Magic Hw: Med-Fi Prototype

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Value Proposition

Homework that Helps You

With long lecture videos, multitudinous lecture slides, and little one-on-one time with instructors, it’s difficult for students to get the information they need. MagicHW aims to make it easy for students to find the exact resources that they need and connect with other students, as well as to provide personalized feedback on homework assignments and tailored exam review material to cater to their unique strengths and weaknesses.

Tasks

Task 1

You can use MagicHW to look at an upcoming pset, and easily get access to relevant material

Task 2

OLD: You can receive personalized feedback on graded pset.

NEW: Added - When you get a question wrong you can connect with someone who got it right.

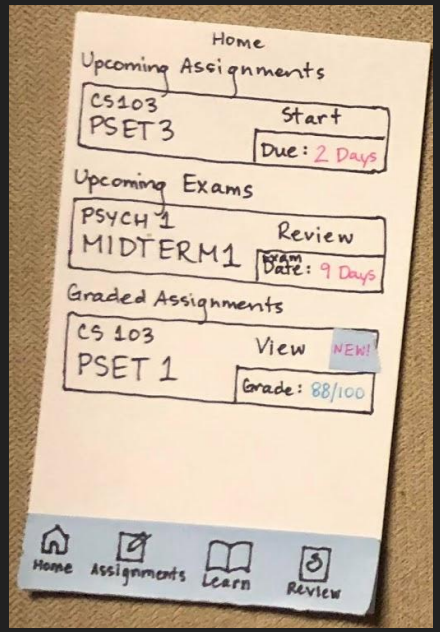
Task 3

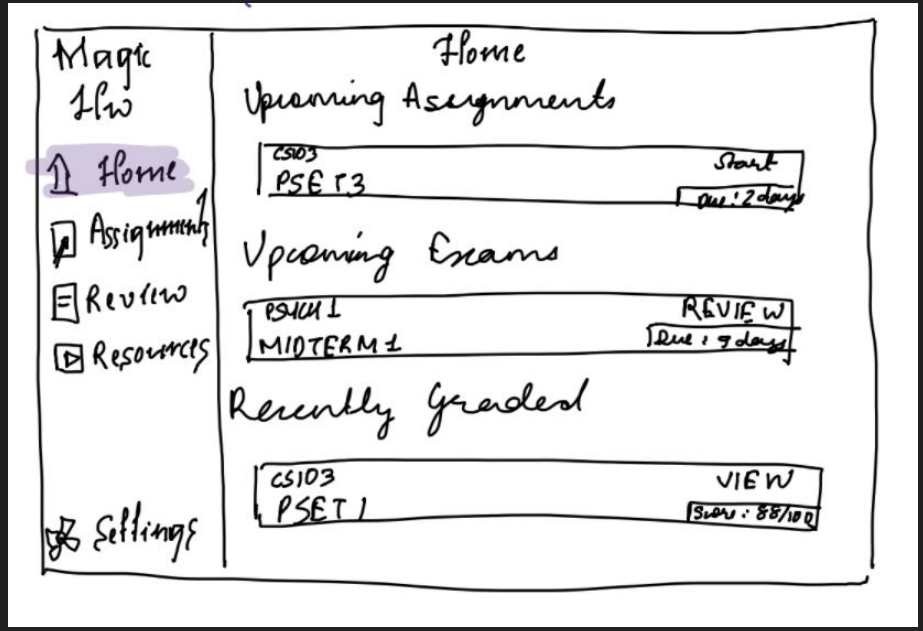
OLD: You can receive a review sheet comprised of past missed problems and problems from previous exams

NEW: You can create a custom review sheet that covers multiple units with recommendations from our AI

