Collaboration Team

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The Problem

- Many students have questions in class.

http://www.onlineuniversities.com/blog/2012/07/10-ways-twitter-is-reinventing-college-lecture/

The Problem

- Not all students ask their questions in class.

https://www.flickr.com/photos/pagedooley/13905987989

The Problem

- Instructors don’t know if students have questions.

http://www.washington.edu/dreamproject/get-involved/join/

Who has a question???
http://www.washington.edu/dreamproject/get-involved/join/

http://www.washington.edu/dreamproject/get-involved/join/

The Problem

- Students don’t remember every topic to study.

https://www.flickr.com/photos/quatar/10102090525

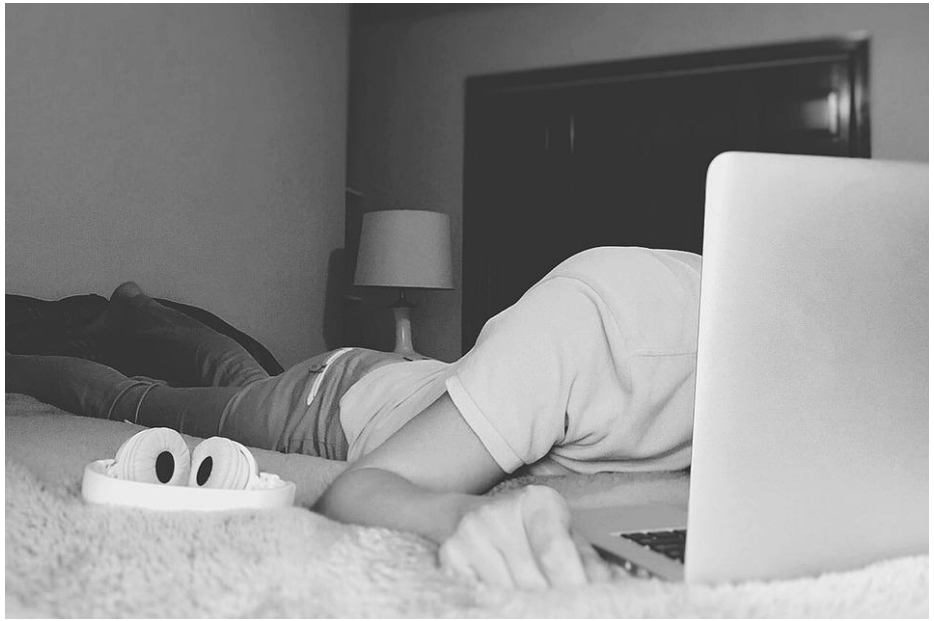
The Problem

- Students don’t remember every topic to study.

https://www.pexels.com/photo/laptop-computer-macbook-apple-7361/

The Problem

- Students don’t remember every topic to study.



https://pixabay.com/en/study-internet-laptop-bed-1265858/

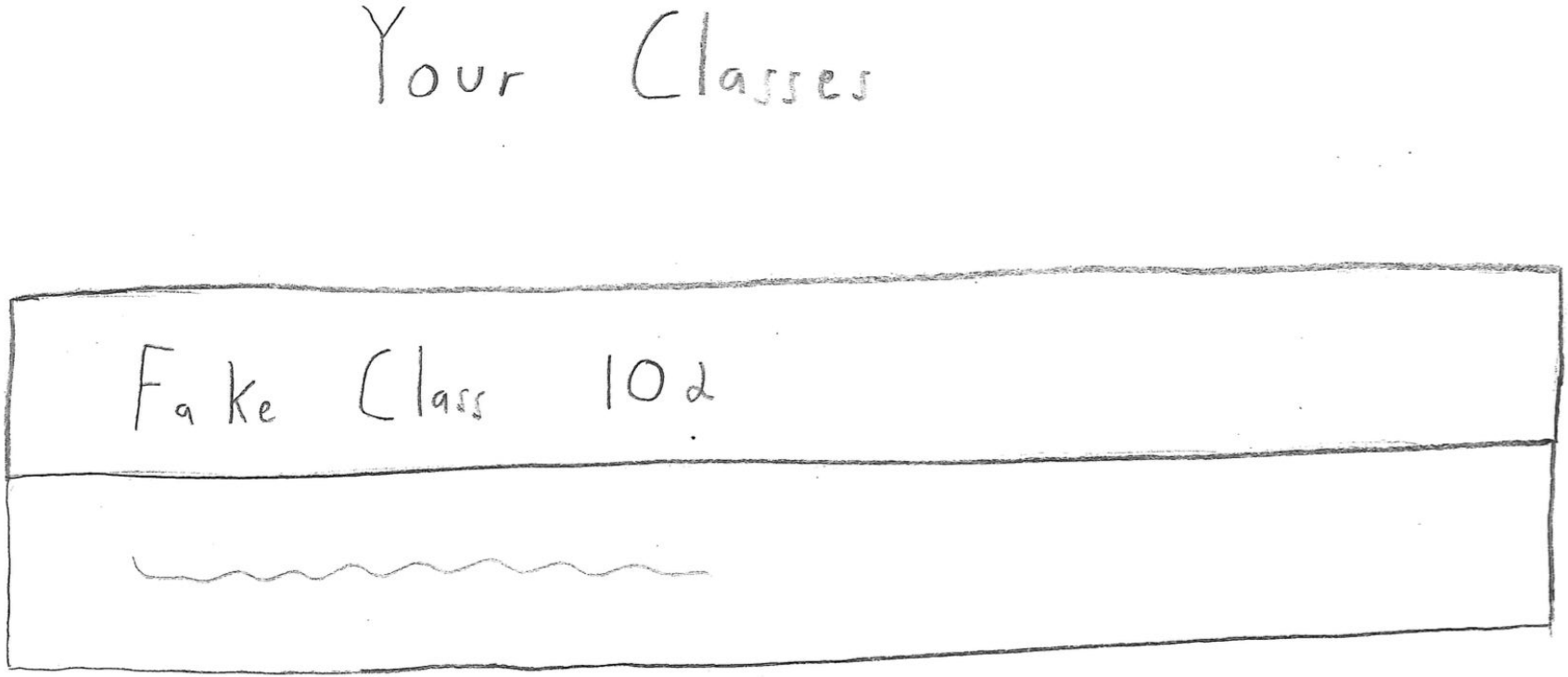
The Problem

- Many students have questions in class.
- Not all students ask their questions in class.
- Instructors don’t know if students have questions.
- Students don’t remember every topic to study.

