



Same-Q

QUESTIONS PAIRED, KNOWLEDGE SHARED

Midway Milestone Presentation: CS 147 Assignment 8

Team Same-Q



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Value Proposition

Elevate office hours: match questions, connect students, and share knowledge.

Problem:

Students wait in the queue, enduring the repetitive cycle of Teachers and TA's answering the same questions.

Solution:

Group students together with the same question to enable collaboration and make waiting for Teacher/TA assistance productive.

OVERVIEW

1 Heuristic Evaluation Results

2 Revised Design

3 Prototype Status

4 Demo

Heuristic Evaluation Result

Summary Results:

- Total Number of Heuristics Broken: 65
- Number of Heuristics 0 - 2 Severity: 49
- Number of Heuristics 3 - 4 Severity: 16

Category	# Viol. (sev 0)	# Viol. (sev 1)	# Viol. (sev 2)	# Viol. (sev 3)	# Viol. (sev 4)	# Viol. (total)
H1: Visibility of Status		2	1	1		4
H2: Match Sys & World		2	2	1	1	6
H3: User Control		2	4	1		7
H4: Consistency & Standards	1	4	5	1	1	12
H5: Error Prevention		2	2	3		7
H6: Recognition not Recall			2			2
H7: Efficiency of Use	1	2	2	1	2	8
H8: Minimalist Design		5	2			7
H9: Help Users with Errors		1				1
H10: Help & Documentation			1	2		3
H11: Accessible		5		1		6
H12: Value Alignment & Inclusion			1		1	2
Total Violations by Severity	2	25	22	11	5	65

Severity 0-2 Changes

49 Total Implications

Change #1: H11 Accessible Design

Change: Changed Purple to be more muted. More light and less strong purple.

Rationale: Feedback from users indicated that the initial color choice was excessively bright, posing challenges for individuals with color blindness. In response to this insight, adjustments are deemed necessary to enhance accessibility and ensure a more user-friendly experience for all.

Change #2: H11 Accessible Design

Change: Increased Text size that scales to device dimensions

Rationale: Users expressed that Question descriptions in list of queue as well as text when creating a question or in the huddle description are very small.

Change #3: H7 Flexibility & Efficiency of Use

Change: More intentional Information and cut repeated information from prototype (e.g. Join with “X” others)

Rationale: We examined the app and cut any information that was repetitive. This allowed us to free up areas with text and have icons and numbers give the user information.

Severity 0-2 Changes

Change #1: H11 Accessible Design

Insight: Users indicated that the initial color choice was excessively bright, posing challenges for individuals with color blindness

Change: Changed Purple to be more muted. More light and less strong purple

Change #2: H11 Accessible Design

Insight: Users expressed that Question descriptions in list of queue as well as text when creating a question are very small

Change: Increased Text size that scales to device dimensions

Change #3: H7 Flexibility & Efficiency of Use

Insight: Interface felt busy, bit difficult to navigate and find what people are looking for in light of a lot of text and information

Change: More intentional Information, cut repeated information from prototype (e.g. Join with “X” others), freed up text and have icons and numbers inform users instead

Severity 3-4 Change Summary

Change #1:

H7 Flexibility and Efficiency of Use

Change: Better Navigation. User no longer is prompted with the option of writing a question, but rather free to browse a class's queue. Has the option of adding a question later

Rationale: This step was repetitive in the app's navigation. A user could join the app to solely join similar questions. Instead, a user has the freedom of choosing to make a question instead of denying the question prompt before joining a class.

Change #2:

H3 User control and freedom H7 Flexibility and Efficiency of Use

Change: Giving the user ability to "Un-Collaborate". A user would join a questions and automatically get that question stored as "collaborated". User can now choose to un-collaborate on specific questions.

Rationale: The user can "un-collaborate" on questions for many different reasons such as the question being resolved, they no longer need it, or it takes up space. This give the user freedom and control over their app.

