of our series: [Intro to Camping](#)



Camping is a great way to get outside with family and friends or even by yourself. You can go camping in many state and national parks, at private campgrounds, in the backcountry or even in your own backyard. (For more info, read [Where Can I Camp?](#))

Most campsites include a picnic table, a place to park your car and a spot to pitch your tent. Many also have shared bathrooms and running water.

Part of the joy of camping is needing very little gear to exist outdoors. But it's also nice to have a comfortable, convenient and homey campsite. If it's your first time camping, it might be best to borrow or [rent](#) some of these things. As you become a more experienced camper, you may find that part of the fun is figuring out what to bring along to meet your needs.

Online Lists

ULTIMATE CAMPING CHECKLIST

Campsite Essentials

- | | | |
|---|---|---|
| <input type="checkbox"/> Tent (and footprint, stakes) | <input type="checkbox"/> Sleeping bags | <input type="checkbox"/> Sleeping pads/liners |
| <input type="checkbox"/> Camping pillows | <input type="checkbox"/> Folding table & chairs | <input type="checkbox"/> Camp chairs |
| <input type="checkbox"/> Fishing equipment | <input type="checkbox"/> Fly swatter | <input type="checkbox"/> Matches/lighter/fire starter |
| <input type="checkbox"/> Sunshade, tarp or screen | <input type="checkbox"/> Portable hammock | <input type="checkbox"/> Cots/blow up mattress |
| <input type="checkbox"/> Sleeping bag liners | <input type="checkbox"/> Firewood | <input type="checkbox"/> Camp rug |
| <input type="checkbox"/> Fire extinguisher | <input type="checkbox"/> Generator | <input type="checkbox"/> Umbrella |
| <input type="checkbox"/> Tablecloth and clips (tape) | <input type="checkbox"/> Clothesline with clips | <input type="checkbox"/> Pet waste bags |
| <input type="checkbox"/> Headlamps or flashlights (and extra batteries) | <input type="checkbox"/> Lantern/mantles (fuel/batteries if needed) | <input type="checkbox"/> Disinfectant spray |

Tools & Repair Essentials

- | | | |
|--|---|--|
| <input type="checkbox"/> Multi-tool and/or pocket knife | <input type="checkbox"/> Duct tape | <input type="checkbox"/> Extra cord/hope |
| <input type="checkbox"/> Tent-pole repair sleeve | <input type="checkbox"/> Pad/Mattress repair kit | <input type="checkbox"/> Small broom and dustpan |
| <input type="checkbox"/> Saw or axe (for cutting firewood) | <input type="checkbox"/> Mallet or hammer (for hammering tent stakes) | |

Health & Hygiene Essentials

- | | | |
|--|---|--|
| <input type="checkbox"/> Toilet paper | <input type="checkbox"/> Hand sanitizer | <input type="checkbox"/> Toothbrush and toothpaste |
| <input type="checkbox"/> Trolley kit | <input type="checkbox"/> Quick dry towel | <input type="checkbox"/> Menstrual products |
| <input type="checkbox"/> First aid kit or first-aid supplies | <input type="checkbox"/> Sunscreen | <input type="checkbox"/> Sunglasses |
| <input type="checkbox"/> Sun hat | <input type="checkbox"/> Lip balm | <input type="checkbox"/> Insect repellent |
| <input type="checkbox"/> Insect repellent candles | <input type="checkbox"/> Pain relievers | <input type="checkbox"/> Potty Trowel |
| <input type="checkbox"/> Peroxide | <input type="checkbox"/> Prescription medications | <input type="checkbox"/> Diapers & baby products |
| <input type="checkbox"/> Tweezers (tick removal) | <input type="checkbox"/> Snake bite kit | <input type="checkbox"/> Eye shades |

Online PDF's



The Essential Camping...
afar.com



Camping Checklist – Love The Outdoors
lovethoutdoors.com



Ultimate Camping Equip...
amazon.com



Camping checklist
templates.office.com



Camping Checklist | REI Co-op
rei.com



The Ultimate Family Campi...
bring-the-kids.com



Camping Checklist: 151 Item...
survivaltechshop.com



Camping Checklist | Arizona S...
azstateparks.com

The image displays three screenshots of mobile applications used for vacation planning and packing.

Screenshot 1: TripIt - New Trip

- Top bar: Xfinity Mobile, 12:56, 75% battery.
- Section title: New Trip, TripIt logo.
- Buttons: Single Destination, Multi-Destination.
- Search bar: Where do you want to go?
- Calendar: November 2020. Days 1-7 are grey, 8-14 are light blue, 15-21 are teal, 22-28 are light blue. Nov 19, 2020 - Nov 27, 2020 is highlighted.
- Text: 9 days (8 nights).
- Icons: Business (briefcase), Leisure (lounge chair).
- Button: Select Activities & Lists.

Screenshot 2: Chicago (26) - Packing List

- Top bar: Xfinity Mobile, 12:33, 83% battery.
- Section title: Chicago (26).
- List items (radio buttons):
 - Work gloves
 - Watches
 - Underwear
 - Tank tops
 - T-shirts
 - Swimsuits
 - Sweater
 - Sunglasses
- Buttons: Add new item, More options.

Screenshot 3: My camping trip - Checklist

- Top bar: Xfinity Mobile, 12:50, 77% battery.
- Section title: My camping trip.
- Statistics: All Items, Pack: 24, Buy: 2, Packed: 7.
- Section: Safety (7 items)

Item	Status	Action
Bug repellant	✓ (green)	Pencil icon
Paper map	□ (grey)	Pencil icon
Proof of reservation	□ (grey)	Pencil icon
Medication	✓ (green)	Pencil icon
Rain gear	□ (grey)	Pencil icon
First-Aid kit	□ (grey)	Pencil icon
Whistle	□ (grey)	Pencil icon
- Buttons: + New Checklist, Checklists, Recommendations, Feedback.

Apps (Vaction Planning, Packing)

Rigid & Static

#1 online camping checklist (REI) can only be exported to PDF for printing. No way to edit.

Outdated

The #1 camping checklist in the app store hadn't been updated in 2 years

Bloated

checklist.com's camping template has 197 items! Lists with 100+ items are common online

Mobile-Second

Google sheets and docs were a real pain to use on my phone, and too

Easy to Lose

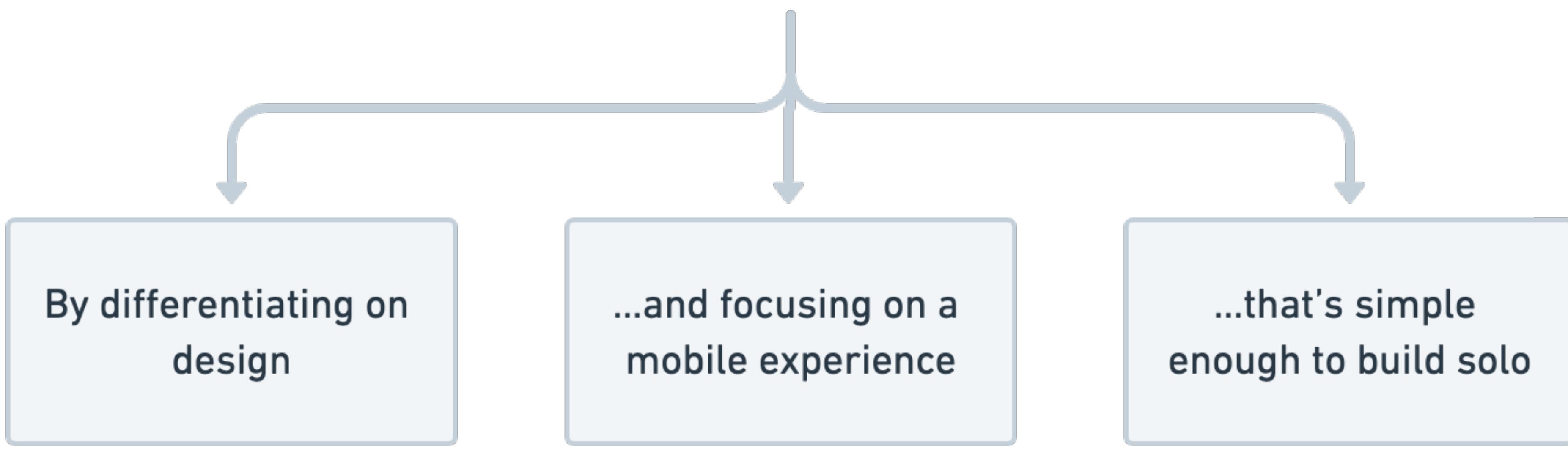
Finding the paper list of gear you made last year isn't always easy.

Poorly-Designed

Many packing apps I found had usability issues & poor visual design

HYPOTHESIS

I might be able to create something better

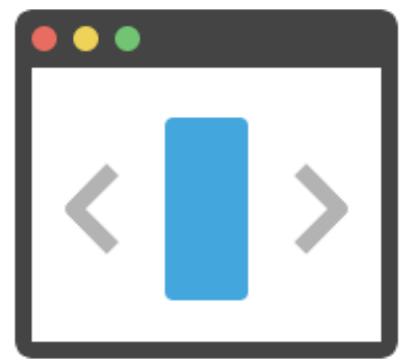


Motivations



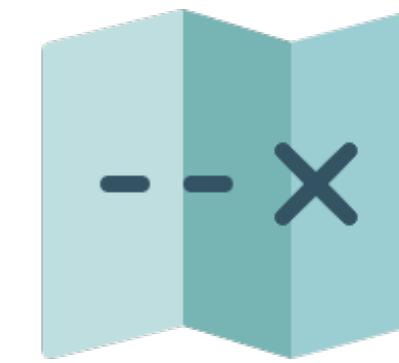
Packing Tool

The obvious one: I needed a good packing tool, and hadn't was surprised at the options.



Mastery/Empathy

Mobile equivalent of learning HTML/CSS to understand responsive design.



Bucket List

I've wanted to build an app since 2016, and had been looking for the right opportunity.

~~Business~~ Human Goals



Money

I did not want to devote effort to making money



Growth

I did not set explicit usage/growth targets



Completion

I wanted to build and ship a real product.



Satisfaction

I wanted a product that was useful to others

KR: Working software

KR: 4.9 in App Store

Goals

4.9 App Store Rating

Master iOS design

Ship working software

Constraints

Don't know Swift (iOS)

Big project

Strategy

Differentiate with Design



Lean into Apple's HCI



Make Smart Tradeoffs



Project Timeline



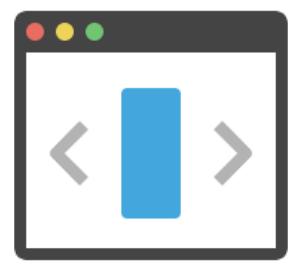
1 month

Discovery



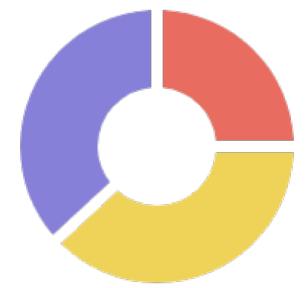
2 months

Research/Design



4 months

Development



currently

Live App

Project Timeline



1 month

Discovery

- iOS & SwiftUI Tutorials
- 23 throwaway projects
- Competitive deep dive



2 months

Research/Design

- User interviews (n=18)
- 2X rounds of concept testing and interviewing with artifacts (n=11)
- Usability testing (n=7, Reddit—to save \$\$)
- Template research & construction
- Final Figma prototype



4 months

Development

- 50+ Trello tickets
- 55+ GitHub commits
- Live software usability testing (n=8)
- Closed beta (n=28)
- Iteration (n=17 tix)
- Privacy policy
- App store screenshots
- V0.0.0 Release



currently

Live App

- Post-release monitoring via App Store Connect
- Promotion/advertising
- ASO (App Store optimization) using App Radar
- New feature development
- User feedback

[Skip to Outcomes →](#)

Discovery

Is this an opportunity, and can I learn the iOS skills I need to build an app?



iOS and SwiftUI for Beginners

Excited to get started with iOS app development? In this learning path, you'll build two fully-functional iOS apps, and go into depth with the Swift Programming Language to learn how to create the logic behind your app.

Get started for free!

[Get Started →](#)

1 Your First iOS and SwiftUI App: An App From Scratch

Updated for 2020! If you're a complete beginner to iOS and SwiftUI development and wondering how to get started, this is the course for you.

Dec 15 2020 · Video Course (2 hrs, 31 mins)



2 Your First iOS and SwiftUI App: Polishing the App

This course is the sequel to "Your First iOS and SwiftUI App: An App From Scratch." In this course, we'll finish off our "nice-to-haves" on our programming to-do list for Bull's Eye, resulting in a professional and polished app.

Dec 16 2020 · Video Course (3 hrs, 48 mins)



3 Your First iOS and SwiftUI App: Designing the App [OPTIONAL]

Learn how to start with nothing but an app idea, and take it all the way to a beautiful visual design made in Figma.

Dec 17 2020 · Video Course (1 hr, 16 mins)



Learning SwiftUI

I spend the first full month immersing myself in tutorials and learning Swift and **SwiftUI, Apple's newer and younger state-driven UI language.**

Resources

- RayWenderlich.com intro course
- Youtube, Udacity, Medium

Outcome: 22 throwaway projects

<https://developer.apple.com/tutorials/swiftui> ::

SwiftUI Tutorials | Apple Developer Documentation

Create beautiful, dynamic apps faster than ever before. 4hr 25min Estimated ... 25min. An illustration showing an app running on both iPhone and Apple Watch.

[Creating a macOS App](#) · [Creating a watchOS App](#) · [Creating and Combining Views](#)

<https://codewithchris.com/how-to-make-iphone-apps...> ::

How To Make An App – (2021) Create An App in 10 Steps

Are you pumped up to learn iOS development? I'm right here with you! Here are my best resources for people who want to learn how to develop iOS apps:

[Write out the features for...](#) · [Put together an app...](#) · [Build the app with one of...](#)

<https://blog.devmountain.com/how-to-create-an-ios-app> ::

How to Create an iOS App: 5 Steps to Make It Happen



iOS Tutorial (2020): How To Make Your First App

1.3M views • 2 years ago

CodeWithChris

In this iOS tutorial, you'll learn how to get set up for iOS app development, how to use the tools required and how to write/read ...

4K



Build your first iOS app with SwiftUI

244K views • Streamed 6 months ago

Paul Hudson

In this livestream I'll show you how to build a complete SwiftUI app from scratch, while also teaching you the basics of Swift.



Swift: Build Your First App (2021) - iOS for Beginners

4.7K views • 2 months ago

iOS Academy

In this video we will build our very first iOS/iPhone app from scratch in Xcode 12 and Swift 5. This tutorial is for absolute ...

“UI Primitives”

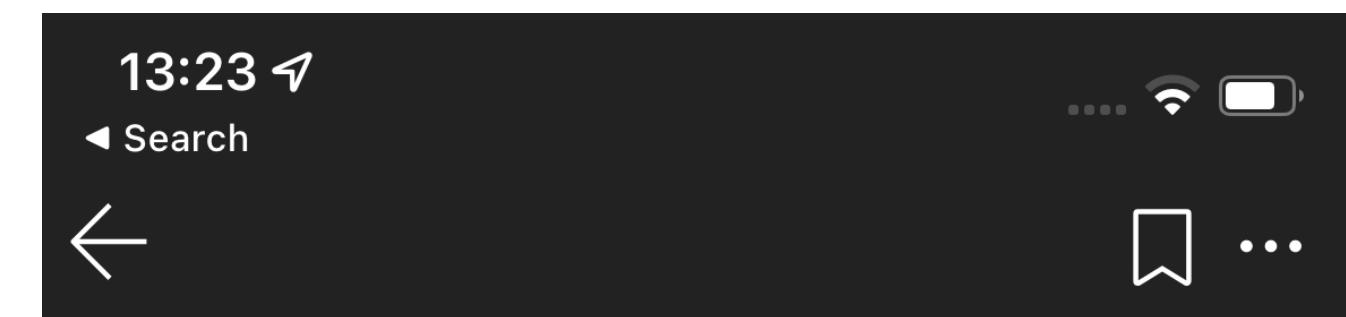
- Text
- Buttons
- Lists
- Sheets
- Edit mode
- Swipe to delete
- Navigation links
- Nav bars
- Tab bars
- Alerts
- Context menus
- SF Symbols
- Semantic colors

The screenshot shows the Xcode interface with the ContentView.swift file open in the editor. The code implements a grouped list view for a todo list application. It defines a placeholder data structure and uses a NavigationView to present a VStack containing a List. The List displays items grouped by category (Household and Section 2), each with a delete icon and a three-dot menu icon. An 'Add Dummy Item' button is at the bottom. The preview on the right shows the resulting UI on an iPhone 12 Pro.

```
26     init(data: [Category]) {
27         self.data = data
28     }
29 }
30
31 @ObservedObject var placeHolderData: dummyData = dummyData(data:
32 [
33     Category(name: "Household", children: [Item(name: "Task 1"),
34         Item(name: "Task 2"), Item(name: "Task 3")]),
35     Category(name: "Section 2", children: [Item(name: "Task 1"),
36         Item(name: "Task 2"), Item(name: "Task 3"), Item(name:
37             "Task 4")])
38 ]
39 )
40
41 var body: some View {
42     NavigationView {
43         VStack {
44             List {
45                 ForEach(placeHolderData.data) { category in
46                     Section(header: Text(category.name)) {
47                         ForEach(category.children, id: \.self) {
48                             Text($0.name)
49                         .onMove(perform: self.move)
50                         .onDelete { indexSet in
51                             print("moving items")
52                         }
53                     }
54                     Section {
55                         Button("Add Dummy Item"){
56                             print("do nothing")
57                         }
58                     }
59                 }
59             }
59             .listStyleInsetGroupedListStyle()
60
61             Spacer()
62
63         }
64     }
65 }
```

Competitive Analysis

I scoured the internet—running google searches, trawling the app store, and posting on Reddit—to chase down any packing tools I hadn't found.



r/camping

u/nik2k • 1y

Do you have a camping checklist? (and where does it live...eg. app, spreadsheet, doc, paper list?)

I'd love to know other people keep track of the items they need to bring while camping. I have a camping checklist I made with a packing app, but I didn't see any good dedicated camping checklists in the app store.



13



thisiscamping • 1y

I use lighterpack.

