

Pathways Prototyping Report

Introduction

Group Members



Mamadou D.



Pao T.



Gray W.

Mission Statement

Pathways aims to equip students with the tools needed to take charge of the college application process, ultimately hoping to leave students feeling empowered and ready to give back to others seeking help during the process.

Value Proposition

We chose the statement of “empowering students forward” to be our value proposition due to how direct and straightforward in our intention.

Problem and Solution Overview

College is often viewed as a way forward and an agent of social mobility, making college access and guidance a pressing issue. We aim to scaffold the college application process with Pathways, empowering students to take charge of the application process by creating their own “college roadmap”. We hope to connect students with college students of similar backgrounds that can help provide feedback and advice on their roadmap based on past experiences.

Sketches

The team sat down together and sketched out a brief flow of different interfaces on various devices, limiting ourselves to ten minutes per interface concept.

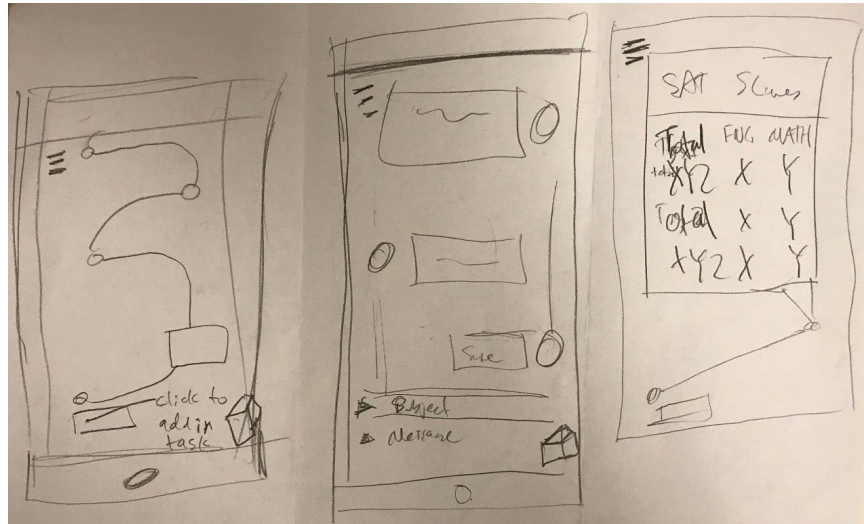


Figure 1: Phone app interface

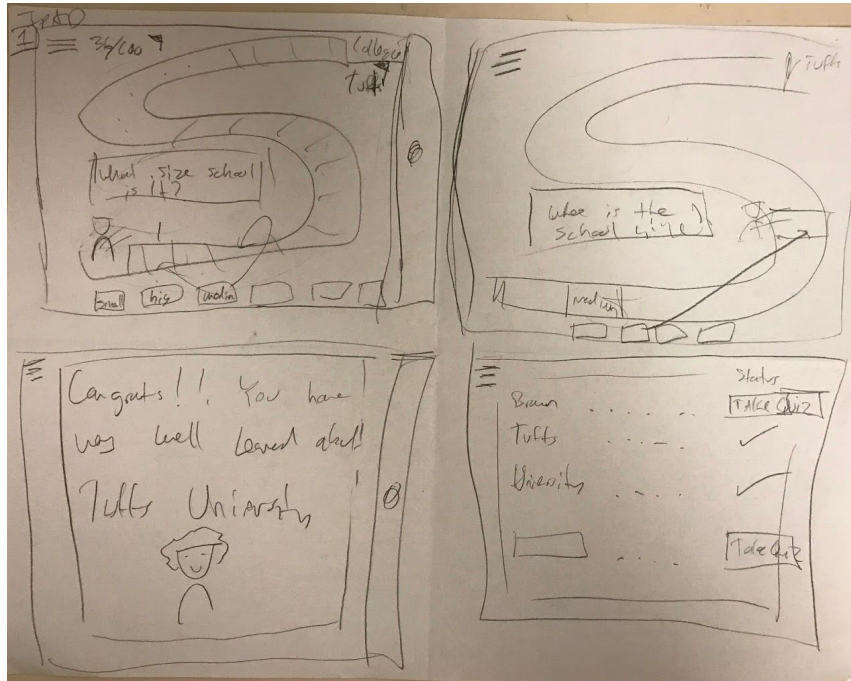
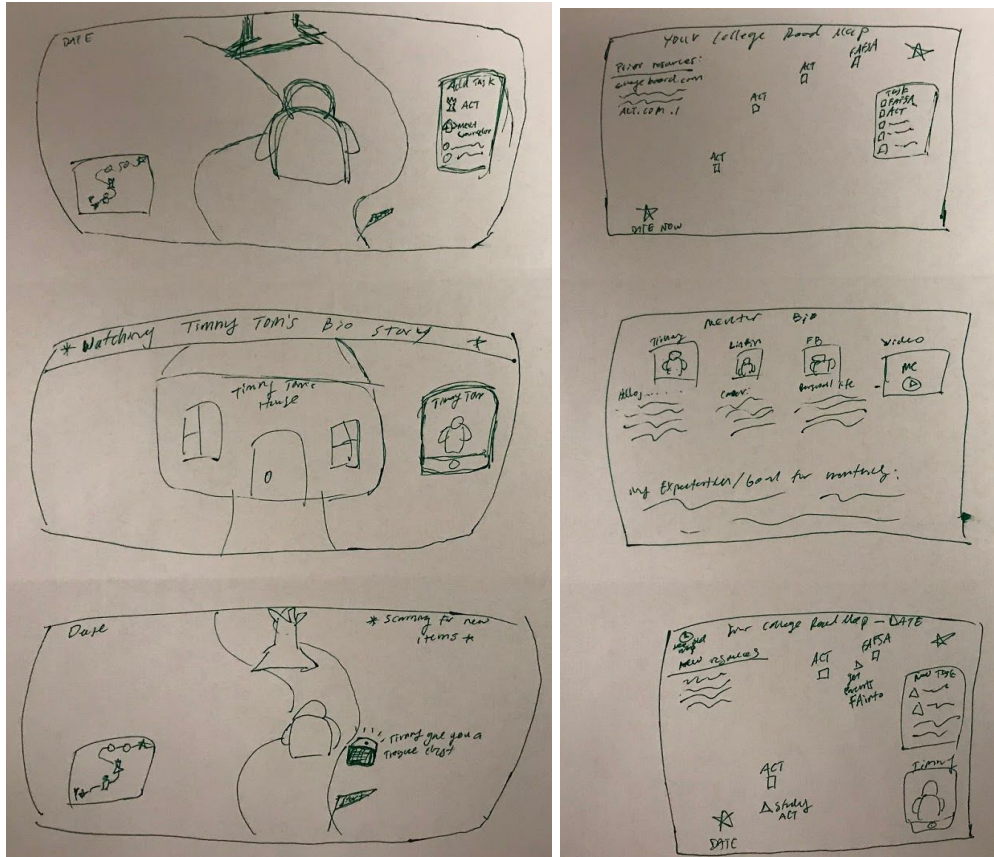