Major Design Changes

#1 Mobile to Tablet





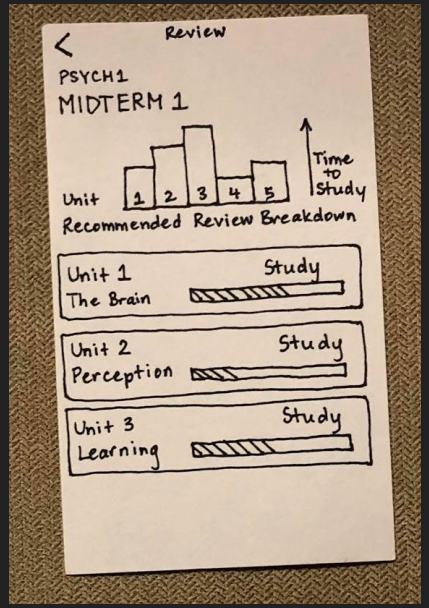
Before

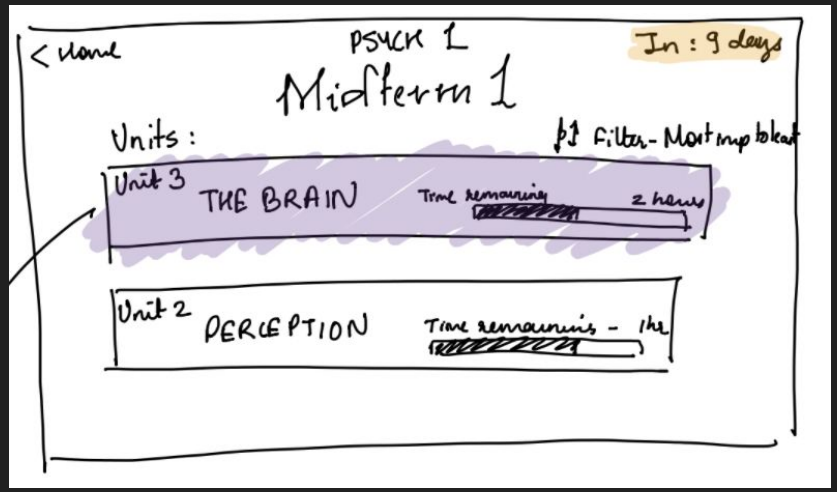
After

#1 Mobile to Tablet

- Our biggest change between the low-fi sketches and the new sketches this week was moving from a mobile application to a tablet application
- We modified all the design elements to adapt to a tablet interface (eg: menu on the side, as opposed to on the top, bigger menu items)
- **Rationale** - The tablet application has more screen space which provides a better interface for a homework application. Students are more likely to do their homework on a tablet, as opposed to on their phone.

#2 Simplified Analytics





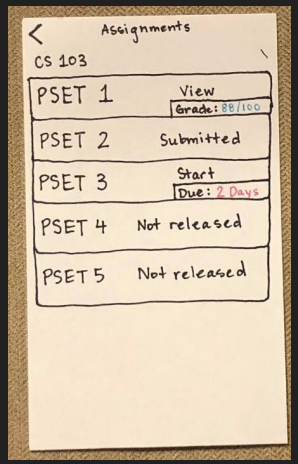
Before

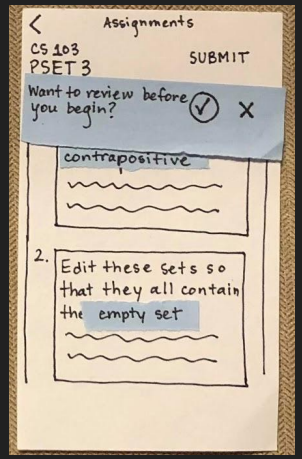
After

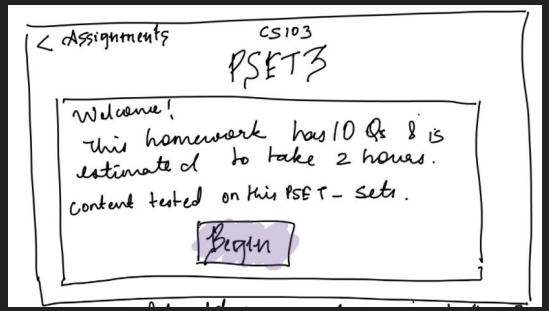
#2 Simplified Analytics

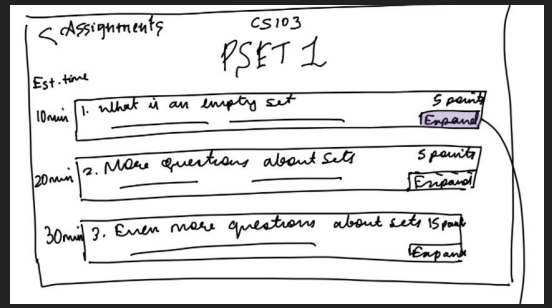
- We switched from complex analytics showing time taken to study a topic, recommended review breakdown, progress, importance on midterm etc to a simple interface that sorts units as “recommended”. This weighs all the factors mentioned above and presents it in a simple list. The only metric presented is “time remaining” as a progress bar.
- **Rationale -**Through all our interviews last week, we got the feedback that the analytics we presented were very confusing and hard to interpret. They did not help the students in any decisions about which modules to pick.

#3 Previews/ Time taken









Before

After

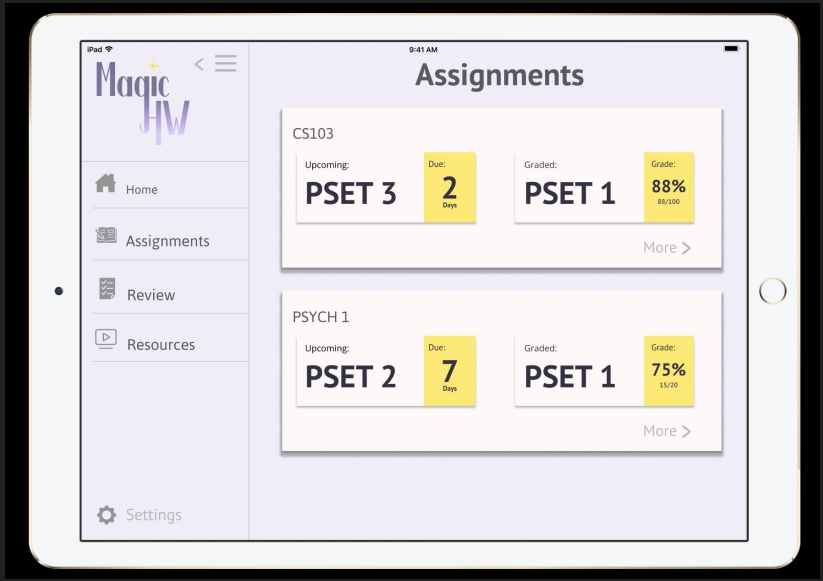
#3 Previews/ Time taken

- Another recurring feedback that we got from our users last week was it was hard to know what problem/PSET they should start working on (given their time constraints). The app interface also provided no knowledge about a problem/PSET before it’s clicked on
- To remedy these issues, we added “Estimated time taken” to each problem/PSET as well as each midterm review Unit
- In addition, we added short snippets of text describing the content of each PSET/ problem, along with useful information such as number of points for each question