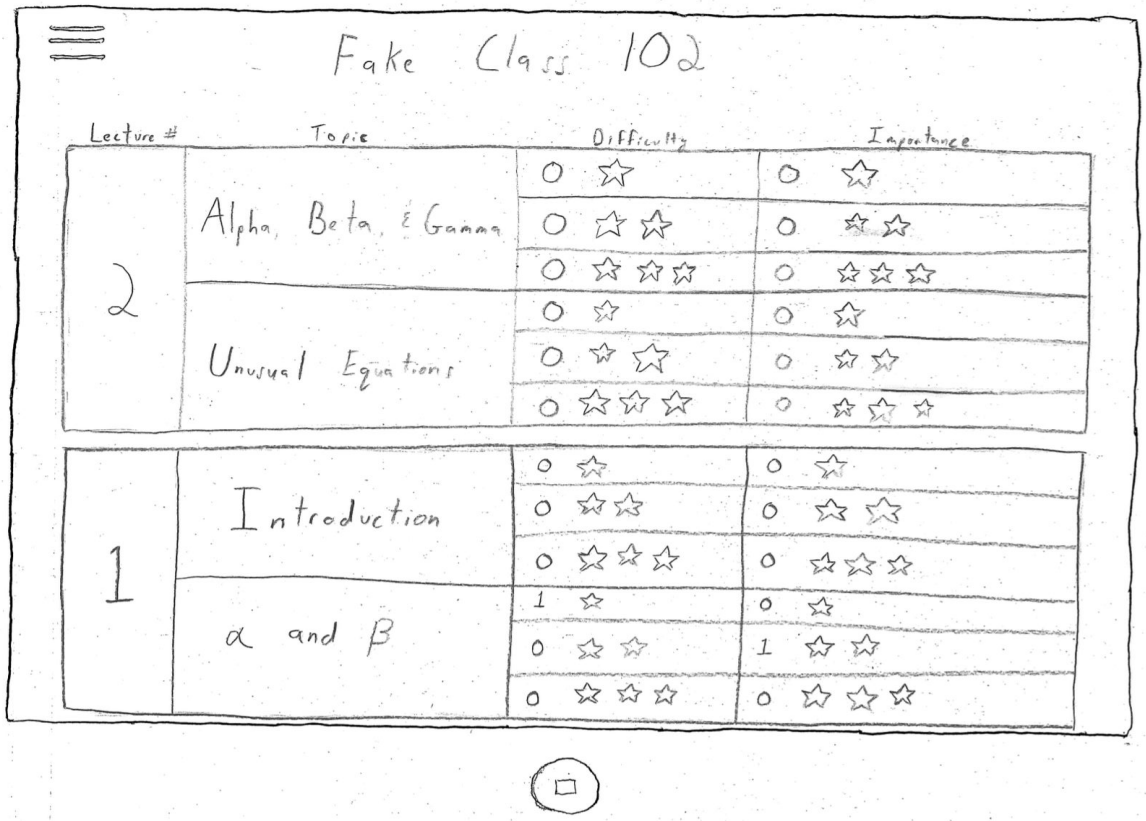
The Tasks

- Community Driven Questions
- Data Driven Study Planning

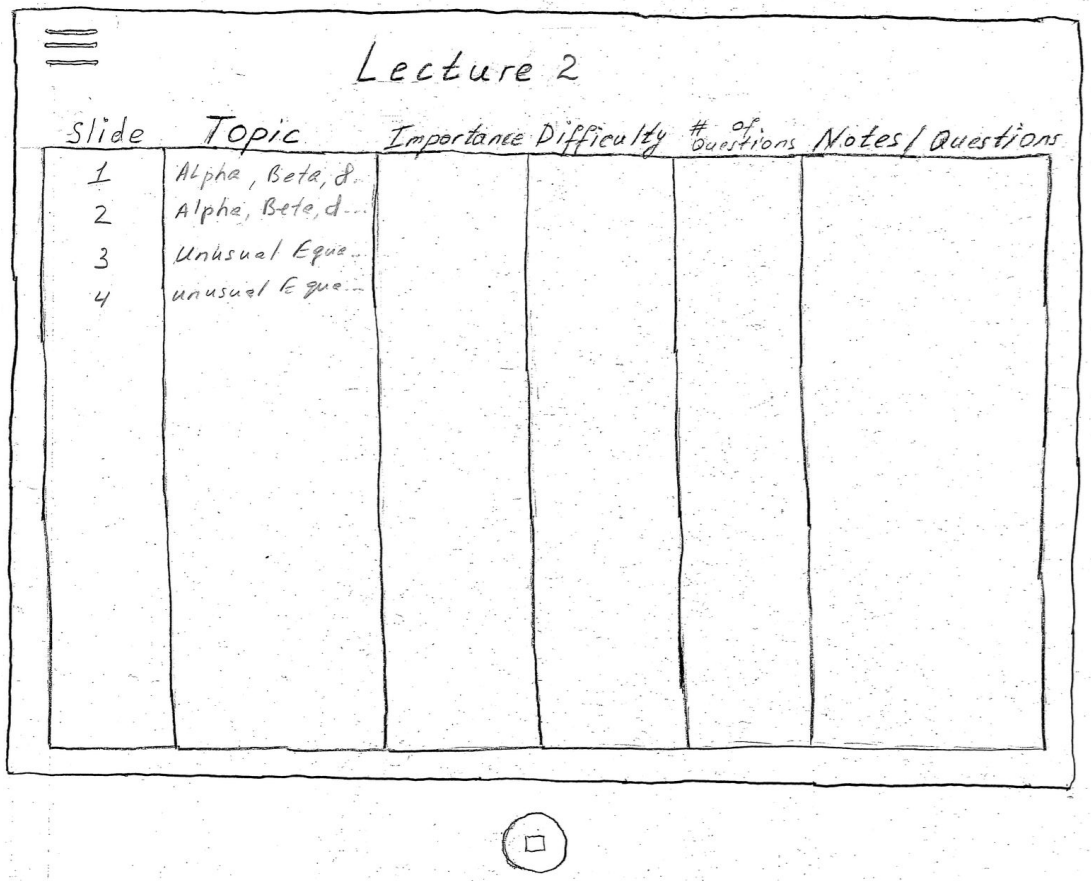
Initial Paper Prototype - Home Screen



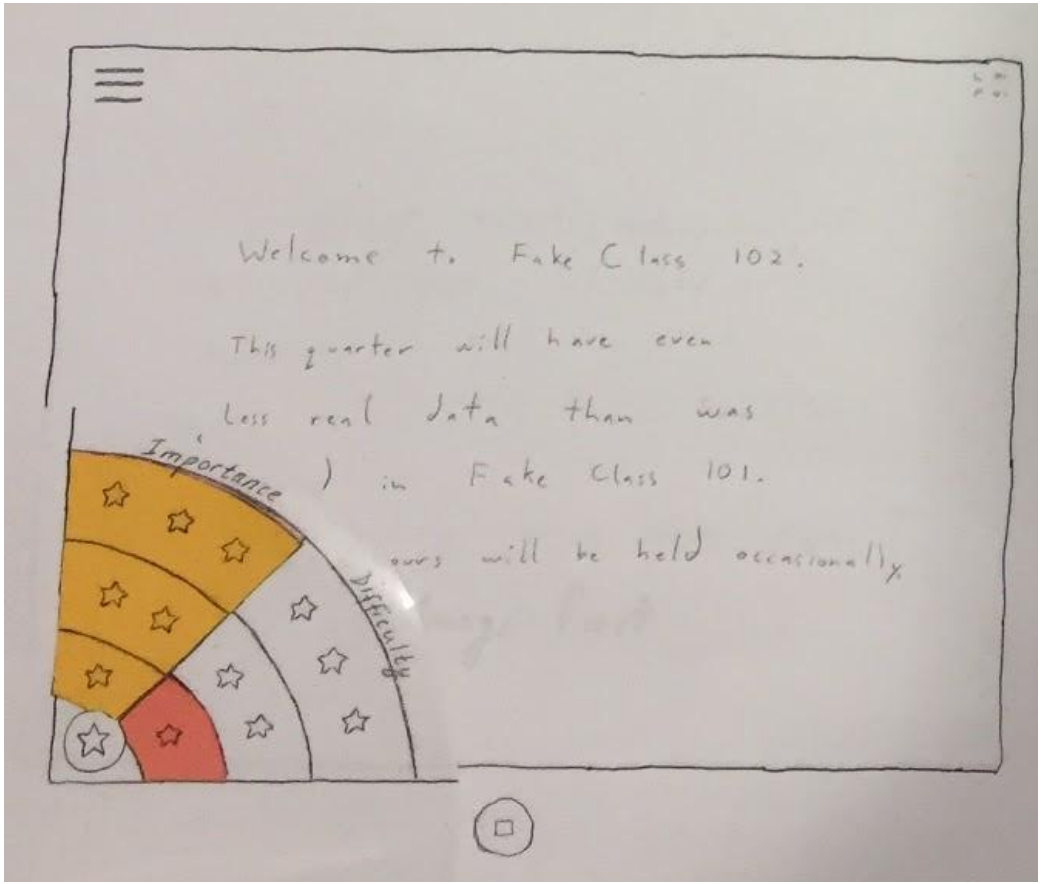
Initial Paper Prototype - Lecture List



Initial Paper Prototype - Lecture Topics



Initial Paper Prototype - Rating Screen



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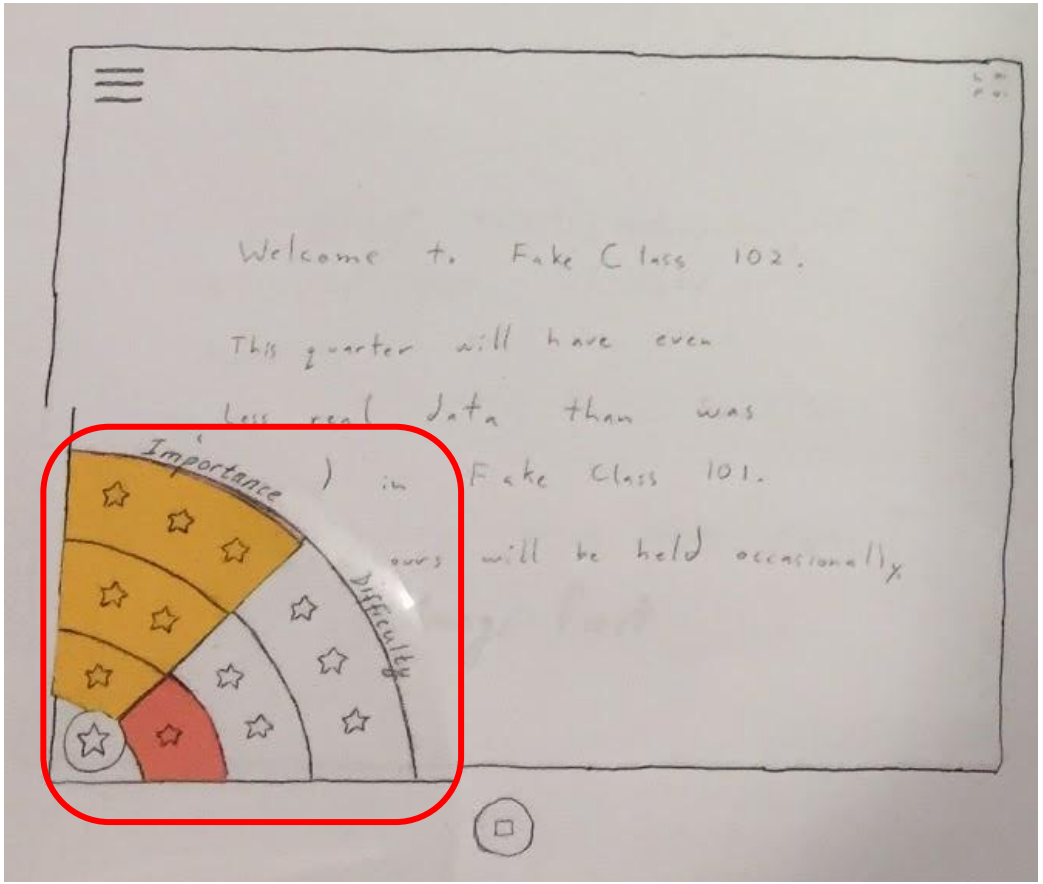
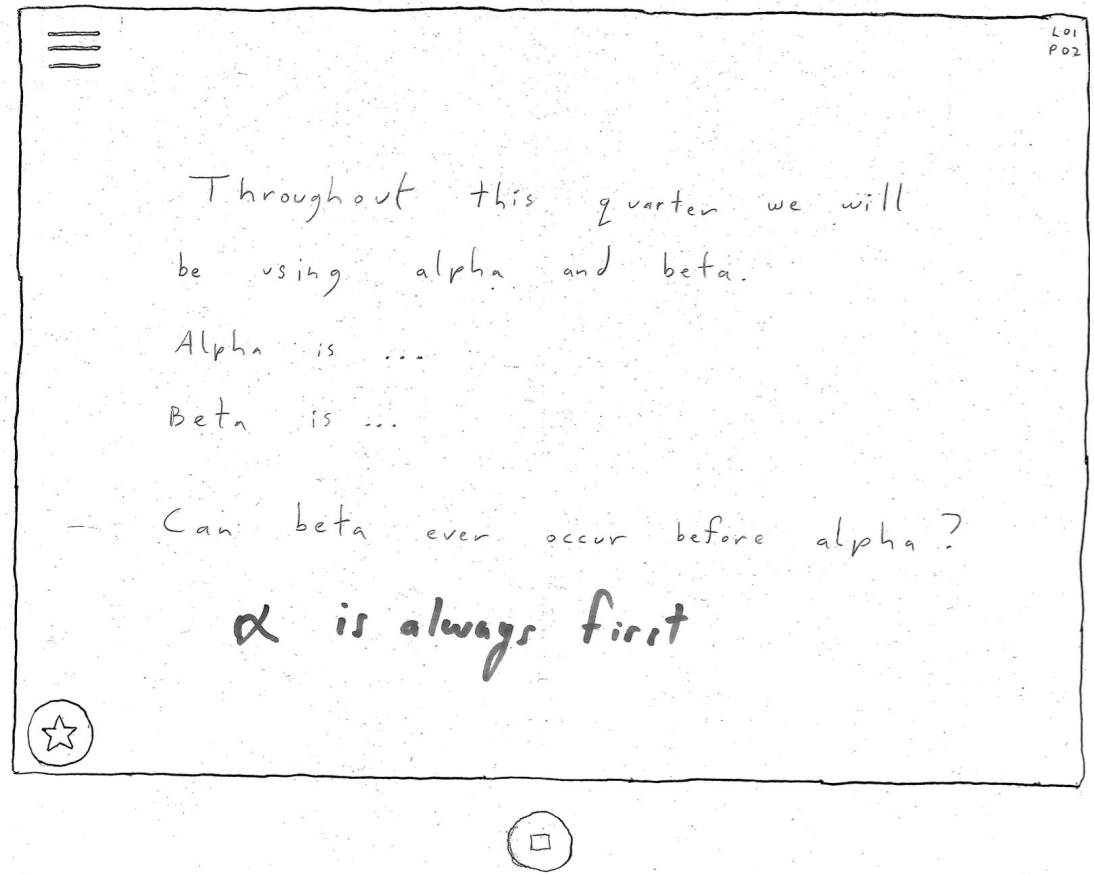


Initial Paper Prototype - Notes/Questions



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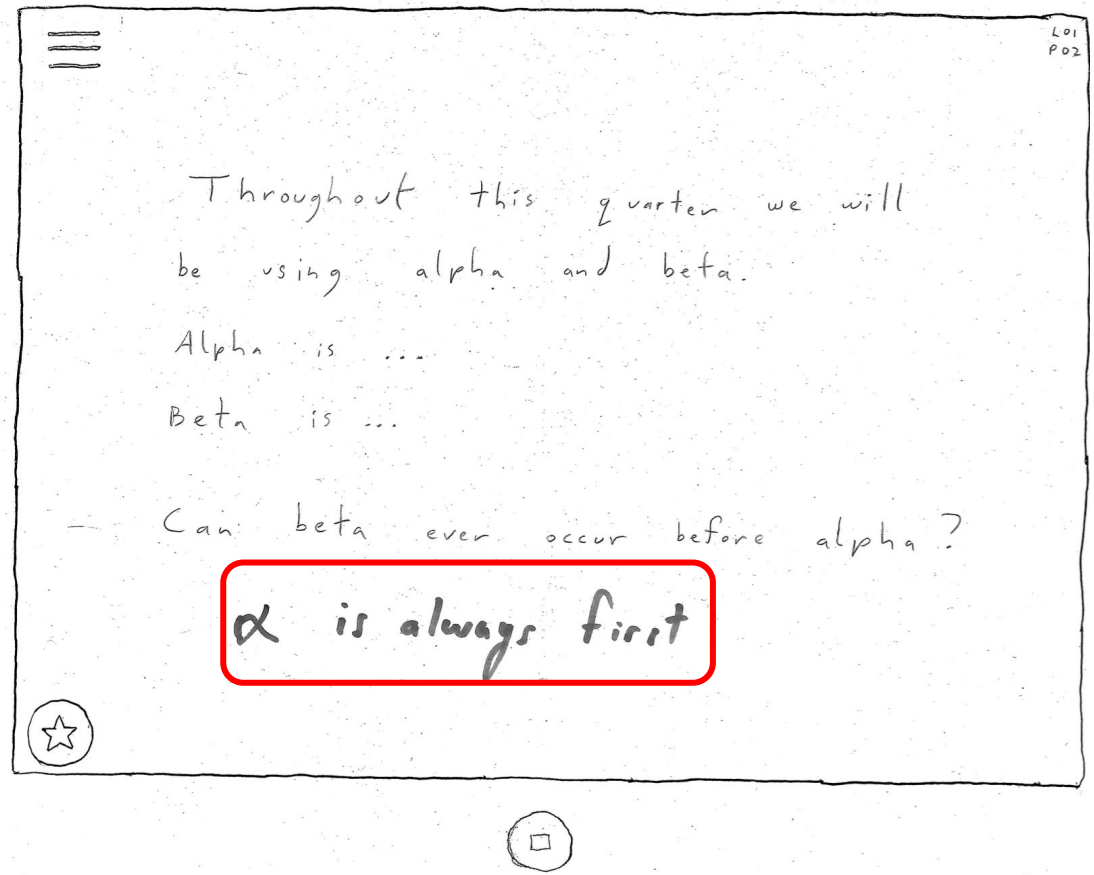
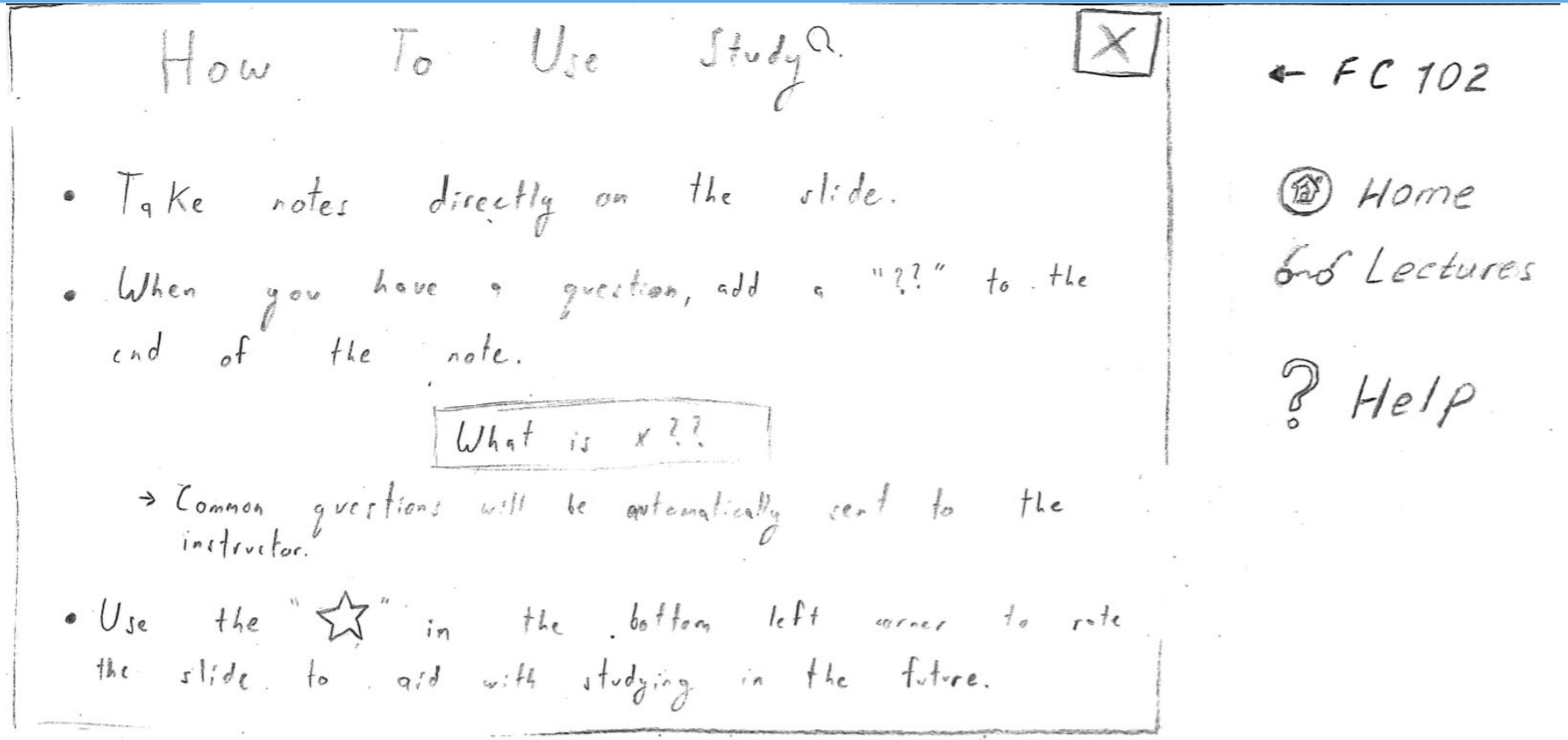


Initial Paper Prototype - Help Screen



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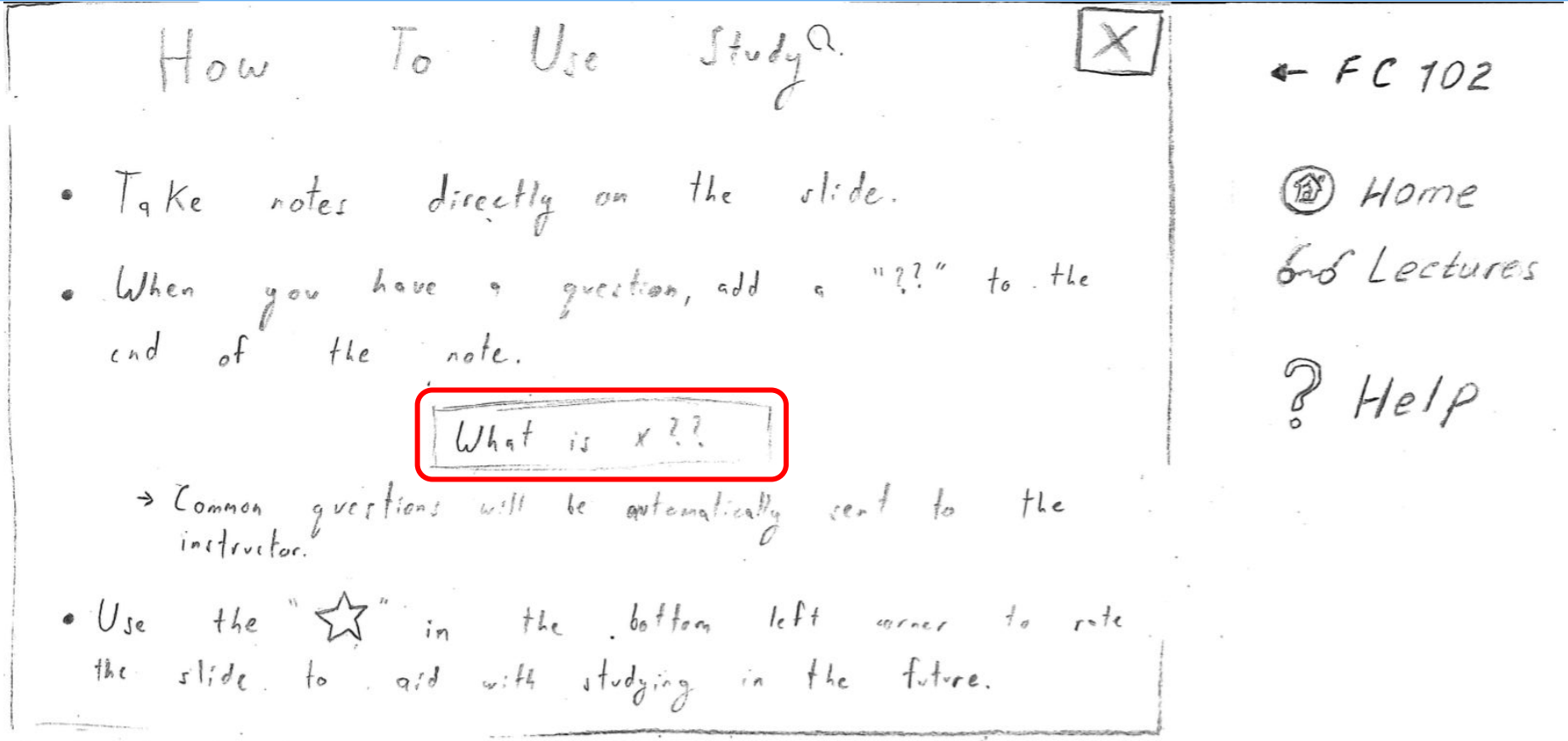