Figure 2: iPad interface



Figures 3, 4: VR (left) and desktop app (right) interfaces

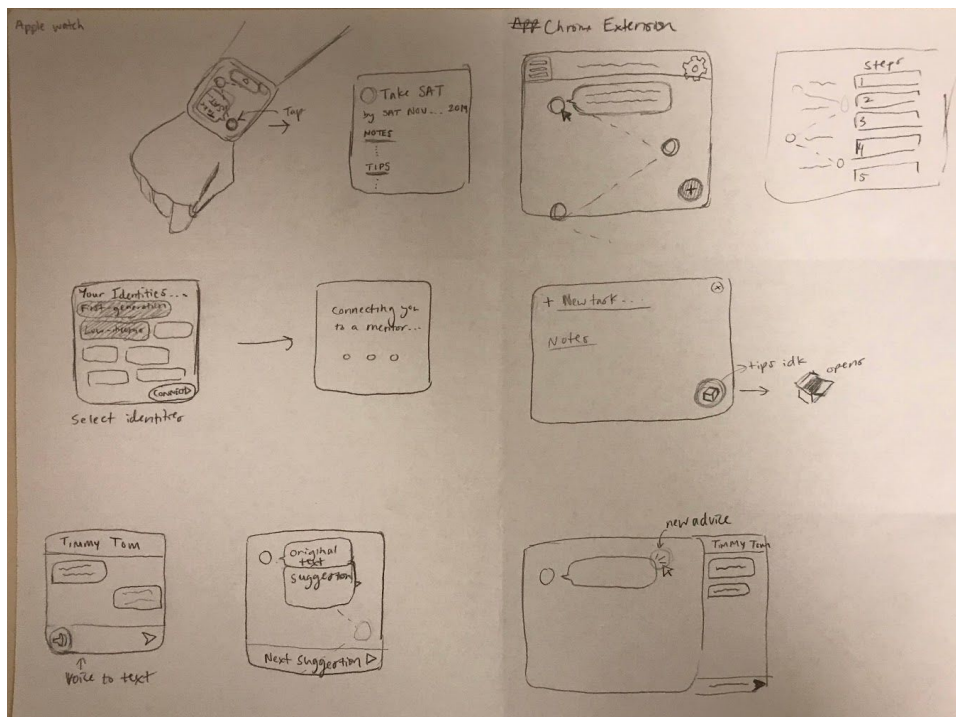


Figure 5: Apple Watch (left) and Chrome browser extension (right) interfaces

Selected Interface Design

Storyboards

From the above sketches, we each decided on the phone app and Apple Watch as ideas we would be excited to pursue and implement. The storyboards for each are below.