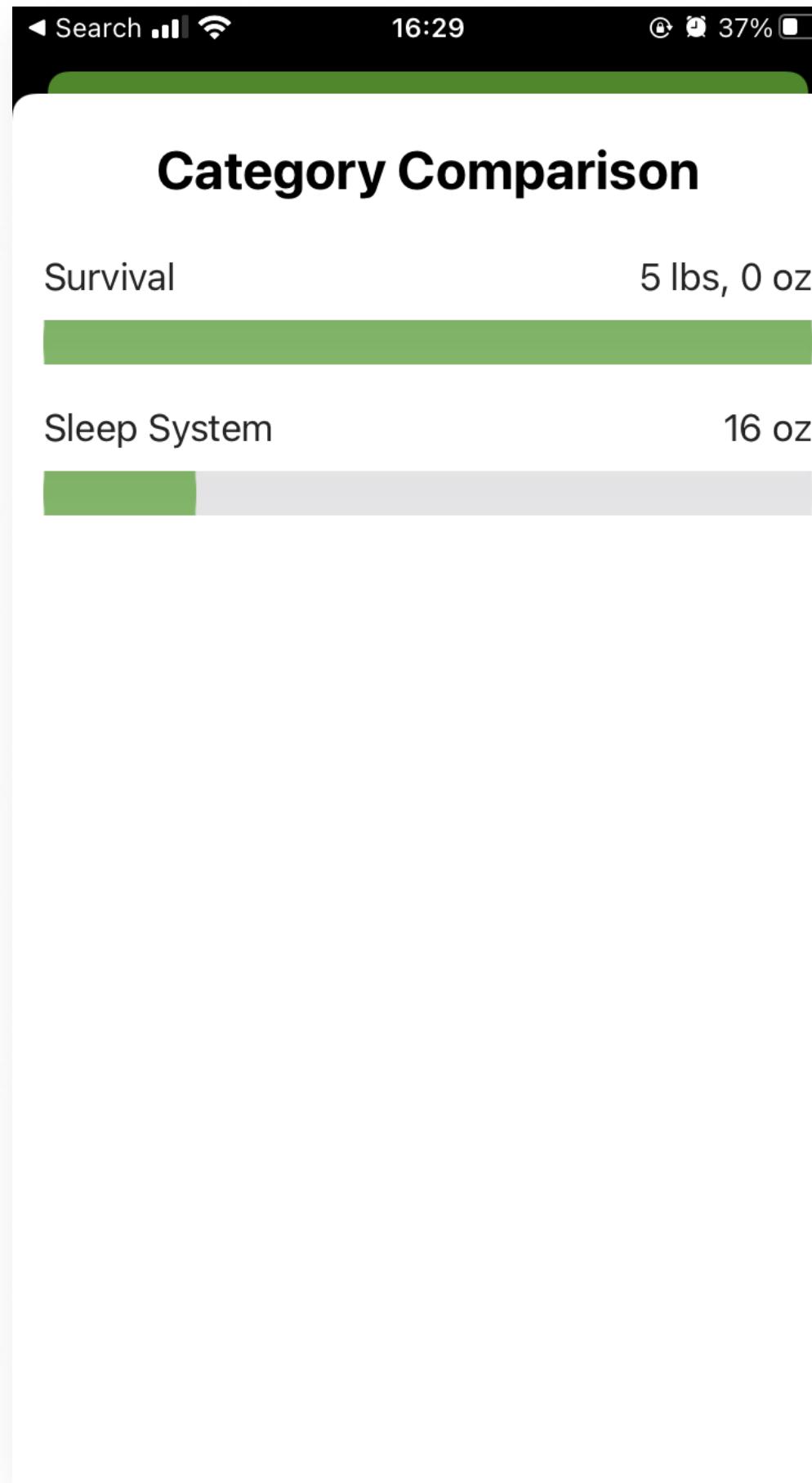
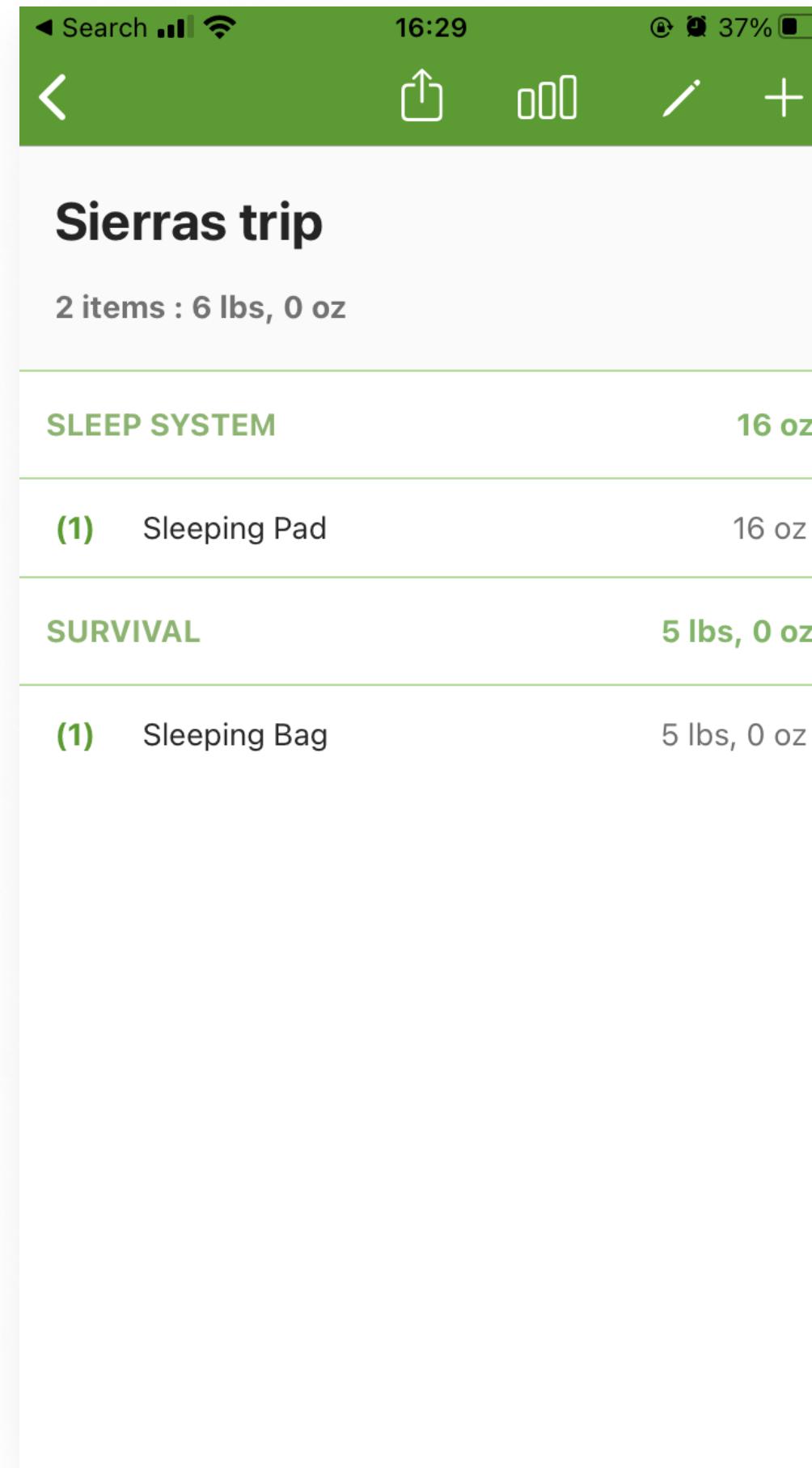


Reply



DOHisme 🦸‍♂ +2 • 1y

I have checklists for everything: truck, trailer



LighterPack (beta)

Lists [+ Add new list](#)

New list

Gear

search items

0 oz

Welcome to LighterPack!

Here's what you need to get started:

1. Click on things to edit them. Give your list and category a name.
2. Add new categories and give items weights to start the visualization.

Note: Your data is being saved to your local computer. In order to share your lists please register an account.

Category Name	Weight	qty
Name	Description	0 oz ▾ 1
+ Add new item		0 oz 1

+ Add new category

Site by [Galen Maly and friends](#). Copyleft LighterPack 2019 - [Contact](#)

Backpacking Weight Managers



Research & Design

How might I help campers and backpackers prepare for trips more efficiently?

Graveyard

The image shows three versions of a mobile application interface for creating checklists:

- Old:** A "Camping" checklist with sections for Sleep & Shelter, Campsite, and Camp Kitchen. Each section contains a list of items (e.g., Tent, Sleeping Pad, etc.). Below the sections is a "Kickstart your Checklist" section featuring logos for REI, Outdoor Gear Lab, and Backcountry.
- Your Checklist:** A "Shelter" checklist under the "Essentials" section. It includes items like Tent, Sleeping Bag, and Pillow. Below this is an "Optional" section with items like Tent footprint, Sleeping bag liner, Tarp, Hammock, and Tent stake hammer. A "Swipe to delete" button is visible next to the Tent item.
- Build your Checklist:** A simplified interface with a large "Build your Checklist" button. It includes a "Would you like us to pre-load your checklist with our research-backed template of 22 common items (tent, sleeping bag, stove...)?", a "Start with Camping Template" button, and a "No Thanks, I'll Start from Scratch" button. A "What's in the template?" link is also present.

Users are reading the logos as ads ("buy your gear from here")

Fluid progress bar makes process feel longer. Want discrete sections. Parents missed swipe to delete

Users don't want to have to click "what's in template to see what's in it?" Expect it shown.

User Research

Research Goal: Learn as much as I can about the user journey of people who go camping and backpacking.

Methodology:

- 30-45 minute Zoom interviews
- Recruited via friends & family, word of mouth and instagram
- Incentive: \$10 REI gift cards

Interview Guide

Preparation

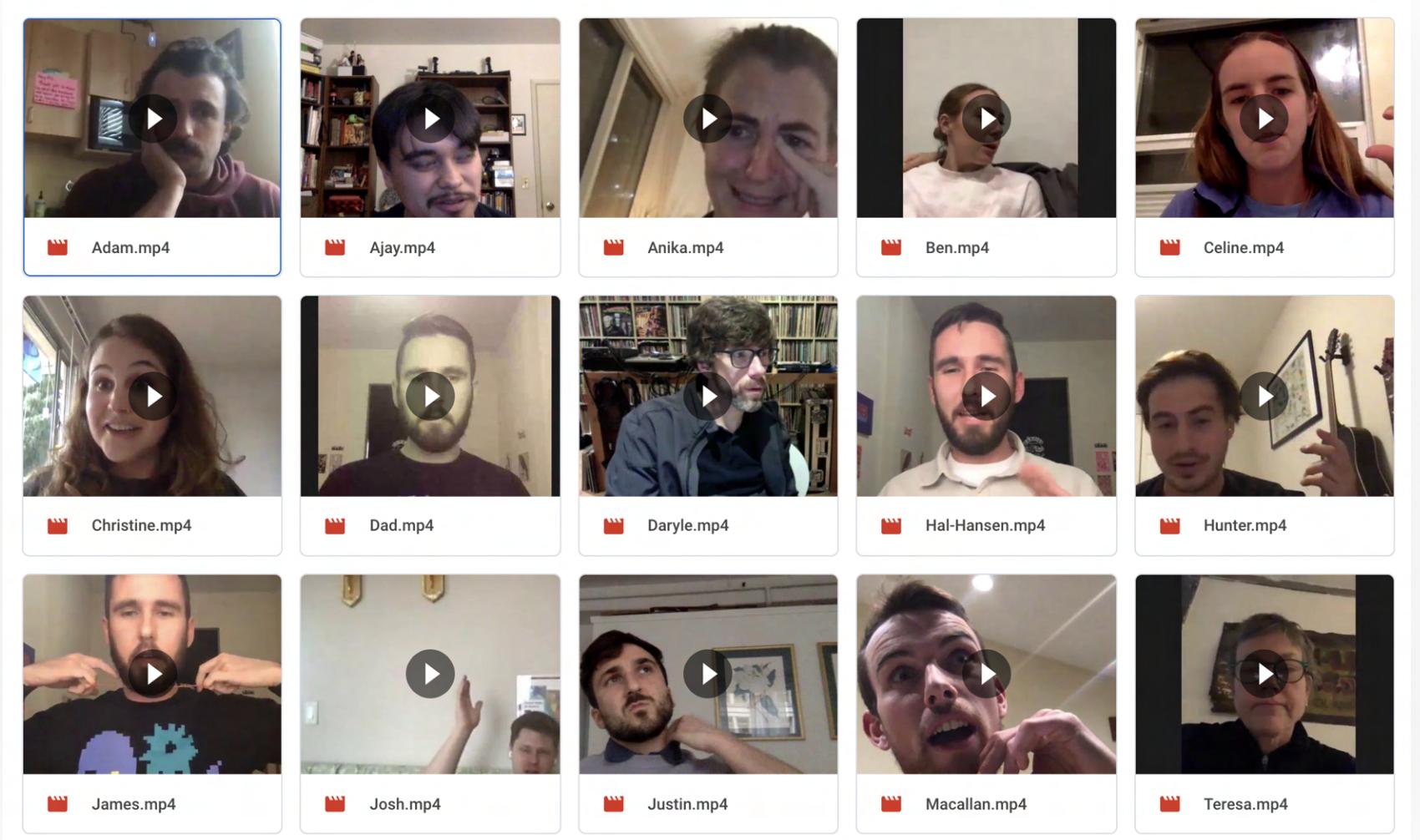
- Email Address
- Do you have a hard stop?

Overview

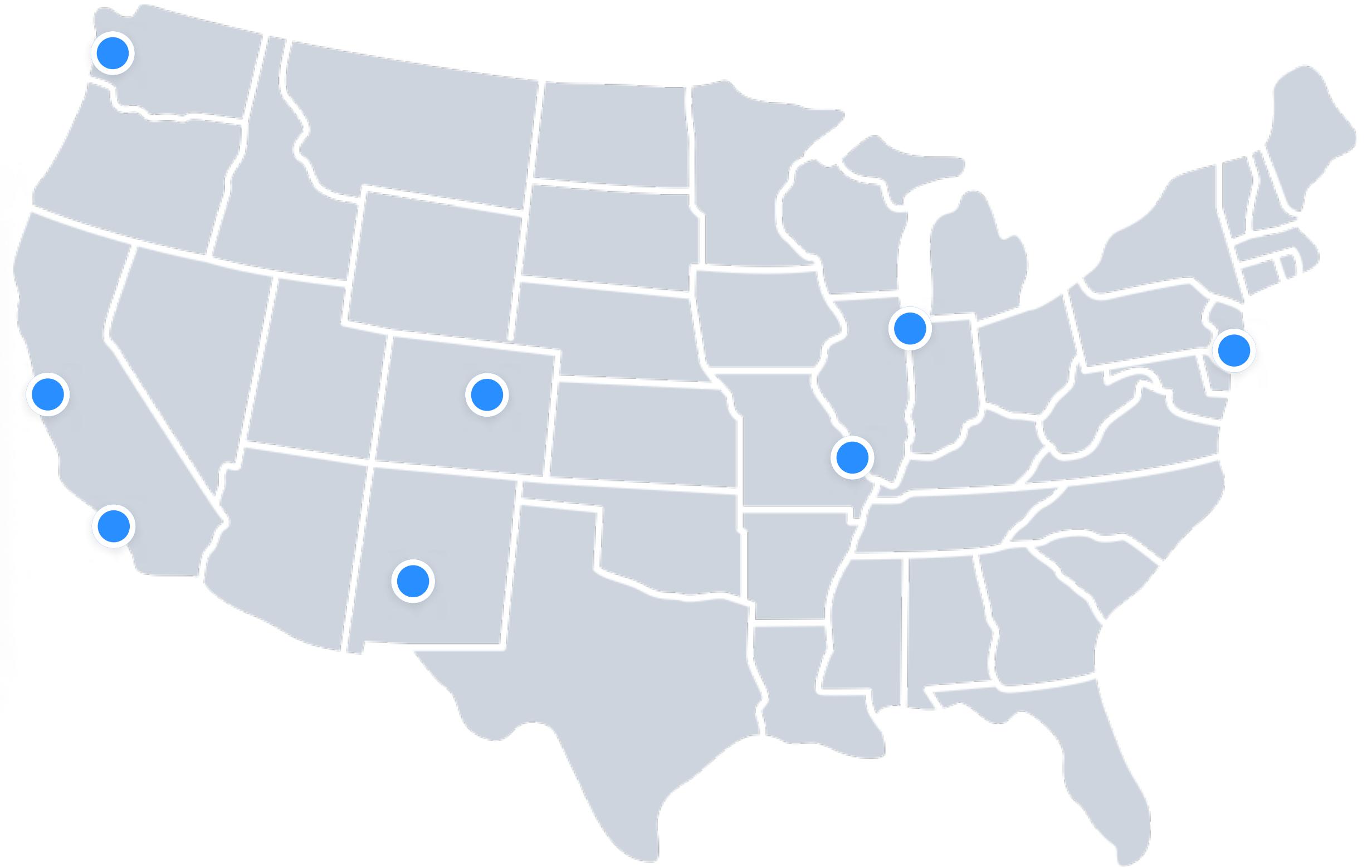
- Little bit about yourself
 - Location
 - 20's, 30's, 40's, 50's
- Quick Questions
 - How often do you go camping?
 - How many years have you been camping?
 - On a scale of 1-5, how confident or experienced of a camper are you
 - 1 totally noob
 - 5 seasoned pro
 - On a scale of 1-5, how much do you enjoy camping, or how "into it" Are you?
 - 1 not much
 - 5 a
 - Where do you typically camp?
 - Private land
 - Public campgrounds
 - Public dispersed/BLM land
 - Off Road
 - Do you do any other forms of outdoor sports like hiking, backpacking, RVing, bushcraft

Last Trip

- Tell me about the last time you went [camping/backpacking]
- Where did you go?
- Size of group?
- How did you decide what to bring?
- Whose gear did you bring?
- Why do you go camping?



zoom



I interviewed 18 people, across 7 states

Synthesis

Synthesis was absolutely brutal. I didn't boil thing down much, but I did end up with **a massive, organized trove of direct quotes** spanning the entire user journey of a camping/backpacking trip.

125

Pages of raw notes

53

Organized pages

6

High-level sections

* Nik Payne

Thought & Evolution

Gear Storage

Camping Totes

Camping Gear in car

Dedicated Garage/shed/closet

Everyday Gear

Joy in Organization

Checklists

Reasons to NOT make a list

[Re]making and Reusing Lists

Lists Evolve

Improves over time

Packing

| ? Why people make lists

Big trips

- "If it's like a big trip then I would definitely make a list...If it's a trip like this I would make a list - Alex"
- Checklist is mostly for camping and traveling - Zak
- Celine's big trip: We did bring a little stove, and pads...and there I did use a travelers backpacking list to check off - Celine
- Our version of camping is local enough and relaxed enough that I haven't felt the need to have a list...our restriction around locality and short trips mitigates - CHristian
- I think I usually make a list, especially if it's more than 2 days - Macallan
- I have seen...Emma is a big packing...When she took off for NZ they have these beautiful checklists...I feel really good about, like I rarely forget things, personal things...I'm in charge of food - Laurence

Remoteness

- [checklists and preparation] Any time we got out a little further you could see [rescue] background come through...We'd absolutely have standard procedures generally on paper - Josh
- If it's a really important trip where I can't afford to forget anything I will do a list generally on paper - Josh
- If you go backpacking and you forget it, you're really gonna regret it. - Josh

Safety, Security & reassurance

- "To me the camping list was always a little bit like the camping box...it's security through this list I could come up against unanticipated experiences but with the list be okay. That's the value of the list. - Dad"
- I got into the truck the other day and saw the first aid kit under the seat and thought you security - Dad
- Even though it's muscle memory it's reassuring to know that I've got it - Daryl
- I just can't remember very much in my head so I like to write a list of what I need to do and cross things off before leaving...it gives me reassurance that what I've done is gonna be okay - Macallan

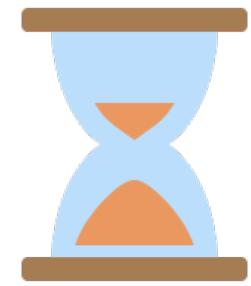
Enjoy making lists

- I love making checklists - Lisa

Newbies / Caring for others

- Going alone: the stakes are lower. If you go with other people the stakes are higher
- "I think if I was planning a group trip I'd use a sheet to get them organized..."
- It's satisfying to me that everything wife needs I've already thought of - Daryl
- I already have the sleeping bags jammed into one of those black canvas duffels

Finding 1/5



Prep is Stressful

Deciding **where to go**, remembering **what to bring**, planning **what to eat**, and **coordinating** with friends (for group trips) were typically mentioned as being the most stressful aspects of planning.

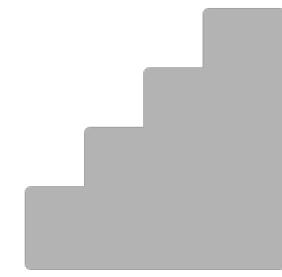
"I'm not super comfortable thinking through the supplies that one needs...it gives me some anxiety and stress."

JD, Los Angeles

"It stresses me a little when my more disorganized friends are responsible for mission-critical gear like the cooking pan"

BR, San Diego

Finding 2/5



Inefficiencies

With regards to packing, I was surprised at how often people described:

1. Starting **days in advance** ("the pile")
2. Making **new lists** for each trip
3. Relying on **memory** to gather items
4. Packing **too much**

"I don't keep a list so i usually make a new list each time...I wonder if I could even find any of my previous lists"

MB, California

"I kind of just visualize it: what am i going to want and need, which does end up with me forgetting small things, like contact lenses, chapstick..."

TZ, Santa Cruz

Finding 3/5



Lists(Effort, Risk)

Most people saw value in having eg. a checklist, but the **barrier was effort**, and it was a **function of risk**:

1. Experience level
2. Group size
3. Trip location & duration
4. The penalty for forgetting things.

"My gut feeling is i would be resistant to using a planner on my phone because it takes time to type it into my phone"

JC, Santa Cruz

"It's security. If I go through this list i could come up against unanticipated experiences but with this list i will be okay. That's the value of the list."

AP, Colorado

Finding 4/5

1 —
2 —
3 —

Varied Tools

My research confirmed there **didn't seem to be a leading tool** for making checklists. They had drawbacks:

1. Pen/paper
2. Notes apps
3. Docs/Sheets
4. Online lists (quick reference)

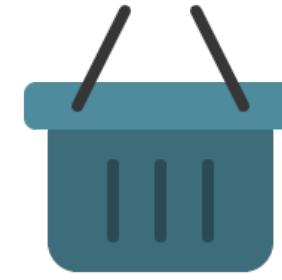
"It's on my notes app...my poor notes app...it's so heavy. It will be organized by the activities i'm doing....I think i might have deleted the last one i took to yellowstone."

AR, Chicago

"I just make a new list every time...typically in a small journal I have or on a piece of scratch paper"

AB, Seattle

Finding 5/5



Don't Forget Food

As common—if not *more* common—than making lists for gear was sketching out **meal plans** and **grocery lists** for trips. A majority of the folks I talked did some meal planning, and it **took effort**.

"The first thing I think of is what i want to eat. I try to plan out the big meals...dinner, then lunches..."

DM, Washington DC

"I'll calculate precisely: $\frac{1}{2}$ cup oatmeal per person per day. One scoop, 2x scoop...packing down to exactly what everyone is gonna be eating"

GL, Los Angeles

Focus Areas

Before ideating, I mapped out **opportunities** in the preparation space that I could **feasibly** solve.



Where do we GO?

Finding Inspiration

Planning Activities

Booking/Reserving



What do we BRING?

Deciding what to bring

Packing Gear

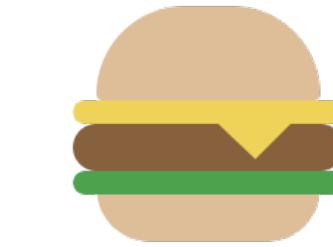
Keeping Gear Light

Buying Gear

Knowing What's Needed

Coordinating with Group

Coordinating with Group



What do we EAT?

