



A SOLUTION TO COLLEGE STUDENT'S
SENSE OF ISOLATION

DESIGN PROCESS BOOK

1

INTRODUCTION
.....

DESIGN PROBLEM
.....

2

3

IDEAS FOR SOLUTION
.....

SOLUTION EXPLORATION
.....

4

5

DECIDING KEY FEATURES
.....

FINAL PROTOTYPE
.....

6

7

SPECIFICATION
.....

FINAL PRODUCT
.....

8

9

VIDEO
.....

CONCLUSION
.....

10

INTRODUCTION

In my design thinking class, my classmates and I were asked to identify a design problem that's related to "Surviving College" and design a solution for it. This process book documents and features the "behind the scenes" story of how we arrived to our final solution: an iOS mobile application **UFree**. While it was a team project with two other lovely and intelligent teammates, this process book is narrated in my own perspective, it will concentrate on my role as the product manager and my contribution to the final solution.

DESIGN PROBLEM

Coming up with a design problem was not too difficult, because the topic was relevant to us as college students. After our initial brainstorming, our team soon came upon an agreement on a problem we could all relate to. However, after I interviewed three peers, I realized that the most challenging part for students was keeping in contact with people met, and establishing long-lasting friendships. I shared the insight with my teammates, and we were able to re-evaluate our design problem and come to agree on a redefined problem.

Students, new ones in particular, have difficulties taking the initiative to meet other students, join groups or clubs, and building a network.

Initial Problem

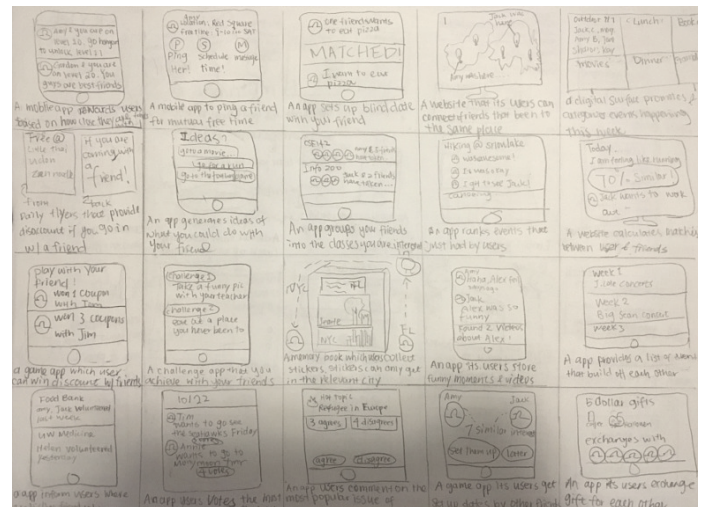
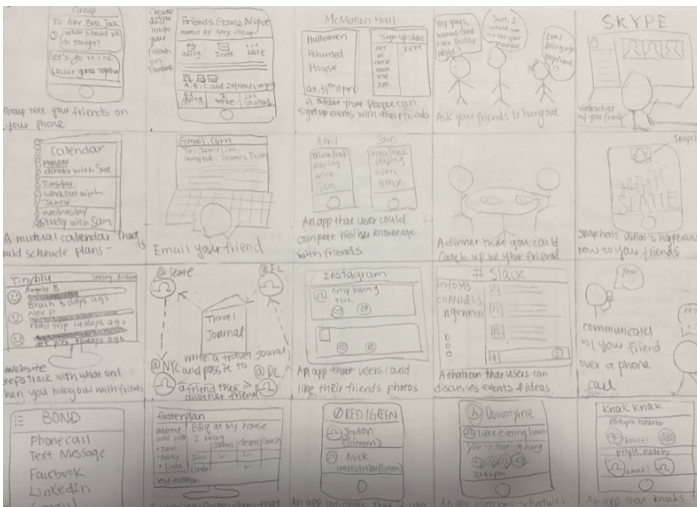


How can college students connect with friends in the small amount of free time they have?

Final Problem

IDEAS FOR SOLUTION

Before we decided on one solution, Each of us generated 40 ideas (my sketches below), 120 ideas in total. This “quantity over quality” method was crucial to our design process, because while none of the ideas was perfect at first, we were able to combine good elements together and narrow down some of the elements that we wanted.