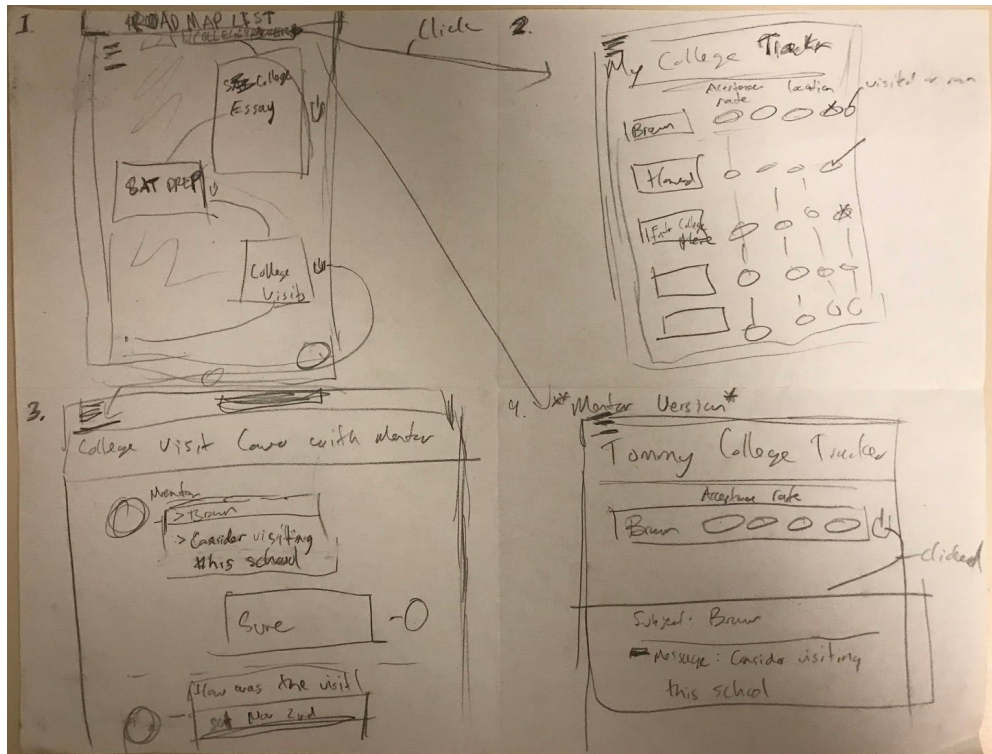


Figure 6: Phone app storyboard showing some functionality of the app, such as adding various events or chatting with the mentor. We focused on creating a modular design that would be intuitive to navigate.

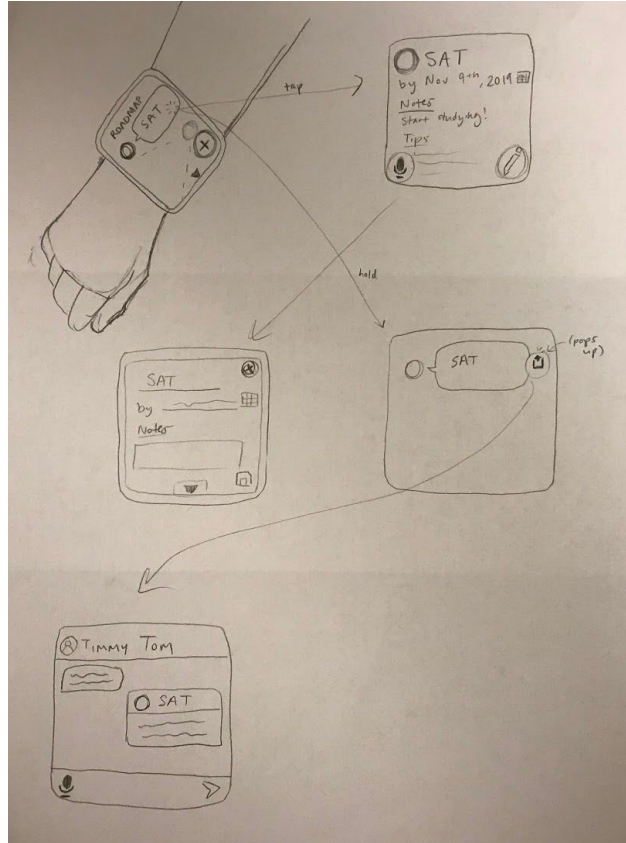


Figure 7: The Apple Watch storyboard showing a similar task process as above. For this idea, we focused on making the design compact and easy to navigate on such a small device.

Selection Process

Phone app

Pros	Cons
<ol style="list-style-type: none"> 1. People are already comfortable with phone UIs, so there won't be a steep learning curve. 2. Accessibility; most people have a phone, meaning it's accessible to underrepresented and under-resourced students. 3. Phones that have messaging capabilities make connecting with a mentor more feasible. 	<ol style="list-style-type: none"> 1. A small screen means that there are design limitations to take into account; we can't fit everything. 2. There are many mobile device resolutions that we would have to account for in designing our screens. 3. Lack of novelty and innovation. Everything is an app. We won't be challenging ourselves much by "building another app."

Apple Watch wearable

Pros	Cons
<ol style="list-style-type: none">1. Convenience of usage; you can easily make notes in the app for any ideas for your road map.2. Novel in use of Apple Watch scrolling methods to scroll through the UI road map vertically.3. Our app having a modular design would work very well with how compact everything has to be on this wearable.	<ol style="list-style-type: none">1. It will be a bit difficult to fit in much of the data we need to put in on the screen since everything has to be compact.2. The app is meant to be interactive. You need to spend probably more than five minutes on it each time, so it might not work well with the battery life.3. Nobody in our team is familiar with how to really use the Apple Watch.