Meal Planning

Grocery Shopping

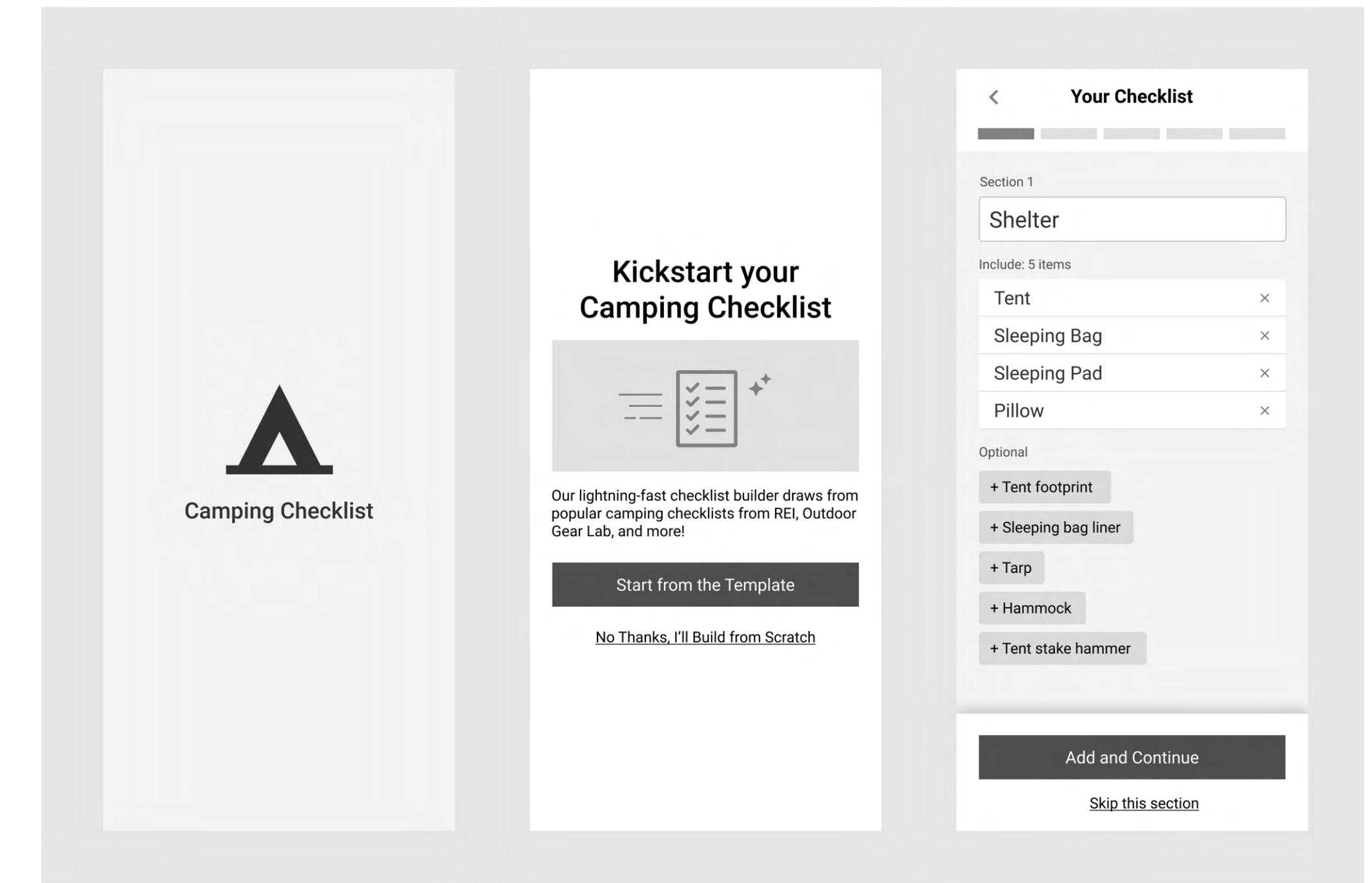
Ideation

Concepts Exploring:

1. Packing
2. Meal planning
3. Pack Weight mgmt

Method

- Interviewing with artifacts
- 45min, remote moderated
- \$10 REI gift cards



Concept 5: Dual Camping/Backpacking List

Users have space for one backpacking checklist, and one car camping checklist.

Learning Goals

1. Do users appreciate having a place for their backpacking list?
2. Is it restrictive to only have one of each? Do they have a need for multiple
3. Is it annoying if items are shared across the lists?
4. Do users expect a backpacking checklist to look different or have additional functionality?

The image shows two mobile application screens side-by-side. The left screen is titled "Camping" and the right screen is titled "Backpacking". Both screens feature a header with an "Edit" button and a title. Below the title is a list of categories with a plus sign to expand them. Under each category, there is a list of items with checkboxes. At the bottom of each screen are icons for "Camping" and "Backpacking".

Camping Checklist:

- Sleep & Shelter
 - Tent
 - Sleeping Pad
 - Sleeping Bag
 - Pillow
- Campsite
 - Camp Chairs
 - Folding Table
- Camp Kitchen
- Tools & First Aid
- Clothing & Footwear
- Toiletries

Backpacking Checklist:

- Main Pack
 - Tent
 - Sleeping Pad
 - Pillow
- Food and Water
- Clothing
- Food & Supplies

Having room for only two checklists felt restrictive to users who duplicate or reuse different checklists. It also set up tension or a kind of dichotomy between both

Concept 4: Food Planning

Users are given the option to build out a mealplan for their camping trip?

Learning Goals

1. How do users respond to having mealplanning functionality in the app?
2. Do they see any advantages over a basic notes app, or any restrictions with this one?
3. Is value in meal-planning more in the planning or the checklist?
4. Do users expect the ingredients to be in there?
5. Would users expect different visual formatting
6. Do supplies live in gear checklist?

The image displays three wireframe prototypes (A, B, and C) for a food planning feature, likely from a mobile application. Each prototype shows a 'Food' section with meal plans for 'Day 1' and 'Day 2'. A large '+' button at the bottom right of each screen indicates the ability to add new items.

Prototype A: Shows a simple list-based meal plan. Day 1 includes Breakfast, Lunch, Dinner (Chili and Corn Bread), and Snacks (Chips, Salami). Day 2 includes Breakfast (Coffee & Oatmeal), Lunch (Turkey Sandwich), Dinner (Pasta Carbonara), and Snacks (Beer).

Prototype B: Shows a more detailed meal plan. Day 1 includes Breakfast (Coffee, Oatmeal), Sandwiches (Bread, Turkey, Tomato, Mayo), Chili & Cornbread, Beers, and Graham Crackers & S'mores. Day 2 includes Bacon, Eggs, Cheese & Crackers (Water Crackers, Brie), and Beer.

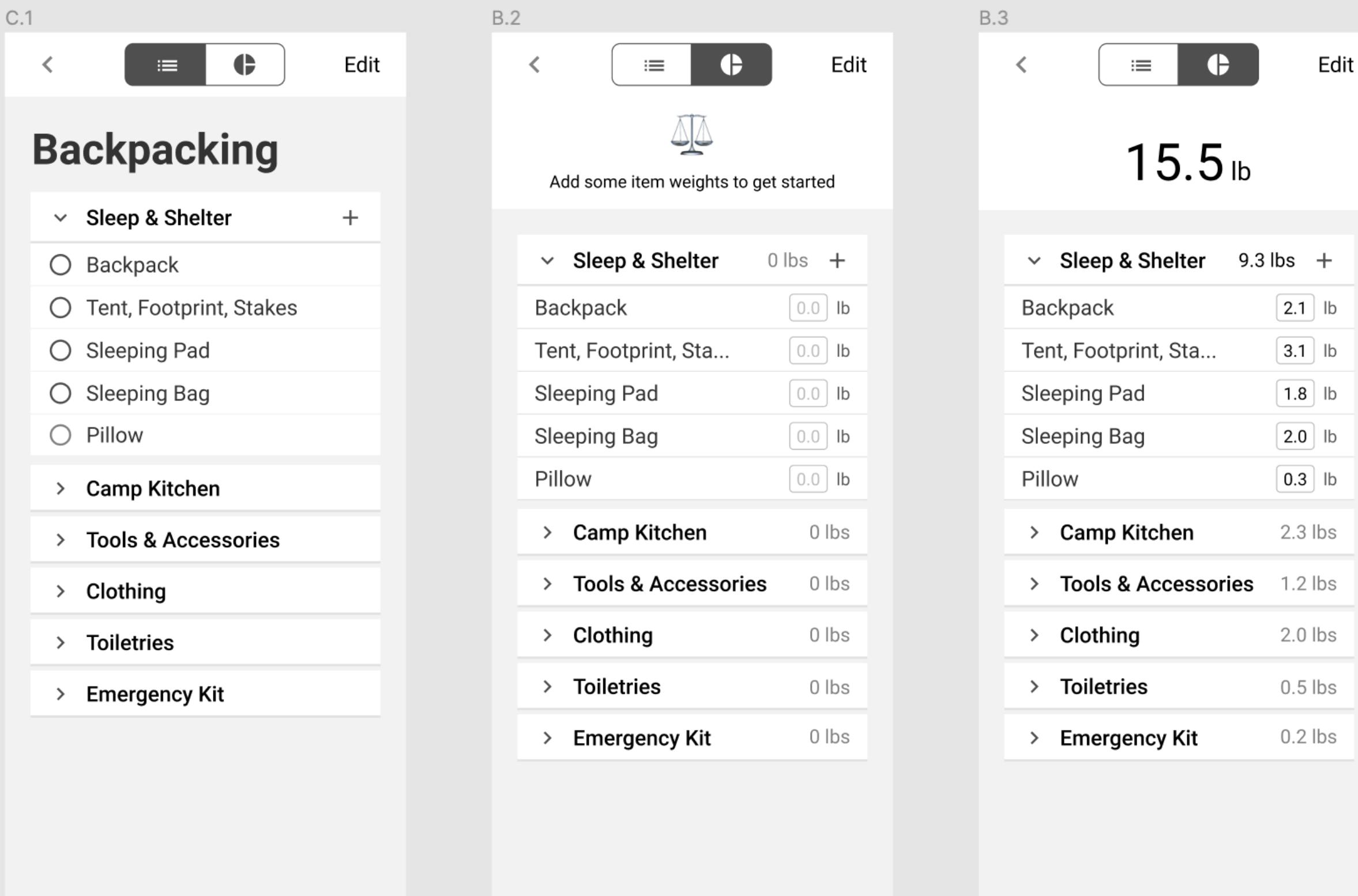
Prototype C: Shows a hierarchical meal plan. It includes sections for 'Breakfasts' (Oatmeal and Fruit, Bacon and Eggs), 'Lunches' (Turkey Sandwich, Cheese and Crackers), and 'Dinners' (Pasta Carbonara, Sausage & Vegetables, Tacos). A 'Recipes' section is also present.

Concept 6: Gear Weight & breakdown

Users have space for one backpacking checklist, and one car camping checklist.

Learning Goals

1. Do users appreciate having a place for their backpacking list?
2. Is it restrictive to only have one of each? Do they have a need for multiple
3. Is it annoying if items are shared across the lists?
4. Do users expect a backpacking checklist to look different or have additional functionality?



Results

Concepts

1. **Packing** ✓ tested well
2. ~~Meal planning~~ tested poorly
3. ~~Weight management~~ niche audience

Key Learnings

1. Users responded well to **templates**
2. Ability to **customize** is important
3. Users want ability to **duplicate**

“Wow—that is pretty nice because it has travel, backpacking and camping and those are the top three things i always make lists for”

CP, Santa Cruz

“I would think that this [weight concept] would be extremely important for anyone who does the PCT or a serious backpacker where everything needs to be calculated”

LW, Colorado

Refinement

I leaned into exploring and prototyping short concepts allowing users to quickly **create** and **customize** a checklist, starting from a **good template**.



Template Design

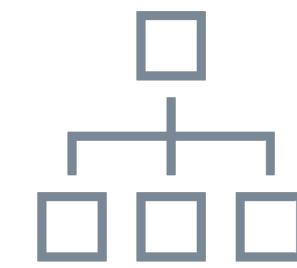
Challenge: How might I design an excellent camping checklist template?

Guiding Principle: “90% of what you’ll need, 90% of time. Nothing you don’t.”

Specifically:

1. Focused on essentials
2. Clear and short
3. Need to remove things

Strategy A
Optimize



Card Sort

Strategy B
Satisfice

- 1 —
- 2 —
- 3 —



Audit Leaders

	Architecture Notes	Sleep & Shelter	Sleep	Shelter	Campsite	Campfire	Kitchen	Clothing & Footwear	Tools & Repair	Toiletries/Hygiene
REI	Lumps sleep & shelter w/ campsite Lumps first aid w/ toiletries Fun stuff = campsite extras Has personal section Campfire stuff lives w/ campsite				Campsite		Kitchen	Clothing and Footwear	Tools & Repair Items	Health & Hygiene
Love the Outdoors	Puts some tools in sleep & shelter category Water goes in kitchen section First aid is its own category Big miscellaneous category/dump that includes tools		Bedding	Shelter			Cooking	Clothes		
MEC	Has an outdoor essentials section that includes some tools, toiletries (sunscreen), and other sections Lumps some toiletries w/ personal items Has a fun section	Sleep and Shelter			Campsite Set-up		Kitchen and Cooking	Clothes and Shoes	Outdoor essentials (First aid)	
CleverHiker	Has separate section for primitive site gear Has a consumables section Has a personal gear section that mimics outdoor essentials section (backpack, headlamp)	Shelter/bedding			Site Gear/Furniture	Campfire (optional)	Camp Kitchen	CLOTHING & FOOTWEAR		Health & Hygiene
Gear Junkie	Calls furniture "camp comfort" Puts water in cooking Puts first aid kit in hygiene and safety Puts speaker in electronics section		Camp Sleeping Gear		Camp Comfort	Fire Tools	Camp Cooking Kit		Electronics	Personal Hygiene & Safety
Cozi	Lumps sleep, shelter and campsite all into one Has an "other items" dumping ground Personal items mostly devoted to toiletries				Campsite gear		Kitchen	Clothes		
Reserve America	Has an essentials category for tools (eg. flashlight) and random gear Has an activities gear section (eg. daypack) Activity gear includes first aid Extras section is a dumping ground	Sleep & Shelter			Around the campsite				Essentials	Toiletries
Americas State Parks	Has a separate clothing section for rainy and cold weather clothing				Campsite		Cooking	Clothing / Footwear	Camping Tools	Hygiene Items

How do leading templates organize gear?

This informed my templates, which I built in Google Sheets and organized into core items, and add-ons

Sleep & Shelter	Campsite	Camp Kitchen	Gear & Tools	Clothing	Toiletries	Personal
Tent	Camping Chairs	Water (1 gal/person/day)	Headlight or Flashlamp	T-shirts	Toothbrush	Sunglasses
Sleeping bag	Lantern	Camping stove	First aid kit	Sweatshirt or Jacket	Toothpaste	Water Bottle
Sleeping pad		Stove fuel/propane		Pants or shorts	Sunscreen	Cellphone charger
Pillow		Matches/lighter		Underwear	Bug Spray	
		Pot & pan	Tools	Socks	Towel	
		Cooking utensils	Hammer or Mallet (for tent staking)	Shoes		Travel Accessories
Tent Accessories	Campfire	Bottle opener, can opener, c	Hatchet or Saw (firewood)		Primitive Camping	Maps (Paper, saved to phone)
Tent footprint	Firewood (locally-sourced)	Knife & cutting board	Pocket knife		Toilet Paper	Printed camping reservation
Ground cover/tarp	Matches or Lighter	Oil & spices	Multi-tool	☀️ Sunny Weather	Camp Trowel	Chapstick
Mat/rug for tent entrance	Firestarter (eg. fatwood)	Coffee + coffee filters		Swimsuit		
Small broom/dustpan		Plates or bowls		Sandals	Personal	Fun Stuff
	Camp Table	Cutlery	Electronics	Hat	Medication	Bluetooth speaker
Sleep Accessories	Folding table (if no table onsite)	Cups or mugs	External Battery	Bandana	Contact Lenses, solution	Podcasts/audiobooks
Air Mattress + pump	Tablecloth + clips	Trash bags	Solar Charger	Water sandals		Day Pack for hiking
Sleeping Bag Liner	Citronella candles	Paper towels			Hygiene	
Blankets		Cooler & ice		☁️ Rainy Weather	Wet wipes	
Cots	Other Furniture		Repair	Rain Jacket	Hand Sanitizer	
Hammock	Sunshade/Tarp (w/ poles)	Dishwashing	Duct tape	Rain Pants	Menstrual products	
	Hammock	Dishwashing bin	Rope		Floss	
	Clothesline (w/ clips)	Quick dry towel	Spare Batteries	Cold Weather	Soap	
		Sponge or scrubber	Tent pole repair kit	Beanie	Shampoo	
		Biodegradeable soap	Sleeping pad repair kit	Fleece Jacket		
				Insulated/Down Jacket		
		Cooking		Long Undewear		
		Skewers for hot dogs/marshmallows		Gloves or Mittens		
		Barbecue		Warm socks		
		Charcoal				
		Griddle				
		Dutch Oven				
		Grill Rack				

Process Overview

Friends & Family (n=8)

Concept Testing

I tested rough concepts or variations of ideas with friends and family to get direction.

19

Rough concepts

Friends & Family (n=10)

Iterative Refinement

Successful ideas became short flows that could be usability tested for clarity.

6

Short Flows

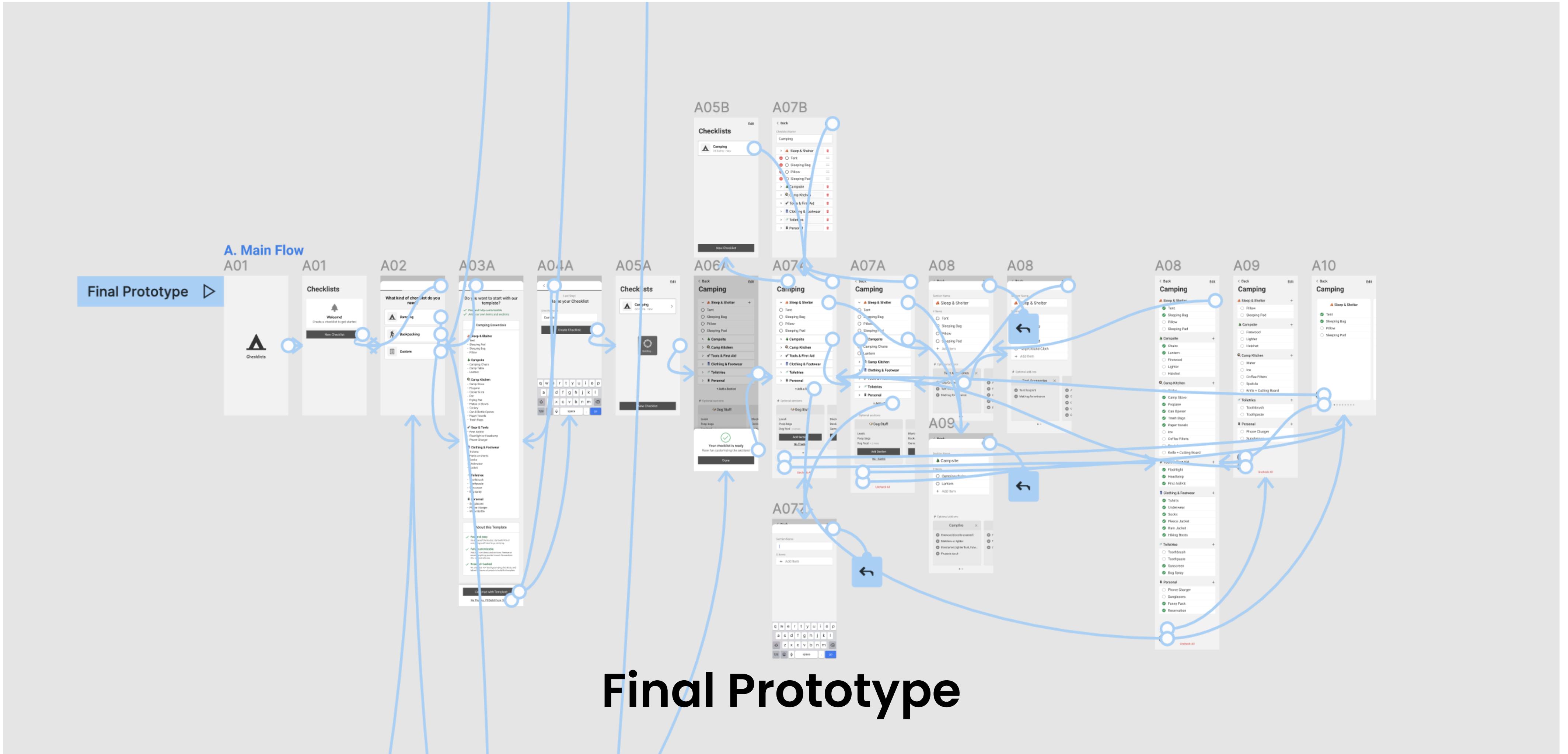
Reddit (n=6)

Final Prototype

I tested a final prototype with 6 strangers from Reddit who were active in camping/backpacking.

