

Medium-Fi Prototype

readme:

https://docs.google.com/document/d/12pqbYq7LoDfZ_F8bS2NyRcFnQxHYDVcKIV2qdjgBhbA/pub

Problem and Solution Overview

kindergarten is on a quest to make the distribution of office hours and the quick review of concepts in college **as easy as kindergarten**. We want to facilitate student and instructor communication and gather feedback to improve the learning experience for everyone involved.

We are creating a mobile app to equalize the distribution of office hour attendance over the course of a quarter and to ease the collection of in and out-of-class student feedback and short “clicker”-style quizzes directly on a phone. The quizzes will test whether students understand the concepts that professors try to present, office hours surveys will provide feedback about how much help students need for an assignment or concept, and polls will enable professors to learn about the disposition and learning goals of their students.

Tasks

We imagine the user using Kindergarten through three tasks.

The most simple task is something a student would do in the first class: they would be informed by an instructor that the class will use Kindergarten, they will bring up the app, add the class to the class listing and then take a poll about learning goals (simply adding the class would not be a real task). **A medium task** would be being prompted in class to fill out a poll or a quiz, and then taking the popup notification to do so to provide that feedback. **A more complex task yet** would be signing up for office hours, meaning giving instructors feedback about how many office hours they need to have, and implicitly how many people are confused by the instruction.

The important refinement we made from the previous tasks was the task of adding a new class, because this is a sine qua non for the actual usage of the app.

Interface Design

The most important constraint from the final target platform which we have to consider is the specific sizing and the room that each specific phone gives us. We did not have the resources

to do a responsive design for the medium-fidelity prototype, so we did the prototype as we would see it on an iPhone.

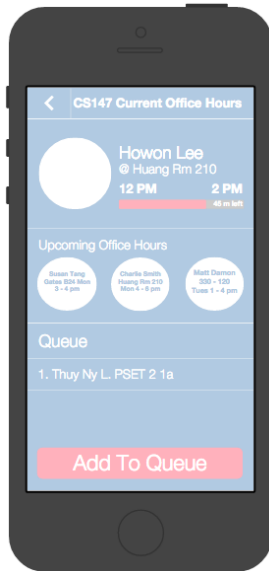
The first screen is a splash / initialization screen, which poses a list of classes. You can add a class (pursuant to the first task) by pressing the button. We previously had an *Alerts* button on the front screen, but we decided that users should not be able to opt out of push notifications on the front screen.



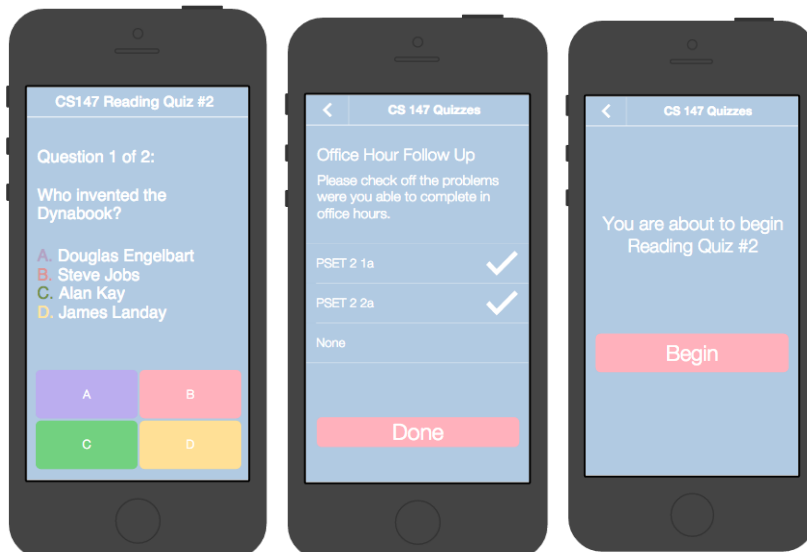
Once a class is tapped, a menu screen specific to the class appears. That menu screen has a button for *Office Hours*, *Polls* and *Quizzes*. It has a button pointing back towards the splash screen.



The *Office Hours* screen allows the student to inspect the office hours for the class and how many people are in any current office hours which are happening, and to sign up for office hours. There is a back button on the screen, and the upcoming office hours scheduled for a class. You don't need to input questions anymore for the office hours survey screen, and you can remove yourself from the queue if you figure things out.



The *Polls* and *Quizzes* screen are listings of polls and quizzes, respectively, (active ones first) which the user can tap to take a poll or a quiz. Each quiz allows you to tap an answer for multiple-choice or true-false questions. There is a “Start Quiz” page before each quiz, in order to ready the user for what comes next.



We took to heart the things that both our subjects on the low-fi subject investigation and our fellow section members had to say about our design, and incorporate those changes into our design. Specifically, we were told that not only was a swiping UI widget easily confused for a clicking one, but that swiping on one quiz is acceptable, but swiping many times gets tiring, so that aspect of the design has been excised. It must specifically be noted that polls and quizzes are differentiated now, because they are differentiated in the user's mind.

Scenarios

1:

It's the first day of CS106A. A boggling mass of people file into the room, and when they read the message on the projector - "Poll 1 on kindergarten", they each take their phones, busily put in "CS106A" on their class list, and can access their first poll, which will tell the instructor about the demographics of the course: "How much programming experience do you have?" "What's your gender?" "Are you an undergraduate?"

