Paper to Pixel

A LOW FIDELITY PROTOTYPE WORKSHOP

Schedule (2-hours)

Overview	10 min
Empathy: Interviews	20 min
Concept/Ideate	20 min
Prototype: Draw Wireframes	20 min
Prepare App	10 min
Link Images	10 min
Test	10 min
Discussion	15 min

“Fail faster, succeed sooner.”

Quote attributed to David Kelley, founder of IDEO
Image: IDEO.com

1.

Empathy

Dig into the problem. Look at the history and context, the objects and (most importantly) the people involved.

2.

Define

Go deeper and find patters. Establish open questions to build on.

3.

Ideate

Have lots of ideas, good and bad. Embrace divergent thinking. Ask “stupid” questions and crazy ideas.

4.

Prototype

Try some things out. Make some things. Fail cheap and fast. Be open to changes!

5.

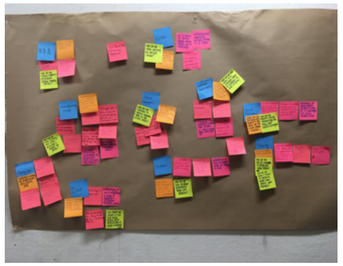
Test

Strip your solution down to the essentials, tell the story to others, and try out your ideas.

Based on IDEO model for Human Centered Design

Research

by Zela Taino



Task

Living with an allergy is living with a disability. People over often over look or disregard there struggles. Our task was to design a digital tool that supports individuals with a soy and peanut allergy.

Research

I began my research through immersion. I found out that international food was riddled with peanuts (Thai) and soy (Japanese). There were also occasions where my allergy started getting in the way of my social life. Other observations made were the lack of clarity on a few food products and the increase in my grocery budget. This first step played in integral part in understating what it's like to live with an allergy. It helped develop a sense of empathy and allowed me to start thinking about the types of questions I could ask during the interview phase.

Interviews

I interviewed 5 people to gain more insight into the struggles of living with an allergy and ways they have managed it thus far. I asked three main questions that drove the conversation. Depending on their answers I would ask follow up questions to learn more about it.

1. Tell me about a time where you felt like your allergies got in the way.
2. In what ways has it affected your social life?
3. How do you usually handle those types of situations you may find yourself in as a result of your allergy?

Synthesis

Key Takeaways

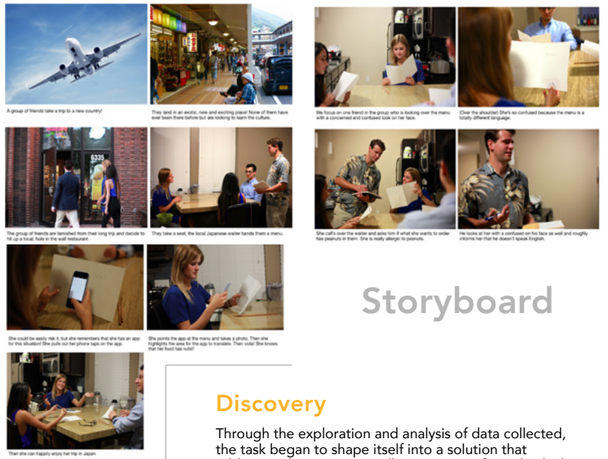
"I know I shouldn't and the consequences are terrible, but sometimes the social pressure makes me cave."
-Rebecca Siow, 22, Dairy

"Traveling to new places is a pain! Especially in developing countries."
-Brady Little, 31, Peanuts

"There have been times where I've eaten something from a friend and it contained alcohol. Sometimes you just don't know and you just can't assume."
-Catherine Taino, 49, Alcohol

"It's just inconvenient. Especially asking waiters at restaurants."
-Daniel Williams, 23, Peanuts

"I've gotten an overwhelmingly negative response from people telling me they wish they could travel but are way too afraid because of one food allergy or another."
-Young Adventuress Blog, Peanuts