1

Final Prototype



Final Prototype

Key Features

1. Built in templates
2. Three checklist types
3. Collapsible sections
4. Editable & duplicatable
5. Add-on items/sections

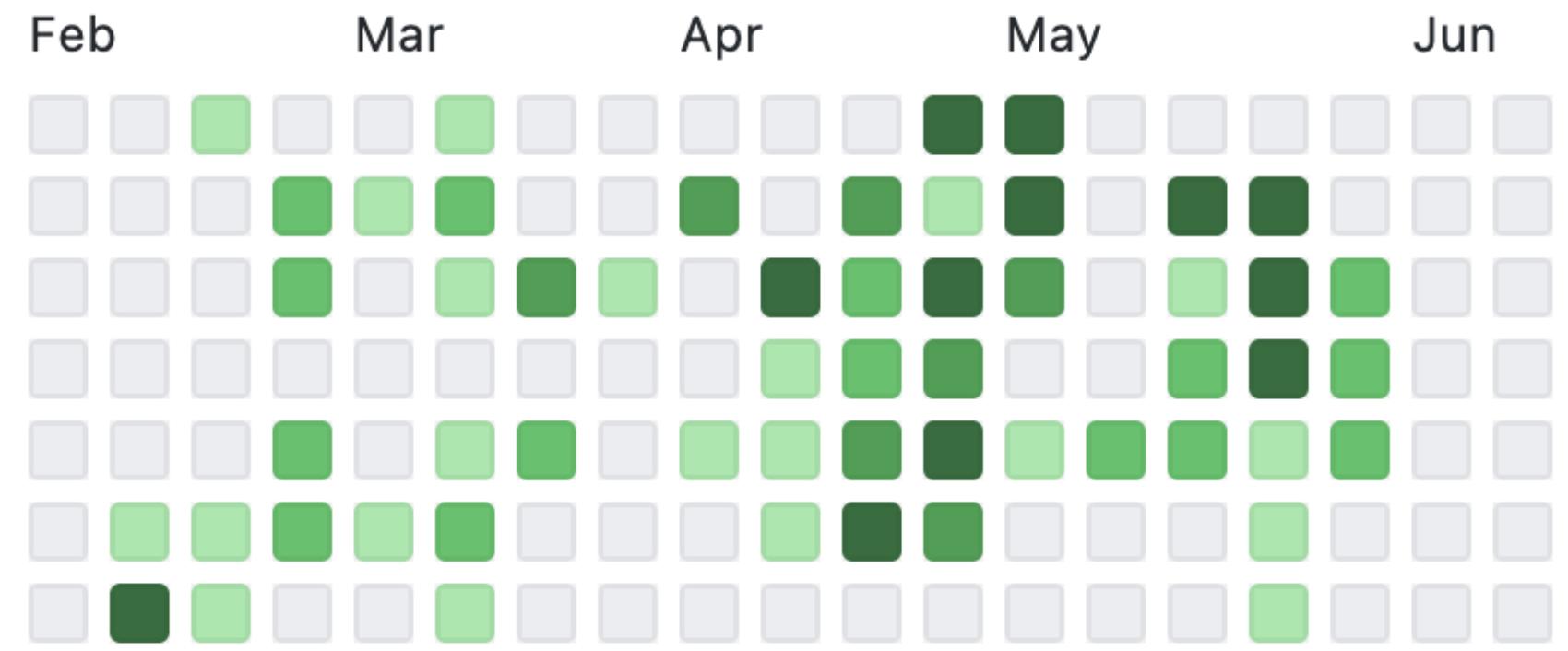


Link to
Figma Prototype

The screenshot shows a mobile application interface for a checklist template. At the top, there's a navigation bar with a back arrow and the word "Camping". On the right side of the top bar are "Back" and "Edit" buttons. Below the top bar, there's a modal or secondary screen with a back arrow and the text "Do you want to start with our template?". It lists two benefits: "Fast and fully customizable" and "Add your own items and sections". This modal has three options: "Camping" (selected), "Backpacking", and "Custom". To the right of the modal, the main content area is titled "Camping". It features a collapsible section titled "Sleep & Shelter" which contains items like Tent, Sleeping Pad, Sleeping Bag, and Pillow. Other collapsed sections include "Campsite", "Camp Kitchen", "Tools & First Aid", "Clothing & Footwear", "Toiletries", and "Personal". A plus sign (+) icon is located at the top right of the collapsed sections. At the bottom of the main content area, there's a button labeled "+ Add a Section" and a note "Optional sections" with a lightning bolt icon. A "Dog Stuff" section is visible at the bottom right.

Development

The longest, and by far hardest phase of the project.



Build by View

Home View

1. New User
 - a. Empty state
 - b. Open create checklist flow
2. Returning User
 - a. Show checklist
 - b. Edit checklist
 - c. Duplicate check.
 - d. Delete checklist

Select Type View

1. Display types
 - a. Camping
 - b. Backpacking
 - c. Custom

Template Preview

1. Parse JSON
2. Display template
3. Navigate forward
 - a. Template
 - b. Build scratch

Name/Create View

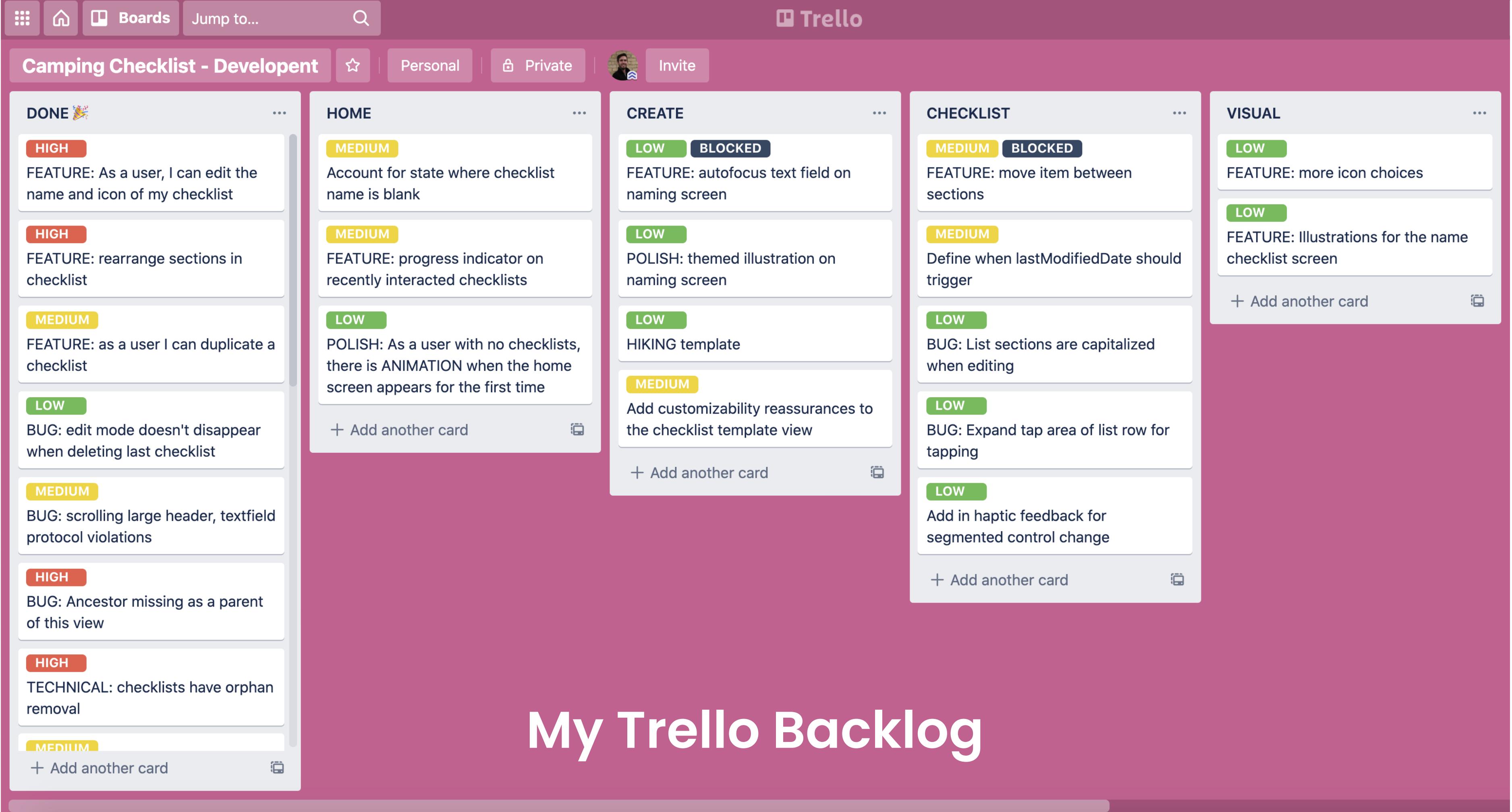
1. Read name
2. Create checklist
3. Close create sheet

Checklist View

1. Empty state
2. Sections
 - a. Create
 - b. Expand
 - c. Edit
 - d. Delete
3. Checklist
 - a. Edit name/type
 - b. (Un)check all
 - c. Reorder sections
4. Item
 - a. Check/uncheck
 - b. Delete
 - c. Reorder

Edit Section View

1. Empty state
2. Section
 - a. Edit name/icon
 - b. Add item
 - c. Reorder items
3. Item
 - a. Add item
 - b. Rename
 - c. Check/uncheck
4. Dismiss sheet

A screenshot of a Trello board titled "Camping Checklist - Developer". The board has five columns: "DONE", "HOME", "CREATE", "CHECKLIST", and "VISUAL". Each column contains several cards, each with a priority level (HIGH, MEDIUM, LOW) and a brief description. The "DONE" column has 7 cards. The "HOME" column has 3 cards. The "CREATE" column has 4 cards. The "CHECKLIST" column has 4 cards. The "VISUAL" column has 2 cards. A large title "My Trello Backlog" is centered at the bottom of the board.

DONE	HOME	CREATE	CHECKLIST	VISUAL
HIGH FEATURE: As a user, I can edit the name and icon of my checklist	MEDIUM Account for state where checklist name is blank	LOW BLOCKED FEATURE: autofocus text field on naming screen	MEDIUM BLOCKED FEATURE: move item between sections	LOW FEATURE: more icon choices
HIGH FEATURE: rearrange sections in checklist	MEDIUM FEATURE: progress indicator on recently interacted checklists	LOW POLISH: themed illustration on naming screen	MEDIUM Define when lastModifiedDate should trigger	LOW FEATURE: illustrations for the name checklist screen
MEDIUM FEATURE: as a user I can duplicate a checklist	LOW POLISH: As a user with no checklists, there is ANIMATION when the home screen appears for the first time	LOW HIKING template	LOW BUG: List sections are capitalized when editing	+ Add another card
LOW BUG: edit mode doesn't disappear when deleting last checklist	+ Add another card	MEDIUM Add customizability reassurances to the checklist template view	LOW BUG: Expand tap area of list row for tapping	+ Add another card
MEDIUM BUG: scrolling large header, textfield protocol violations	+ Add another card	+ Add another card	LOW BUG: Add in haptic feedback for segmented control change	+ Add another card
HIGH BUG: Ancestor missing as a parent of this view				
HIGH TECHNICAL: checklists have orphan removal				
MEDIUM + Add another card				

Storing Data



Core Data

Apple's powerful, built in object graph manager. Free and first-party, but steep learning curve and Apple-only.



Realm

A cross-platform offline-first database designed for mobile. Object-based, easy to learn, and able to do realtime syncing.



Firestore

Google's document-based realtime database. Fast and powerful, but a bit more complex to learn.

TLDR: I chose Realm. It was intuitive, and cross-platform

Data Models: V1

Checklist

```
class Checklist: Object {  
    var id = UUID().uuidString  
    var createdDate = Date()  
    var lastModifiedDate = Date()  
    var name = ""  
    var icon = ""  
    var sections = List<Section>()  
}
```

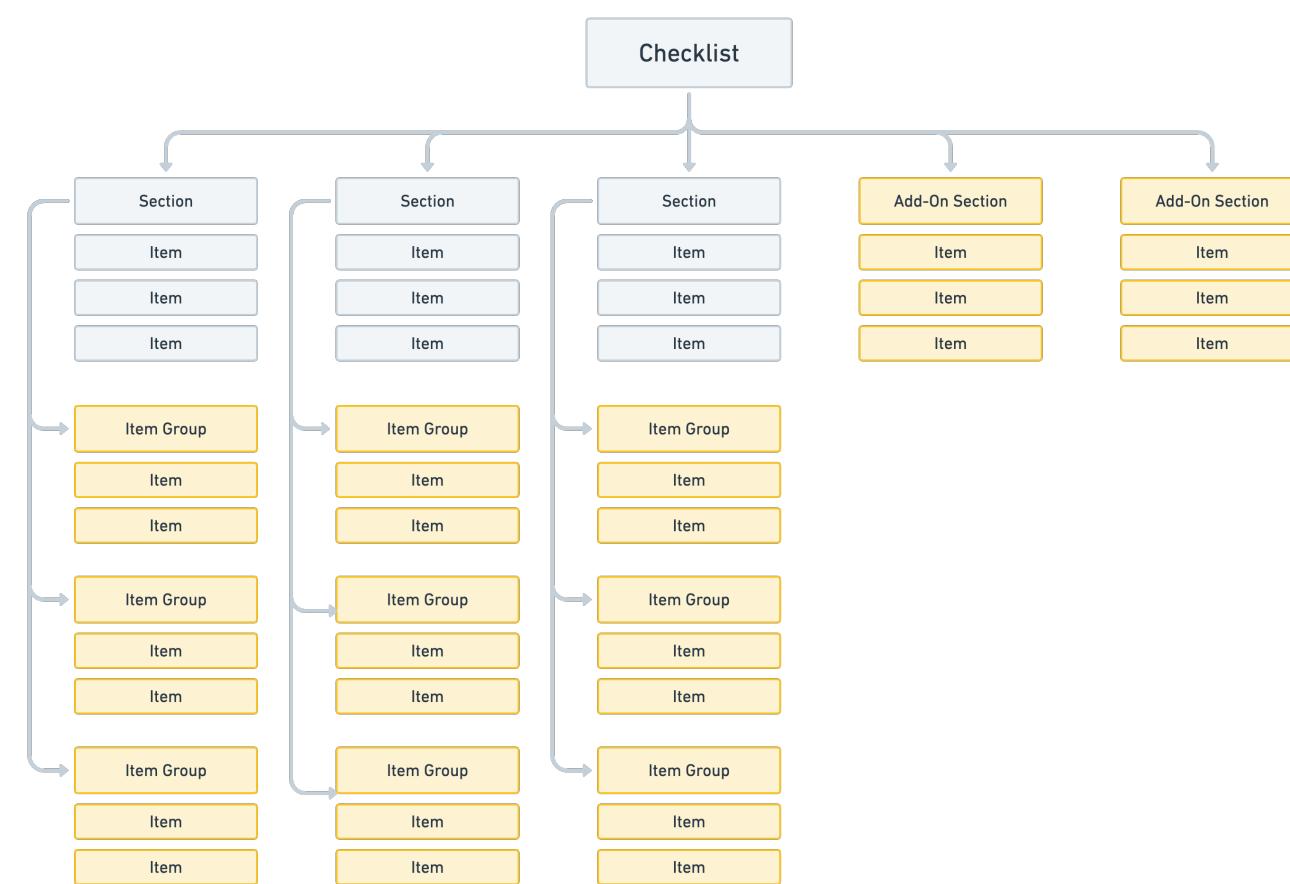
Section

```
class Section: Object {  
    var id = UUID().uuidString  
    var name = ""  
    var items = List<Item>()  
}
```

Item

```
class Item: Object {  
    var id = UUID().uuidString  
    var name = ""  
    var isChecked = false  
}
```

Tradeoffs



karinprater · 9 mo. ago

I tried this too. Could not make it work. This was very disappointing for me. You NSItemprovider makes it harder.

2

Name your Checklist

Checklist Name

Camping

Create Checklist

Complexity for V1

Example: data modeling for the “optional add-ons” functionality proved highly complex.

Technical Limitations

Example: dragging to reorder list items across different sections was not possible in SwiftUI.

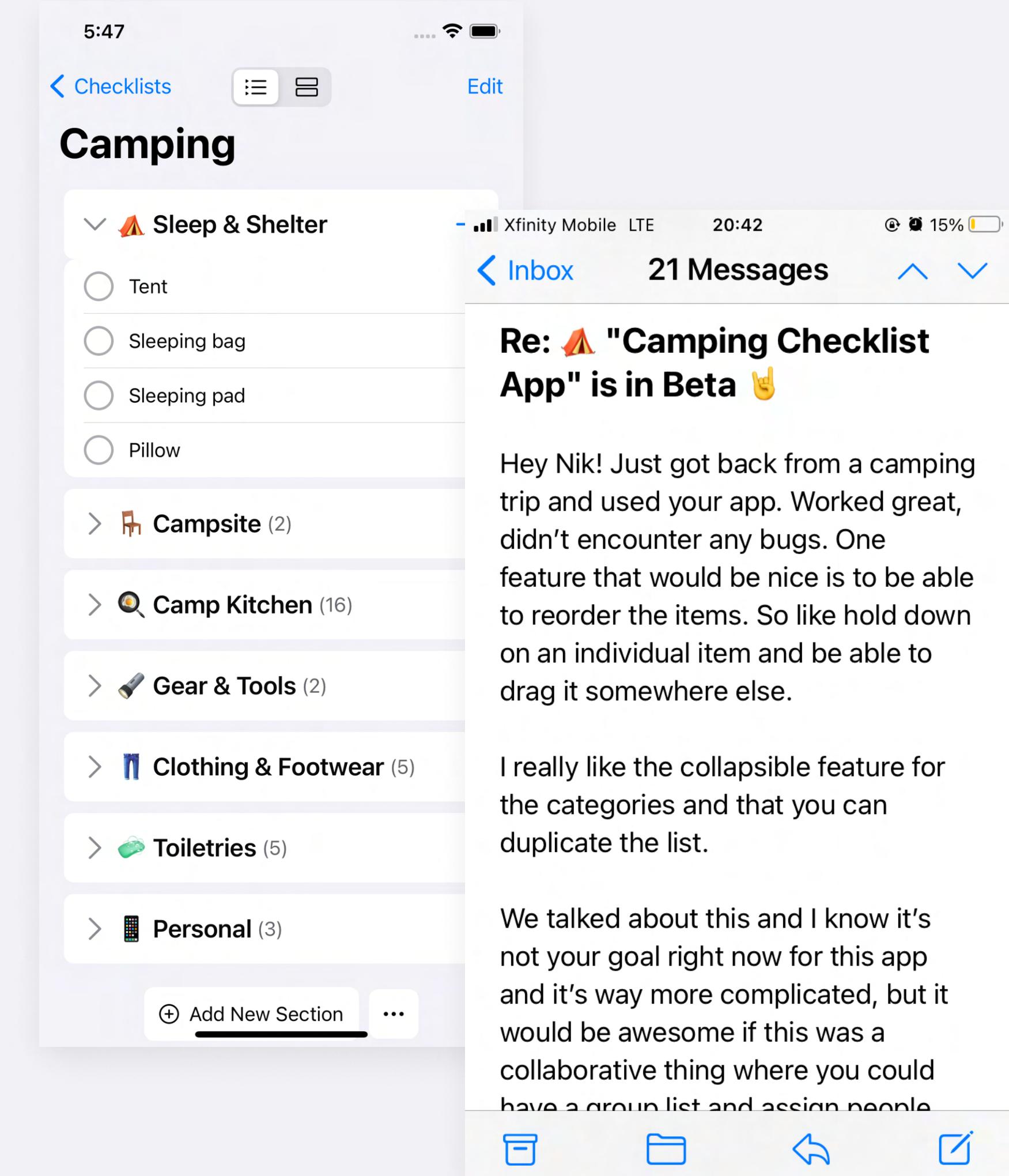
Expensive Details

Example: autofocusing a textfield using a UIKit wrapper turns 1 line of code into 30.