Change #3:

H8 Aesthetic & Minimalist Design

Change: Icons were more intentional

Rationale: initially had a lot of icons that were similar or confusing without additional documentation. Made sure that icons are now used for the same purpose across the screens, and that icons are different enough to not be confused with one another

Severity 3-4 Changes

Change #1: H7 Flexibility and Efficiency of Use

Insight: More flexible navigation is needed. Give user the freedom of choosing to make a question instead of denying the question prompt before joining a class

Change: Better Navigation. User no longer is prompted to write a question, but rather free to browse queue, can add a question later

Change #2: H9 Recover from Errors/H7 Flexibility and Efficiency of Use

Insight: Option needed to “un-collaborate” on questions, can happen for many different reasons such as a mistake, the question being resolved, they no longer need it, or it takes up space

Change: Adding ability to “Un-Collaborate”. User can now choose to un-collaborate on specific questions, giving them more choice

Change #3: H5 Error Prevention

Insight: A lot of icons that are similar and thus confusing without additional documentation

Change: Icons are now used for the same purpose across the screens, and icons are more distinguishable/hard to be confused

Progress Towards Usability Goals

Efficiency

Better Navigation allows the user to better traverse the app without feeling lost and confused.

The back button is now labeled with the previous page the user was on.

The page header at the top of each page that allows the user to know current location.

Collaboration Tab Allows for efficient search when looking for previously visited questions.

Invitingness

Intentional Icons and Numbers invite the user to join instead of having words that may be daunting for users.

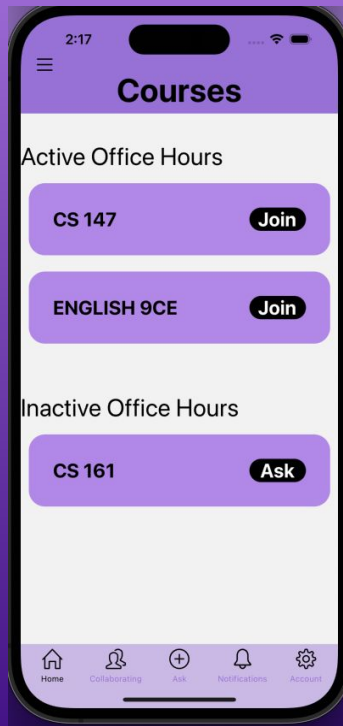
Overview of Revised Design

#1: Home Page and Navigation

Before



After



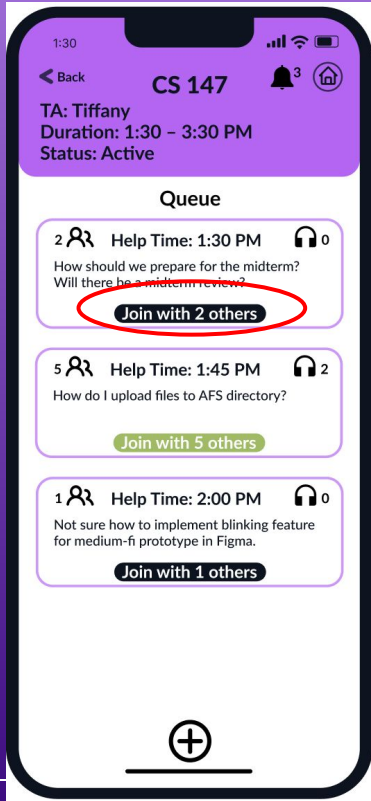
Revisions

1. Made Buttons/Classes Larger and Closer. Adhered to Fitts Law with button size.
2. Grouped Similar action items together and kept opposing items apart (Active/Inactive Classes)
3. Added a bottom Bar for easier navigation and accessibility