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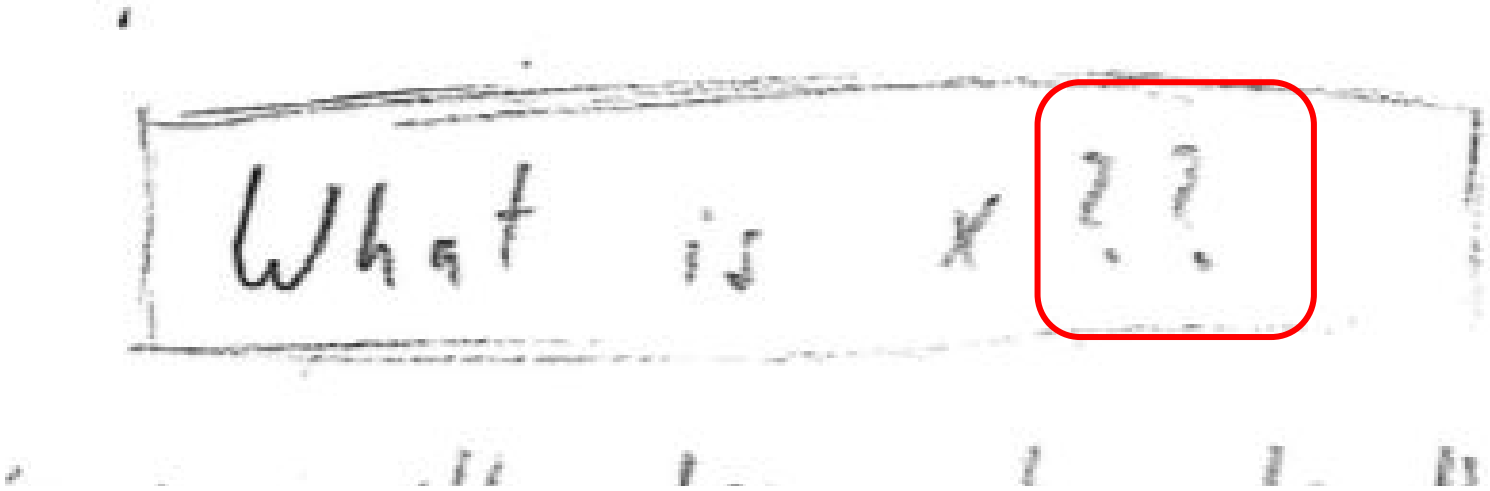
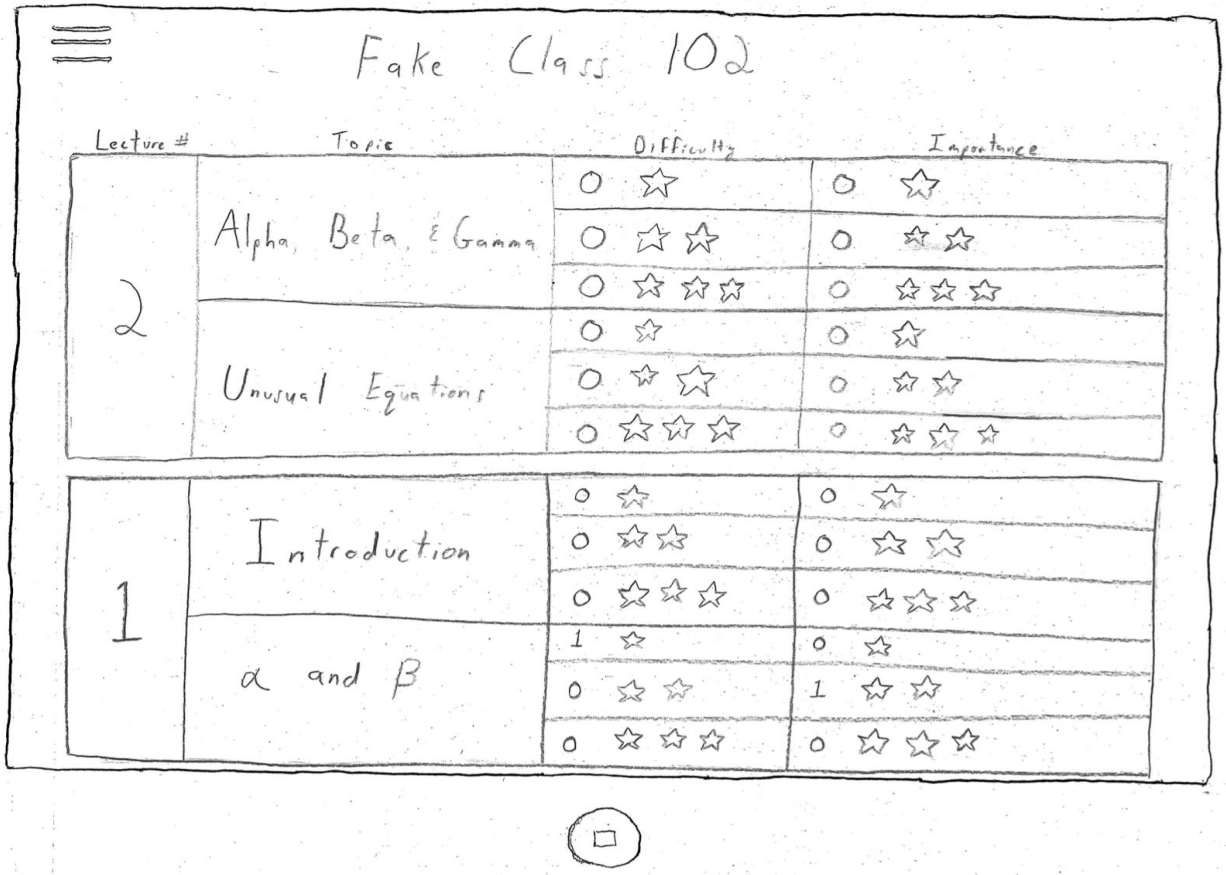


Initial Paper Prototype - Lecture info



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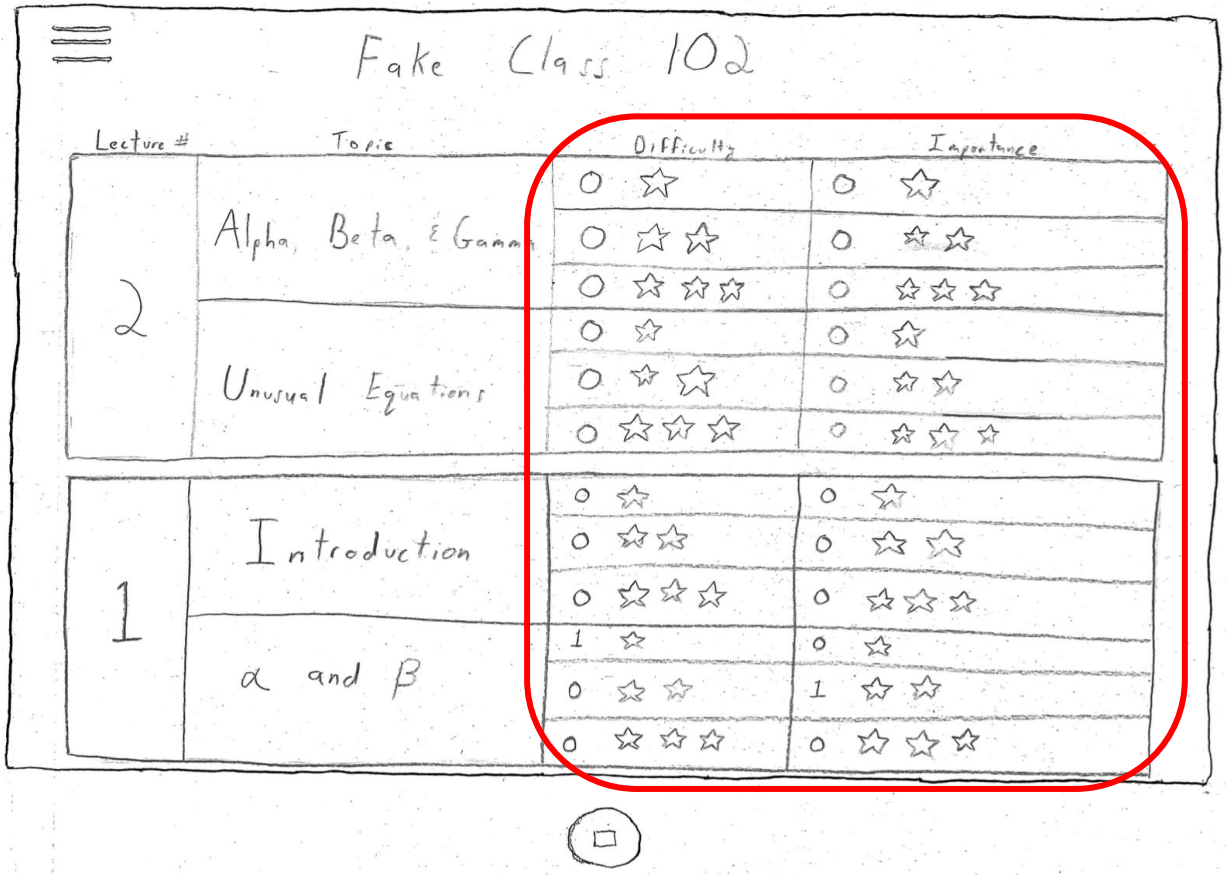
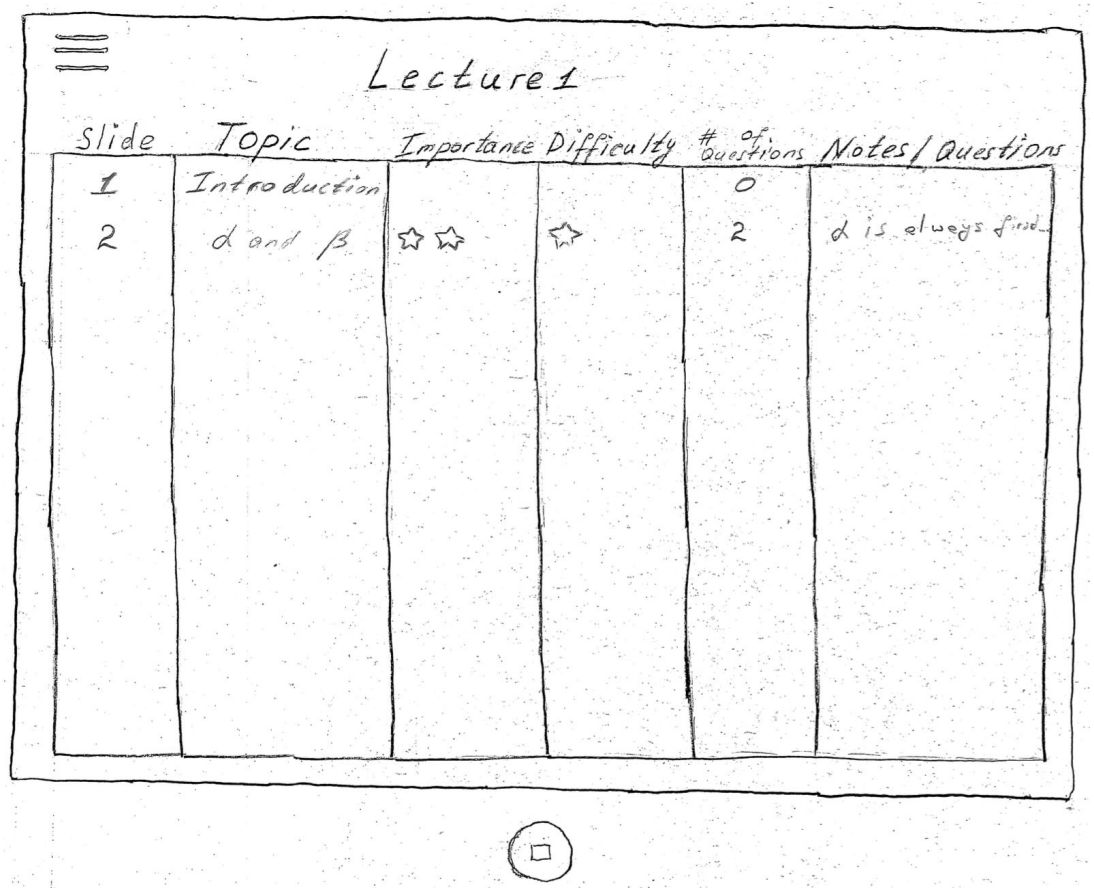


Initial Paper Prototype - Topic info



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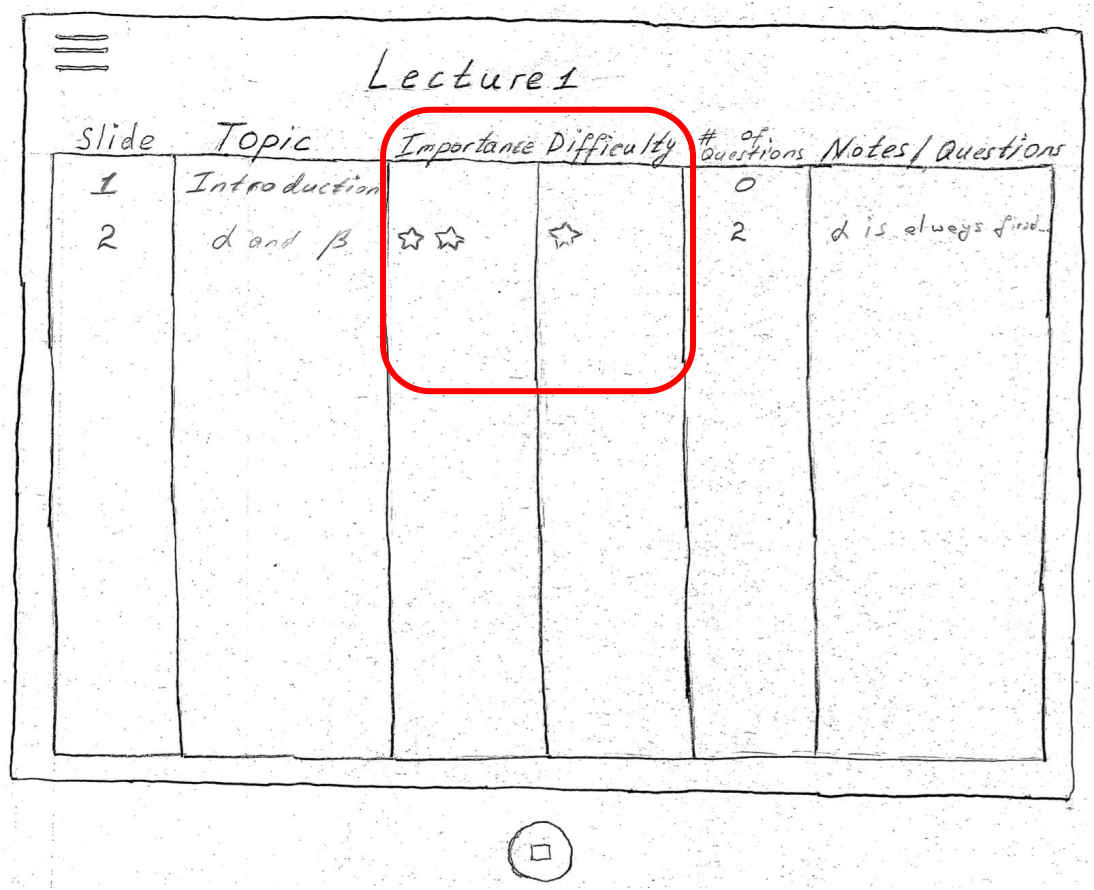