Task Flows

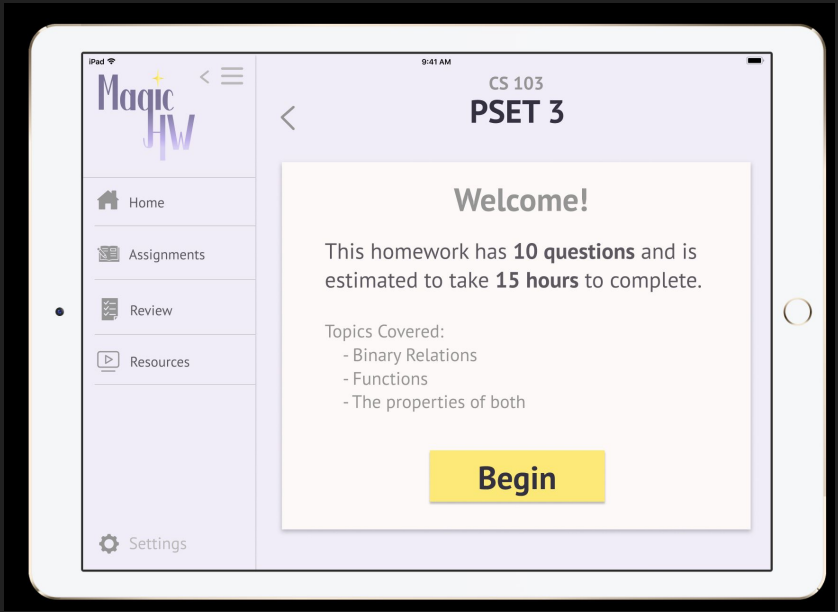
Task 1: Access material relevant to upcoming PSET

Click on “Assignments”

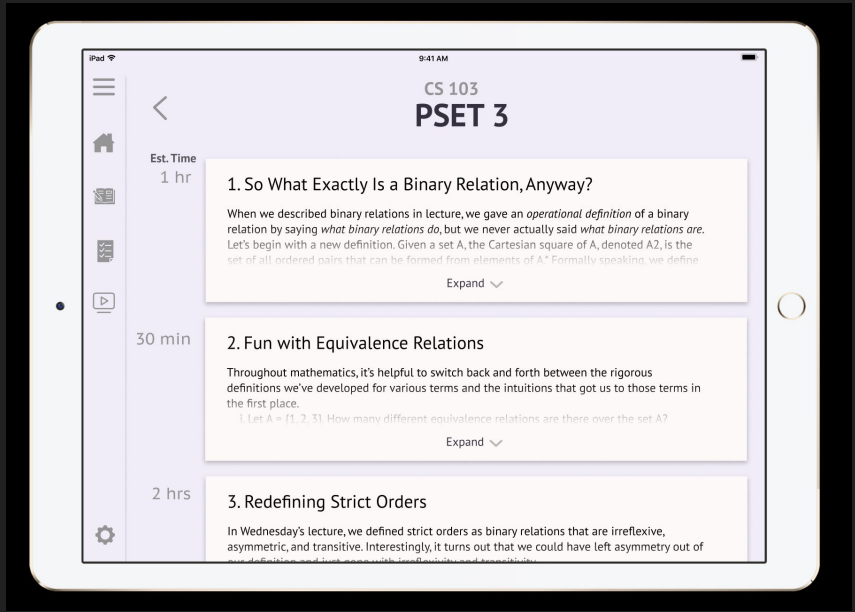


Click on “PSET 3”

Task 1 (Continued)

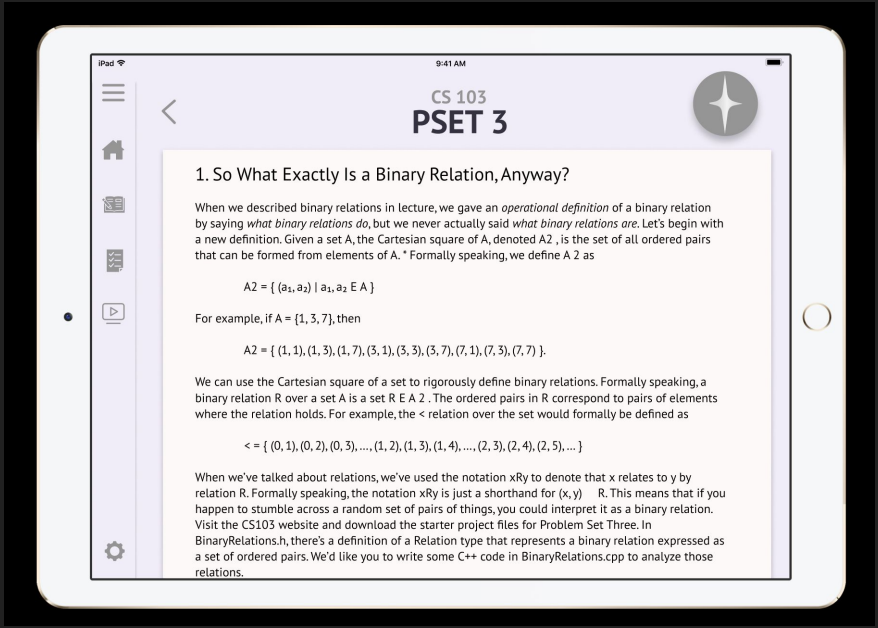


Click on “Begin”