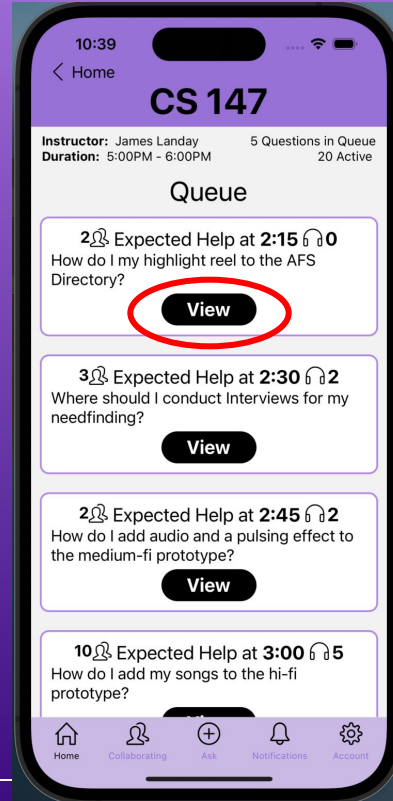
Overview of Revised Design

#2: Remove Repetitive Information

Before



After



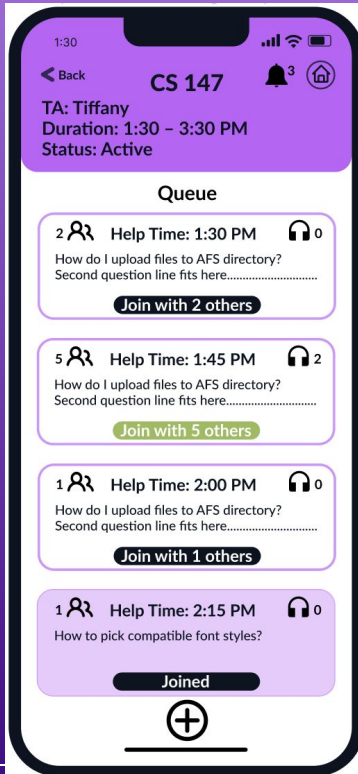
Revisions

1. Changed "Join with X Others" to view. This lets the user know there is a distinction between joining a classes OH, and viewing a question together where they can choose to collaborate later.
2. Removes Number of people in button because the active number of people is present in the top right of the button

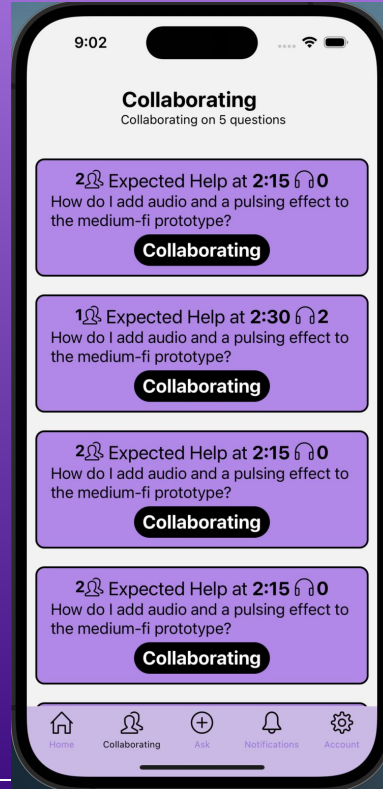
Overview of Revised Design

#3: Collaboration and System Visibility

Before



After



Revisions

1. Added a new page to check for questions that the user is currently collaborating on
2. Gets rid of searching through queue for visited question
3. Clear distinction in color with "collaborated" and "un-collaborated"

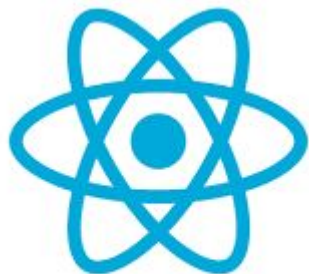
Prototype Status

#1: Frameworks/Tools - Development Stack

Additional Resource:

- React Native Libraries
- FontAwesome
- SimpleIcons

Front-End Framework



React Native

Back-End



Collaboration/Source Control



Prototype Status

#2: Development Tools

VS Code

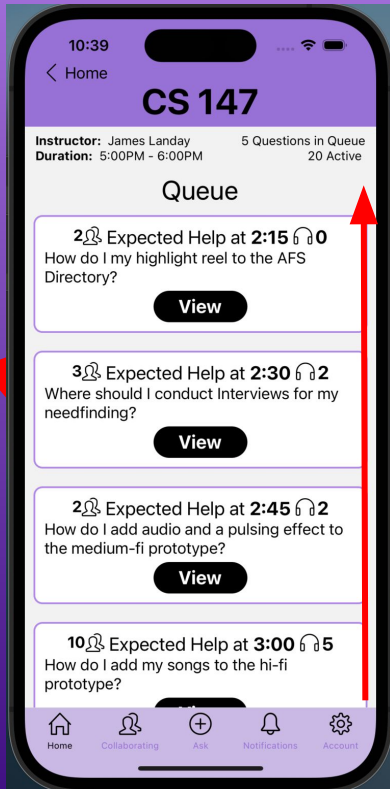
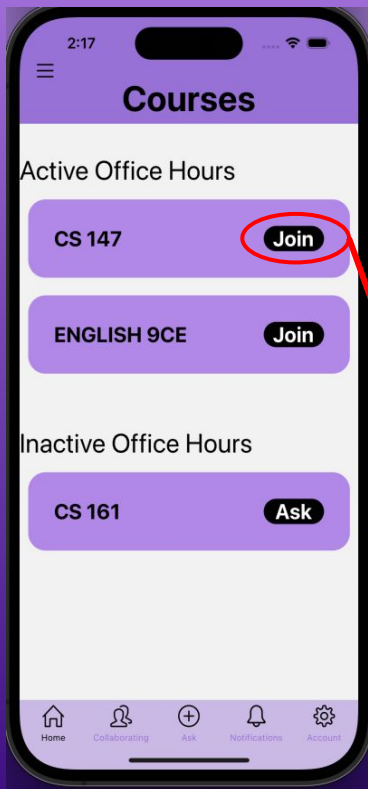


Expo GO

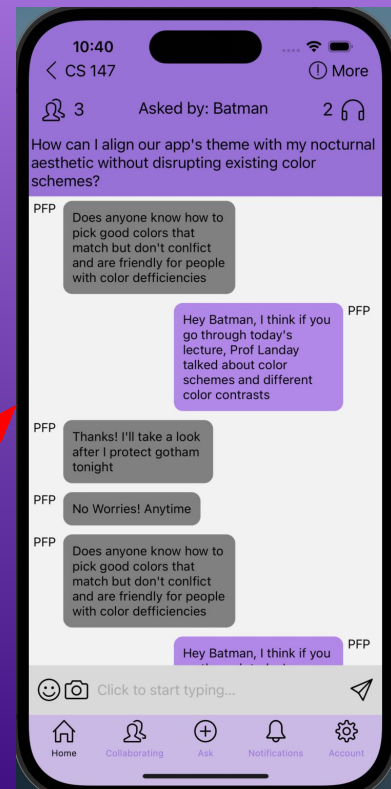
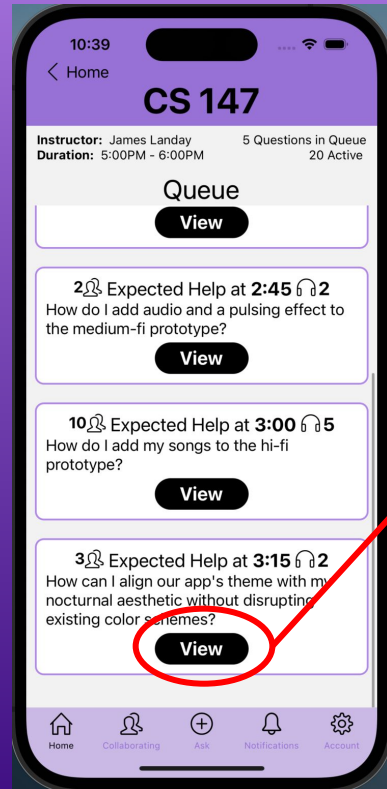