Testing Process

- Heuristic evaluations within our own team
- Heuristic evaluations with other students from CSE 440
- Usability testing with potential users of the end product
  - Aimed to get students of different backgrounds, within STEM
  - For the most part we got the process right
  - Biggest Change was how we presented context

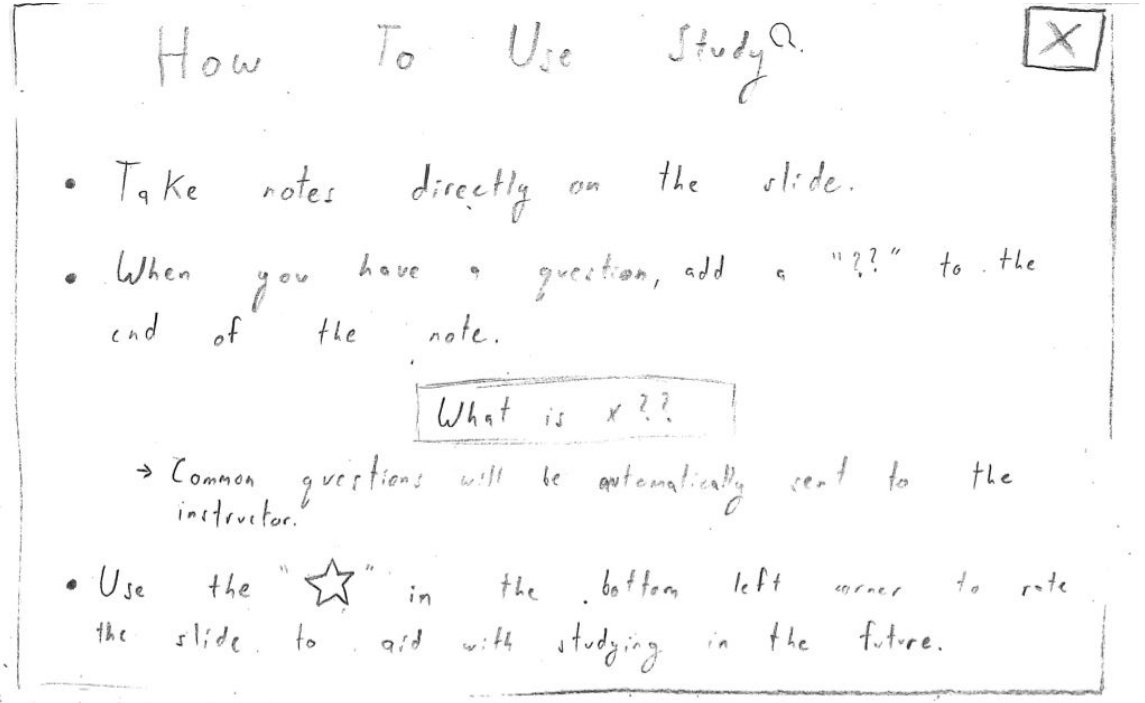
Testing Results

- At every step of the way, we caught a multitude of bugs
  - Made every effort to correct before the next testing, to ensure that we continued to find more issues with our design

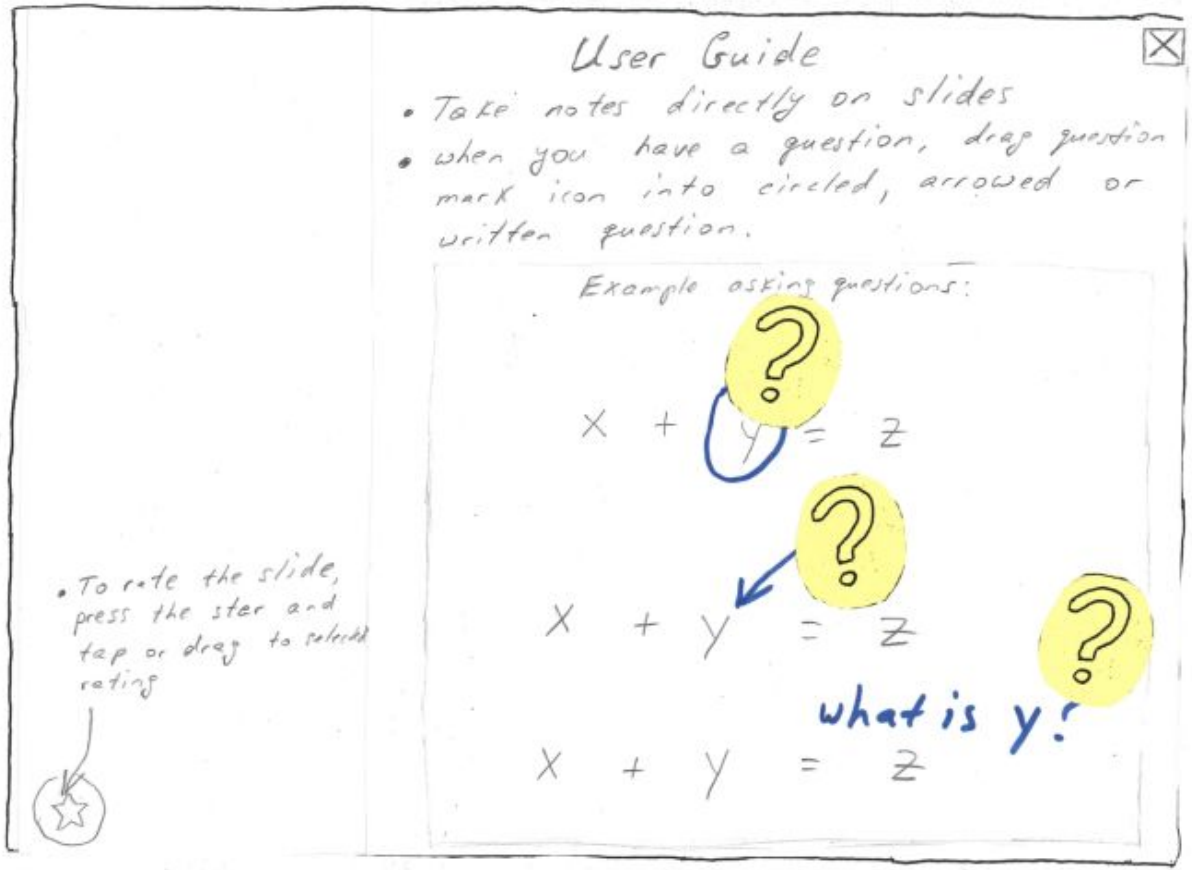
- A couple areas that we struggled with the most:
  - Question asking Mechanism and associated help menu
  - Ratings on the lecture list screen
  - Lots of other additions based on user feedback

Question Asking System

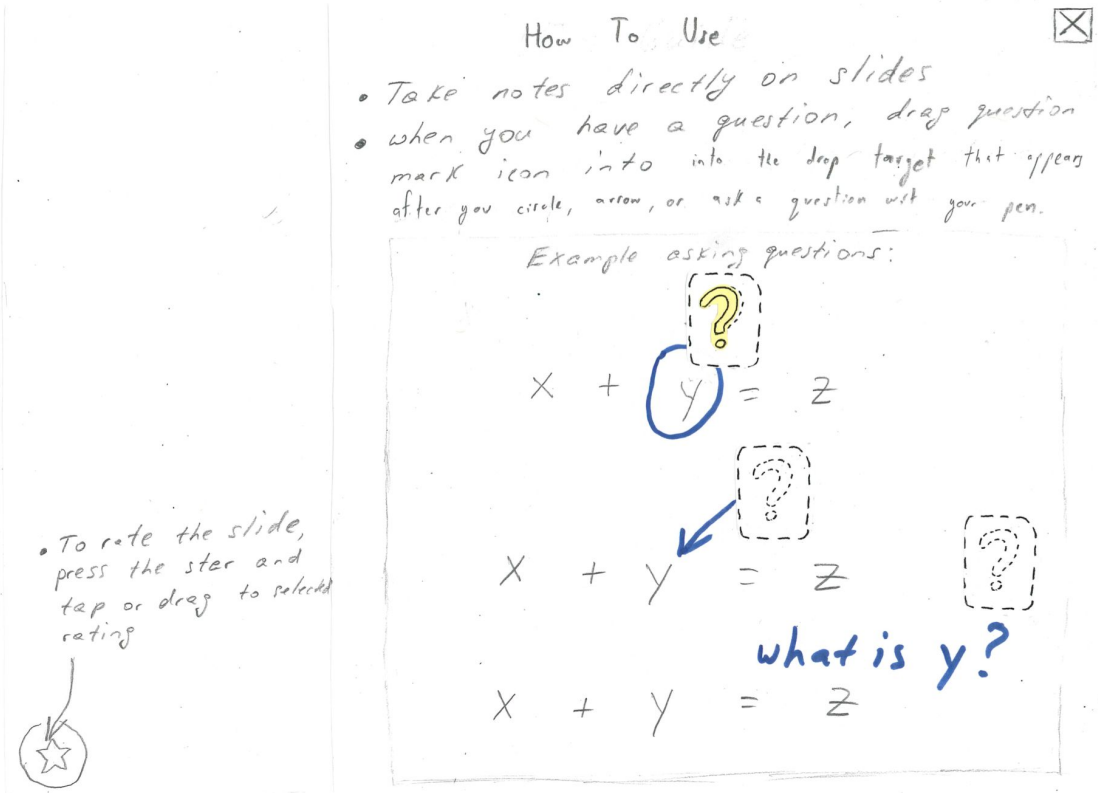
- The Question asking mechanism wasn't clear
- Users didn't like the double questions mark setup, suggested something more graphic/interactive.

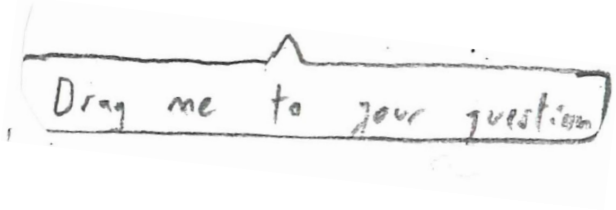


Question Asking System



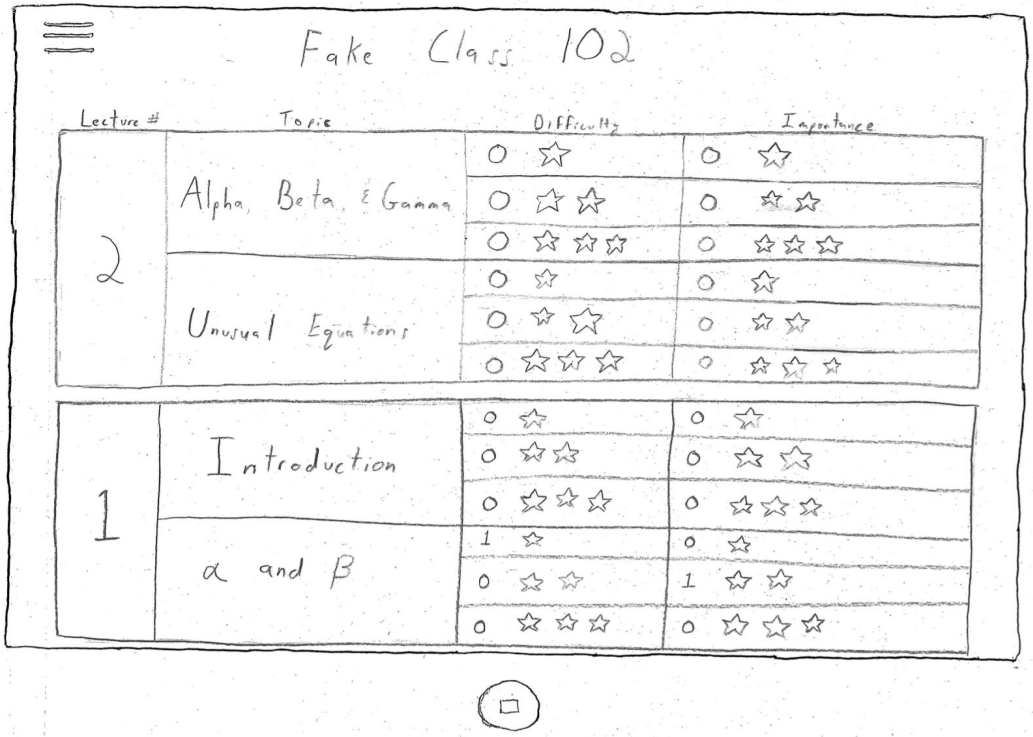
Final Iteration of Community Questions





Ratings Screen

- Users thought it was too visually busy
- Difficult to read
- Lots of info/little insight

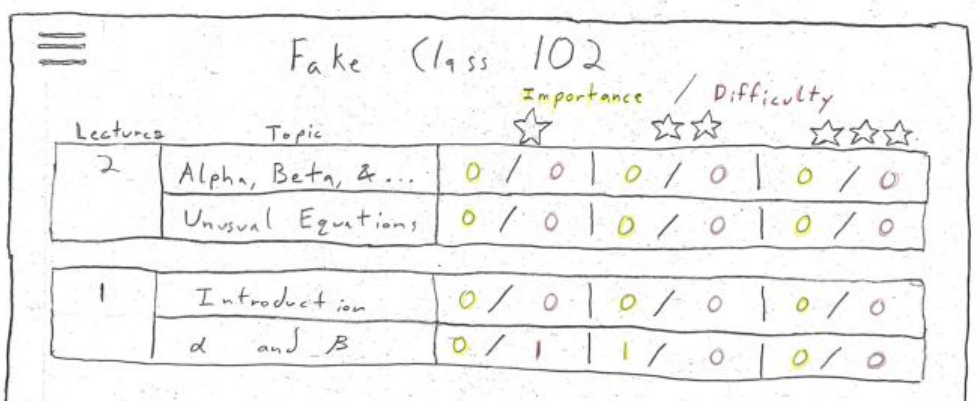


Ratings Screen

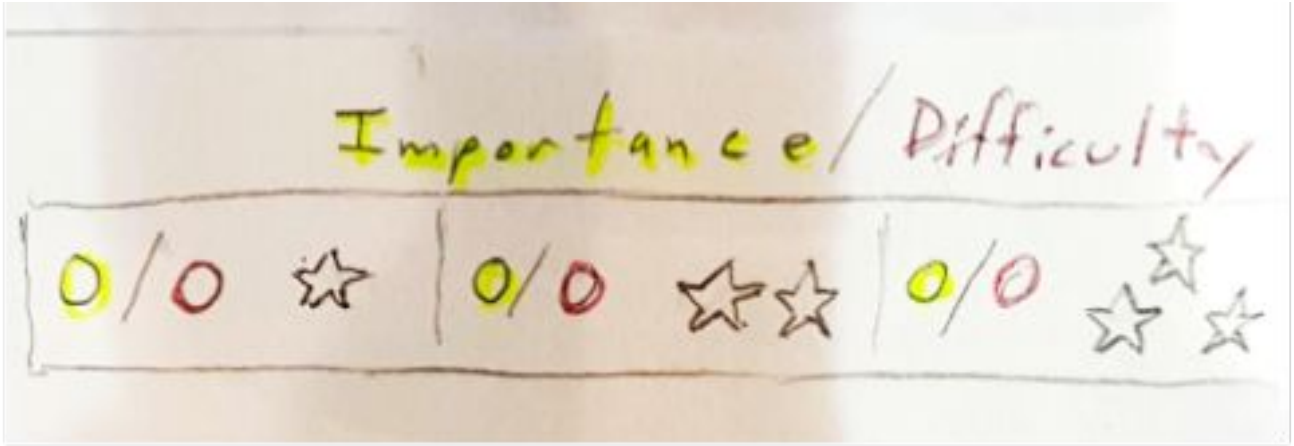
Combined the importance/difficulty, columns now by stars