Live Usability Testing & Beta

Live Usability Testing (n=6): in person and testing & Zoom screen sharing w/ Xcode emulator

Closed Beta (n=28): previous participants downloaded the app and sent me feedback async via email



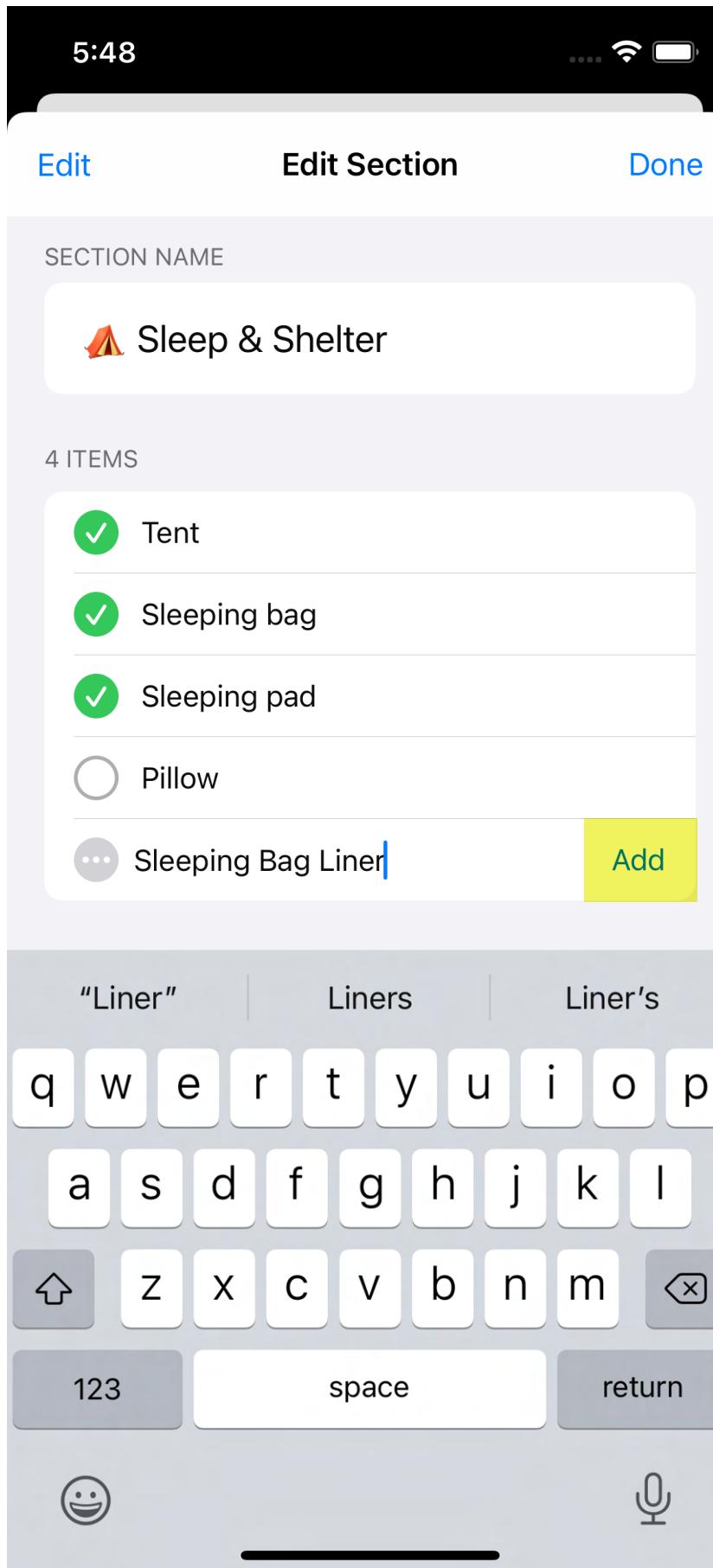
Improvements

TLDR: I made 17 changes to the app in response to usability testing.

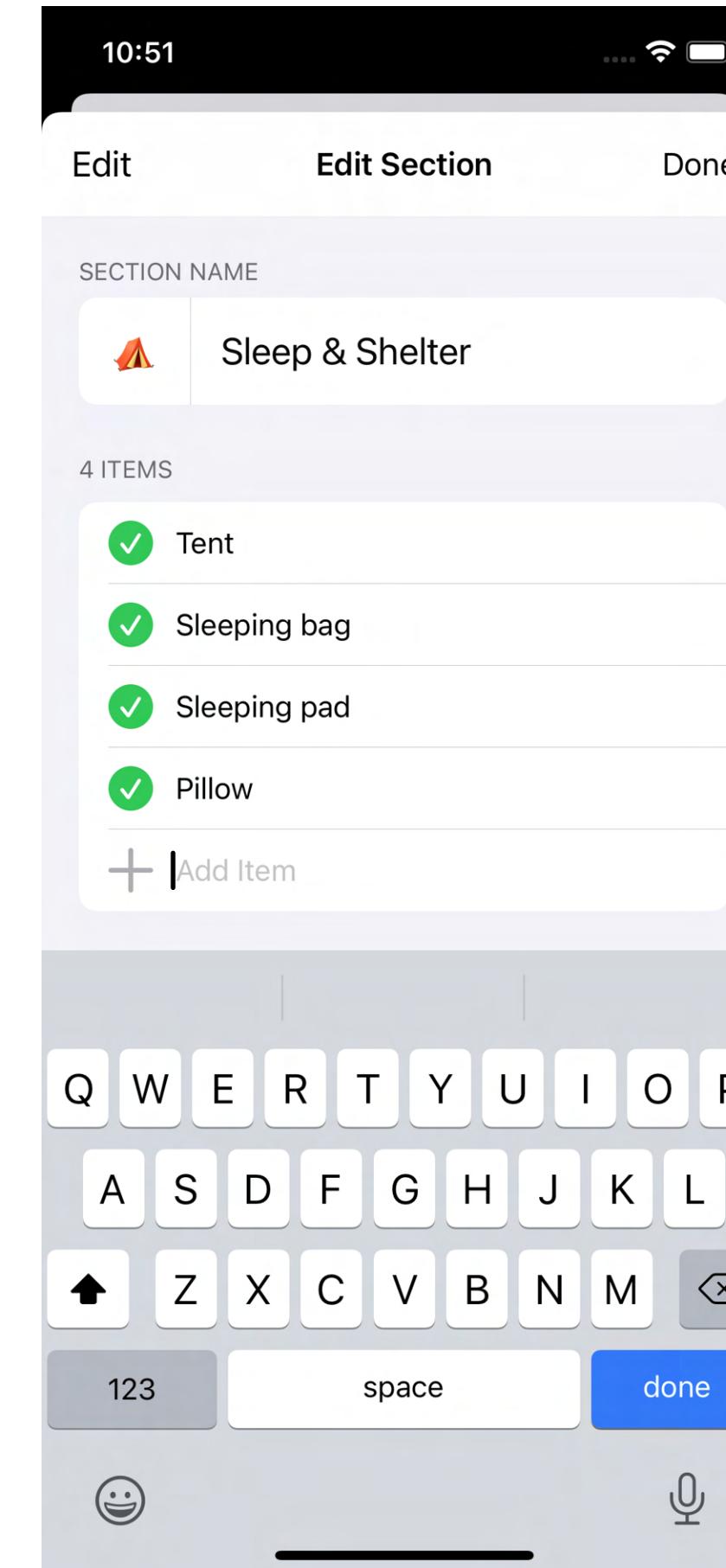
Examples:

- Addressed concerns about template
- Removed confusing “expand all” view
- Made “duplicate” easier to find
- Optimized item adding TextField

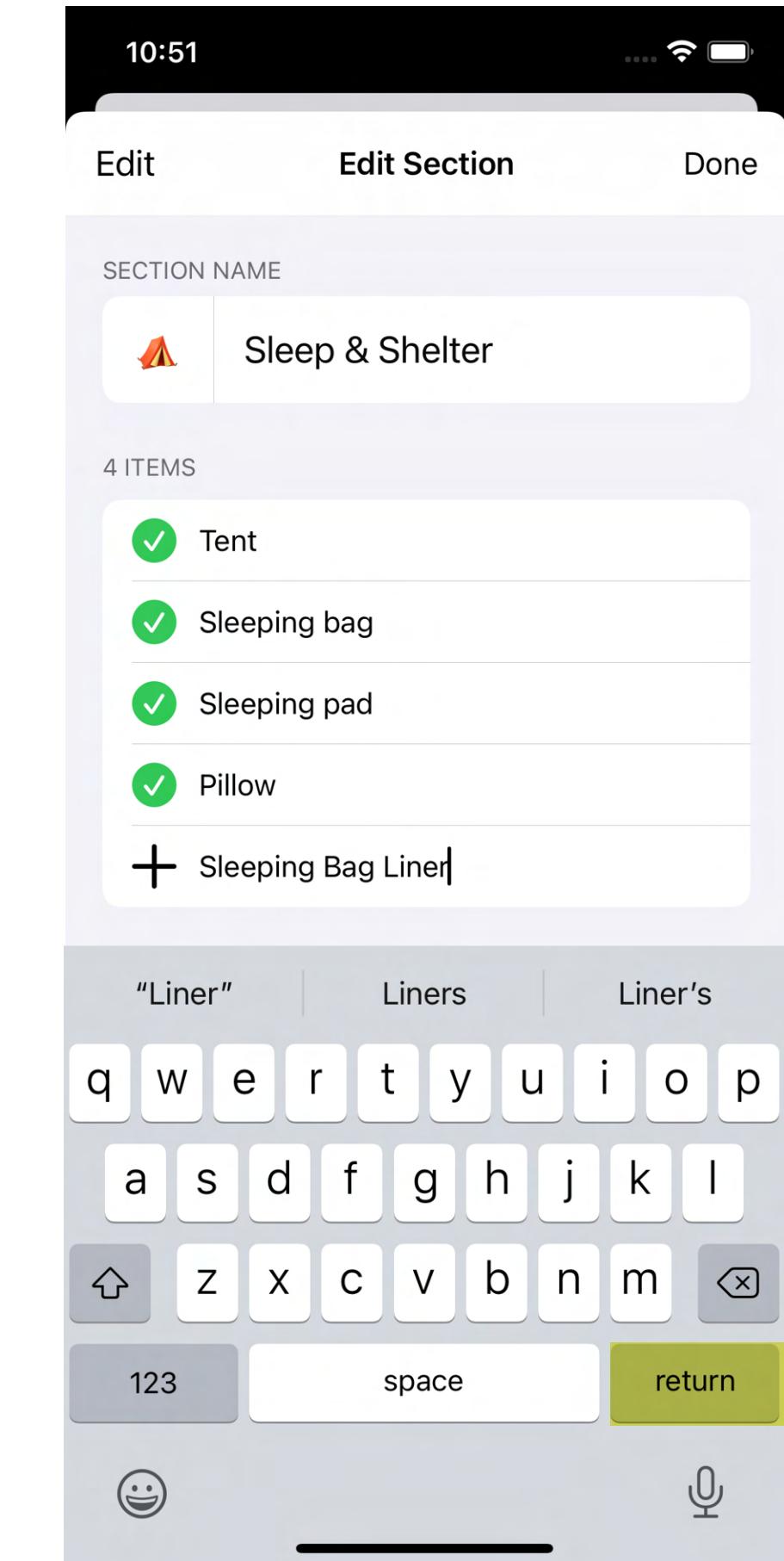
Creating, Duplicating, Deleting checklists			
Users are deleting the placeholder text and renaming the checklist	Macallan, Christine, Celine, James...	6+	<input checked="" type="checkbox"/> Done
User has difficulty locating the duplicating checklist functionality/opens (create new three dots functionality, edit mode)	Macallan, Christine, Dad, Teresa	4	<input checked="" type="checkbox"/> Done
User confused on what to do immediately after creating a new checklist	Alex, Celine	2	<input checked="" type="checkbox"/> Done
User wants to rename a checklist when duplicating it	Alex, Celine	2	<input checked="" type="checkbox"/> Done
User wants a confirmation before a checklist gets deleted	Celine, Ruth	2	<input checked="" type="checkbox"/> Later
Editing Section			
User expects item in text field to save without hitting an extra button	Celine, Ruth, Kristina	3	<input checked="" type="checkbox"/> Done
User expects enter key to add an item	Celine, Christine, Macallan	3	<input checked="" type="checkbox"/> Done
Users are confused by the emoji as part of the section title	Celine, Alex, Christine	3	<input checked="" type="checkbox"/> Done
User clicks on plus button in row to try to add an item	Ana, Alex, Celine	3	⚠ Technical Blockers
User expects to be able to edit section names during edit mode	Celine	1	🚫 Don't Fix
Editing Checklist			
User long presses category or item to try to reorder and drag	Ana, Celine, Christine	3	⚠ Technical Blockers



Before: a user had to physically click a link on the textfield to add an item



After: custom logic allows user to add the item by hitting return key. If textfield is empty, return key switches to "Done" and dismisses keyboard.



Data Models: V2

Checklist

```
class Checklist: Object {  
    var id = UUID().uuidString  
    var createdDate = Date()  
    var lastModifiedDate = Date()  
    var name = ""  
    var type = ""  
    var sections = List<ChecklistSection>()  
}
```

Decided to store a checklist's type, rather than its icon.

ChecklistSection

```
class ChecklistSection: Object {  
    var id = UUID().uuidString  
    var name = ""  
    var icon = ""  
    var isExpanded = false  
    var items = List<ChecklistItem>()  
}
```

Created separate fields for section name & emoji.

Persistence for expanded/collapsed state.

Renamed for clarity

ChecklistItem

```
class ChecklistItem: Object {  
    var id = UUID().uuidString  
    var isChecked = false  
    var item = Item()  
}
```

Removed item-level attributes from object.

Renamed for clarity

Item

```
class Item: Object {  
    var id = UUID().uuidString  
    var name = ""  
}
```

Broke out items from checklist items to make it future compatible w/

New Functionality

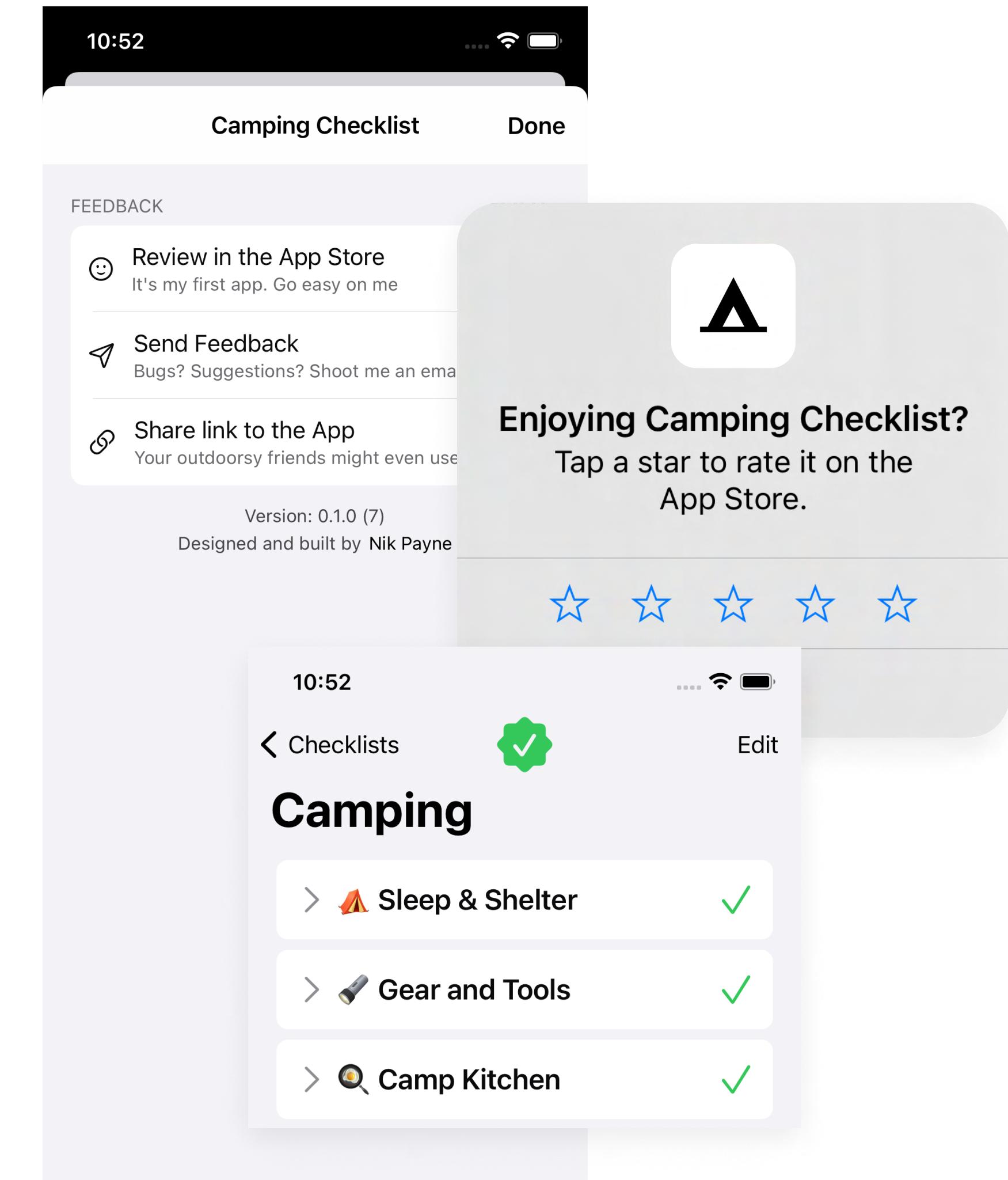
About Screen: allows a user to rate the app, share a link to it and to email me bugs or suggestions (to create a lightweight feedback loop).

App Rating Logic

- Trigger: user completes a checklist
- Threshold: 3 app launches, 3+ completed checklists

Delight

- Animation when a user completes a checklist.
- Randomly generated messaging for humor (eg. “hell yeah” when you check last item)



4½

Months of
coding

6

Stack Overflow
questions

\$424

Uber Eats (to
code more)

59

Trello
tickets

9

r/swiftUI
questions

50+

Hours of 90
Day Fiance

55

Github
commits

2

Bugs filed on
Apple Radar

100+

Emotional
highs & lows

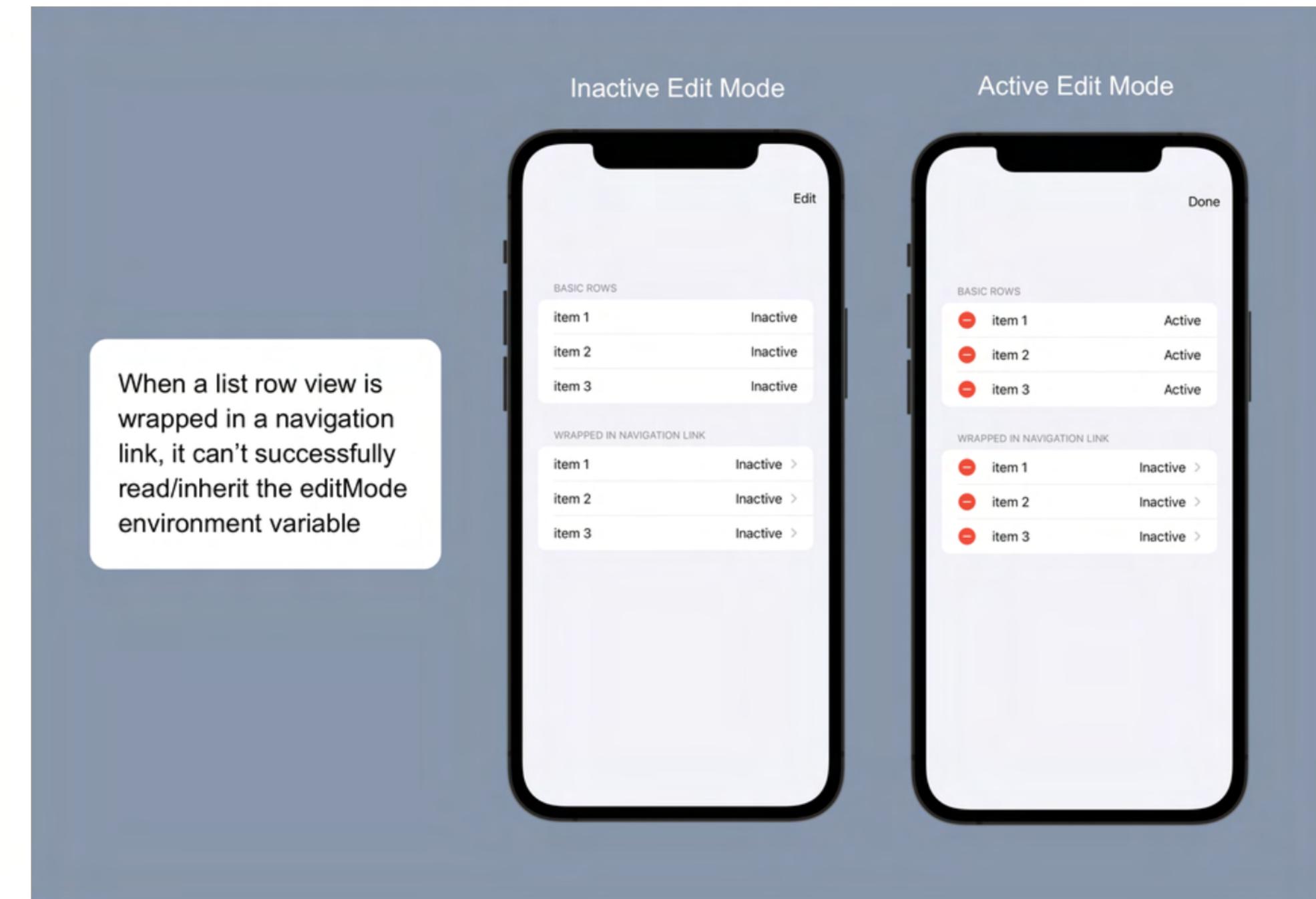


19



r/SwiftUI · Posted by [REDACTED] 2 months ago

I have a list view. I want the list items (which are extracted into their own view) to change when the list is in edit mode. I've noticed that when the list items are wrapped in navigation links they can't read the list editMode environment variable correctly. Why is this?