Task/Features

Task 1: Join a question in the queue

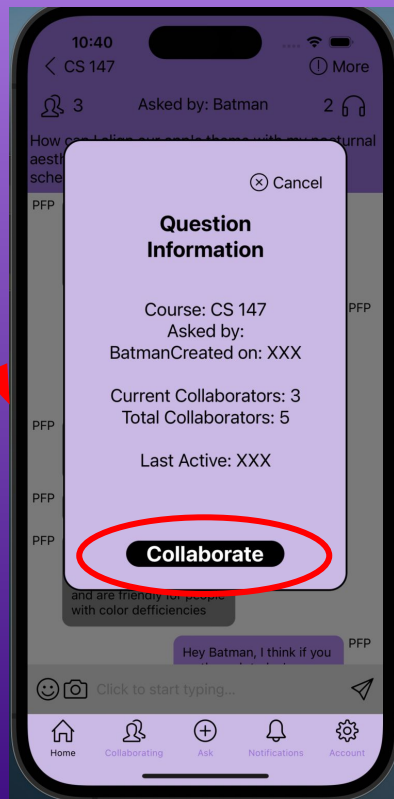
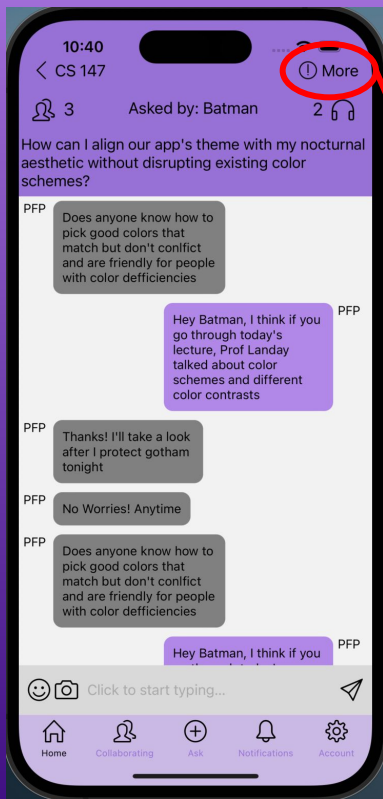


Swipe to explore questions



Task/Features

Task 1: Join a question in the queue



Implemented Features

Task 1: Join a question in the queue

Stack Navigation

1. The main stack allows for proper navigation between different pages
2. Back button allows user to move backwards from the direct previous page
3. Bottom bar tab navigation allows for easy navigation and maintains stack location (Home Button doesn't automatically go home)

Scrolling

1. Allows for extensive data to be rendered and explorable in pages

Notifications

1. Users have a notification page that lets them know if another user is interacting with their own question or a collaborated question

Unimplemented Features

Other Pages In tasks 2/3

1. Pages not built for “asking a question”
2. Account Page needs to be added
3. Other question pages (CS 161, English 9CE) need to be populated with different data

Messaging

1. Messaging feature is not functioning and only brings up the phone’s keyboard

Other

1. No form of data retention that can be used for saved questions, collaborated questions, questions asked. Need a small backend database
2. Hamburger Menu not yet functional
3. Account Information
4. Information/Help Page
5. Filtering Questions

Hard Coded Data/Wizard of Oz

Current Task 1

1. Each Question in all the courses has hardcoded data for CS 147 specifically
2. The information passed into each question in the queue is used with hardcoded props.