Storyboard

Discovery

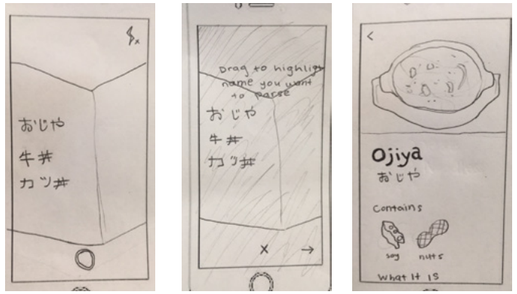
Through the exploration and analysis of data collected, the task began to shape itself into a solution that addresses the constraints allergies create for individuals as they travel across borders. In order for me to understand and clarify the user's goals/tasks I created a user story that depicts what a situation where a user is traveling to a different country and their start to allergies get in the way. It continues on to illustrate how a digital tool may solve that problem and the type of interactions between the user and the tool.

Prototype

Iterations

Going off of the interactions highlighted through the user story, I began with my initial paper prototype (Figure 1) to illustrate the features and interactions of the app. After having users interact with the interface I found out that I didn't consider quite a few use cases the user may encounter. Use cases such as changing languages, other alternatives to taking a photo, and letting the user confirm if the parse was correct. These changes were applied (Figure 2).

1



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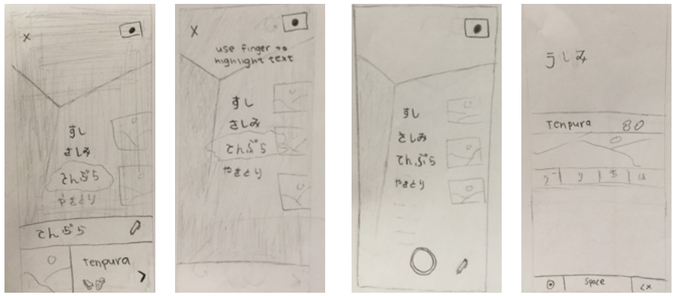


Final Design

Summary

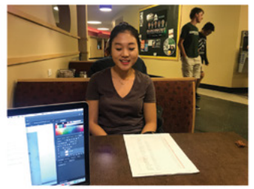
The idea of the final design was developed through research into the problems, understanding the user, and multiple iterations of the initial design. The design includes different ways of searching food while abroad — photo parsing and character pad. The use of color is meant to convey danger to have the user avoid food they were considering. Changing translation is meant to be as visual as possible for speed.

1 / Exploration

The goal was to design a digital tool that supports individuals with allergies by addressing challenges that I found through research. Before designing the tool, I spent the first week living with corn and wheat allergies. I tried to avoid the food that I was assigned so that I can learn from my experiences and reflections. I took notes for all the food that I had this week, my thoughts, reactions, and reactions from other people as well. Some questions that I had in mind were: How will you ensure that you don't accidentally eat the food you are allergic to? How do you have to change behaviors in your daily routines? How do people treat you or react when you ask about food ingredients? How do you feel when people explain what is in the food? One of the most interesting observations that I had was that *it was difficult to read the labels and that I had to be extra careful when I check ingredients before eating something.*

In addition to experiencing allergies myself, I had an opportunity to interview my friend, Grace Kang, who deals with more than ten food restrictions and hear more about her experience with her allergies. I asked these questions:
How have you experienced food limitations?
How have you been limited in what you can eat?
How have your friends and family reacted to the limitations of you?
How do you know when that ingredient is in something that you're eating?
Tell me about a time when you were limited by your own or someone else's allergies.
What was it like to be friends with someone who had an allergy?

My guiding question was: How might we design a tool that will help people dealing with allergies in their daily routines?

Interview


Experiences



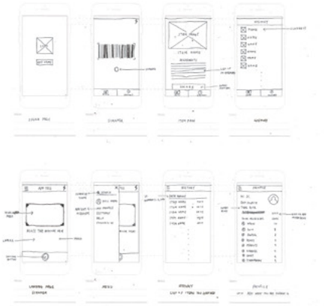


Reading labels

2 / Synthesis

After researching and experiencing allergies, as a class, we synthesized our findings into a series of guiding principles for design. We then came up with many ideas about tools to support people living with allergies. Although I wasn't there for an in-class workshop, I read through my colleagues' research findings and found out that we had the similar idea of designing an application that would read the barcode of food products and tell users whether it is safe for them to have it or not. After deciding on which idea I want to work with, I refined my ideas by creating a storyboard and wireframes.

