

Wavelength: Lo-Fi Testing

Corbin S | Steven K | Sebastian J | Connor H

Value Proposition

Connecting compatible music listeners.

Mission Statement

Our aim with Wavelength is make it easier for people with similar music tastes to connect. We believe music is better when you share it with others!

Problem/Solution Overview

It can be difficult to find friends with the same taste in music. Not only is there a vast pool of musical genres and artists, there is a growing number of ways to consume music. The plethora of music genres and listening platforms can make overlap in musical tastes with your friends unlikely.

Our solution, Wavelength, is a platform where users are matched with one another based on sampled music taste and geographical proximity. We encourage users to chat about their music taste, share songs with each other, or even meet in real life and go to a concert together. Wavelength isn't a competitor to music streaming or purchasing platforms, but a unique platform for expanding and sharing one's music taste with like minded listeners.



Sketches

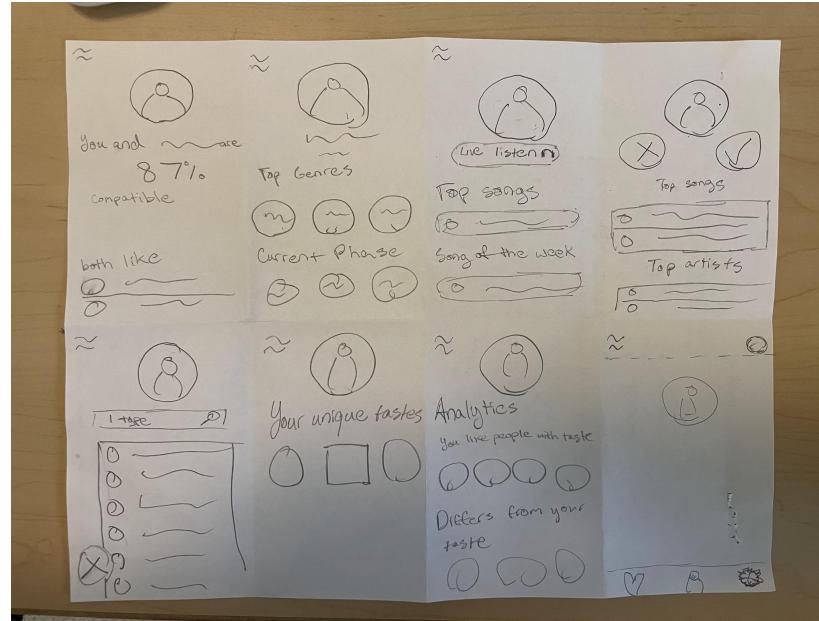


Figure 1: Sketches generated during the “Crazy Eights” exercise during section (different ways to illustrate a user’s profile)

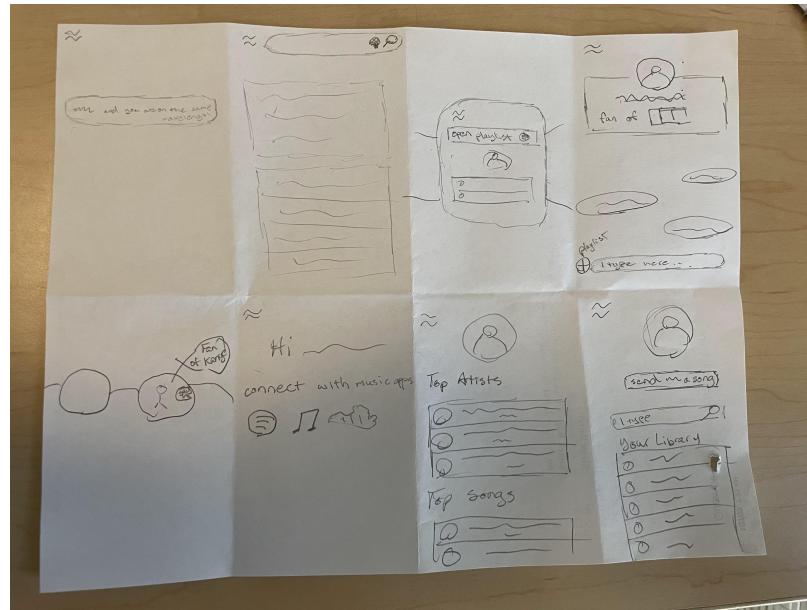


Figure 2: More sketches from the “Crazy Eights” exercise during section with an emphasis on non standard interfaces





Figure 3: More sketches from the “Crazy Eights” exercise during section (visual notifications, chat-based UI, wearables)