Discussion and voting

Concluded college students have little time to spare.

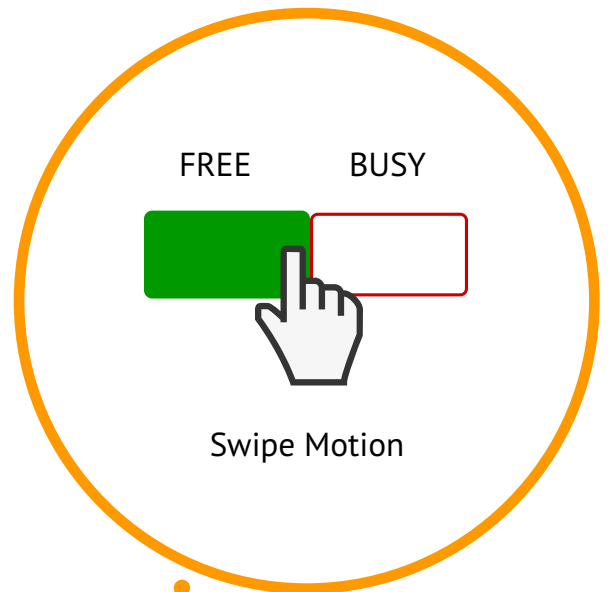
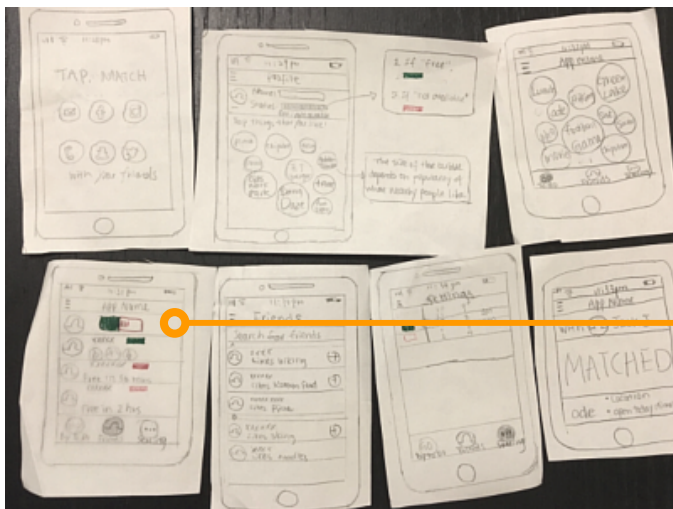
CORE ELEMENTS

- Simple
- Require little of time
- Minimalistic design
- Minimum interaction

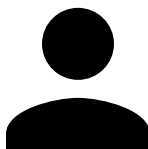
SOLUTION EXPLORATION

With the design core elements in place, our group decided to explore three solutions, and individually made paper prototypes to test out. The one I chose to focus on was an app that let users see what events their friends are interested, and whether or not they are free or busy utilizing green (free) and red (busy) visualization.

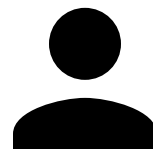
My Solution



Swipe Motion



Kevin's Solution
UW Events Calendar App



Elisabeth's Solution
Hangout Invitation App

DECIDING KEY FEATURES

All three of us did usability tests with our own paper prototypes. The feedback that we received had a balanced amount of likes and dislikes.

At this point, we were not so sure whose prototype we should use as the final solution. A popular comment from the users was about the free or busy color indication. So as the project manager, I recommended that we should move toward that direction, if everyone seemed to like it.

At the end of this discussion, we established some features that will be in our solution

1
A screen to show friends' availability, with red/yellow/green color indication.

2
A schedule formatted as a table allowing the user to swipe their availability in thirty-minute intervals.

3
Automatic updating of the user's availability based on their schedule.

FINAL PROTOTYPE

After the design decision was made, the next step was creating a prototype. We delegated the tasks to each teammate: Elisabeth focused on the prototype creation, while Kevin and I created a script used to get feedback, conducted user tests with our target audience and wrote a summarized report on the critiques and discoveries from the usability test.