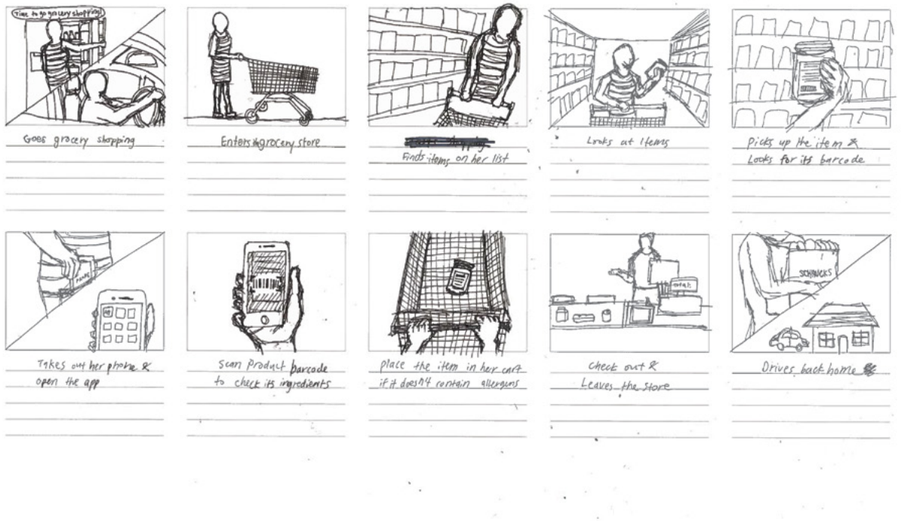
In-class synthesis



Wireframes

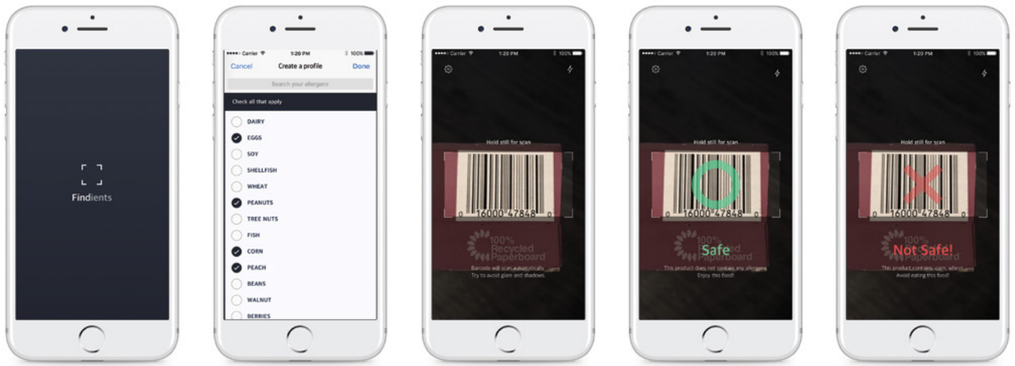
2 / Synthesis

Storyboard



3 / Prototype

Findients is the hassle-free way to read ingredients, designed for people living with food allergies. It is a barcode scanner application that scans barcodes on the food products and looks up ingredients in them. Once you create a profile, it tells you whether it is safe for you to consume the food that you have scanned.



RESEARCH

The task at hand was to redesign a TV controller that focused on efficiency, style, and usability. I started by drafting a series of questions that would help me understand how a typical user interacts with a TV controller.

QUESTIONS

Before images are shown
1. What are the buttons you use the most?
2. Are there any buttons/functionality that you are confused by?
3. What are the most annoying parts about your remote?
4. What activity to you usually use your TV for?
5. Where is your remote when it is not in use?
6. Where is your remote when it is in use?