After considering the pros and cons for each of these two options, we decided that the best interface to move forward with was that of the **phone app**. We decided this based on:

1. The phone app allows for flexibility in a modular design. We can utilize components that are the same shape but have different purposes (be it College Essay, SAT, or College Visits). This is crucial from a design perspective because there is a lot of potential to overload the screen. With different boxes and shapes for each type of “destination” on the “college road map”
2. We want to be able to produce something that is more widely accessible. We want the user to interact with this app without financial hurdles, solving the design problem of accessibility.
3. As an app, it would be more advantageous for the user to use the many interfaces as an app on a phone than watch - e.g scrolling through college road map, adding somewhat long/complex notes, communicating with counselor, etc.

Initial Storyboarded Flows

We focused on storyboarding the main three tasks that we defined for our app.

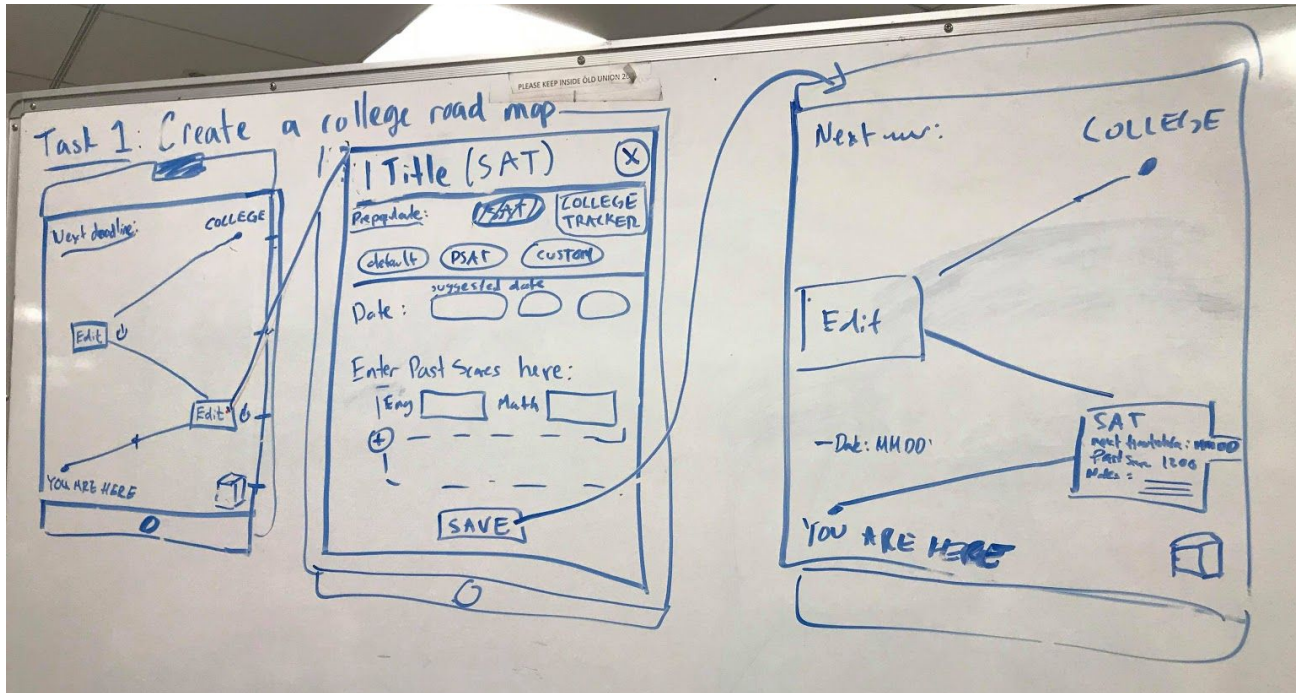


Figure 8: Sample flow of the high school student creating a college road map. We outlined how the map will appear to them at first and how they can add/edit an event to their map.