Two Major Design Changes

While I conducted user test with a classmate, he discovered a fatal problem in our prototype. When only displaying who was available (Figure 1.a), a contact may be “free” for only several minutes, not providing enough time for the contact and the user to meet and spend time together. To solve this complication and satisfy user experience, we extracted the data from the schedule to display how long the user would be free for (Figure 2.a).



Figure 1 (Before)

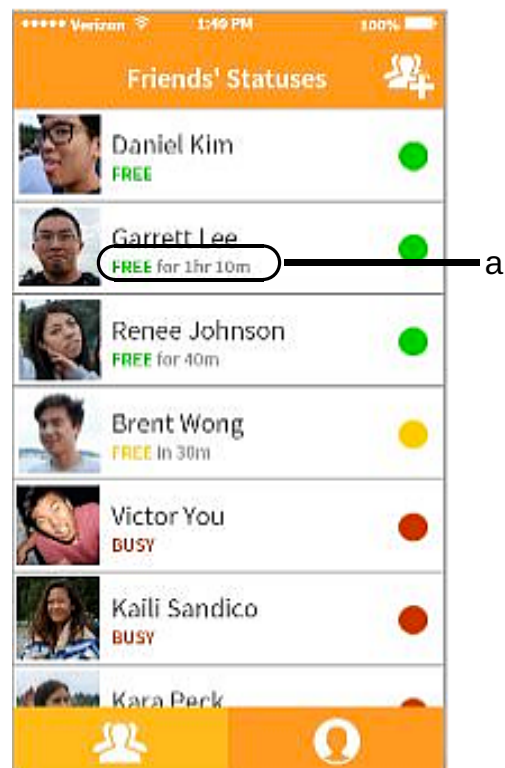


Figure 2 (After)

FINAL PROTOTYPE

Almost all the users complained about the time schedule table (Figure 3). First they don't want to learn the swiping actions, finding it annoying that they had to fill it out in a way they were not used to. So we changed the time setting to be identical to iOS' default time dropdown (Figure 4), enabling the user to avoid learning new interactions. We also added a "Skip" feature where user could simply skip inputting a time schedule.



Figure 3 (Before)

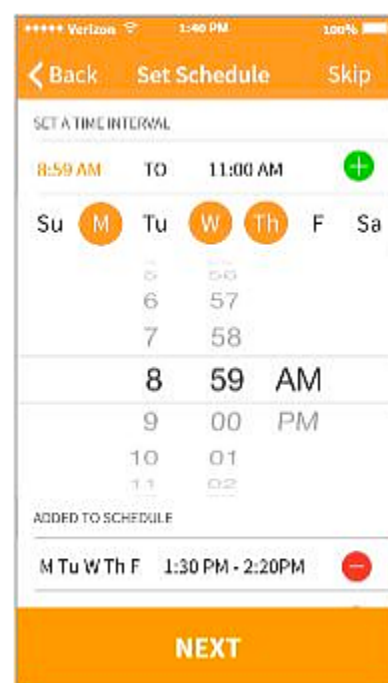


Figure 4 (After)

Reflecting this part, I wish I could have participated more in the prototype creation process, despite not having previous design experience. I was too afraid to ask, as it was an area Elisabeth has worked in a lot, and I felt like my involvement would more of a burden than help.

I also wish that there was a discussion on the color and font design selection. The orange color and the font were utilized in our low-fidelity prototype, but we never discussed why we chose it among other options.

SPECIFICATION

- The app is updated in real time
- The statuses of the friends are accurate
- The user has reliable Internet connection when they want to know if their friends are free

Our Target Audience

The following personas were synthesized and modeled after interviewing a total of six classmates. The patterns found in the interviews were generalized into these personas. The main focus is that these personas wish to maintain the existing friendships while in school possibly with other commitments. They are frequent users of mobile phones and mobile applications. Our team also conclude that UFree would not work for people who don't use iPhones (iOS), people who are unconcerned about maintaining friendships, nor people who think they already have the perfect way to maintain friendships.