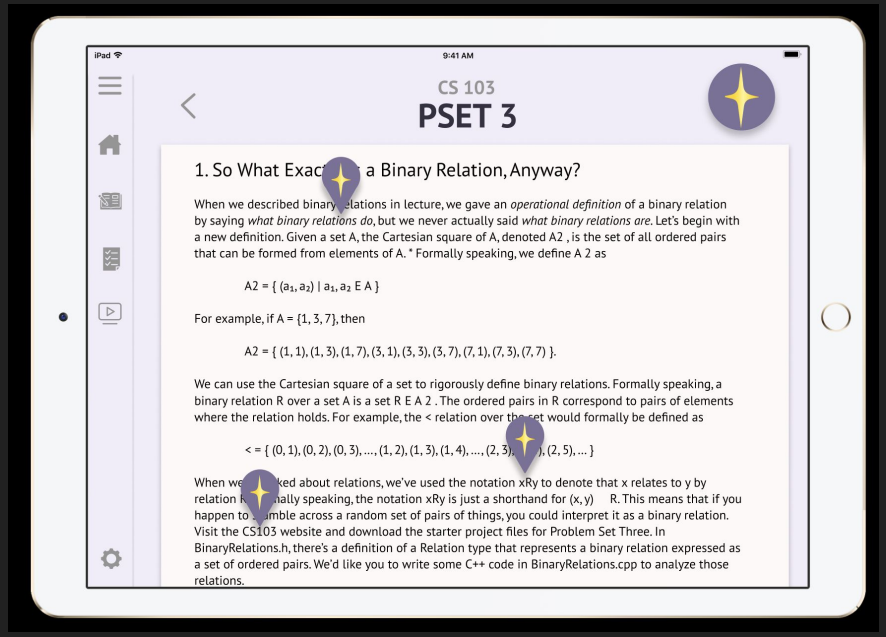


Click on “Expand”

Task 1 (Continued)