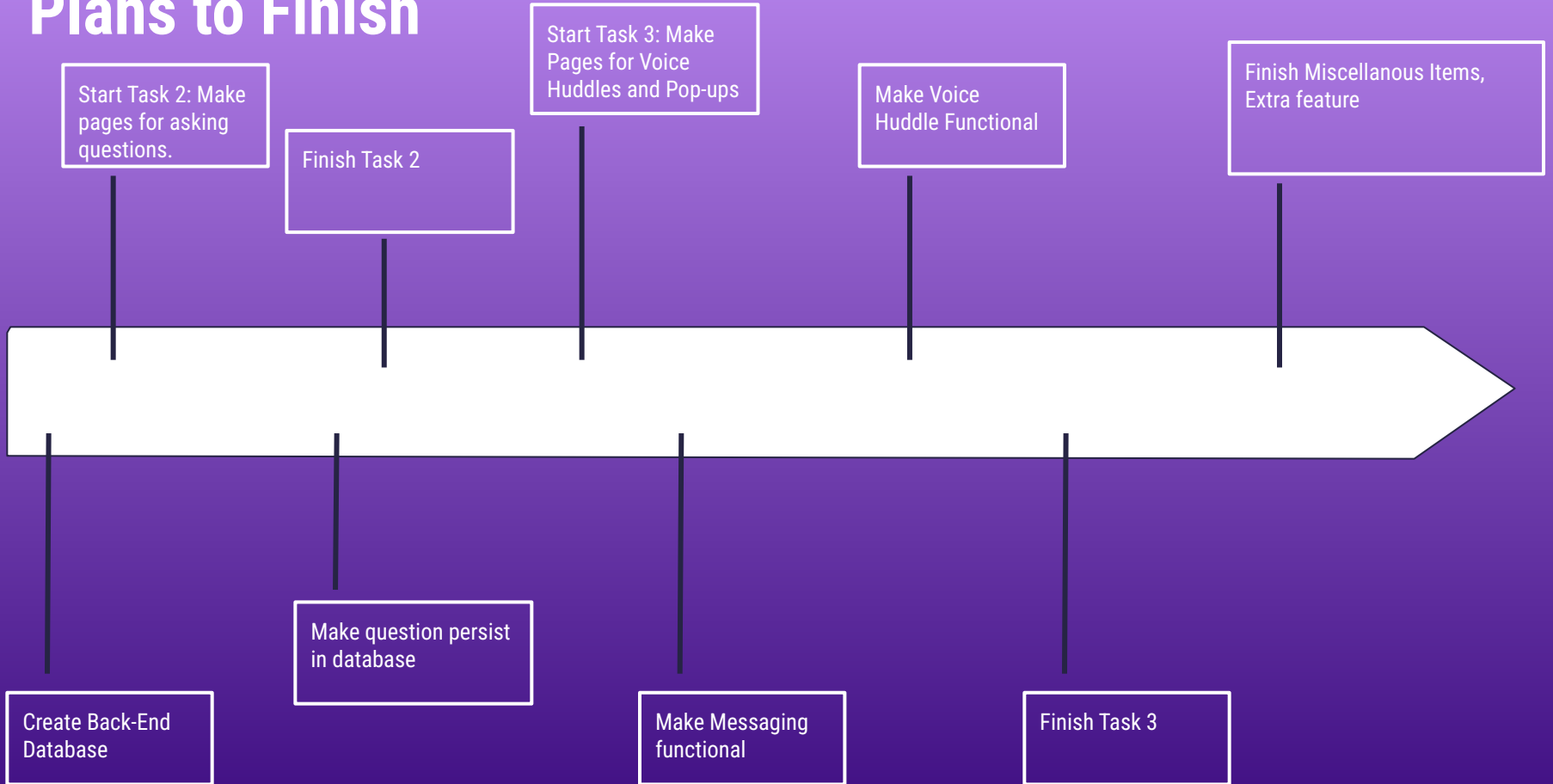
Messaging

1. All Messages for all classes are currently hard coded for one specific question in the queue

Other

1. The notification page in the bottom bar is hardcoded in the front-end to fake notifications
2. Collaboration page in the bottom bar is hardcoded to render a list of current questions the user has collaborated on.

Plans to Finish



High-Fidelity Prototype Task 1 Demonstration

Thank You!