Personas



Amy Clark

Amy Clark is a 20-year-old Junior who is studying Psychology in the University of Washington. She is an out-of-state student who did not have any friends coming into college. While Amy's parents pay for her tuition and housing, she has to pay for food and other expense. Amy works part-time in a coffee shop five days a week in Fremont with four-hour shifts. Her commute to and from work is about a 15-20 minutes bus ride. Amy is outgoing and energetic, she likes to watch movies and do outdoor activities with a group of friends. She prefers quiet environment when she is studying or reading. Amy actively uses her phone to text her friends, check Facebook, view her calendars and plan her schedule.

Amy lived in the dorms in her freshmen year, where she met and made a group of friends, they used to hang out frequently, since they all lived on the same floor. In her group of friends, she was always the one who planned events and made decisions. Now, she lives by herself in a studio in the University District with a 10 minute walk to campus because she likes to have her own space. Due to a busy schedule, Amy found that it had become difficult

One of the Personas

more, and after the text with the code is sent, the user is brought to another page to change their password (Figure 7), as this is a separate feature from logging in.

Forgotten Password

Again, the layout for entering information remains the same as the sign up and log in pages. After entering the correct verification code, the user can change their password, requiring a confirmation with the same password to avoid typos being made. Shortly after, they are redirected to the homepage after the two passwords are verified to be the same. This is to allow the user to access their account immediately rather than requiring them to log in with their username and the password that they just reset.

The Main Pages

The homepage only has two different views: one to view friends' availability statuses (Figure 8), and another to edit the user's availability settings (Figure 9). We intended to make the interface as simplistic as possible to allow the user to consume the information easily. To switch between views, the user simply has to tap on the icon (Figure 8.e or Figure 8.f) in the menu bar. Alternatively, because there are only two pages to switch from, a user can also swipe the page left or right to change it. The color of the icons mark where the user located, utilizing the lighter and brighter orange color to show that the user is on the page to contrast against the original orange. We initially had text beneath our icons in the menu bar, but after a critique with our teaching assistant, we decided to remove the text because it was too small to be legible, and the icons proved to be more effective at communicating the difference between views. The first icon for friends' statuses (Figure 8.e) was used because it used more than one silhouette, implying multiple people, multiple contacts, involved with the page. The second icon (Figure 8.f) is inverted in colors, emphasizing the single head encircled by white to suggest a different context/environment in comparison to the first icon. When the user taps on the bar of a friend, whether it be on