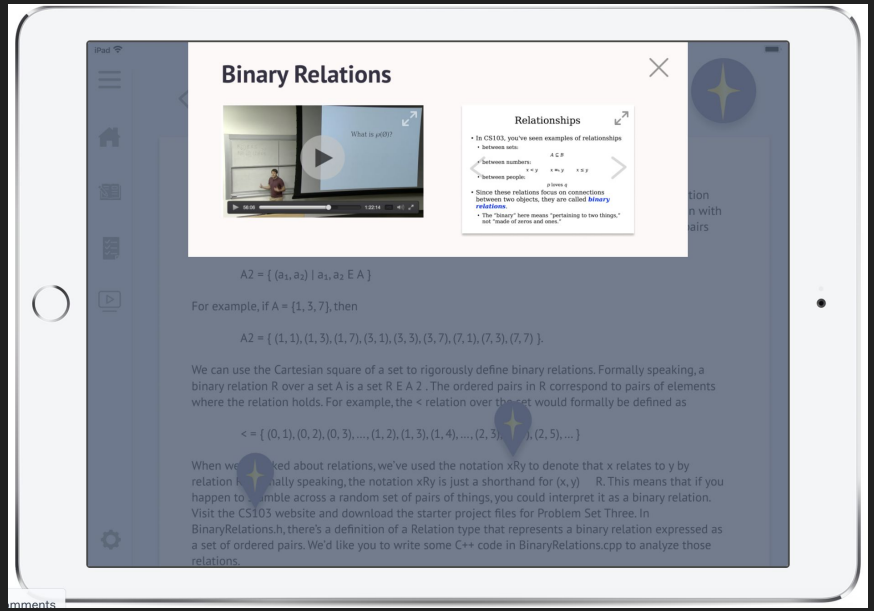


Click on grey button at top

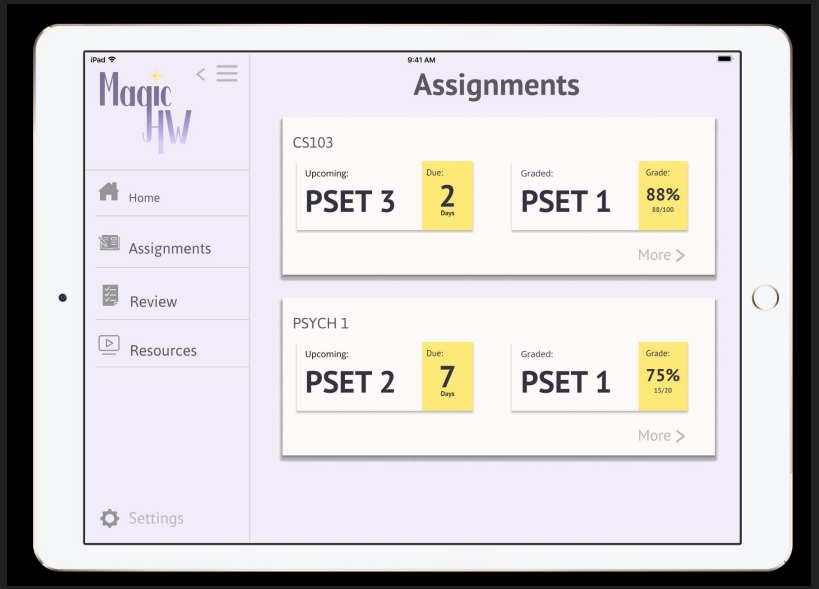


Click on the first pin

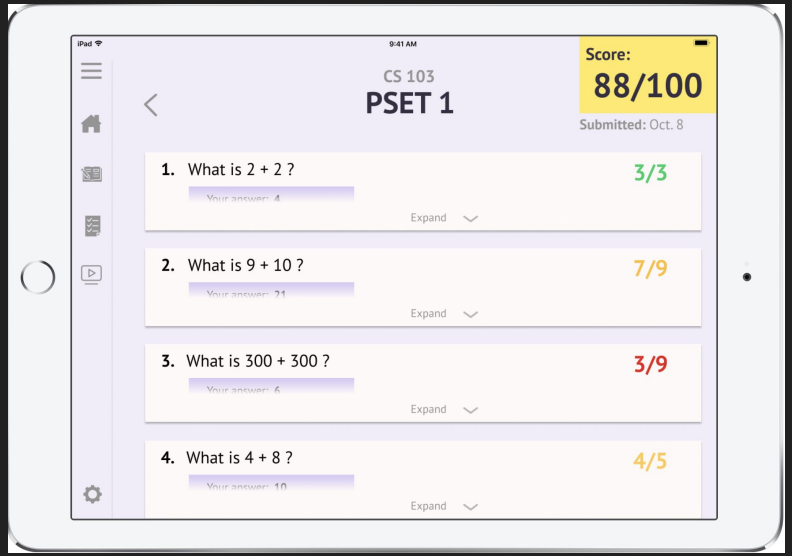
Task 1 (Continued)



Task 2: Get feedback when you get a problem wrong and connect with a student

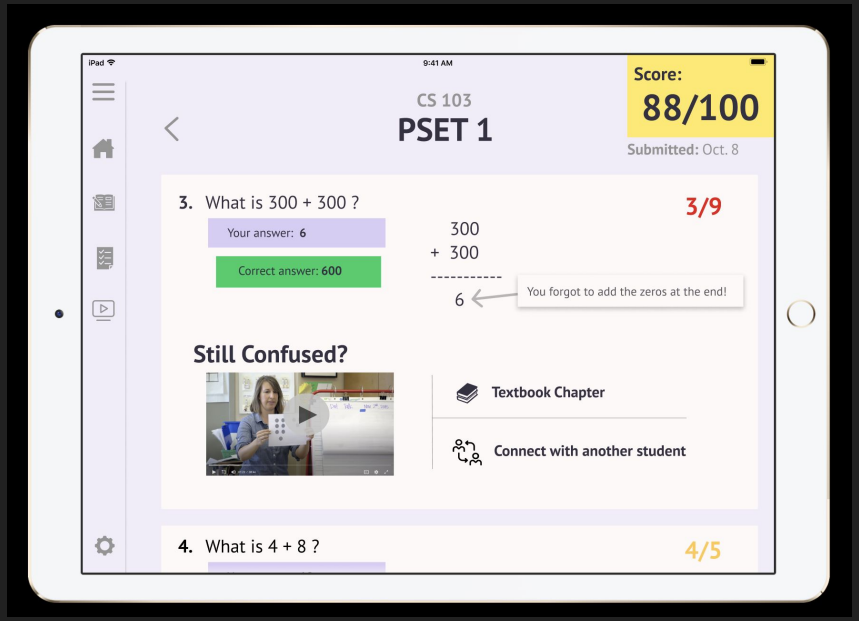


Click on “PSET 1”

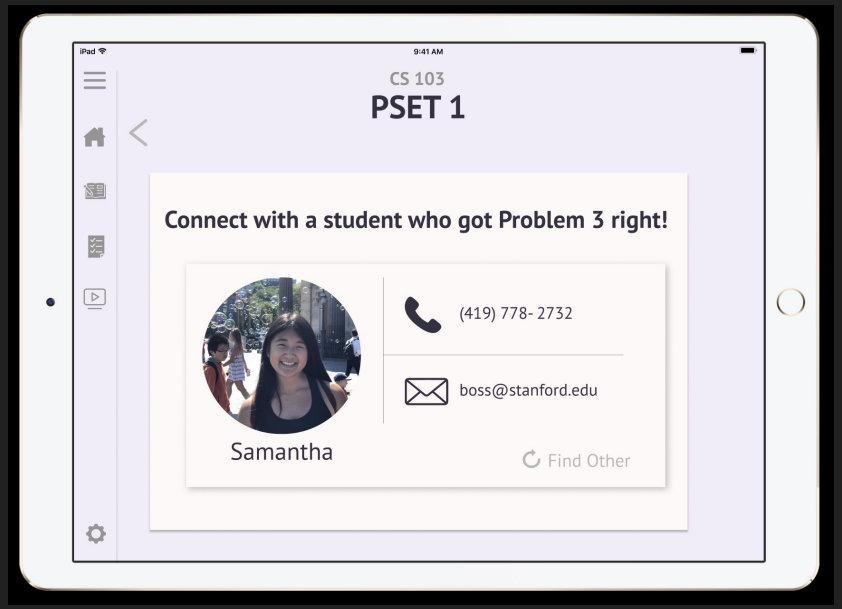


Click on “Expand” for Q3

Task 2 (Continued)