10 Comments

Share

Save

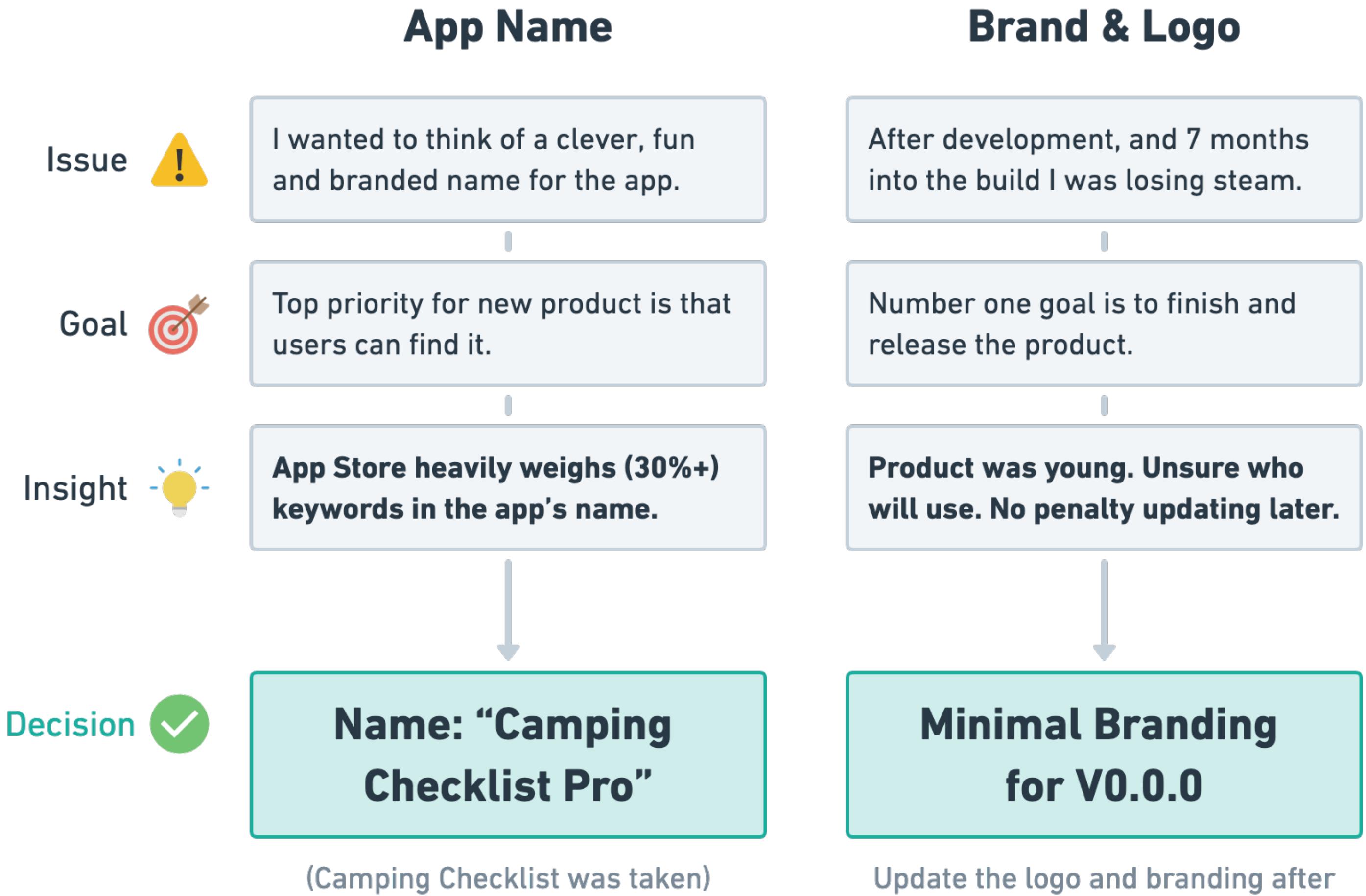
Hide

...

100% Upvoted

App Name & Branding

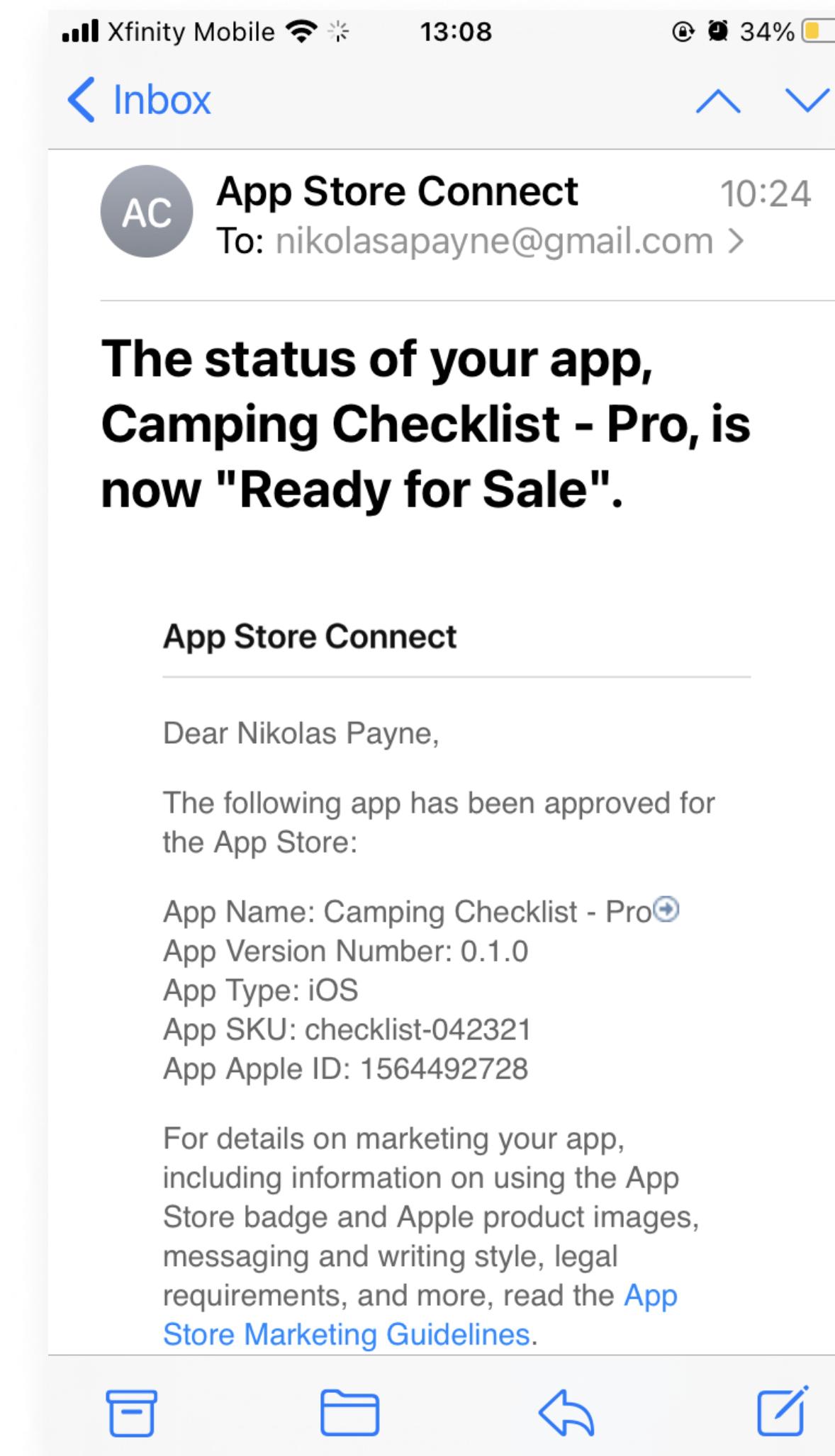
TLDR: I chose to defer on a clever app name or sexy branding. It didn't align with the project goals.



App Submission

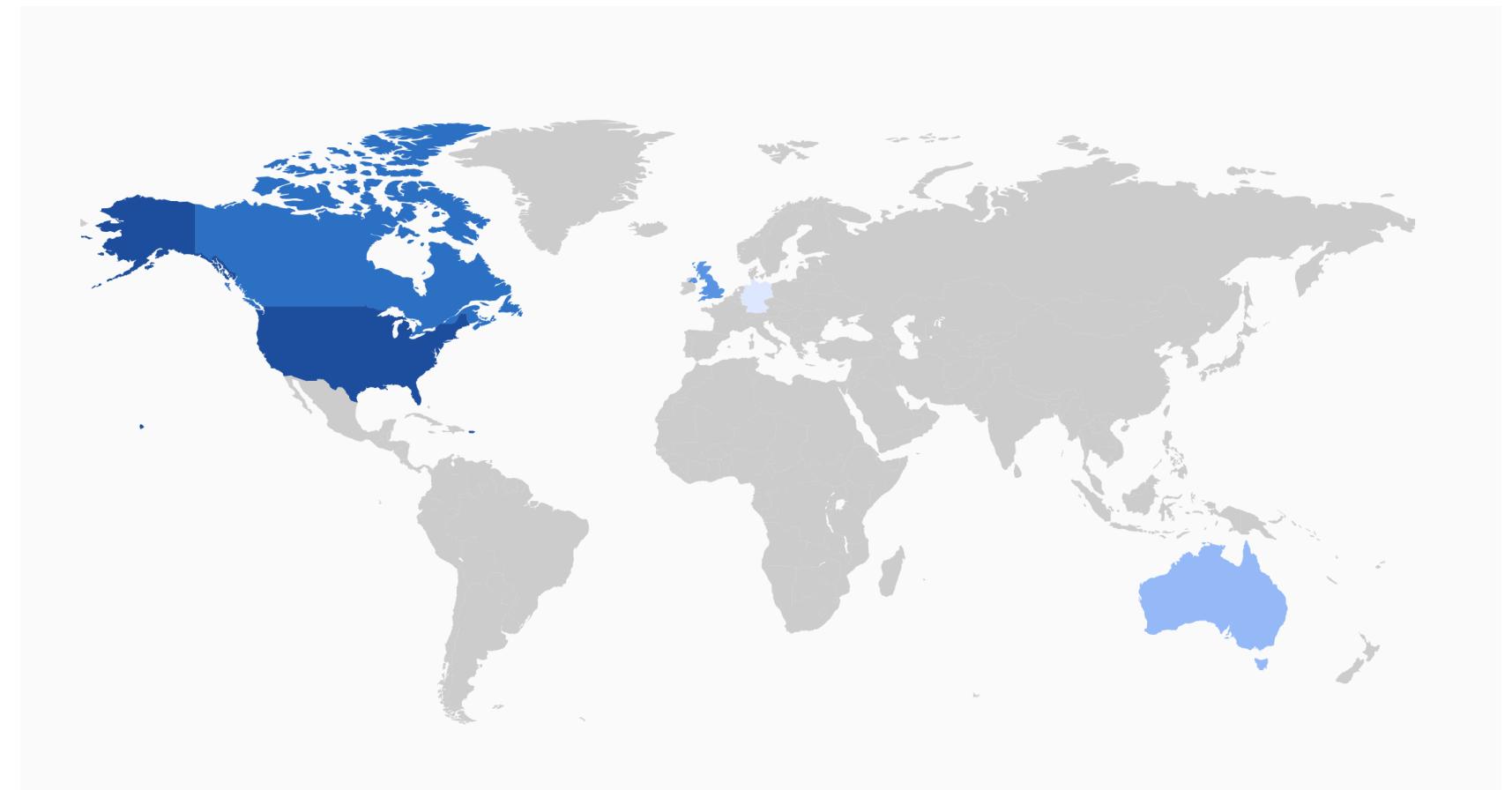
7 months after starting the project, I hobbled together a privacy policy and terms of use, submitted the app to the App Store, and hoped for the best.

24hrs later it was approved 



Outcomes

Was the app successful and did it hit the goals I had set for it?



Build 0.0.0

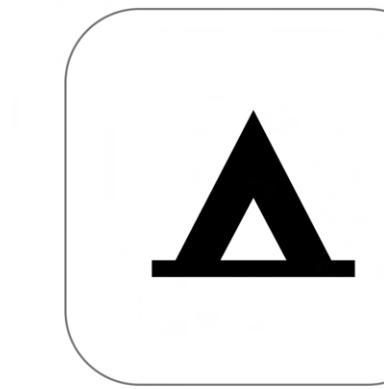
Key Outcomes

1. KR: Working software ✓

- 4,200 single lines of code (SLOC)
- No bugs and 0 crashes recorded in App Store Connect