After images are shown
1. Are you confused by any of these buttons?
2. Are there any buttons that you forgot to mention before that you use a lot?
3. Which remote would you rather use? Why?
4. What's the ideal shape for a remote?

OBSERVATIONS

1. Remote was initially on couch while TV was off
2. Tried to turn on cable/tv but had to physically get up because cable box wasn't "on" and turned it on manually
3. Straight to "Guide"
4. Used individual arrows when trying to select a specific program within Guide
6. Holds remote while watching
7. Watches TV (in right top corner of screen) while Guide is still up

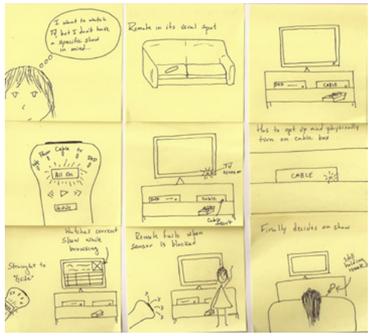
DATA

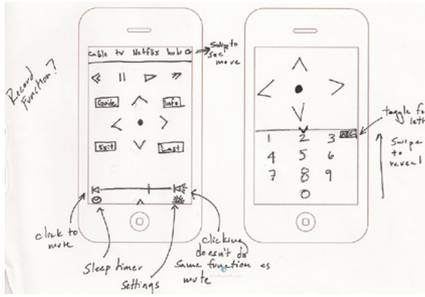
After compiling my inital round of data from remote-control users, I organized their responses in a table to find out about the most essential functions of existing controllers and what features were irrelevant or confusing to the typical user.

Most used buttons	Confusing buttons?	Annoying parts?	Usual TV activity	Remote location not in use	Confusing buttons?	Forgot any buttons?	Favorite remote (All 3)	Ideal shape
All-on, guide, volume, arrows, mute, number pad	Picture in picture	When the cable comes on but TV doesn't	Watch TV (browse)	Coffee table in a box	A/B/C, fav, help	Last	1– like the shape (3 is too simple)	Fit in hand, want to only use thumbs for important buttons
Guide, OnDemand, power, Netflix, Apple TV	Top of remote, picture in picture	Understanding inputs	Watch movie (Netflix), OnDemand	Coffee table	Live, (recycle arrow) button	Exit, record DVR	3 – simple and clear	Mini iPad remote at home is awkward
Guide, page up/down, sleep timer	Picture in picture	Volume for TV doesn't work on cable remote	Recording TV, browsing	Nighttable, couch	Nothing	Nothing	2 (3 has no color/shape and lack of words)	Fits well in hand
Guide, volume, page up/down, off/on	Sleep timer, favorites	TV/cable box relationship, doesn't light up in dark, needs to line up with TV sensor for remote to work	Browsing, Netflix, Hulu	Nighttable, couch	Bottom section	Exit, mute	2 – very familiar (I is clunky)	Fits well in hand
Power, guide, arrows, select, exit, info, number pad, last	4 buttons that are different colors (don't know functionality)	When remote is lost, having to explain to other people how it works	Live events (i.e. sport), Netflix	Coffee table	A/B/C	Pause (live TV), live	3- small, simple, good middle control, not dumbed down	Simple rectangle, not much longer or wider than an iPhone 5

SYNTHESIS

After analyzing the initial data that I collected, I decided to design a remote based on the physicality of the iPhone 5. A touch screen remote offered familiarity for the user and opportunity for a simple, customizable interface. I drew a mock-up of what a touch screen controller with only the essential features would look like. I also drew a brief storyboard to further explore the user's typical interaction with a TV controller.

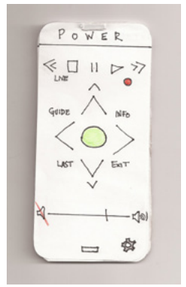




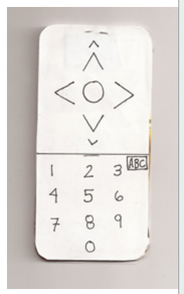
PROTOTYPE

For the prototype, I drew a series of screens on a thin piece of cardboard. I then gave the device to users to simulate the experience of actually using a controller. By having participants walk me through how they would use the remote, I assessed its functionality and ease of usability.