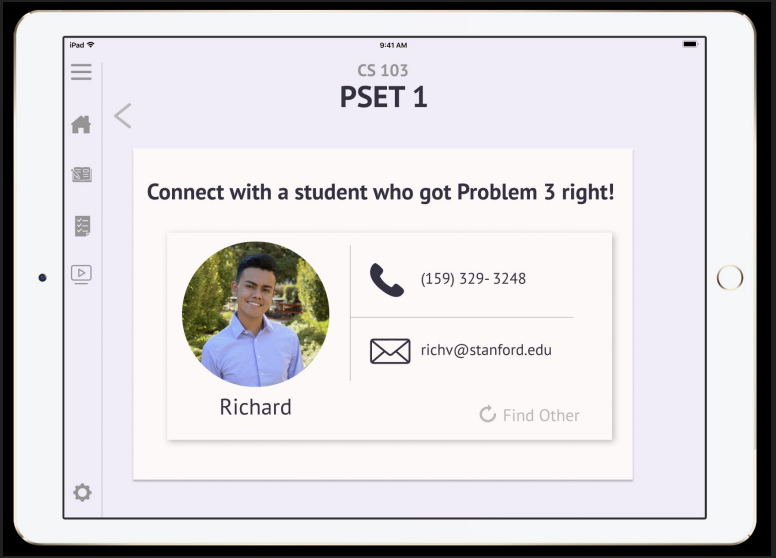


Click on “Connect with Another Student”

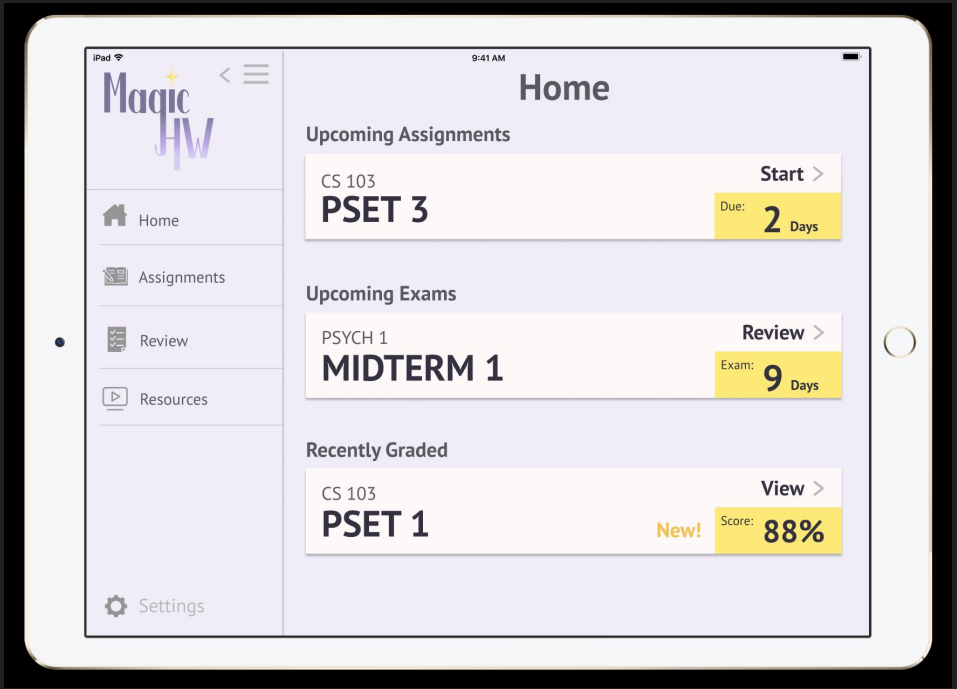


Optional : Click on “Find other”

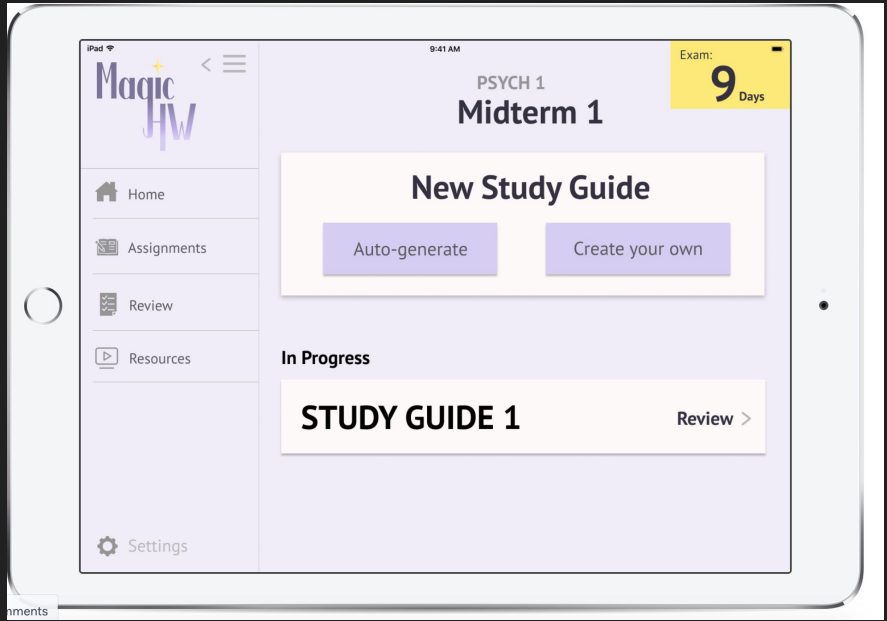
Task 2 (Continued)