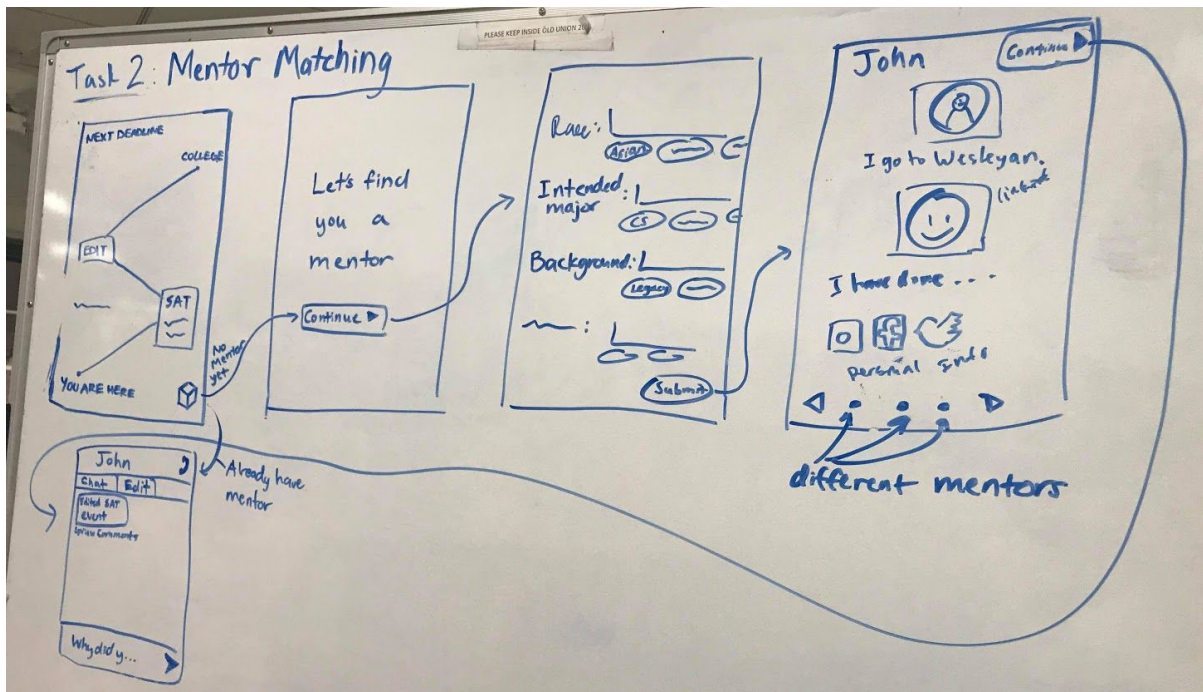


Figure 9: Sample flow of how the high school student can match to a college student mentor. We provided a flow for if the student did not already have a mentor (thus the matching process) and a flow for if the student already has a mentor and just wants to access the chat with the mentor.

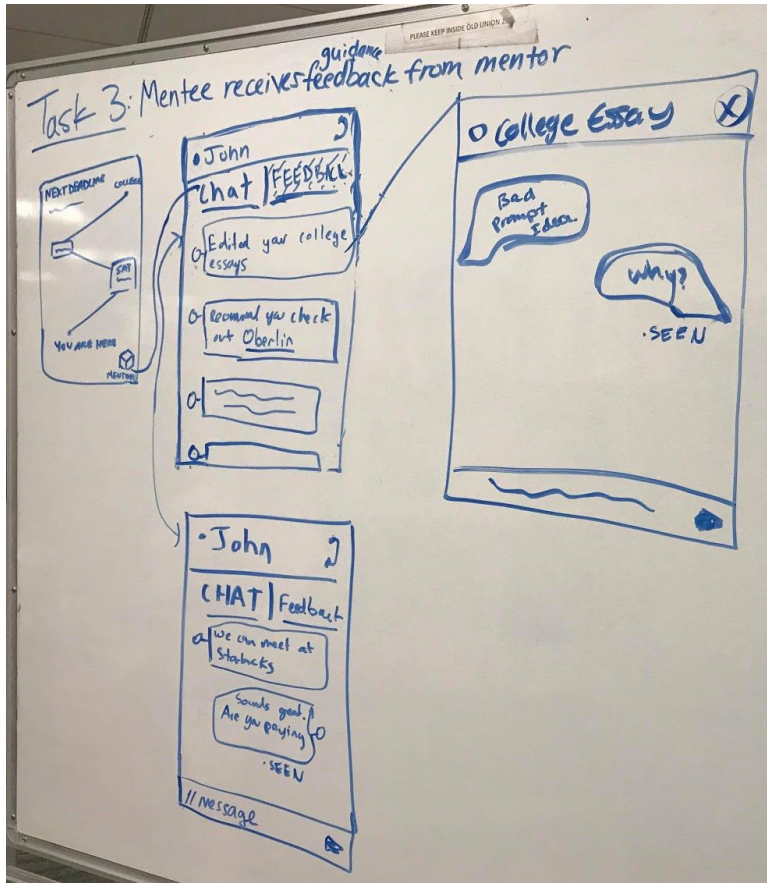


Figure 10: Sample flow of how the high school student can view/receive feedback and guidance from their mentor. Tapping on an icon in the bottom right leads to a chat window with their mentor, which can display a general chat and a section specifically for feedback.

Prototype

This low-fi prototype is mobile app that you interact with by using touch input through the screen. The interface isn't novel but we believe the map UI the user will scroll through looks pretty cool.