Figure 8

Some of the Labels

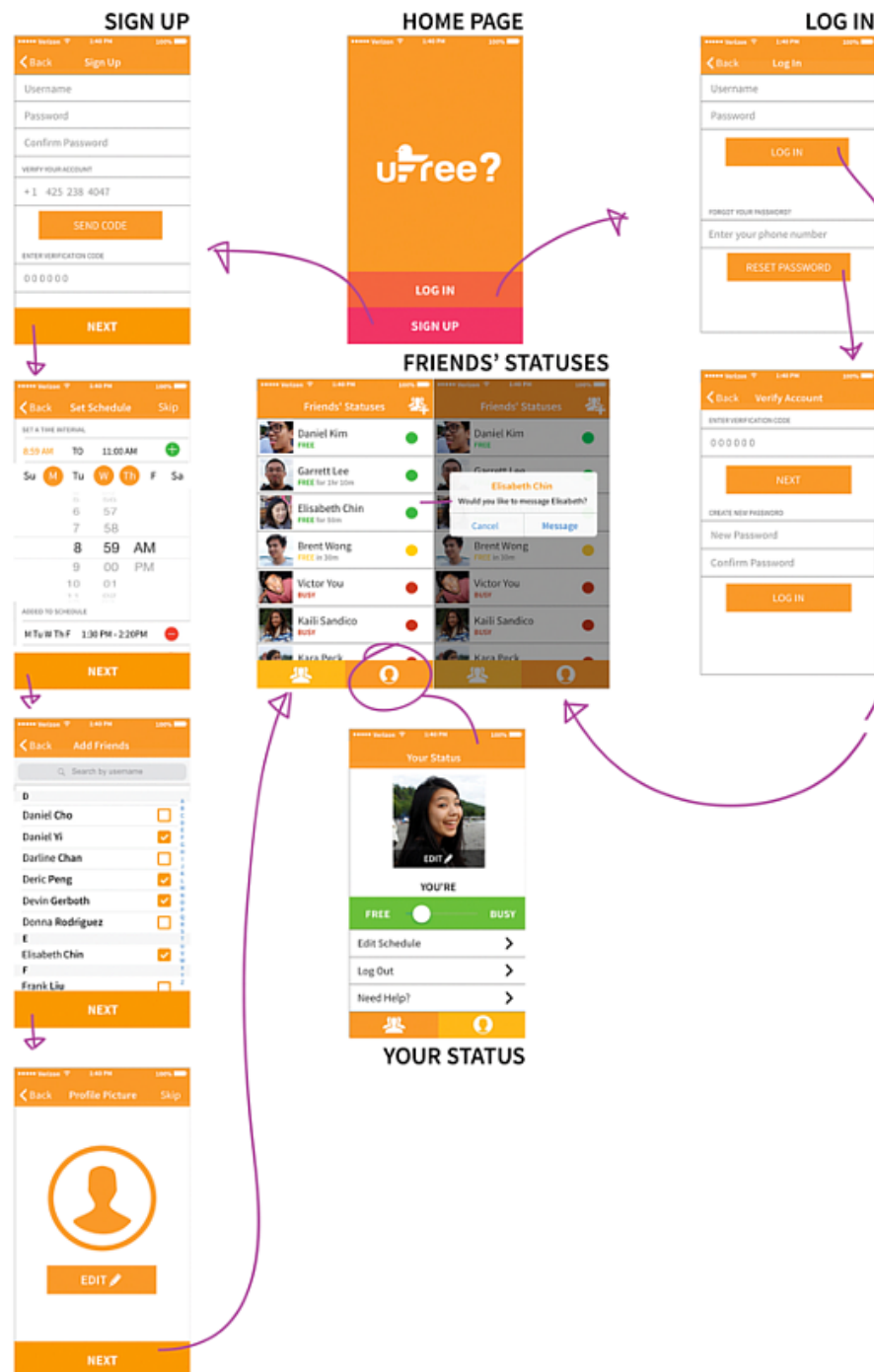
Once our prototype was finalized, we individually worked on different sections of the spec. In order to involve readers, I developed several personas that were generalized from the patterns found in interviews, as well as primary scenarios of use for our design solution. I also included our user tests so it would be clear for a developer to understand why we made certain decisions.

The spec itself was then updated to reflect feedback from peers, our TA and our professor. One thing I added was labels to the prototype images, so that readers would understand exactly which figure and which part they should be looking at.

Reflecting on the spec process, we tended to be compartmentalized on our own sections, and didn't realize ahead of time some of the sections involved more work than other. In the end, the workload on the spec design was not equally distributed. For instance, explaining the rationale for design decisions required much more writing than addressing the design problem.