Task 3: Create a custom review sheet

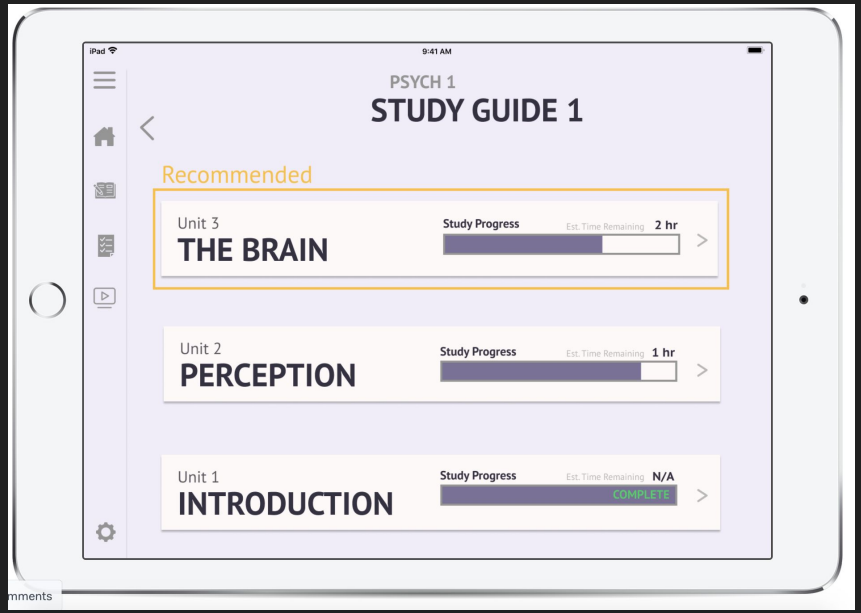


Click on “Review” for Midterm 1

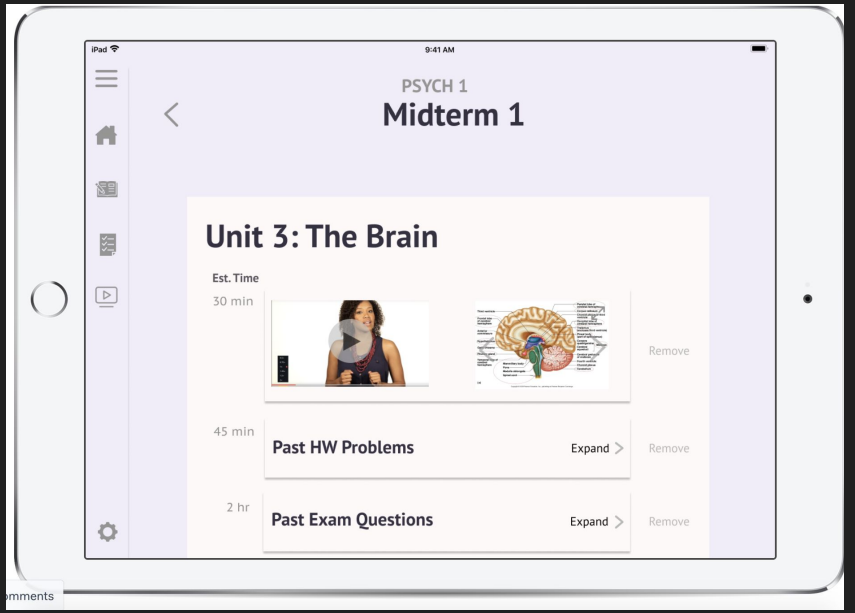


Click on “Review” next to “Study Guide 1”

Task 3 (Continued)