Issues persisted:

- Users thought it was too busy
- Difficult to read
- Lots of info/little insight



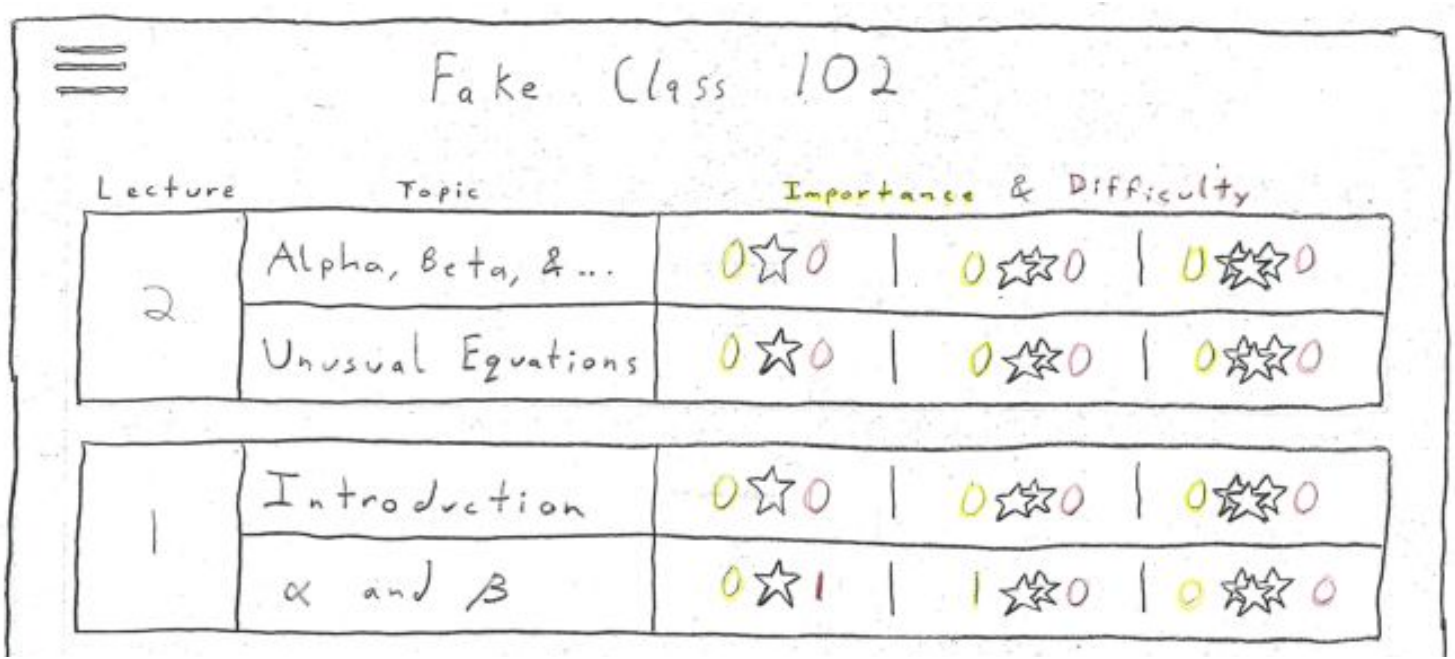
Ratings Screen



Proposed Fix: Minimize number of stars and color-code differences.

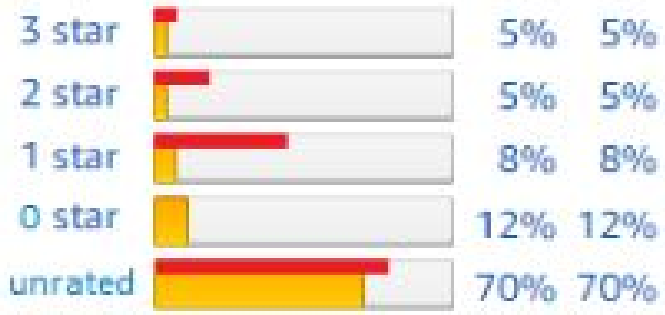
Still difficult to read, not quite what we wanted

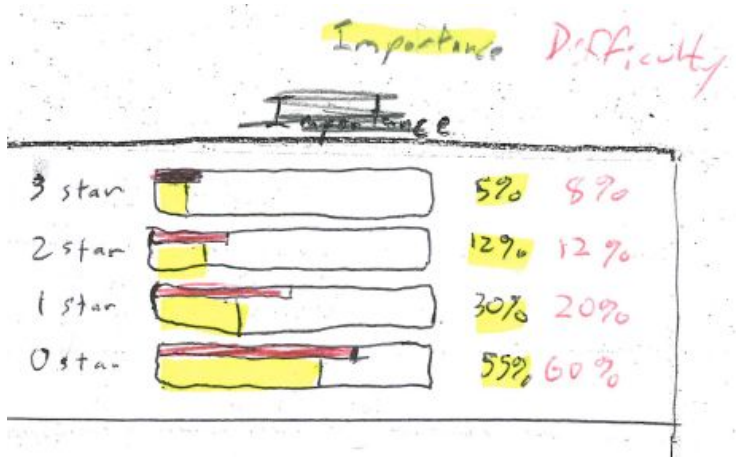
Ratings Screen



Too many zeros - feels like we are reinventing the wheel

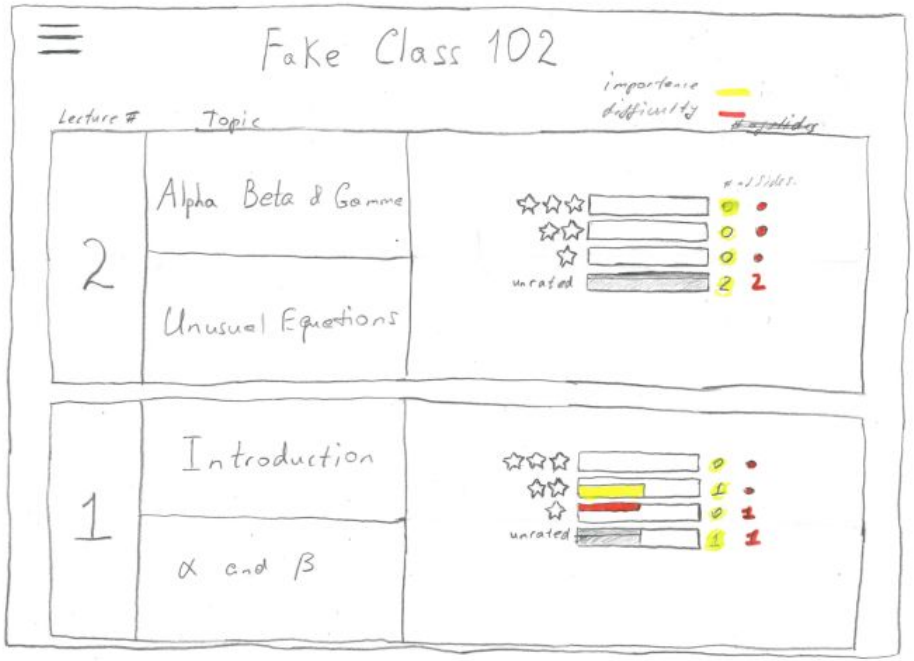
Ratings Screen





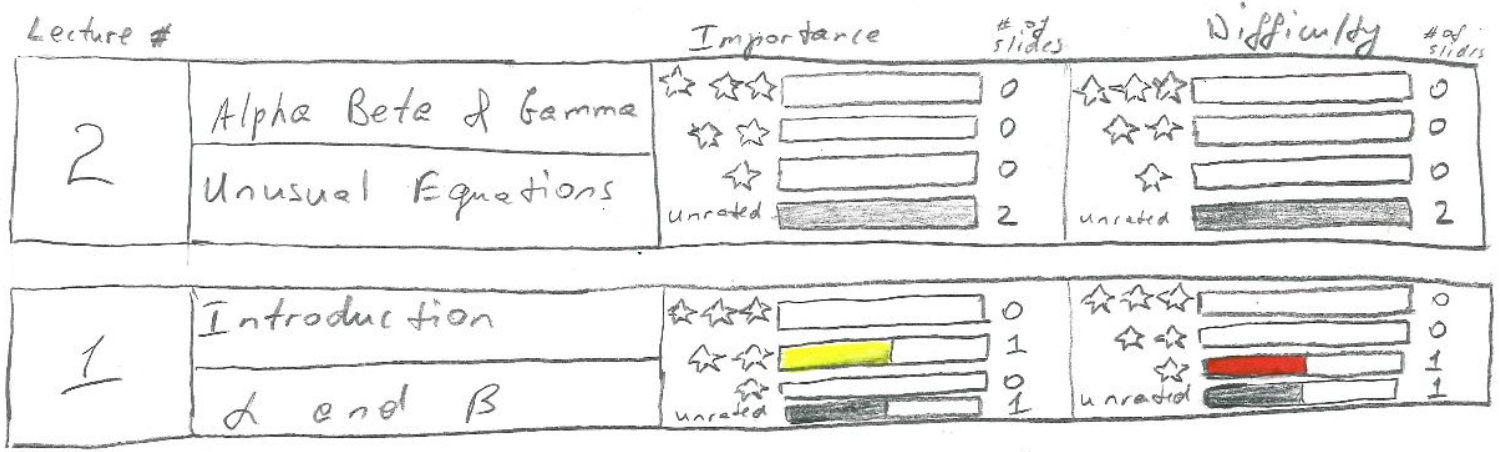
Back to a common design pattern - users liked it much more

Ratings Screen



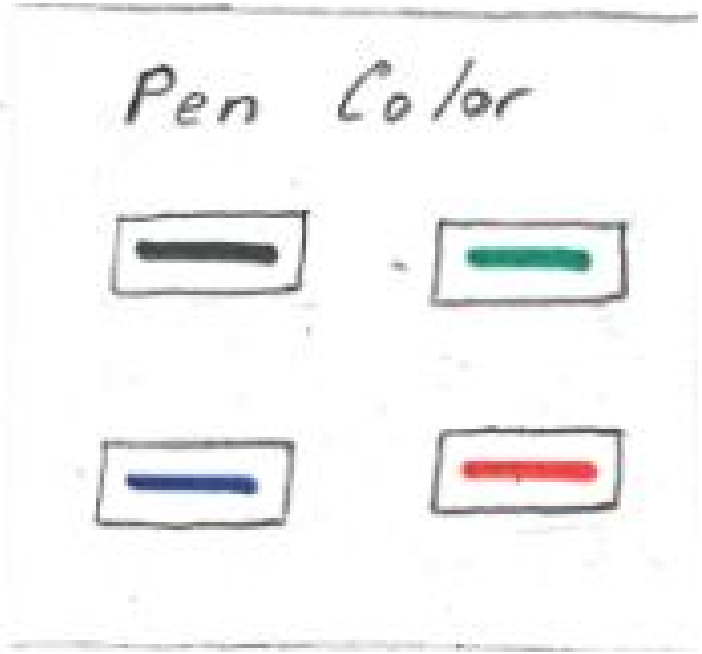
Almost there – percentages were ambiguous

Ratings Screen



Final iteration – Very readable, easy to interpret information

Testing led to numerous smaller changes



- Redesigned menu, added pen color options, changes/additions to gestures we supported, etc.
- Iterative design process meant we got better after each test - which led to users finding more sophisticated and minor problems with the application - didn't all just get hung up on the same thing

Final Paper Prototype

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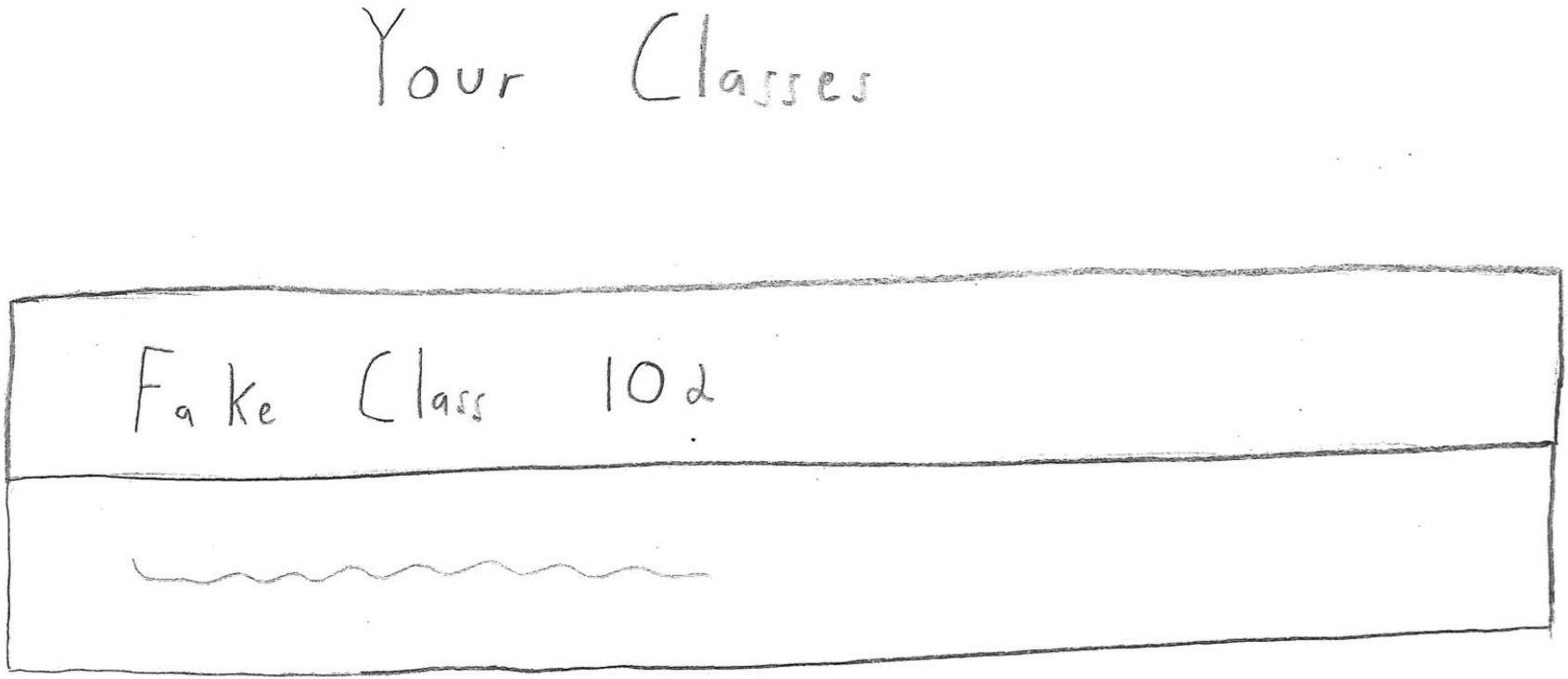