Power screen



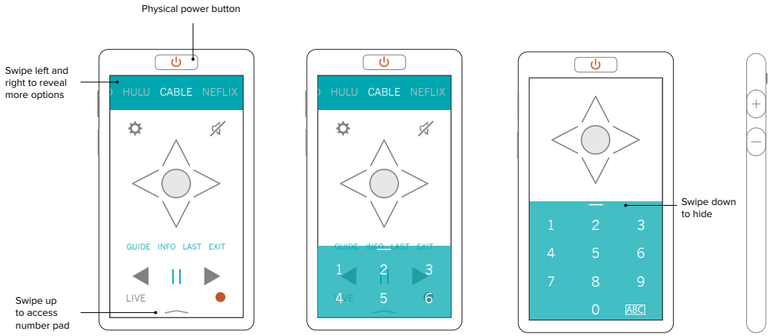
Power–on home screen



Number and letter pad

FINAL DESIGN

The final design incorporates initial user research and prototype feedback. Essential functions are featured on the simple initial display, while more advanced features can be accessed from the settings panel or by intuitive guess (i.e. holding down the top arrow cycles upward more quickly). The end result, a stand-alone digital interface with three physical buttons, offers a more efficient and natural way to control TV functions.



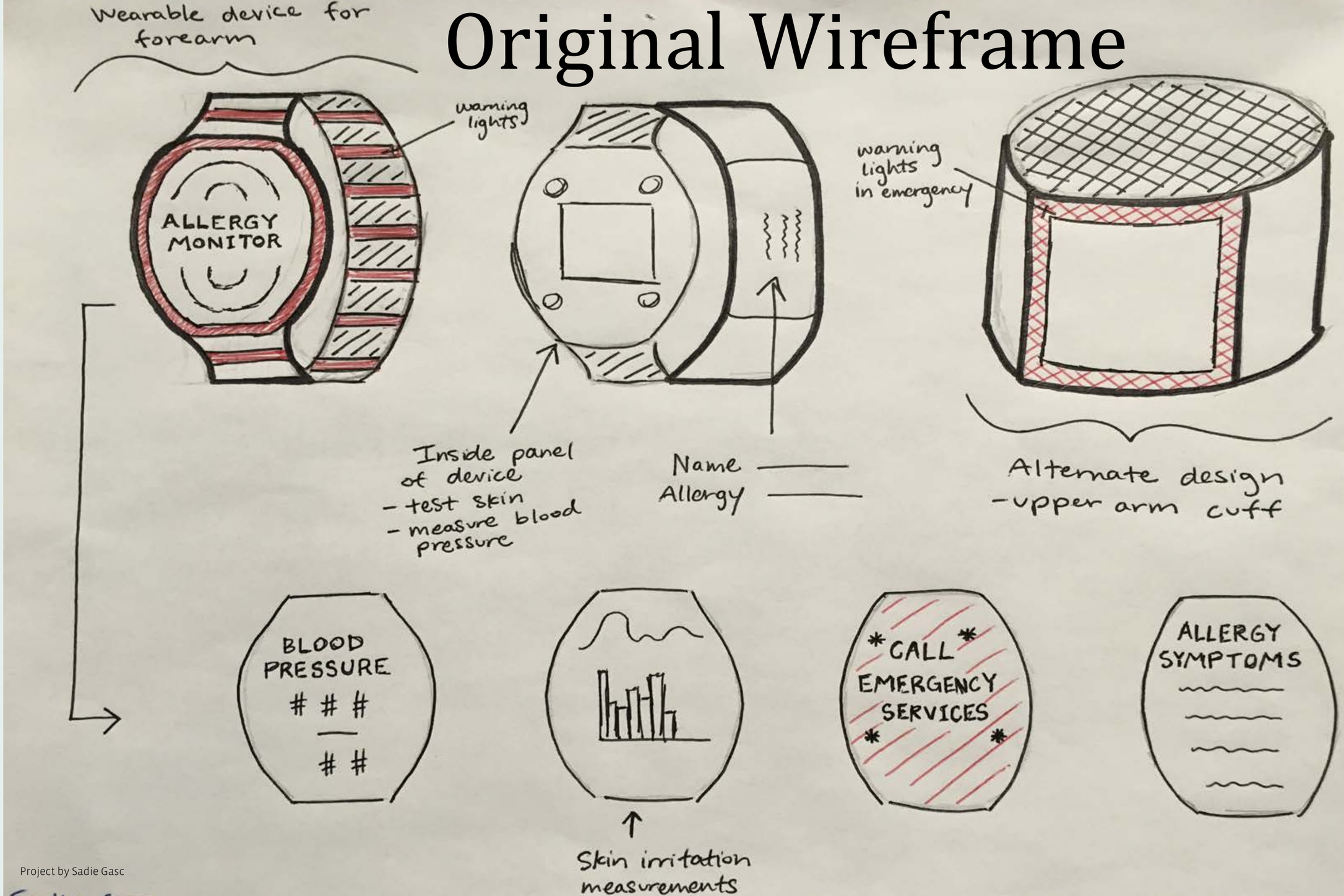
Initial home screen

Transition screen to reveal number pad