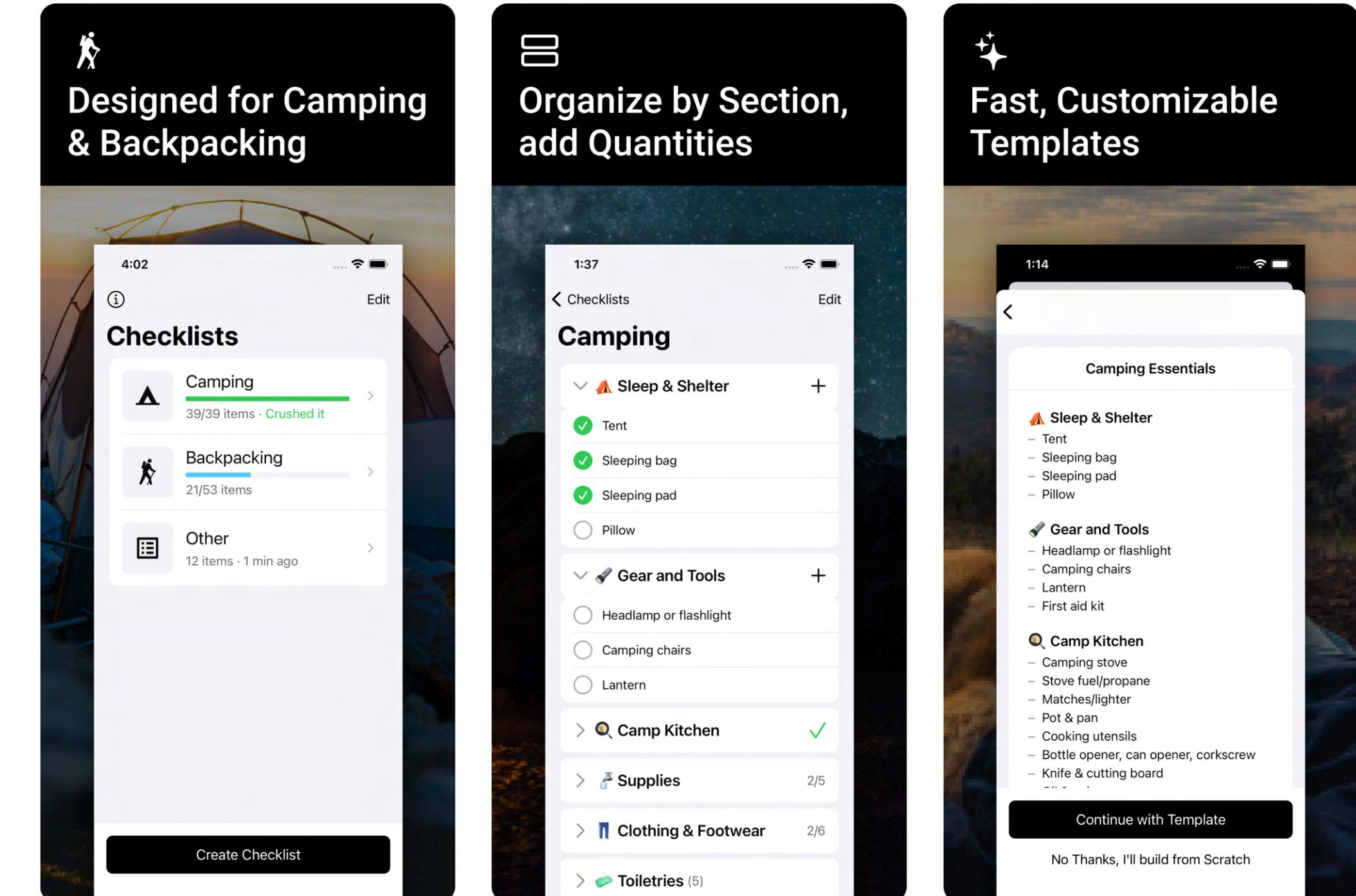
Keyword Rankings

- “camping checklist” #18
- “backpacking checklist” #35

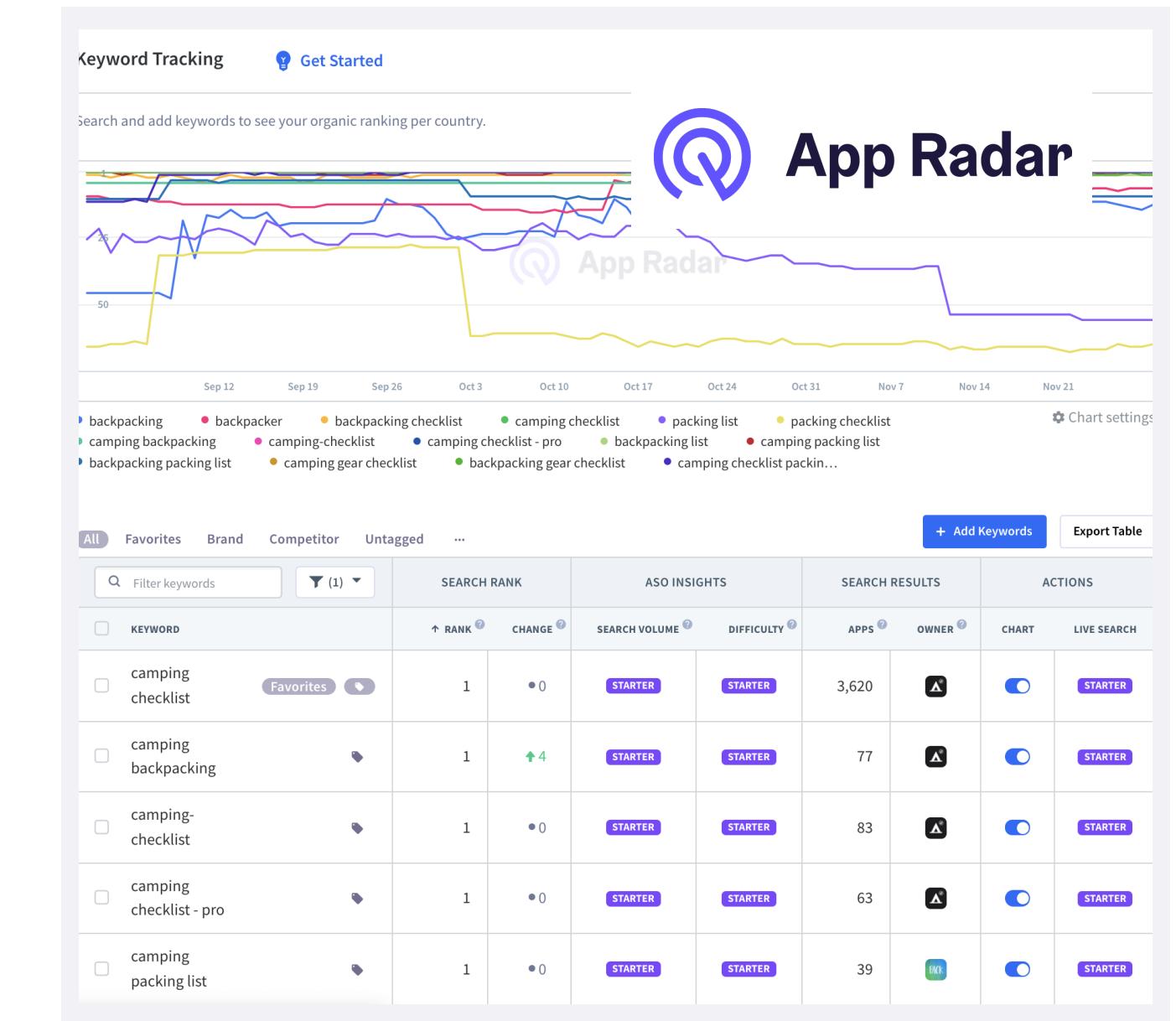
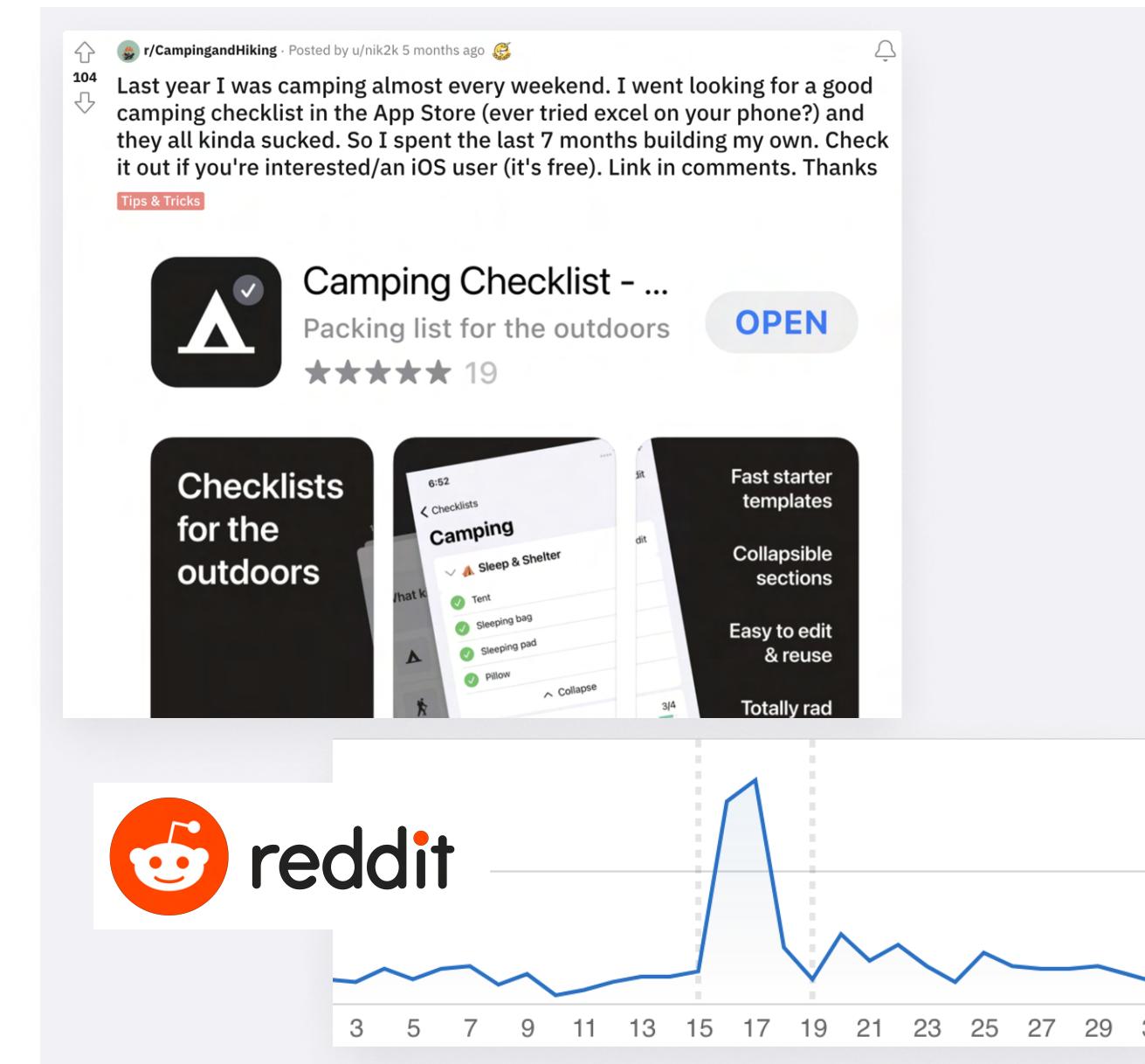
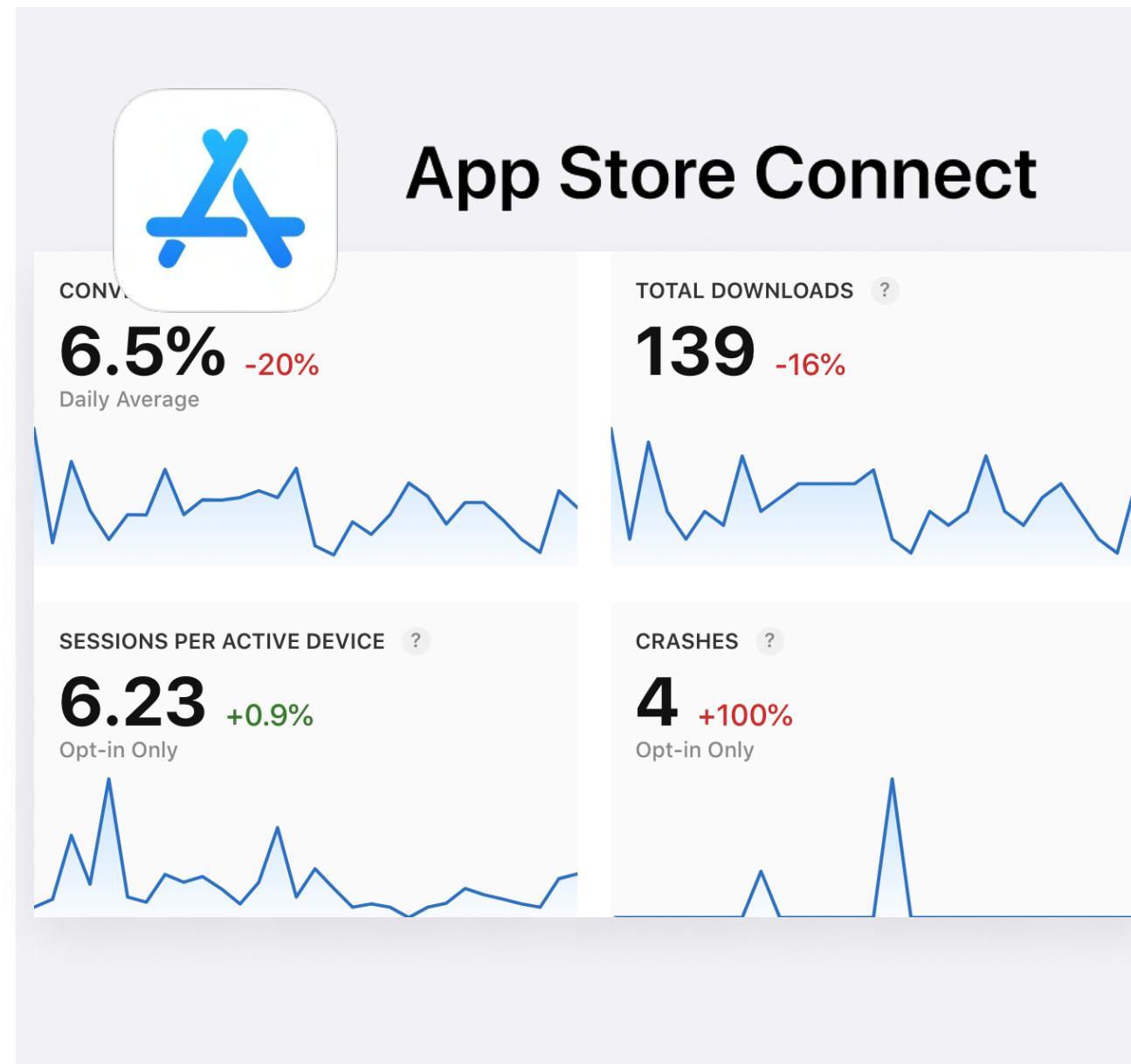


Camping Checklist P...
Pack for camping, backpac...

GET



Iteration & Growth



Analytics/Tracking

Promotion & Growth

Keyword Optimization

User Feedback

SB Sam Burke 6/29/21
To: nikolasapayne@gmail.com >

* Camping Checklist Feedback

Hey,
Been looking for a perfect packing list app,
and yours has a ton of potential to be exactly what I've been searching for. Very clean and simple look. Really like it!

I know you are still in 0.x but wanted to throw out a few suggestions having been looking for a good camping packing list for a while. I have probably tried every one on the App Store and this is the first one that I have sent any feedback on (and I offer this entirely

NF Nicholas Flint 7/30/21
To: nikolasapayne@gmail.com >

* Camping Checklist Feedback

Love the Camping Checklist app! I'm the Scout master of a scouts BSA troop. It would be amazing to be able to create a checklist and send it to all of the scouts so they could use the same one.

Thanks!

Nick

MP Maria Polishchuk 8/12/21
To: nikolasapayne@gmail.com >

* Camping Checklist Feedback

Hello,

Clicking the upload button causes the app to crash and close.

Also it would be great to be able to reorder items in a list so similar items are together

Thanks,
Maria

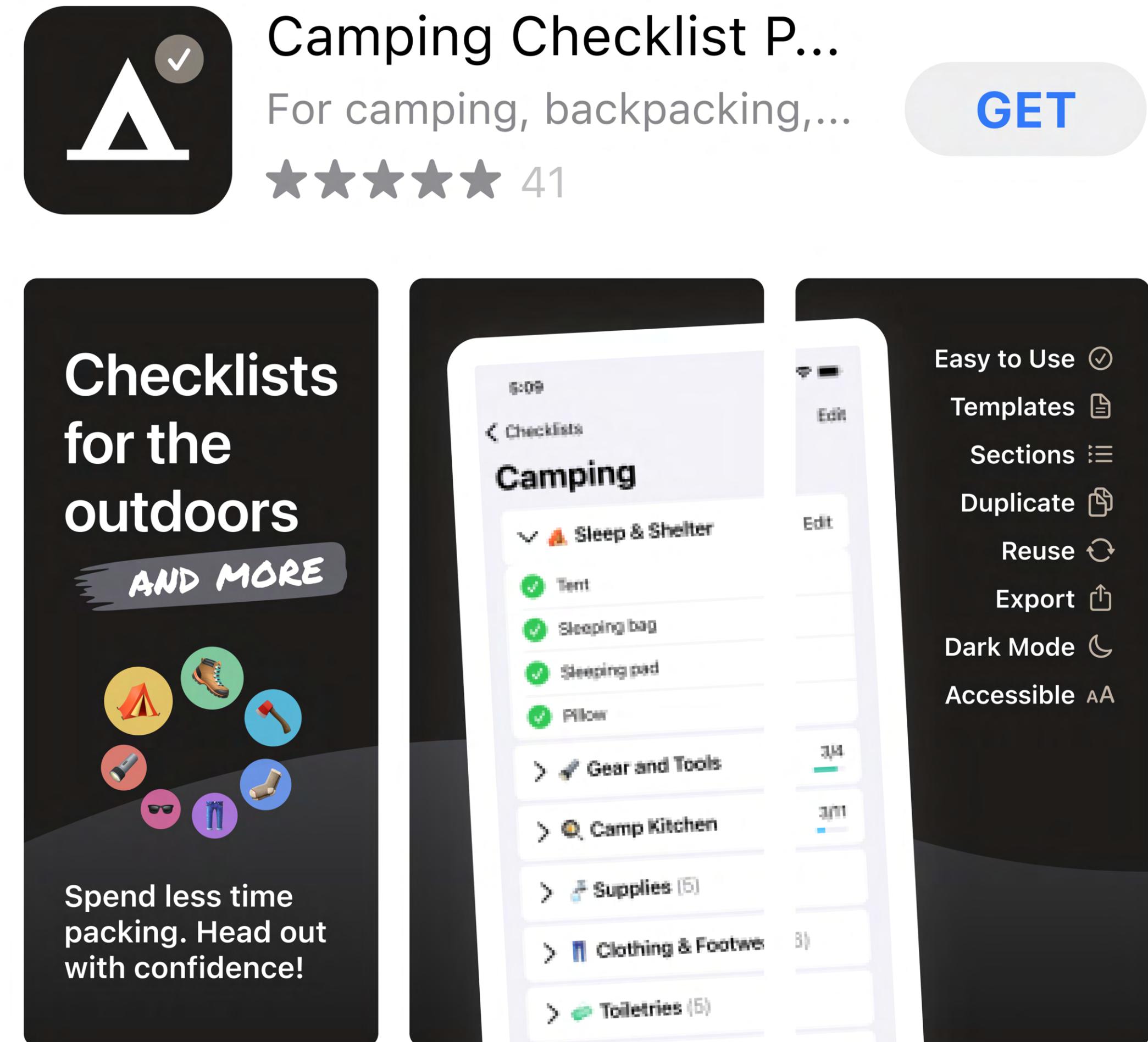
Build 0.6.0

Key Outcomes

1.  KR: 4.9 in App Store ✓
 - a. Based on 41 ratings globally
2. Small, real user base
 - a. 2,000+ downloads globally
 - b. 20/day peak season

Keyword Rankings

1. “camping checklist” #1 (was 18)
2. “backpacking checklist” #2 (was 35)



Improvements

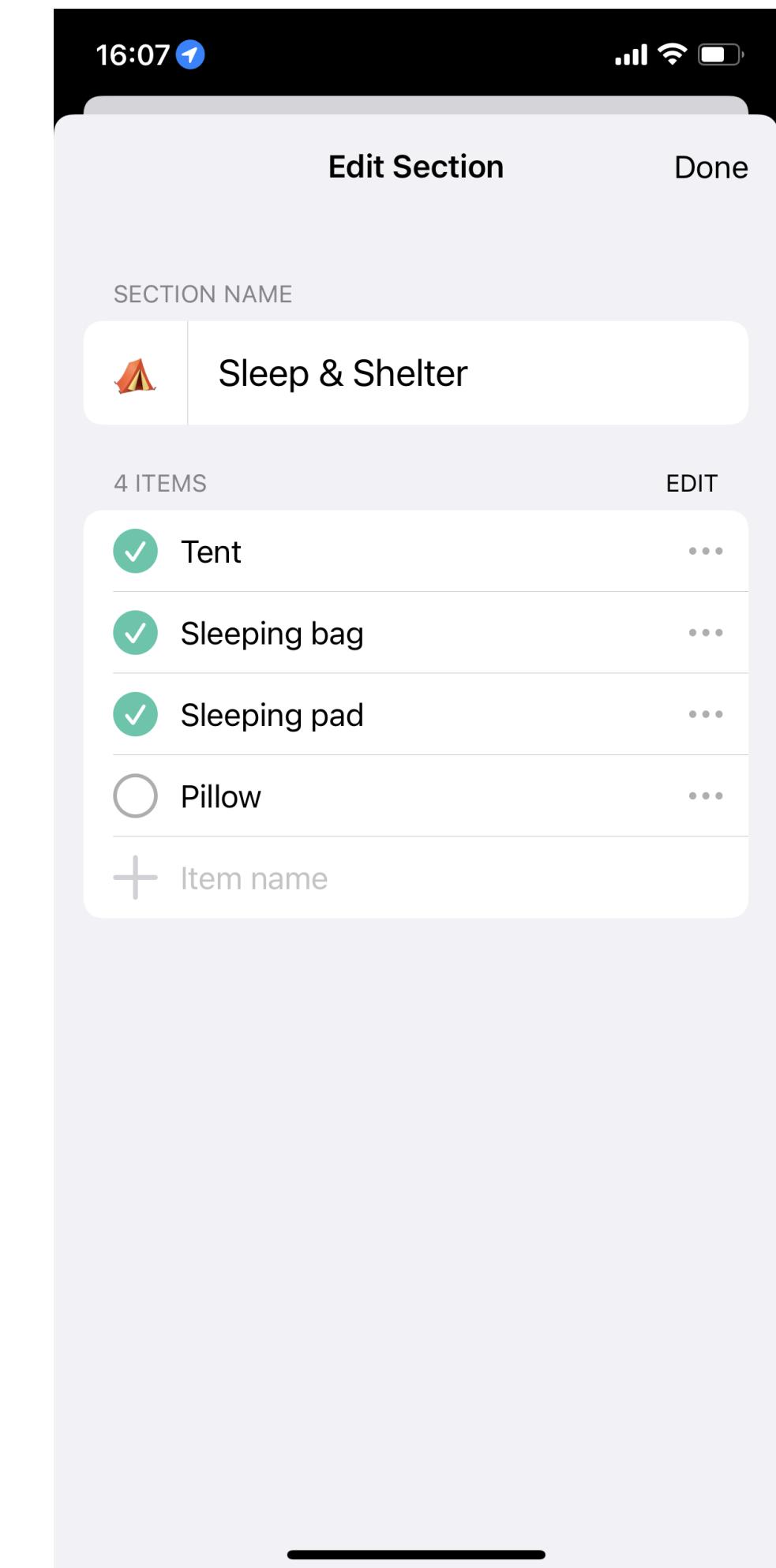
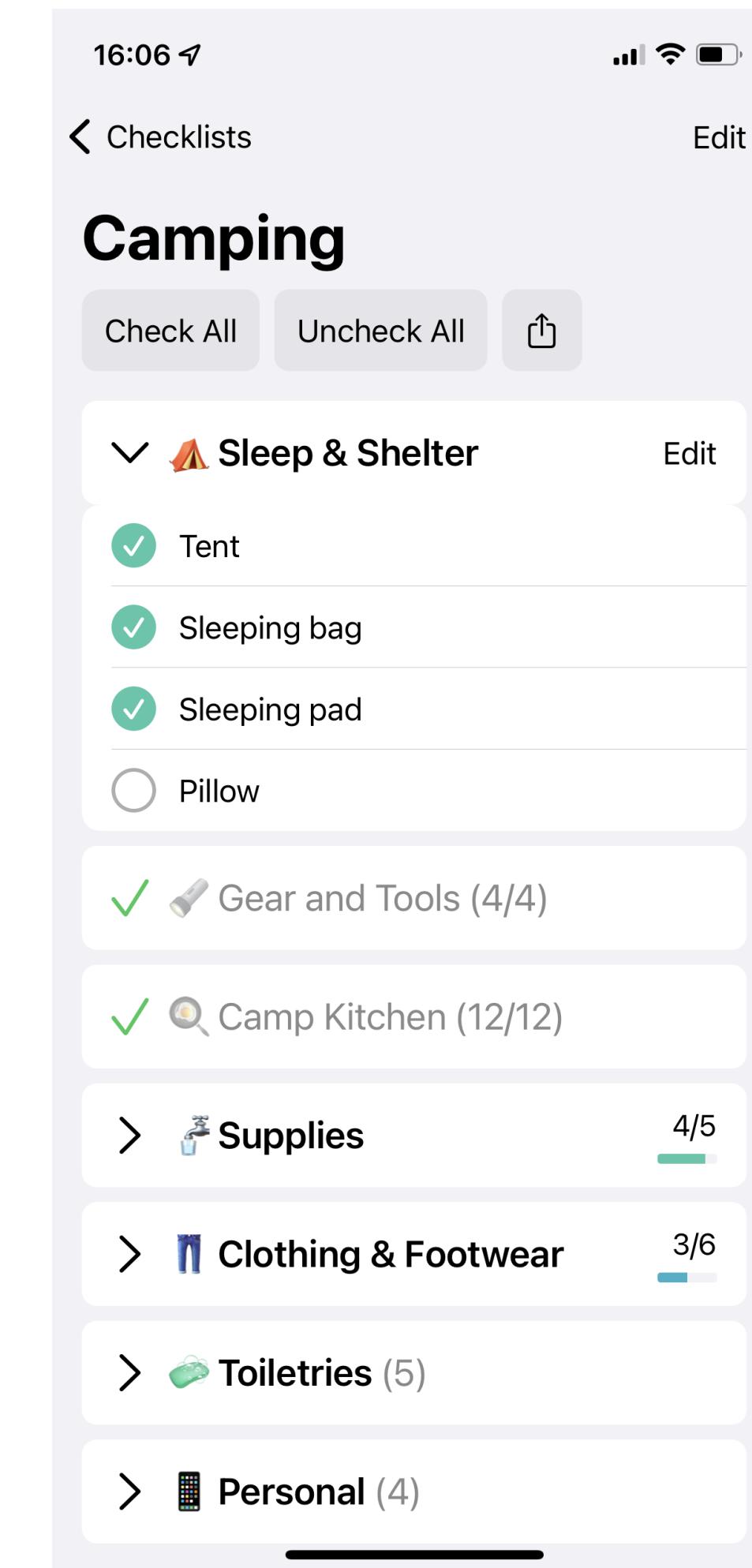
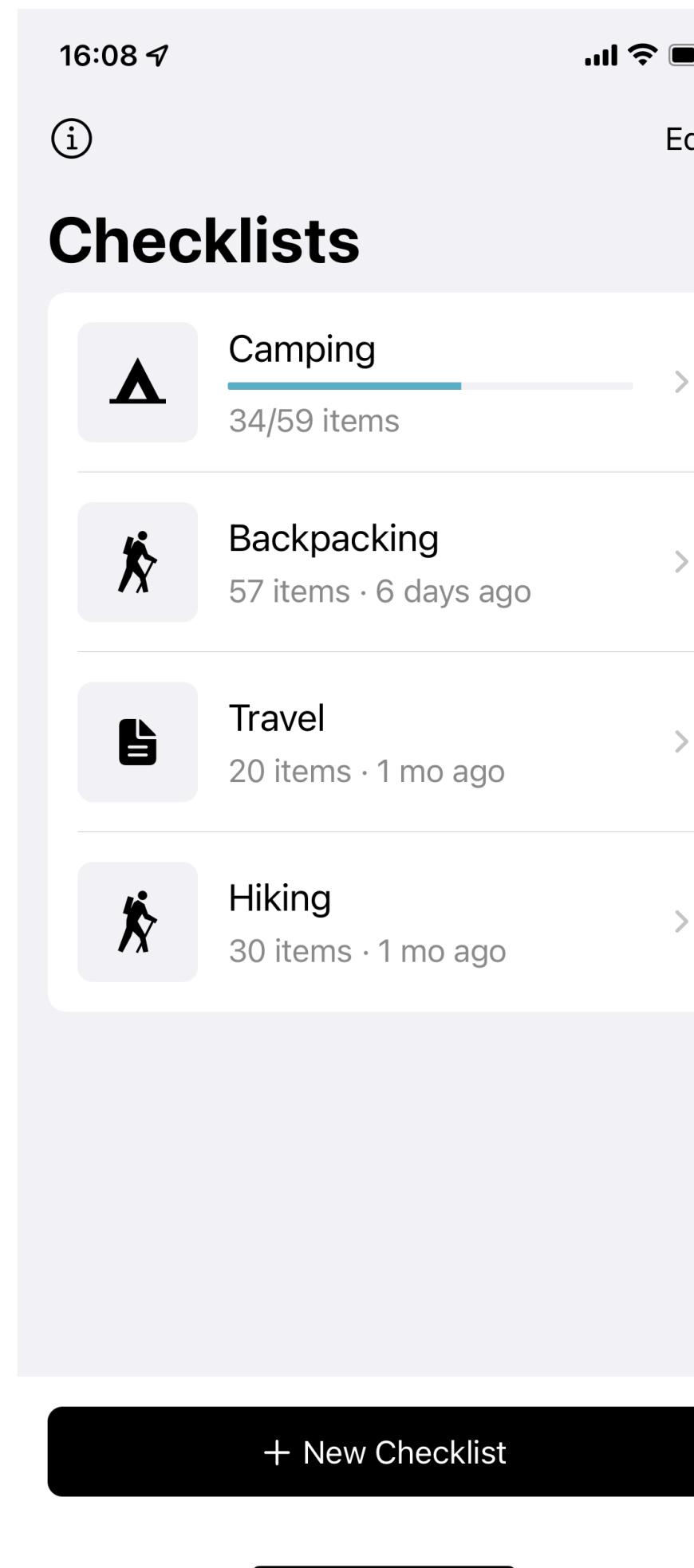
- Usability fixes
- Dynamic type/colors
- Screenshots, icon
- ASO optimization
- Better latency