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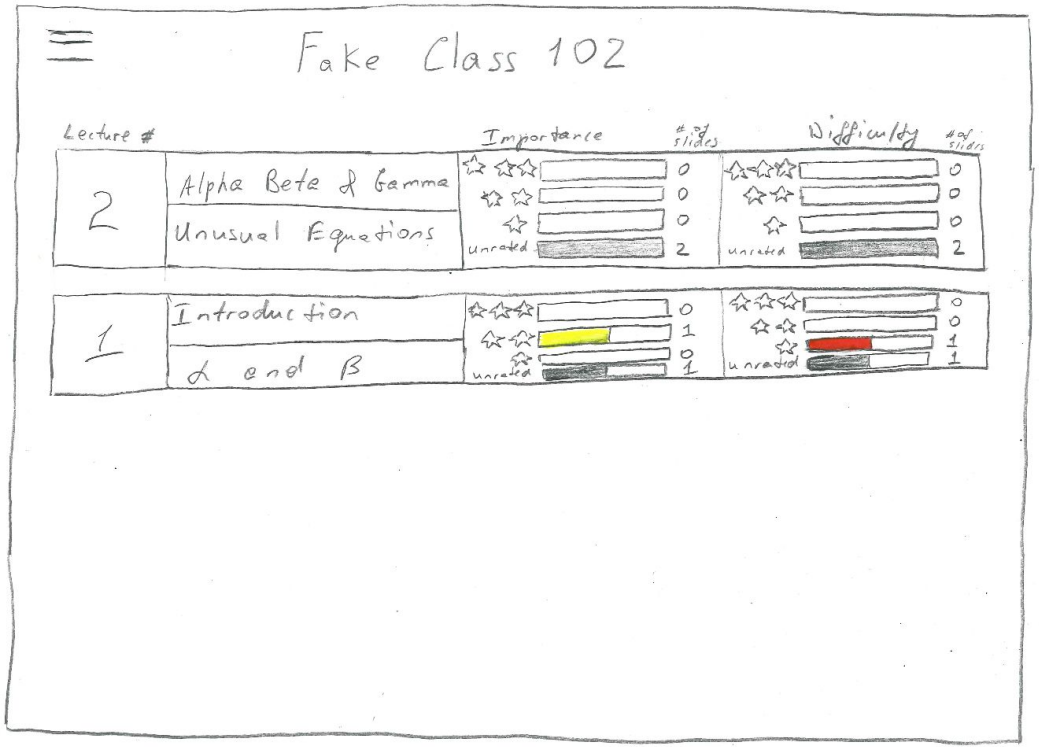

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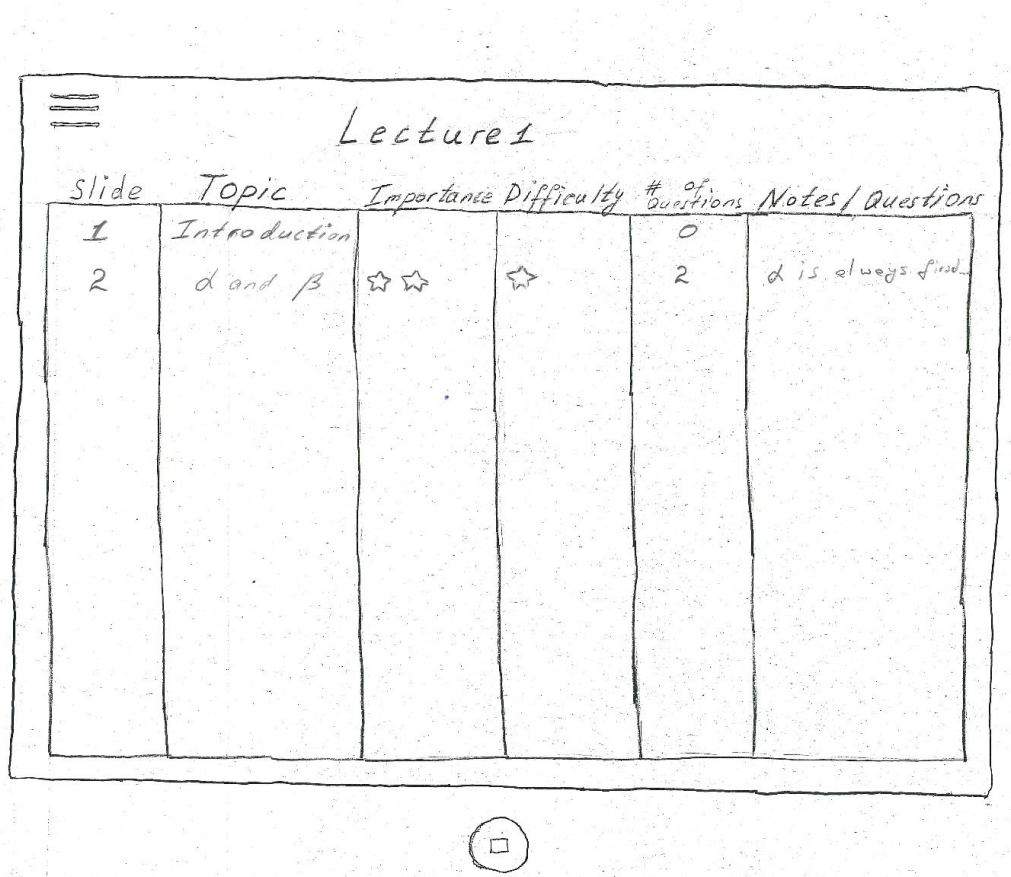

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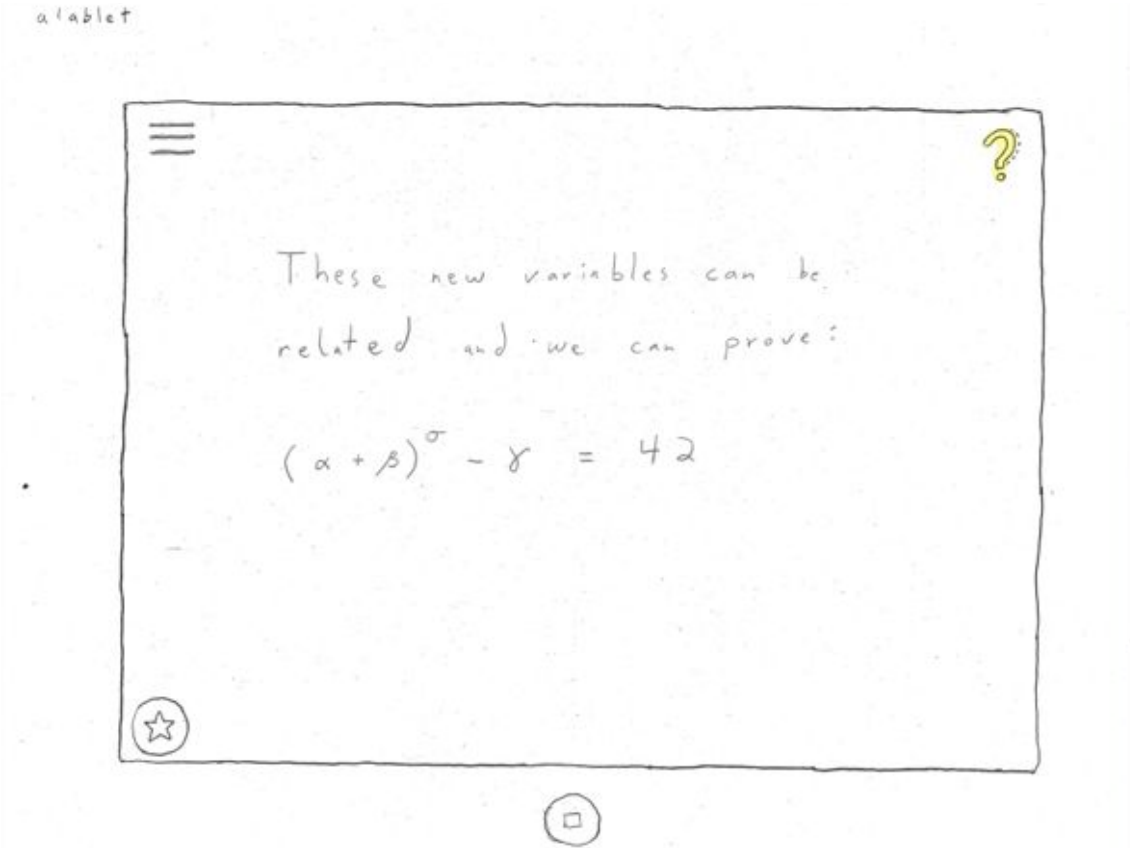

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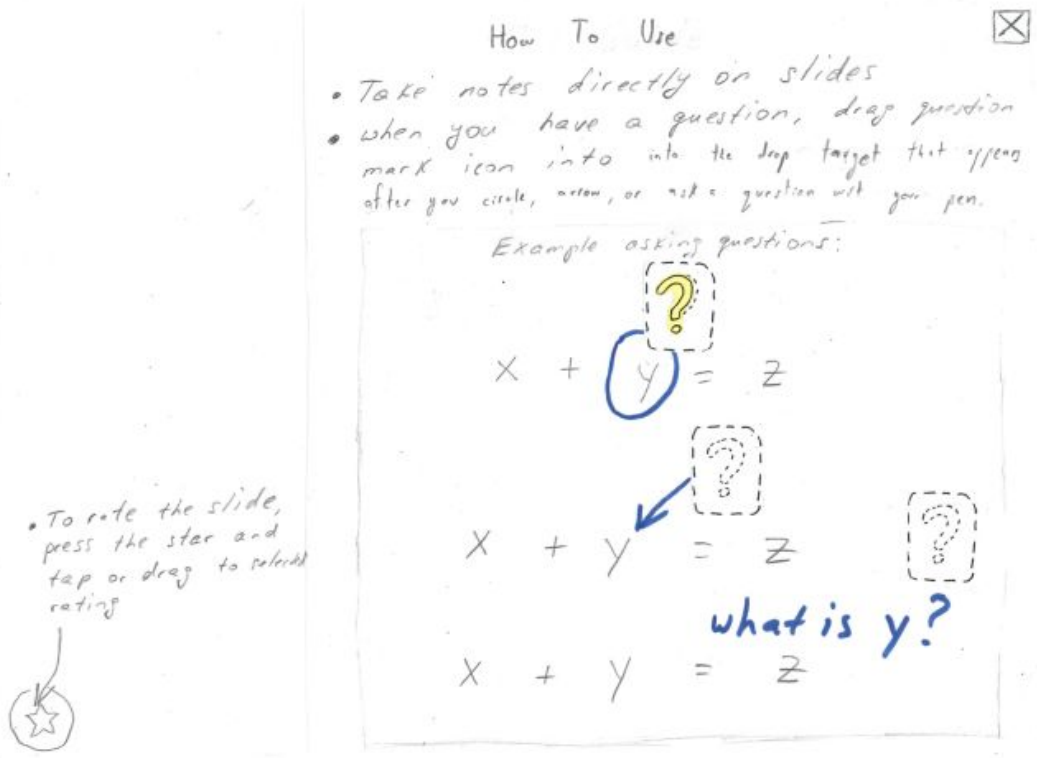

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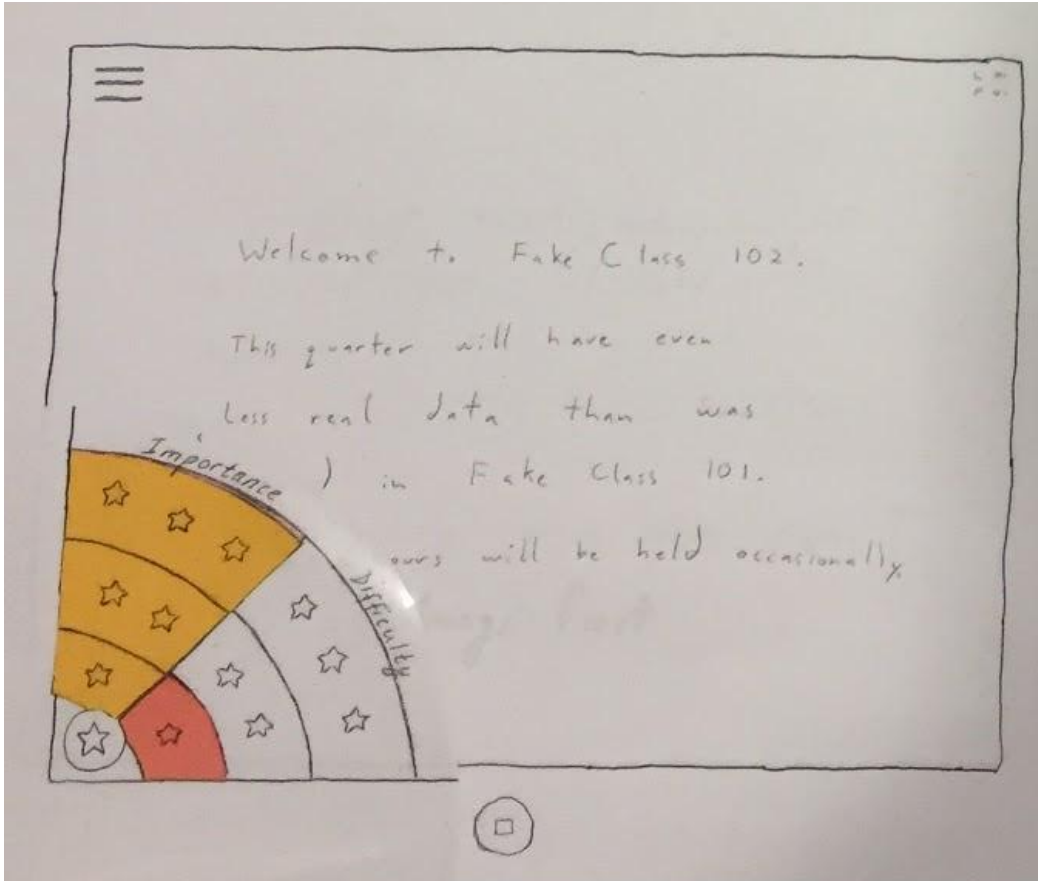
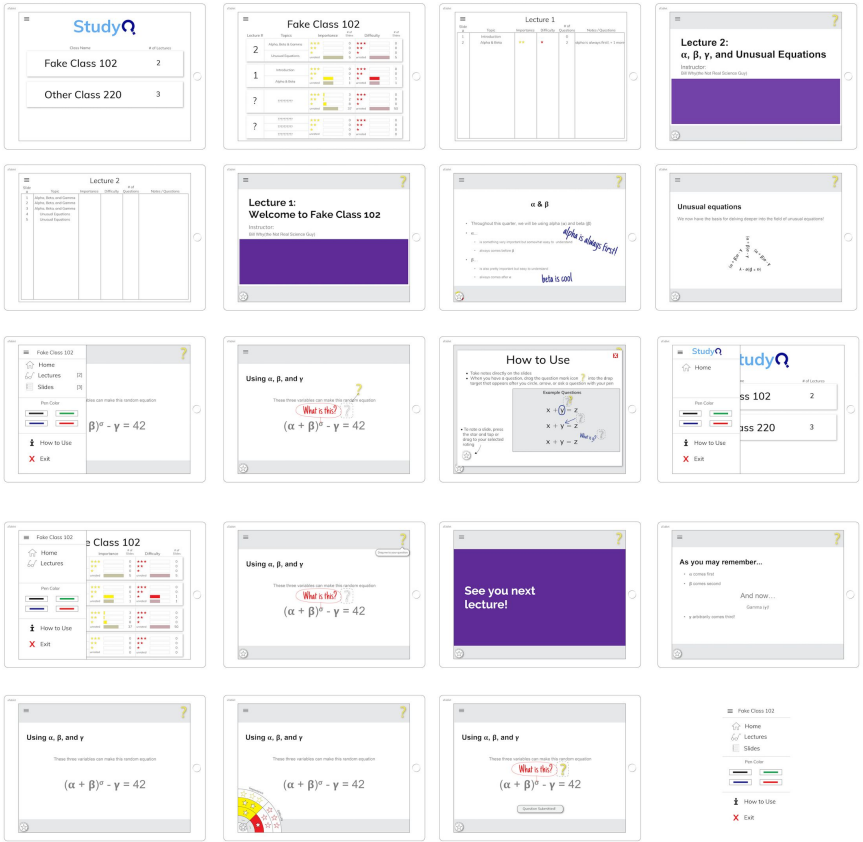