Task 1 - Adding an SAT step to the roadmap

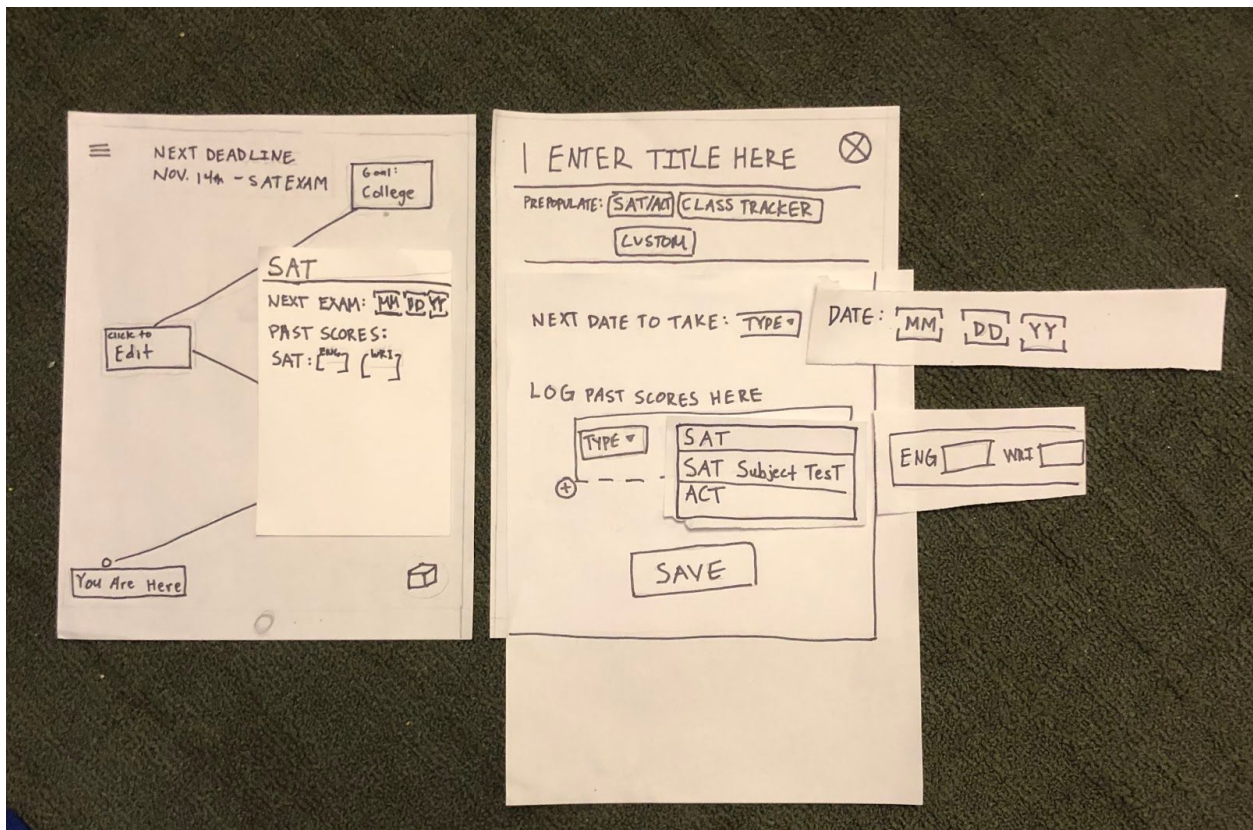


Figure 11:

Actionable items:

- (What buttons there are to click)

Task 2 - Connecting/matching with a mentor

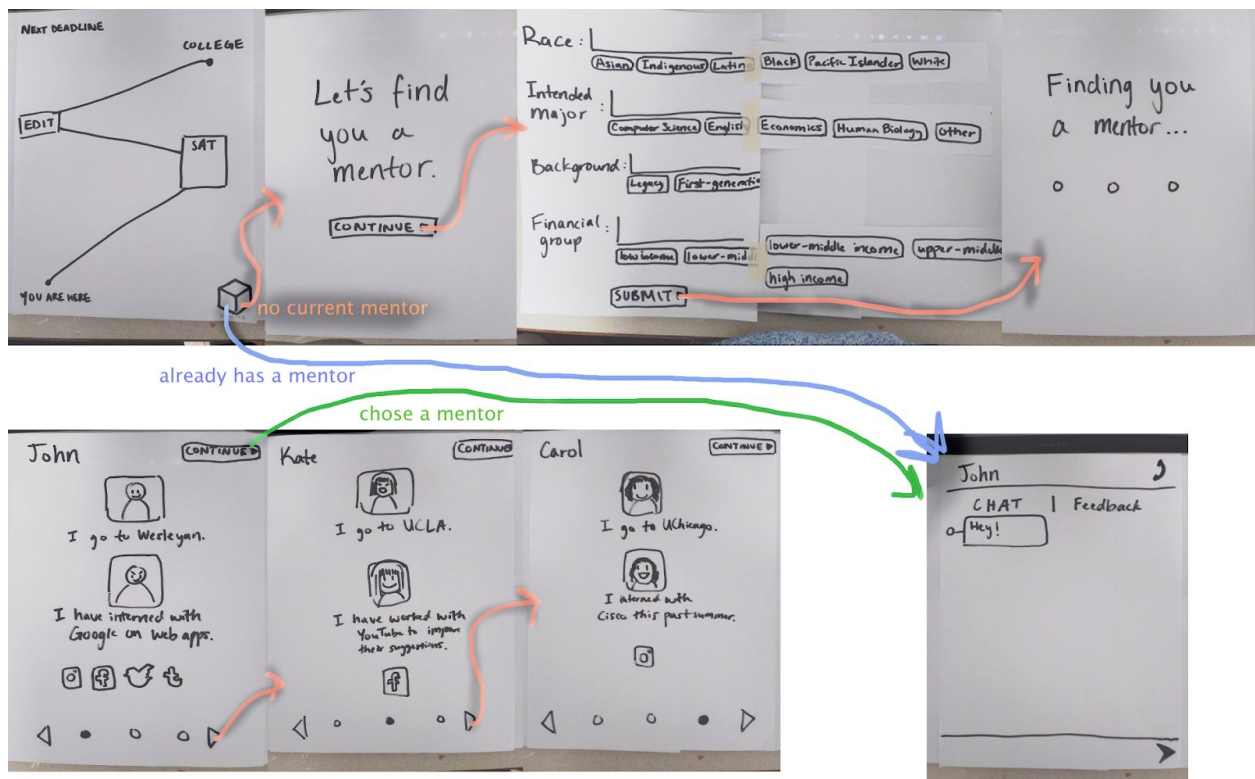
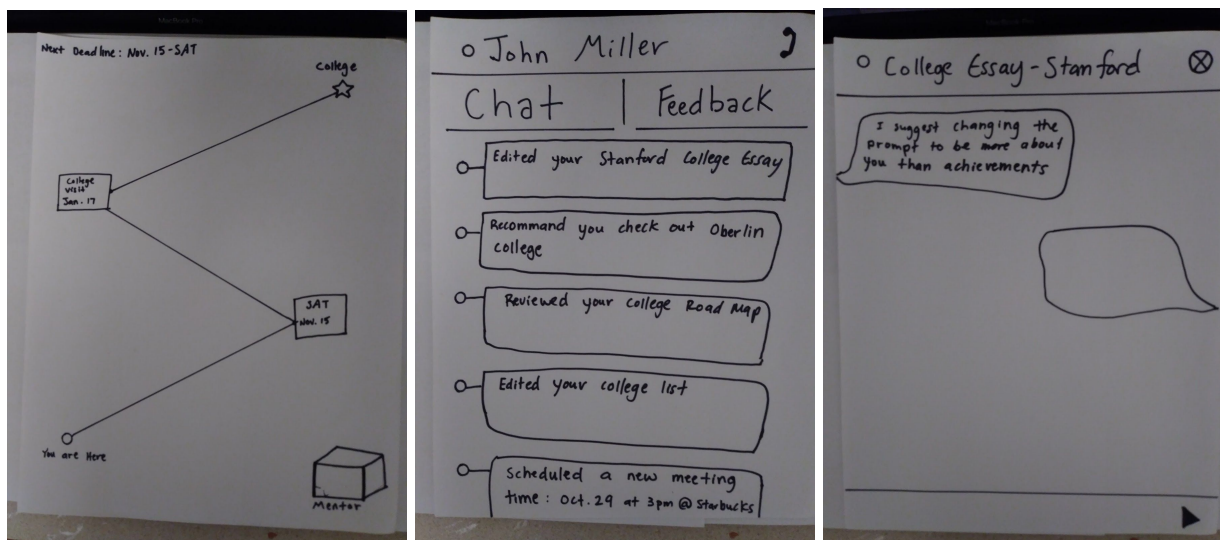