2:

There's just enough people at office hours - you see, you know, you use kindergarten - that you don't quite want to just go and wait in line, but it's really imperative that you get the solution from Alice - Bob is really not quite competent at Riemannian differentiable manifolds - and so you just put yourself on the queue.

3:

An hour into class in CS147, a certain professor says, "Alright. It's reading quiz time. Close your laptops and get out your phones." The studentry do so. "What did Alan Kay invent?" Obviously, the answer is "Smalltalk".

Prototype Overview

We used proto.io for the prototype. We anticipated that the lack of swipe implementation would be a difficulty, but we excised the swipe functionality from the design, so this was fortunate. Only one person could work on our proto.io account at once, which was an annoyance. Fairly ironically, the tool itself does not have a very customizable UI, and the UI is quite complicated: there is a learning curve. But the positive aspects of a convenient widget toolkit, viable transitioning via screens, and a unified, simple way to get our design on a screen were the important points.

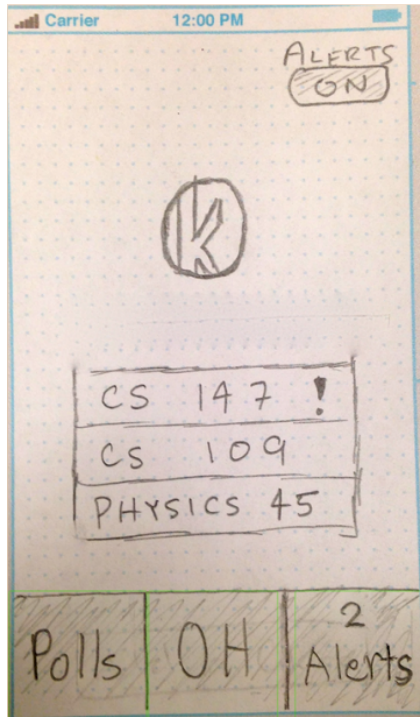
We did not implement more than one class in the prototype itself, because that would be redundant. We also hardcoded in the class name along with TA office hours. You are not able to enter in the class name, because text entry is very hard in the proto.io interfaces and it's quite orthogonal to the UI itself.

Appendix

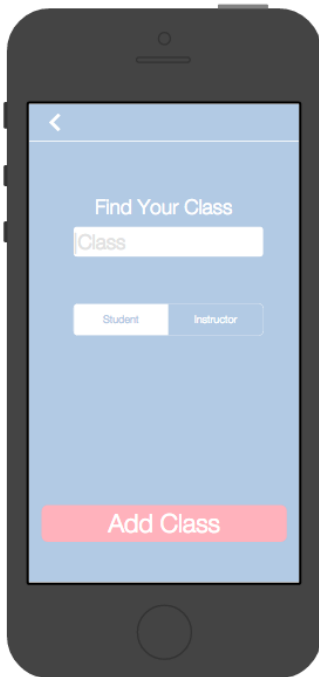
Before Adding a Class (juxtaposed with lo-fi)



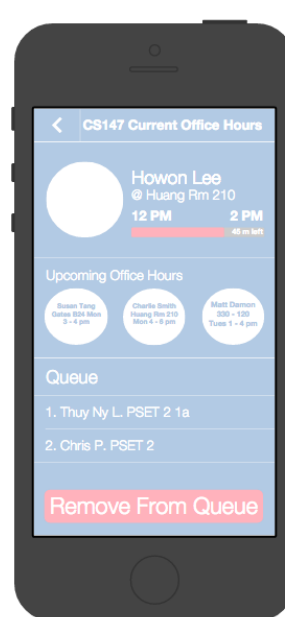
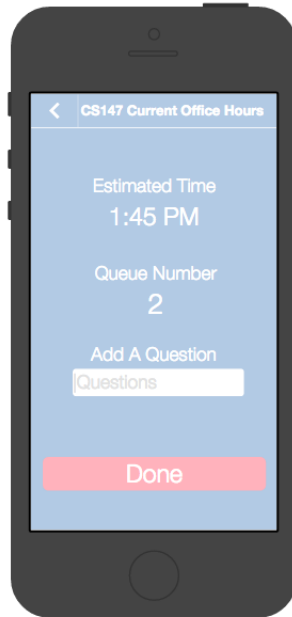
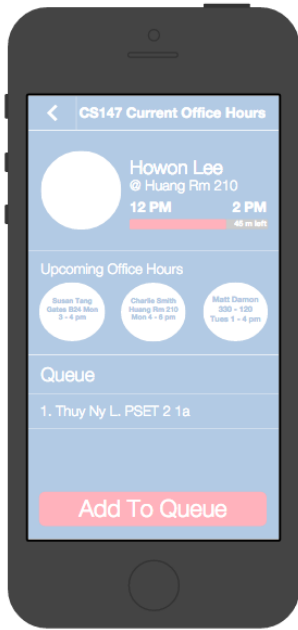
Choosing Polls, Quizzes, OH's (juxtaposed with lo-fi)



Adding A Class



Whole Office Hour Cycle



Quiz Entry Screen