Digital Mockup



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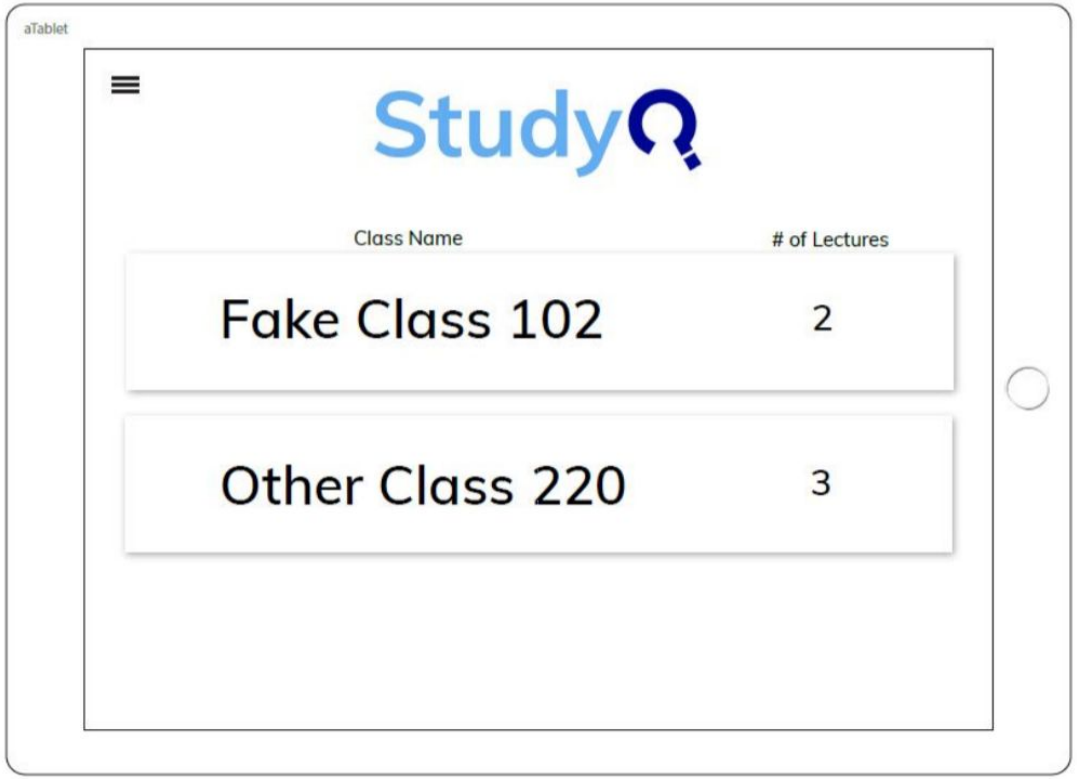

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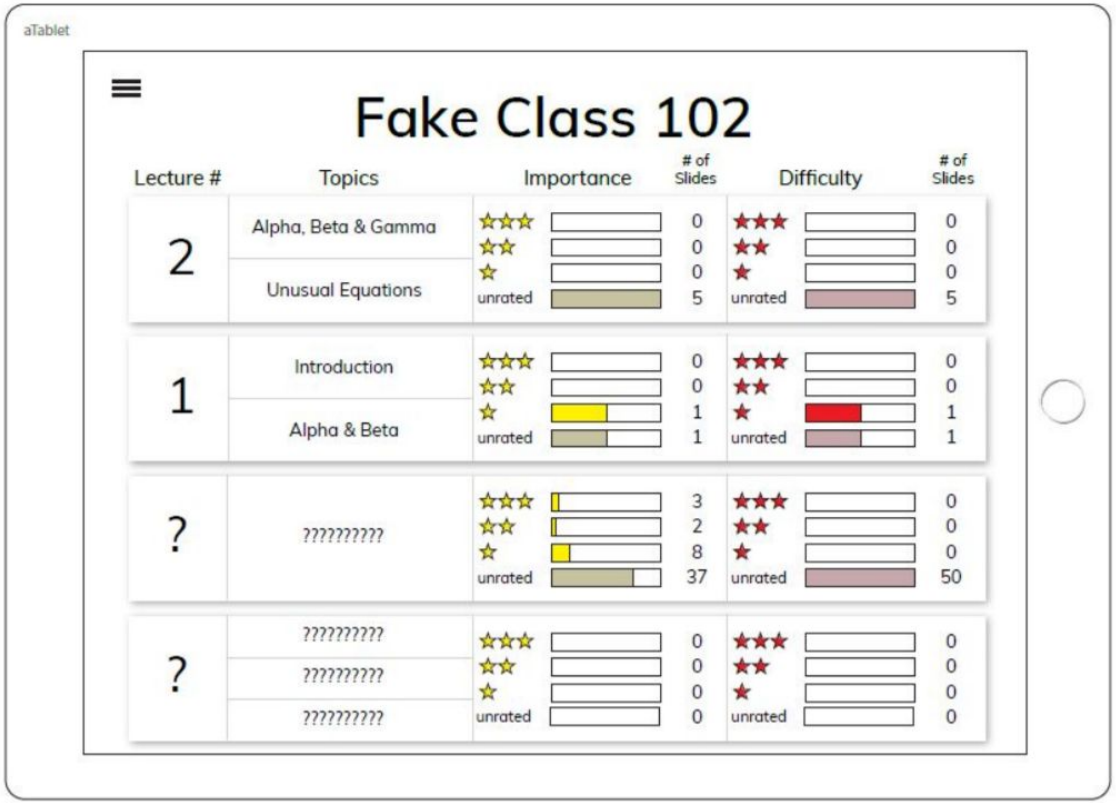

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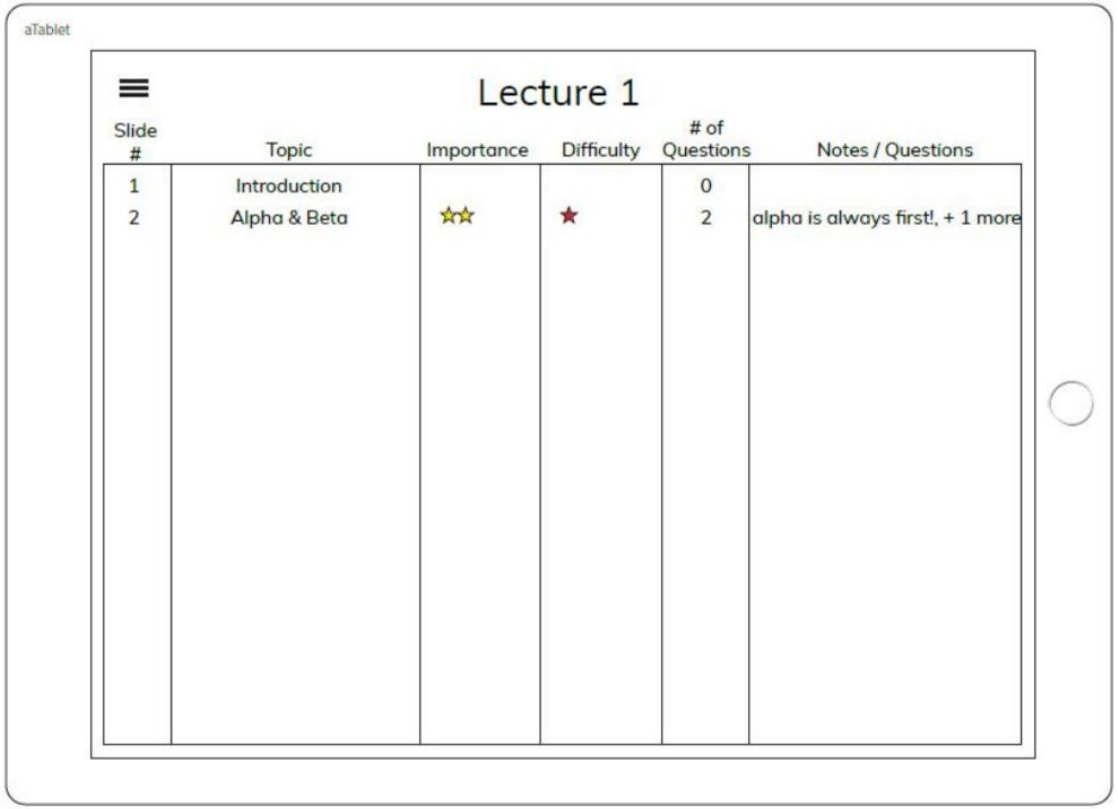

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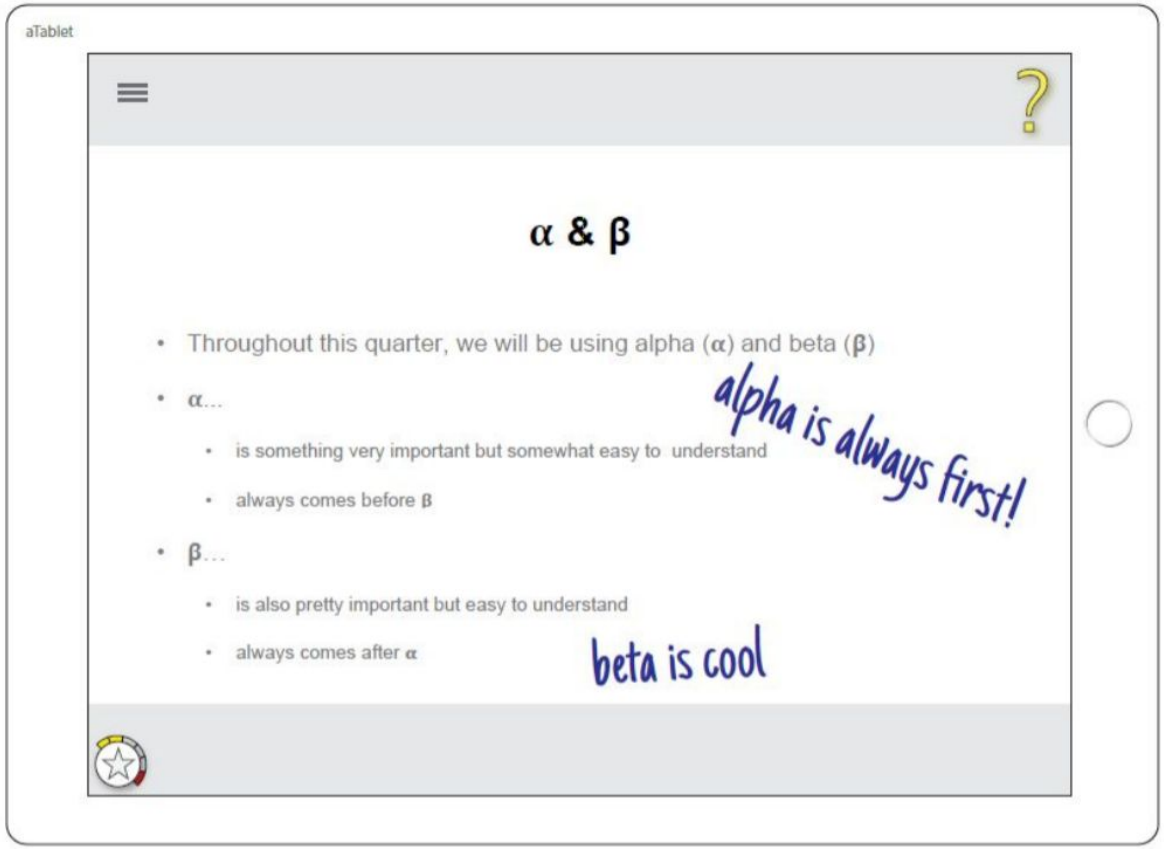

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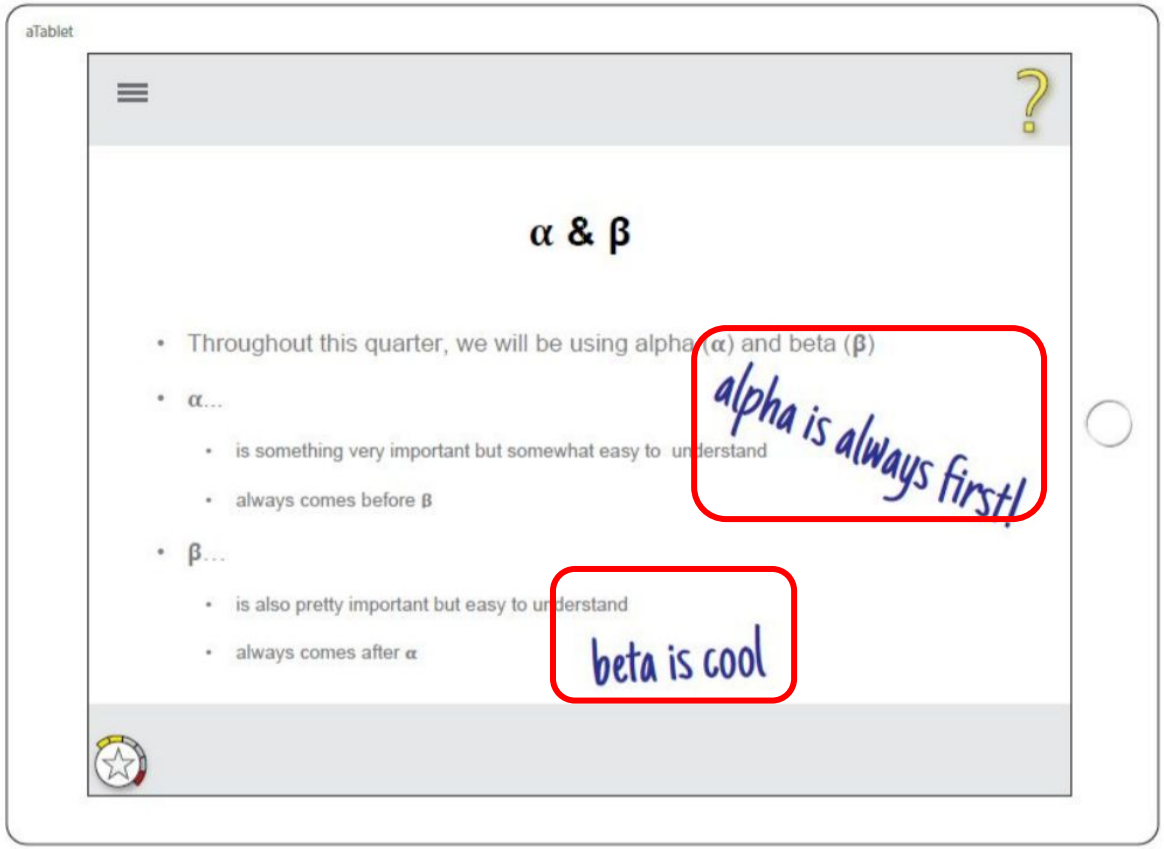