New Functionality

- Item quantities
- Share/export

Maintenance

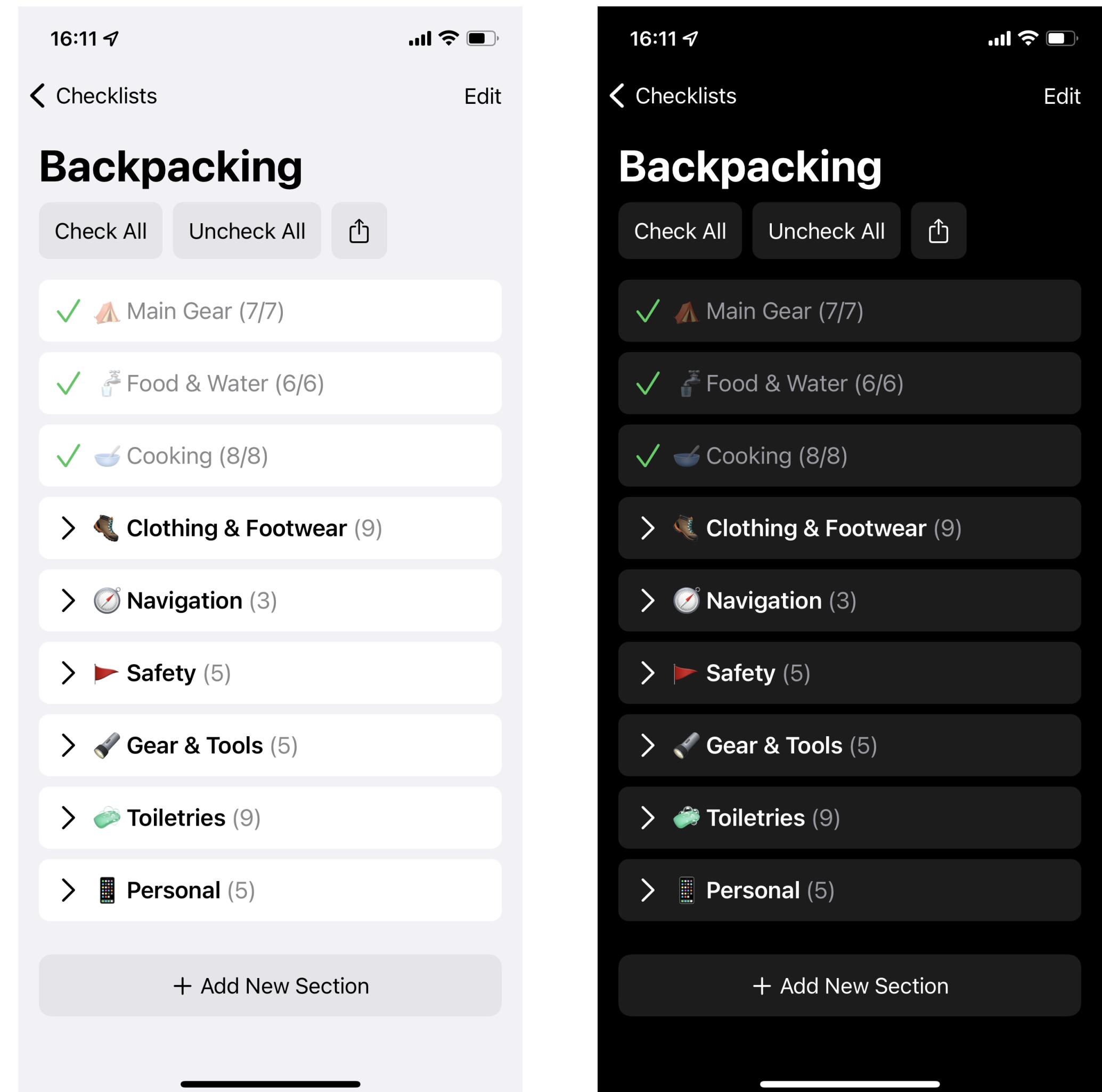
- Fixes for iOS 15
- Realm upgrades



Dark Mode

I exclusively used Apple's semantic colors like so the app looks good in any light or dark environment

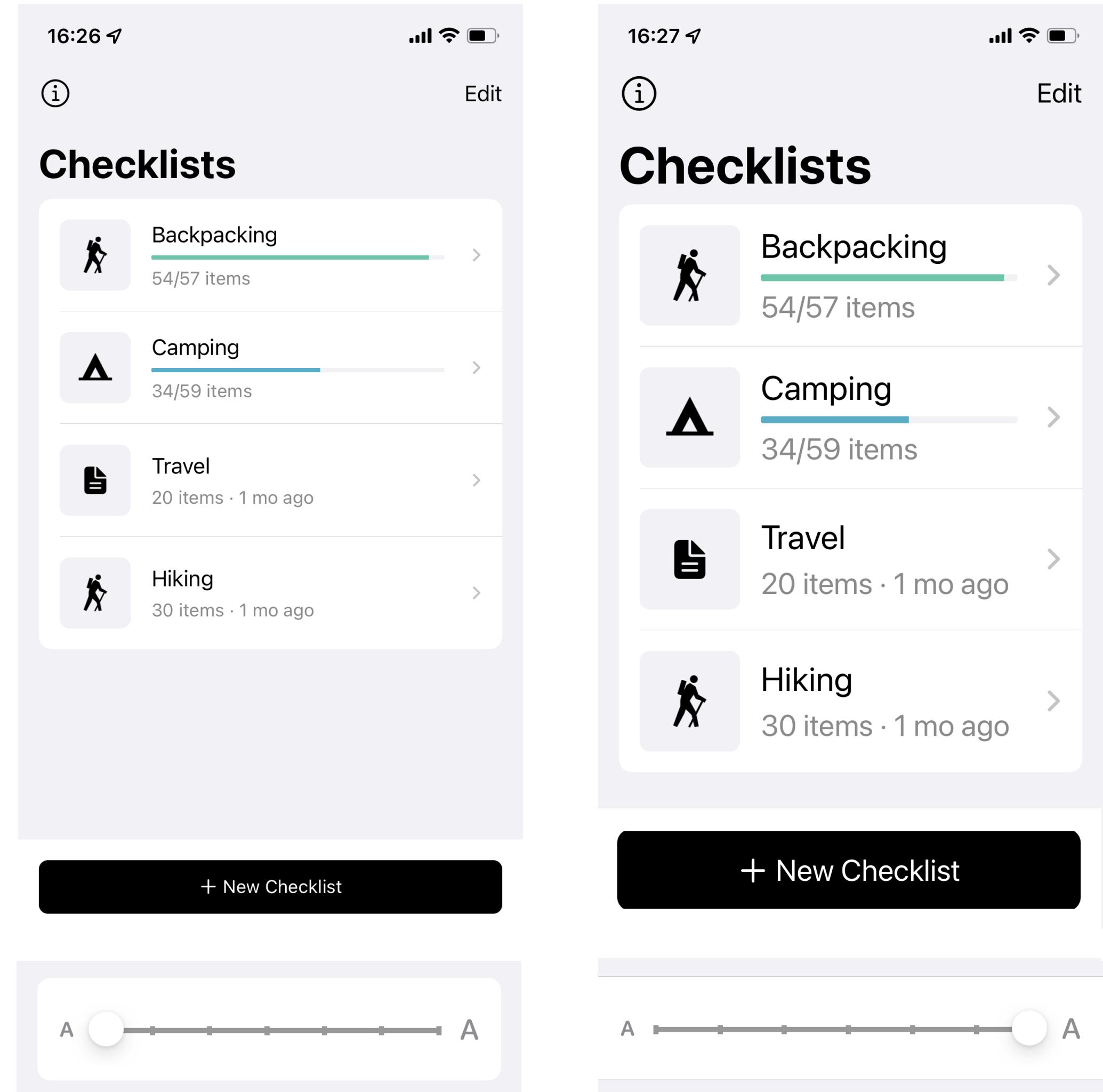
Color(.systemGroupedBackground)



Dynamic Type

In version 0.4.0 I refactored all type and key interface elements (eg. buttons, checkbox) to be fully dynamic.

```
@ScaledMetric(relativeTo: .body)  
var buttonHeight: CGFloat = 48
```

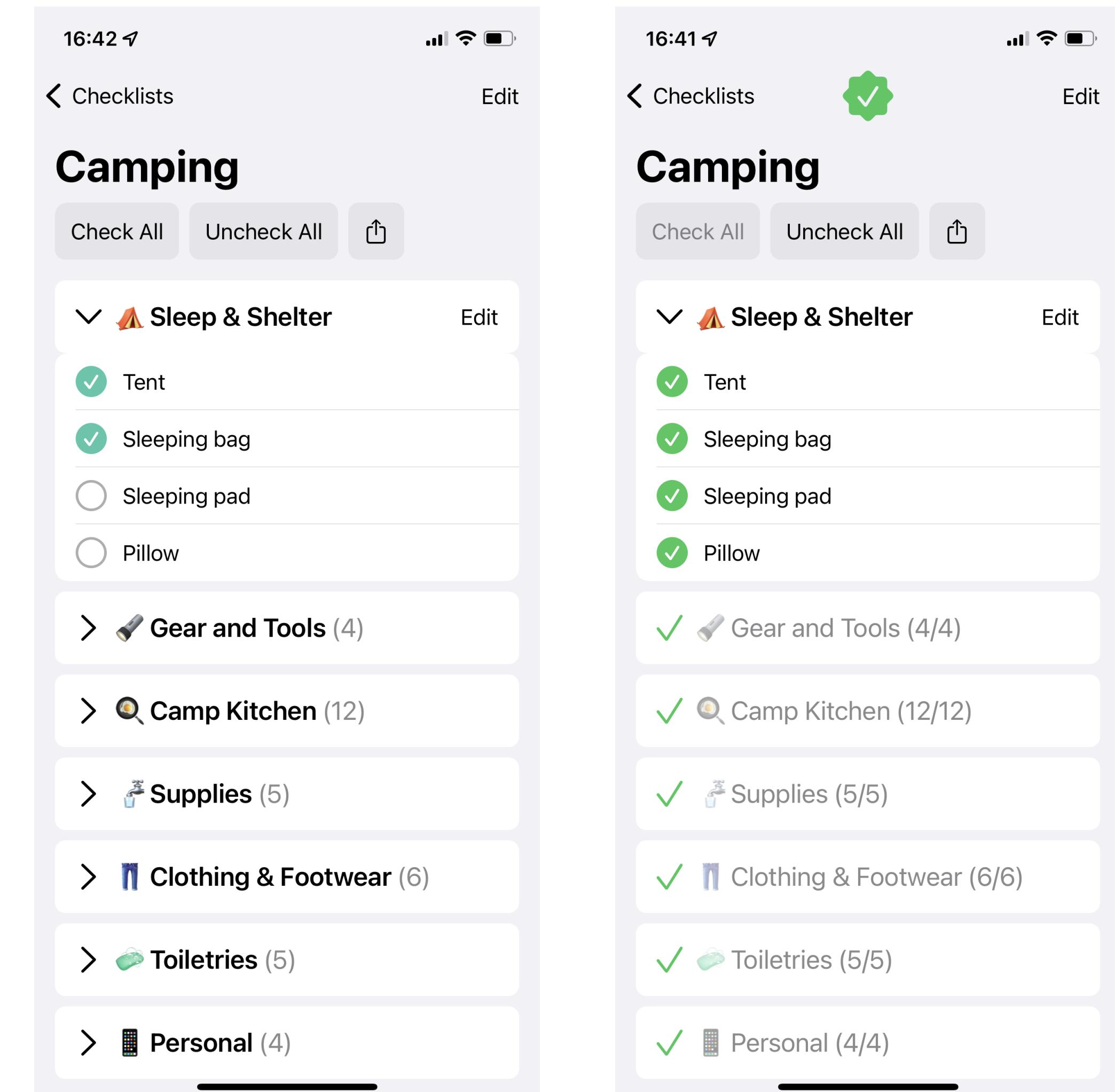


Haptic Feedback

I added haptic feedback to make key interactions clearer (eg. checking items), and add polish and delight.

```
UIImpactFeedbackGenerator(style: .light)  
.impactOccurred()
```

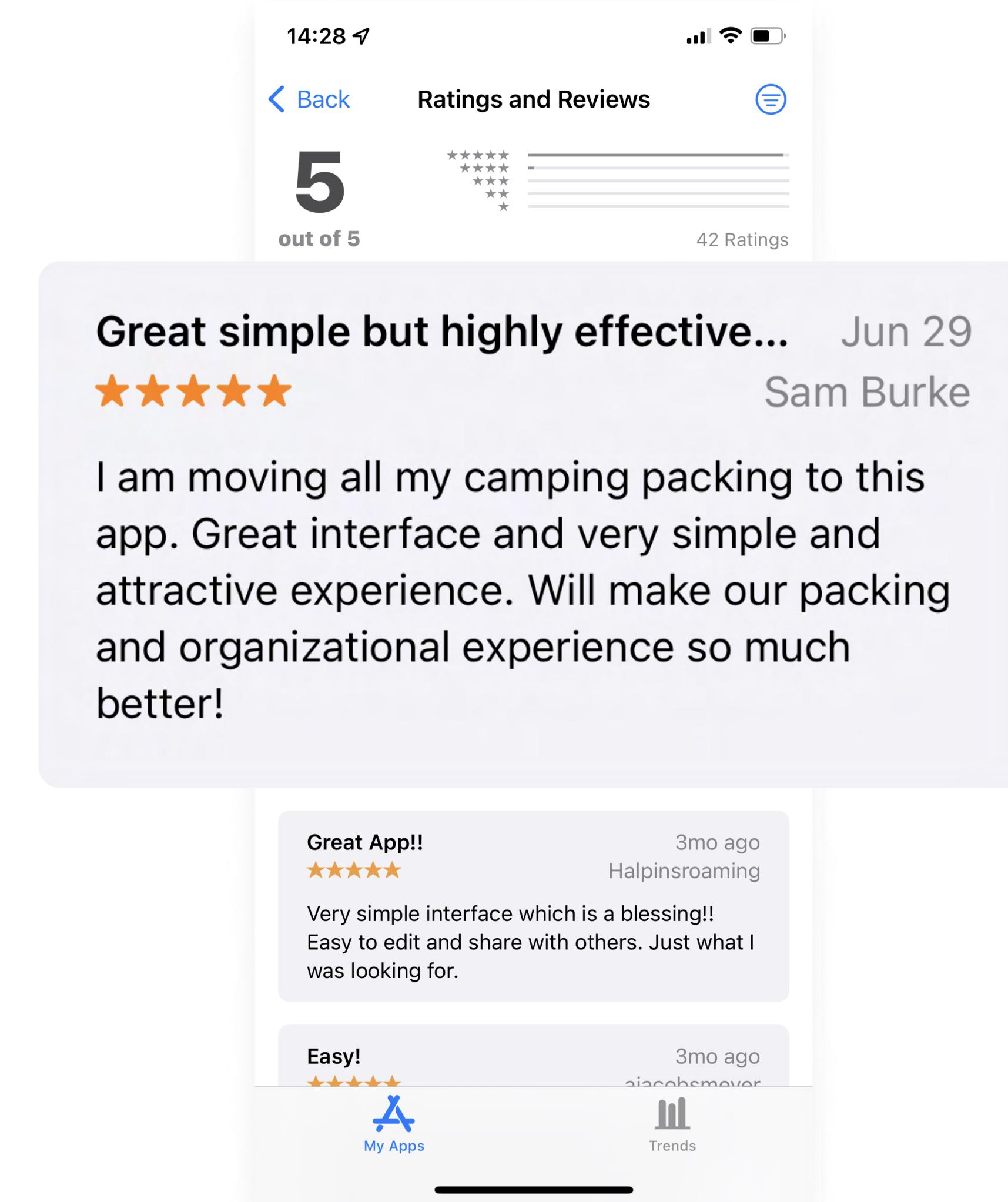
```
UINotificationFeedbackGenerator()  
.notificationOccurred(.success)
```



My Favorite Part

Growing and evolving the app, learning about iOS, building and maintaining software—that has been a ton of fun.

But seeing that it's helping people—and hearing from my users—that's been amazing and really satisfying.





Ypoedza · 155d

Was just complaining about having to write shit down , will give ur app a shot!

... 2

Exactly what I was looking for!



Super app - simple to use and customize.
Exactly what I was looking for - thank you 🤘

Love it!



Exactly what I needed. No bells and whistles.
Function over form. Thank you.

Great simple but highly effective...



I am moving all my camping packing to this app. Great interface and very simple and attractive experience. Will make our packing and organizational experience so much better!

* Camping Checklist Feedback

Great app. Very simple and easy to use. Is it possible to have a function to share a checklist with another user, a

* Nik Payne



Lovely_catastrophes · 132d

This is so great!! Aside from camping, I'm also using this as the place to put all the things I don't want to forget as we get ready to take our daughter to college. This set up is perfect. Thanks so much for making it so easy and intuitive.

... 2

Just what I was looking for



I have a camping trip coming up and I was getting really frustrated with the Notes app on my phone. This is exactly what I was looking for! Solved all of my problems AND one of their Templates reminded me of something that I forgot!



Et3rna1Sunshine · 132d

Really cool app! Great user interface

... 2



Natprk · 133d

Simple and to the point. Love the fact you allow for "Other" and categories.

... 3

Simple and Elegant



I wanted a packing list app that was current since the one I was using hadn't been updated in years and was buggy. This app is simple, good size font and doesn't have all the distractions and color schemes of the other apps. I don't go camping but this app can be used for any trip. Thank you for making an app that isn't trying to do too much. It doesn't backup to iCloud but it is part of my phone's iCloud Backup which I like.

Oct 4

Y2Skippy

3mo a

R

Great app

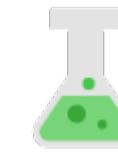


MuffinProfessional51 · 132d

I'm a software developer that loves the outdoors well and this app is awesome. It's so simple and easy to use. Too many apps like this try to do too much and add so many extra features; this hits sweet spot with keeping things simple. Will definitely be using this for every trip moving forward.

... 2

What's Next?



Discovery	Analytics	Iteration	Branding	Growth
Additional round of usability Testing	% of people using templates vs scratch	Faster options for customization	Custom brand and product name	Promotion and advertising
Explore ultralight backpacking space	Why do people choose "other"	iCloud backup	Adventure driven visual design	Android or web app
Card sort for template?	Items users are adding	Realtime sharing and collaboration	Brand colors & Illustrations	Landing page website for SEO Packing versus outdoors-focused

Project Learnings

Overall: Damn, that was fun (and tough too!)

Learnings:

- Small taste of entrepreneurship
- Clean design can take you far (4.9/5)
- Engineering takes patience
- iOS: the hard stuff is easy. The easy stuff hard
- Balancing design/dev solo is tricky
- Maintenance: it's work!

Next Time

- Find a partner!
- Android?