Number/letter pad

Side view

Original Wireframe



Project by Sadie Gasc

First Prototype

Project by Sadie Gasc

Adam Skaates and Coe Leta Stafford
develop Elmo's Monster Maker—an iPhone app
for Sesame Workshop https://www.youtube.com/watch?v=-SOeMA3DUEs

Image courtesy IDEO/Nicolas Zurcher

Image courtesy IDEO/Nicolas Zurcher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SESAME STREET
ELMO'S MONSTER MAKER
HD
CREATED WITH IDEO
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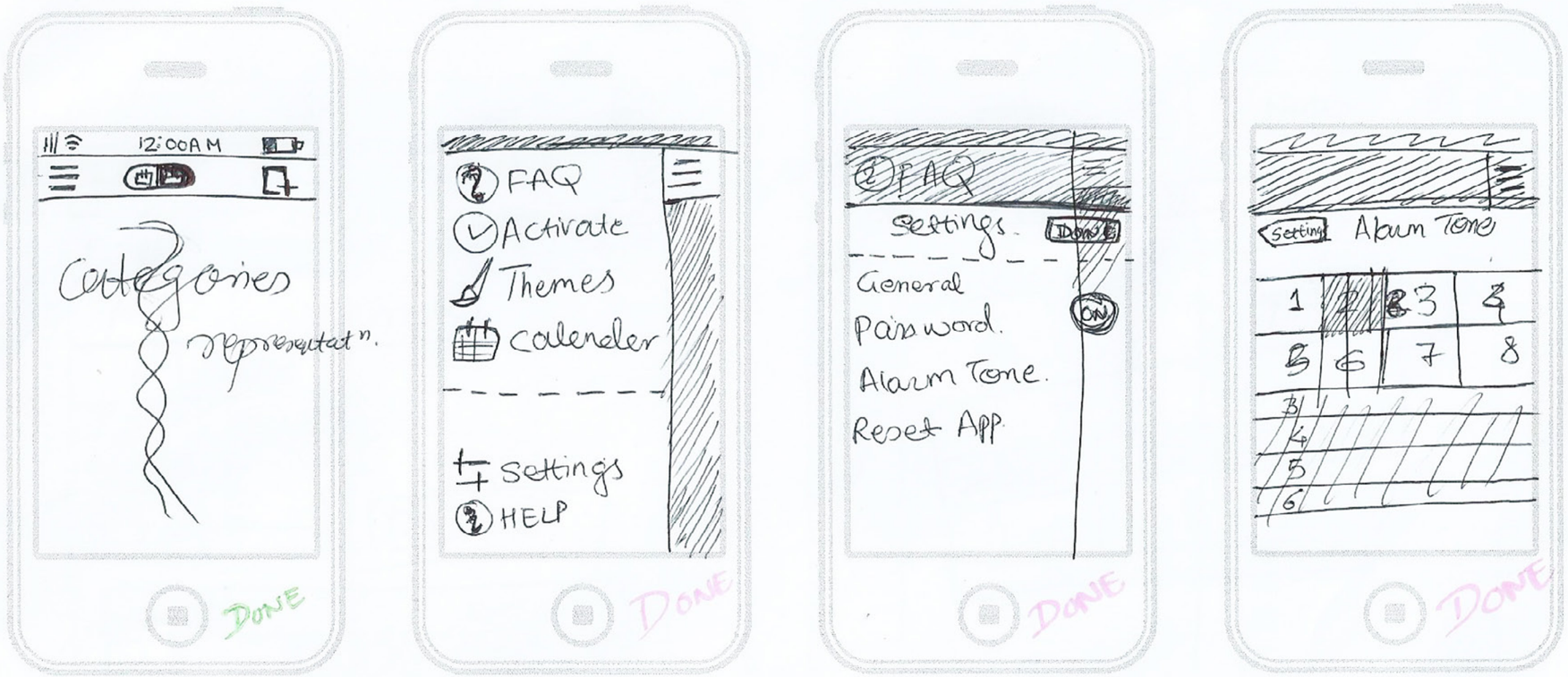
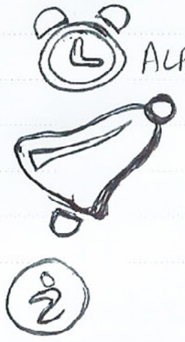
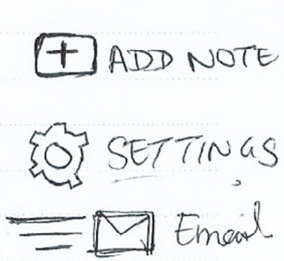
SETTINGS PANE