FINAL PRODUCT

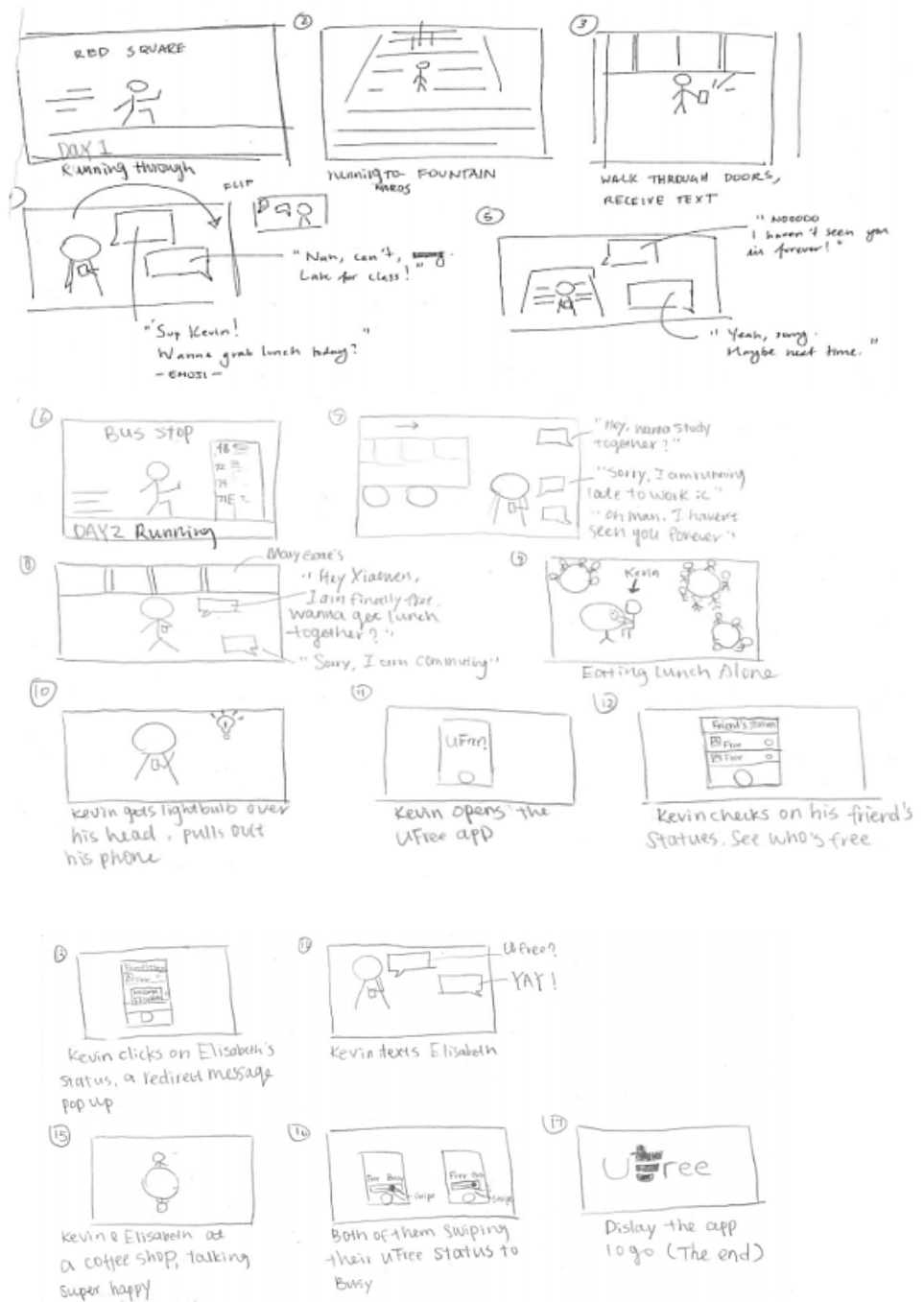
Our final design incorporated all the feedback from peers, our TA and professor. UFree aims to give users little work to get started and focuses on the status content displayed with a minimalistic theme. The final design allows user to view the feed of contacts' availability statuses, and to change his/her status to "free or busy" whenever with a simple swipe. The final prototype tree is displayed below,



VIDEO

Our video prototype aims to persuade our audiences and potential users that UFree is the solution for college loneliness. We created a scenario where a student has a limited amount of time to see his friends, and UFree helps him to find his friends availability when he is free.

I sketched a detailed storyboard (shown on the right) for our video. Both Elisabeth and I filmed the video with Kevin being the main character. Elisabeth also handled the video editing.



CONCLUSION

In three months, our team went from a broad topic to a specific design with numerous of iterations. I am still amazed at how much we have come through as a team. While I enjoyed working with my team and learned so much from them, there were few aspects that I wish it could have done differently. As the project manager, I didn't allocate and balance the tasks well from the beginning; many major processes found a bottleneck as they were handled by only one person, who had a wider skill set than the rest of the team. Prototype development and video editing are a couple examples of this.

In general, though, we collaborated well with each other and always made ourselves available if other members needed help. We created an effective and specific solution that can potentially help the issue of college loneliness. I also learned a lot on how to work and communicate with teammates who have different expectations and personalities.