Figure 12:

Actionable items:

Task 3 - View messages and feedback



Figures 13-15:

Method

Participants

All participants that we recruited for the study were not compensated. We simply asked if they would be willing to participate in our study and then provided a brief description of our project. Two were typical users, high school students hoping to go to college and one was a Stanford student with experience working at a college access program and an Ed-Tech VC firm.

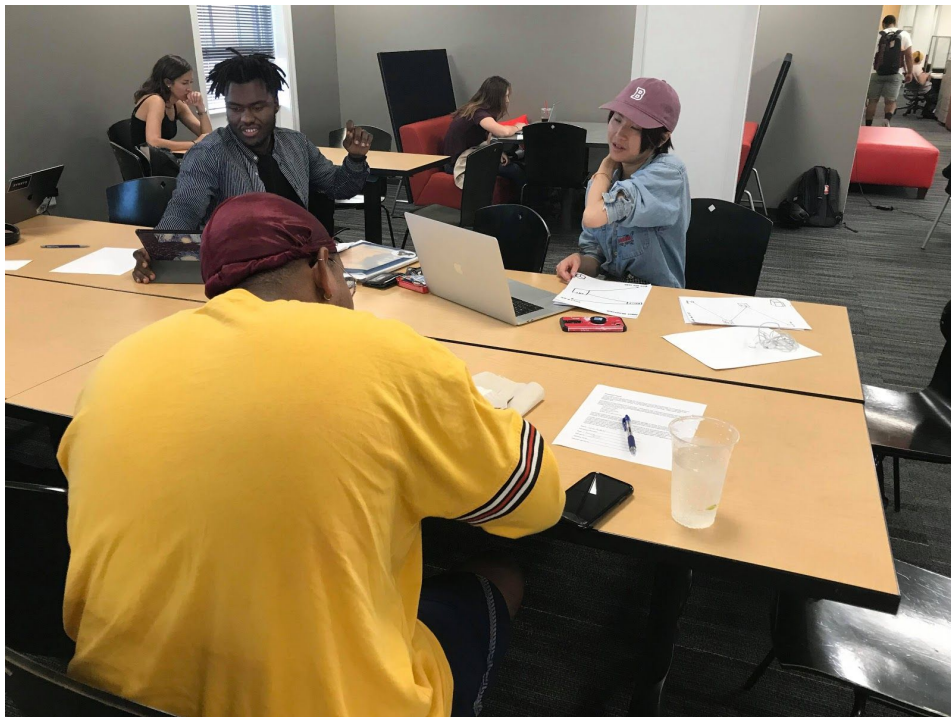


Figure 16: Doing the usability testing of the prototype on the college student.



Figure 17: Doing the usability testing of the prototype on the high school sophomore (right, short-sleeved shirt).