General = Personalizations.

Alarm Tone = [illegible].

Image By Dhananjay Garg

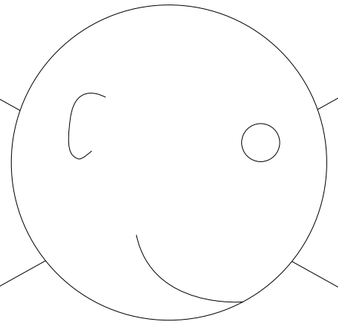
#1 Empathy (Interviews)

Pick a Partner: Ask Questions (10 min then switch)
Have you ever known anyone with an allergy?
Can you tell me a story about when something felt awkward?
What kinds of environments do you think are difficult to navigate with an allergy? Tell me a little bit more about why?
Have you or anyone you know experience a severe allergic reaction?
Can you tell me a little bit more about what happened?
In social situations, what has been your experience interacting with or navigating issues of allergies?
Take good notes!

Empathy Map

What does she/he
THINK and FEEL?
What really counts
Major preoccupations
Worries ↄ aspirations

What does she/he
HEAR?
What friends say
What boss says
What influences say



What does she/he
SEE?
Environment
Friends
What the markets offers

What does she/he
SAY and DO?
Attitude in public
Appearance
Behavior towards others

#2 Define/Ideate

With your 1st Partner
Explore what themes you uncovered. Were there any common stories or pain points. Write these down, one per post-it note.

Are there clear solutions you could identify to help solve a specific challenge you uncovered?

#3 Prototype

With your 1st Partner: Draw some Wireframes
Use the templates provided to draw out our ideas. Create an open screen, a home screen and a few sub pages. Consider any navigation at the top or bottom of the app.

#4 Prepare your App

**If you have not downloaded and started your App,
do so now by going to:**

https://marvelapp.com/pop/

Then take a picture of each of the screens you created.

#5 Link the images

Import all the pictures (or take pictures right from withing the app) into the app and link them up.

https://marvelapp.com/pop/

#6 Test: (Share & Feedback)

Yay! You did it.
But you might have to start over based on the feedback.
No sweat, cycle again.

Want to go further?

Try:
Adobe XD https://www.adobe.com/products/xd.html
Balsamic Mockups https://balsamiq.com/
Sketch https://www.sketchapp.com/