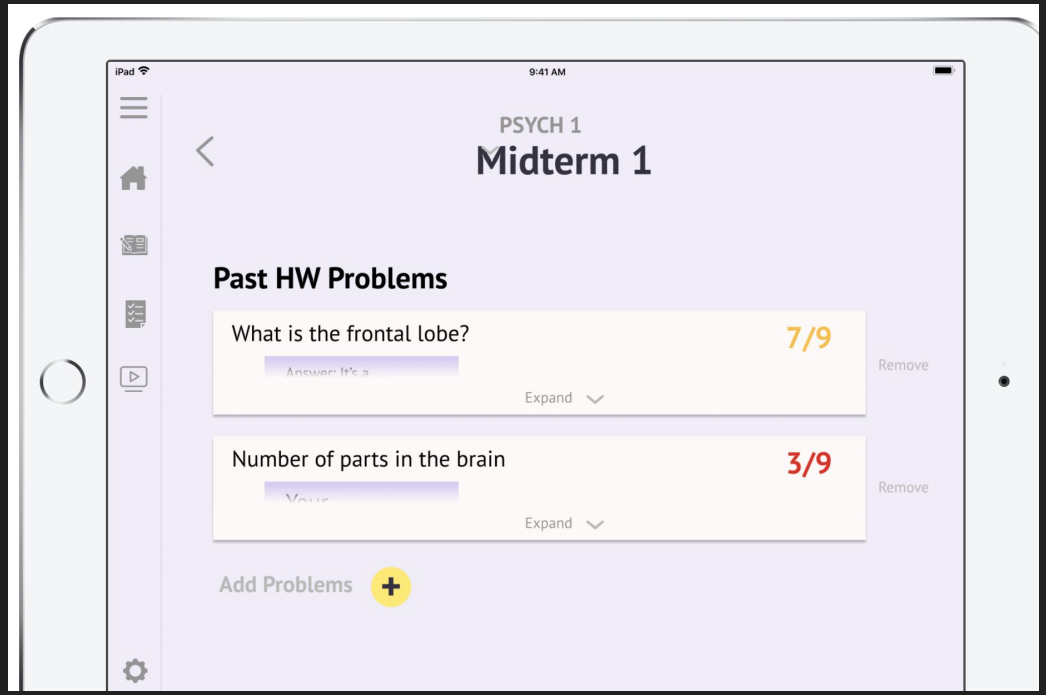


Click on “Unit 3”



Click on “Expand” next to past HW problems

Task 3 (Continued)



Prototype Overview

Prototyping Tools

- **We used**
  - Figma
  - Marvel
- **How the tools helped**
  - Collaborative - all members could work on different aspects of the project at the same time
  - Keyboard shortcuts were consistent with other tools (i.e. Adobe Illustrator) and intuitive
  - Easy to make aesthetically pleasing screens
-

Prototyping Tools cont.

- **How the tools did not help (especially in comparison to Adobe)**
  - Fonts were limited to ones included on Figma, or those available free online. A complicated process to have everyone install the fonts
    - If using Adobe Creative Cloud, font integration is much easier
  - Tools are less robust than Adobe software
  - Various functionality requests:
    - Figma
      - Make it easier to un-make a component
      - Capability to lock placement of components/objects across screens or make it easier to align the same object between frames
      - A general master screen
    - Marvel
      - Allow manipulation from the Userflows page
      - Make it easier to access the Userflows page
      - Make the screens smaller when editing so the entire screen can be viewed

Limitations of Current Prototype

- We did not implement the following things for task 3 -
  - Creating a new review sheet/ Customizing a review sheet
  - We added place holders for adding/removing parts of the review sheet but the envisioned implementation for a custom review sheet (drag and drop system) was too complicated given the time constraints. We had to reduce our interactions all to click interactions
- We did not implement the “Resources” tab since it was not a part of our task workflows
- We only implemented the task workflows for a single class
  - Assignment related workflows are only implemented for CS103
  - Midterm related workflows are only implemented for PSYCH 1
  - This was because we had limited time and the core functionality would simply have to be duplicated across classes

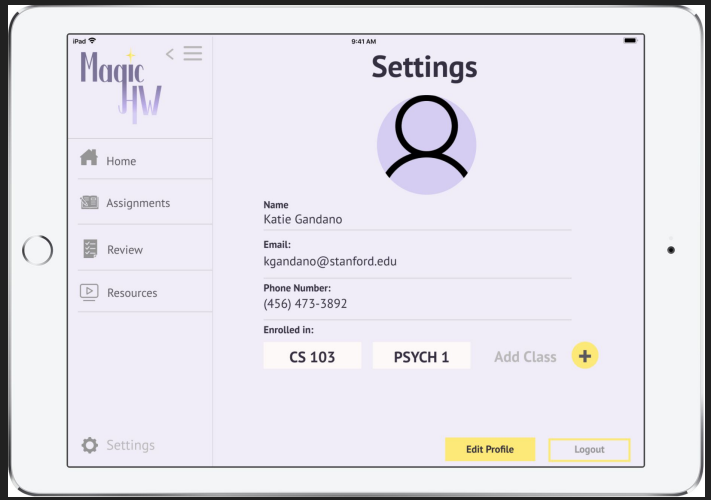
Hardcoded features

- Login screen is there to show a login system but doesn't actually let you put in your own information
  - **Why hardcoded -** Hard to track user input in Marvel
- The settings page is populated with hardcoded info
  - **Why hardcoded -** Same as above
- The classes and assignments are currently hardcoded in while the actual version will pull from the user's classes.
  - **Why hardcoded -** We haven't implemented the integration with Canvas to have this feature
- When selecting a new student to review with on problems you got wrong, we hard coded in 2 people
  - **Why hardcoded -** We don't have any real users to match with
- The review material and progress is all hardcoded
  - **Why hardcoded -** We picked two classes just to demonstrate basic functionality

Wizard of Oz features

- Time taken for a unit for midterm review/ a problem on the PSET
  - Currently, random numbers. Ideally, these will be predictions based on a student's past performance
- There are "pins" on key words in problem sets that provide more information about that concept.
- The videos accompanying each problem set/midterm unit
- The explanation for why a problem was done incorrectly
- Generating a custom review sheet
  - This will ideally be done using an AI that takes into account a student's past performance on PSETs

Appendix: Additional Prototype Screenshots



Settings