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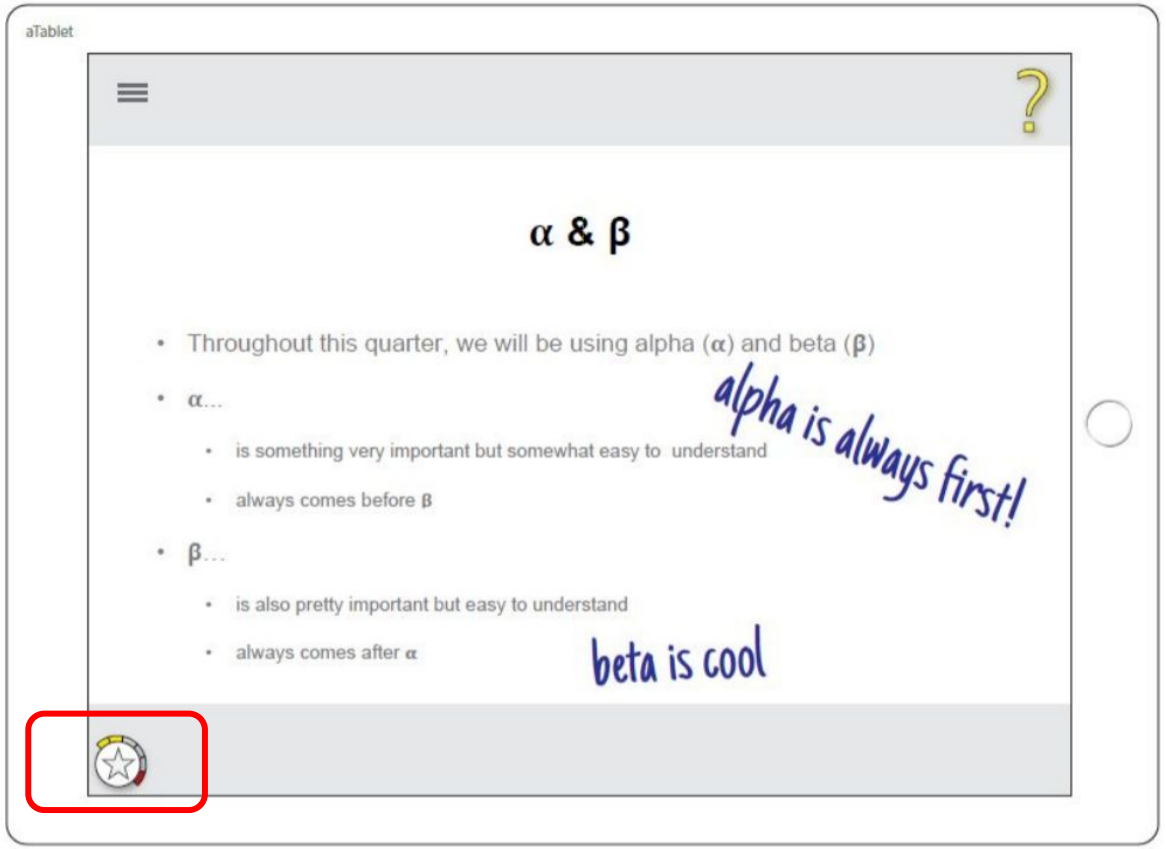

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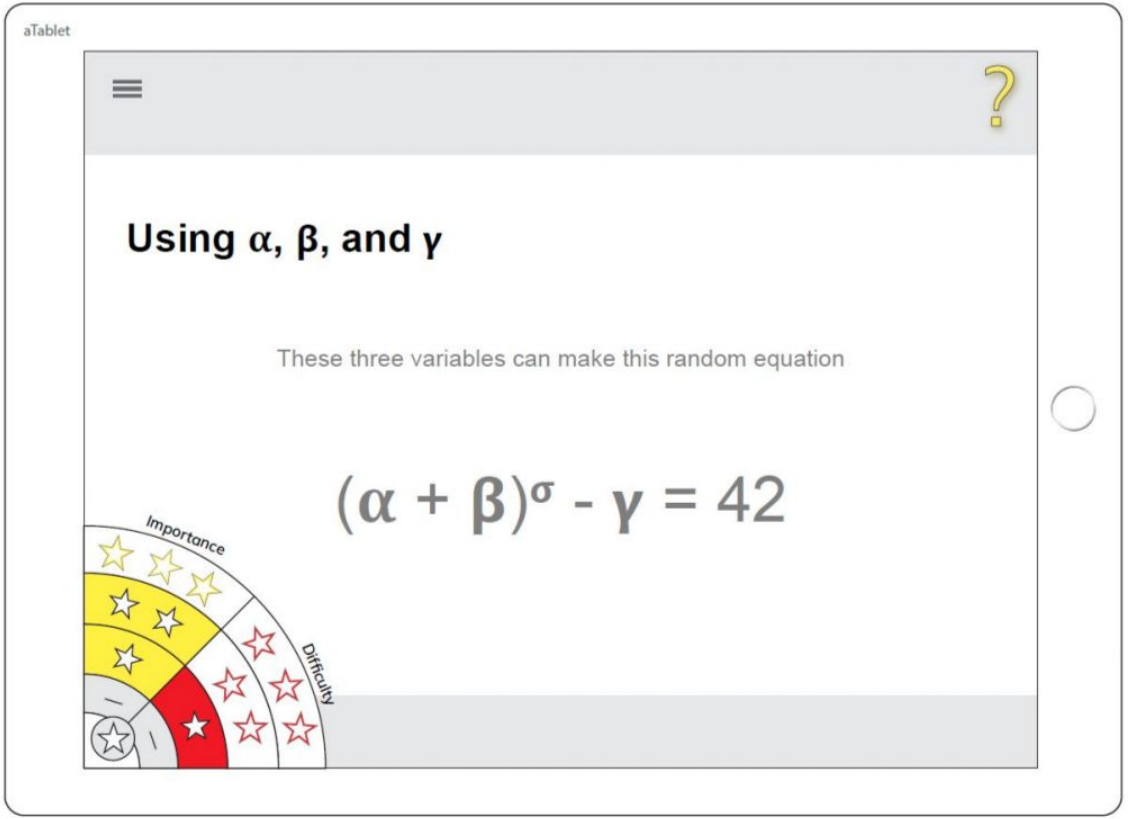

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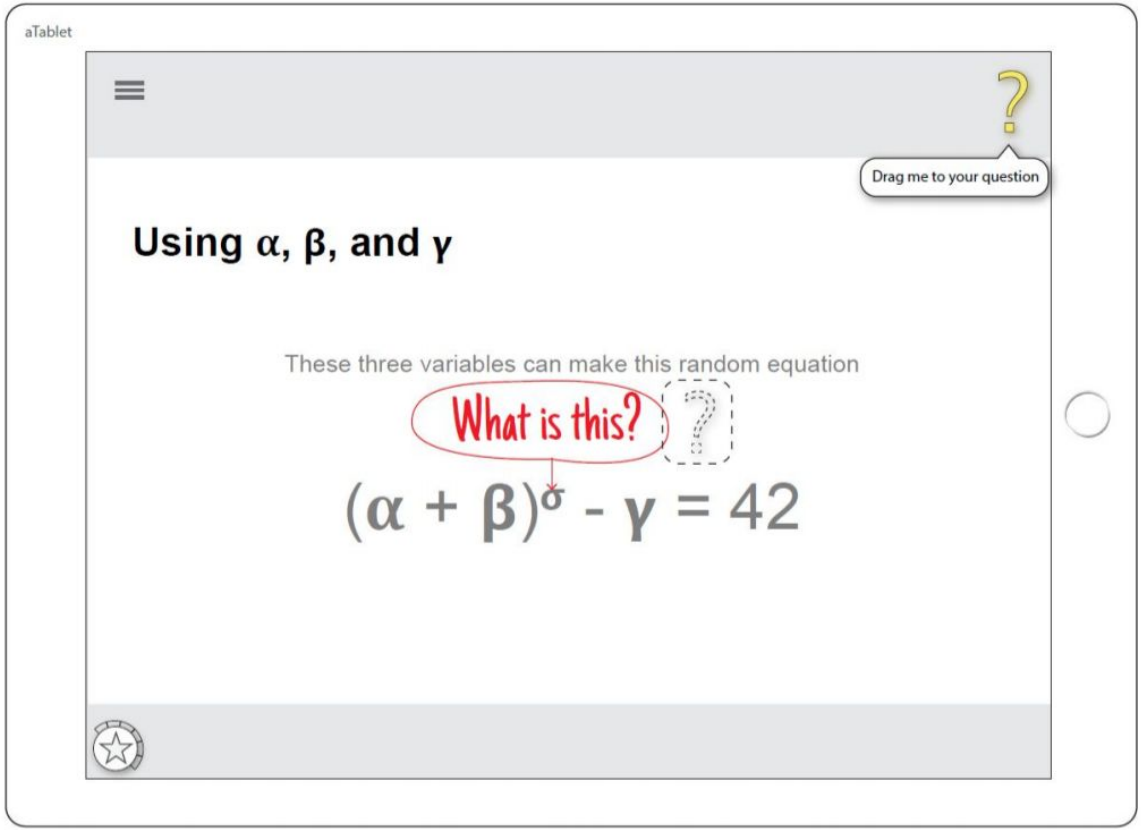

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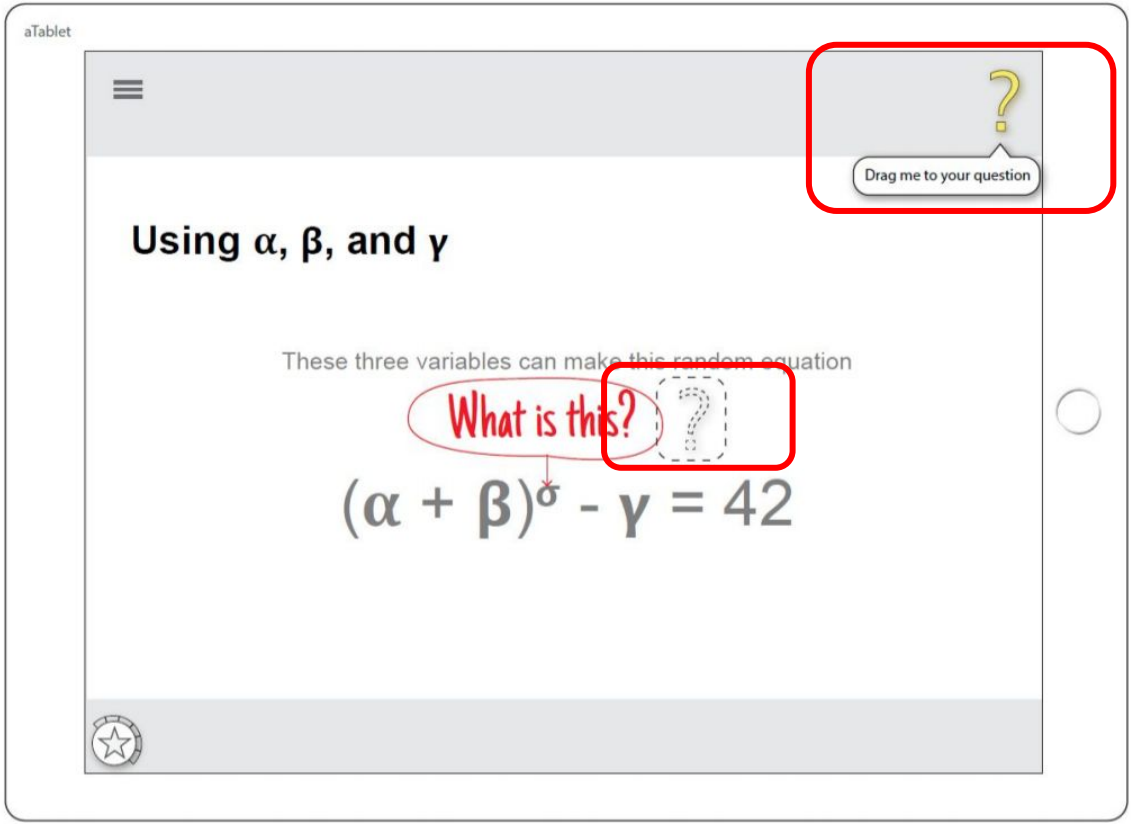

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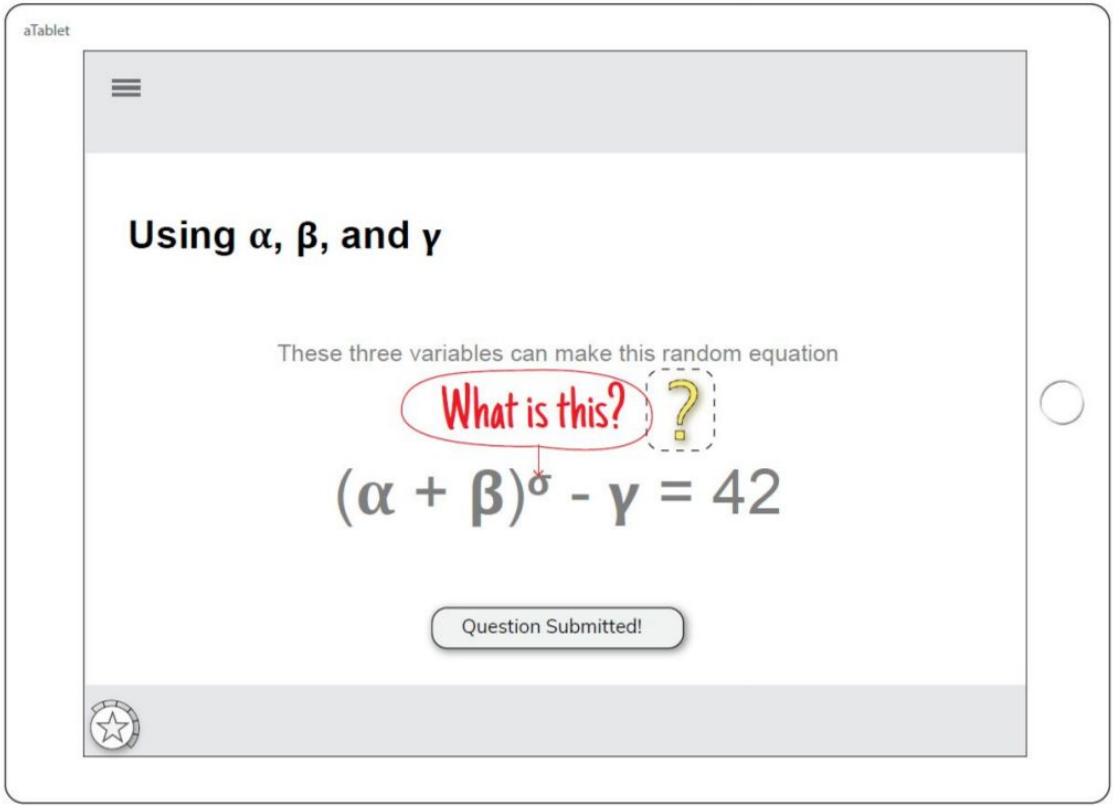

Summary

- Good context is more important than detailed instructions
- Iterate as many times as necessary
- One person's feedback isn’t indicative of a design flaw
- Recognize problem with “paper” prototype vs. problem with design

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