Figure 18: Doing the usability testing of the prototype on the high school junior (left, white shirt).

Environment

To secure the two high school participants, we went to the Town & Country area in the afternoon. We interviewed the college student participant in Old Union. Both of these environments were calm and quiet environments.

Tasks

We asked the participants to navigate the three tasks specified previously:

1. Moderate - Have the participant create a college roadmap
2. Complex - Connect the participant with a college student/mentor of a similar background
3. Simple - Receive/view guidance and feedback from the mentor

Procedure

1. We began our testing by asking if participants were of the age group we were looking for (a college student and two high school students) and asked for around 10 minutes of their time.
2. We then gave a brief explanation of our app and what we hope to accomplish with it, all without showing any sort of demonstration of how to use our app.
3. We then asked them to perform the tasks above in that order, asking them to mimic tapping on the screen.
4. After task was completed we asked questions and for feedback.

On the rare occasion that a participant was confused, we often asked them for their own thoughts and would not provide an answer unless it inhibited the remainder of the task.

Test Measures

The group was especially careful to note **if a user hesitated to tap on a particular item** (time spent per action) and **if the user was confused at any point or made any errors**. If the user spent a relatively small amount of time on a particular item or screen, it was classified as a success. Similarly, if the user made no errors or had no questions (the interface was intuitive), then it was also seen as a success.

Team Member Roles

As mentioned above, we all took turns facilitating throughout each one of the tasks. Mamadou was in charge of facilitating the first task, Gray the second, and Pao the third. Additionally, Pao acted as the primary greeter for our group in order to allow the rest of us time to set up the testing. The computer role was delegated to the facilitator, since they knew the setup of their

task the best and could ensure a smooth transition between screens. The remaining two people were recorders/observers.

Results

From our prototype testing, we discovered that:

- Many participants wanted to make certain event details optional (i.e. next SAT exam date).
- The node placement on the map is confusing; some people navigated to the wrong node or to one that was out of order.
- Participants either couldn't find or hesitated before clicking the box to access communications with mentor .
- Participant 3 was worried about safety surrounding picking a mentor.
- Participant 3 was confused as to how they would go back and edit their scores if they wanted to. They assumed they would click on another node in our map, which isn't the case.
- 2 out of 3 of the participants did not know how to pick a mentor, whether they should select "Continue" or click on the profile itself.

Discussion

Throughout this testing process, overall, we learned that our design was intuitive and fairly simple to navigate. The tasks were completed without much trouble and in an appropriate time. The participants even got faster navigating through the app as they were given more tasks to complete. However, most of our results tell us that we need to iron out the details on what a "node" (or a piece of the roadmap is) and how to use that node to log/track parts of your roadmap.

As for how the results will **change the design** of our interface and for **what did we learn...**

- In the case of adding the SAT event, people did not want to fill in certain portions, such as the next test date, if they were already satisfied with the SAT score they filled in. Thus, next time, we will out all things that are optional or add an asterisk to all things that are required
- As for the node placements, we will look into sample/pre-filled nodes. Or perhaps, we could simply only have one starter node, rather than two, in order to prevent confusion on where to add the first event to the map.
- The mentor icon needs to stand out more; we should either adjust the contrast or make it an actionable item or button that's clearly labeled "Mentor"
 - Participant 3 suggested adding some sort of mentor icon as a node on the map itself.

- In regards to the security concerns over picking a mentor; the high school students wanted to know if the mentor was safe and would be helpful. Perhaps we offer them a link to the mentors linkedin account or somehow show we have verified that they are indeed a student at XYZ university

Appendix

Word count: 1469 (not counting the image descriptions)

Consent Forms

Consent Form

This student team is interviewing and observing as part of the coursework for Computer Science course CS 147 at Stanford University. Participants provide data that is used to understand the possible opportunities of the design. Data will be collected by interview, observation and questionnaire.

Participation in this experiment is voluntary. Participants may withdraw themselves and their data at any time without fear of consequences. Concerns about the experiment may be discussed with the researchers ([TEAM MEMBERS NAMES HERE]) or with Professor James Landay, the instructor of CS 147:

James A. Landay
CS Department
Stanford University
650-498-8215
landay at cs.stanford.edu

Participant anonymity will be provided by the separate storage of names from data. Data will only be identified by participant number. No identifying information about the participants will be available to anyone except the student researchers and their supervisors/teaching staff.

I hereby acknowledge that I have been given an opportunity to ask questions about the nature of the research and my participation in it. I give my consent to have data collected on my behavior and opinions in relation to the [TEAM NAME HERE]'s research. I also give permission for images/audio records/video of me being interviewed to be used in presentations or publications as long as I am not personally identifiable in the images/video. I understand I may withdraw my permission at any time.

Name Gary Anhalt

Participant Number _____

Date 10/22/14

Signature [Signature]

Witness name _____

Witness signature _____

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Name Kathleen Lum

Participant Number _____

Date _____

Signature [Signature]

Witness name _____

Witness signature _____

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Name [Signature] Elf Turgut

Participant Number _____

Date 10/1

Signature [Signature]

Witness name _____

Witness signature _____

Figures 19-21: Consent forms of participants 1, 2, and 3, in order from left to right, top to bottom.