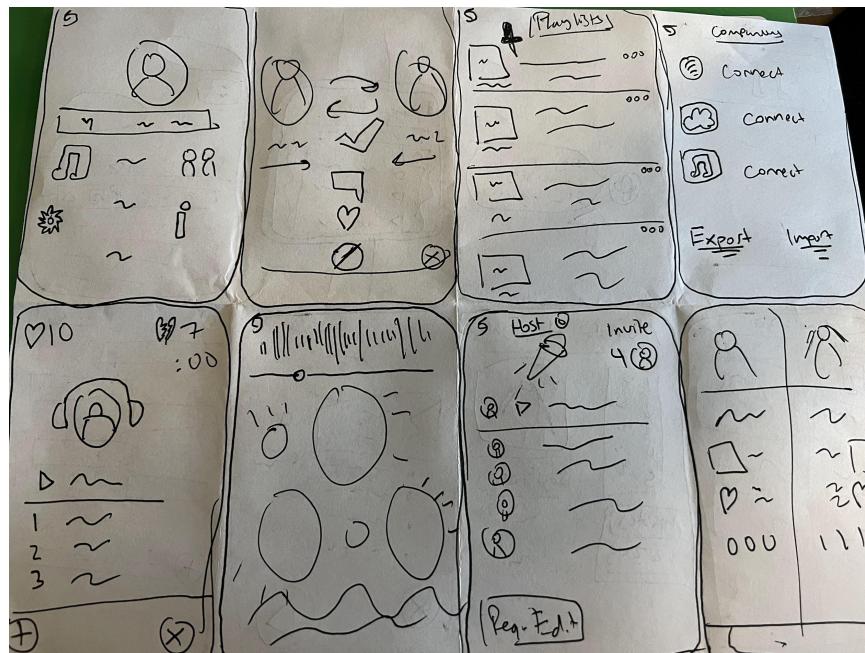


Figure 4: More sketches from the “Crazy Eights” exercise during section (live listening screen)



Top Two Designs

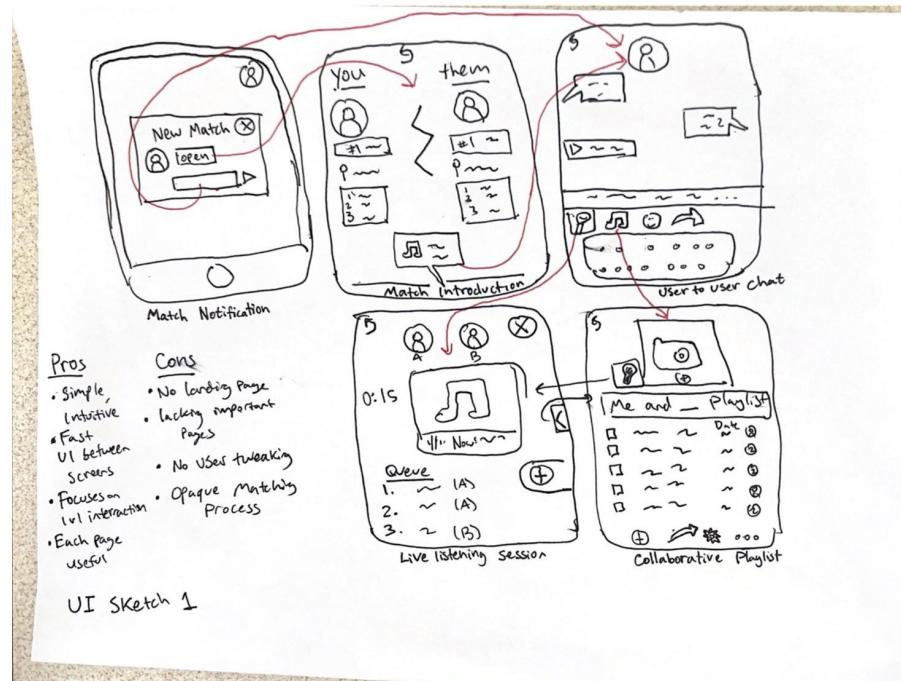


Figure 5: The first design, which we ended up choosing because it favors simplicity and focuses on interpersonal interaction

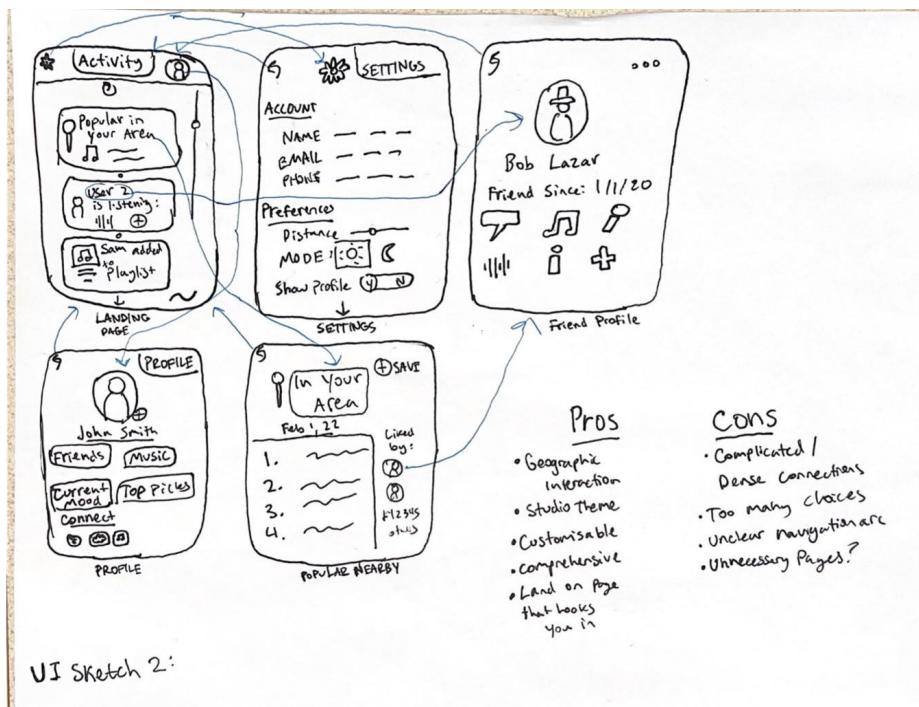


Figure 6: The second design took a more social media-esque approach, with a prominent activity feed, intense profile customizability, and a variety of task flows. While comprehensive, we ultimately decided it was overcomplicated.



Selected Interface Design

Task Flows

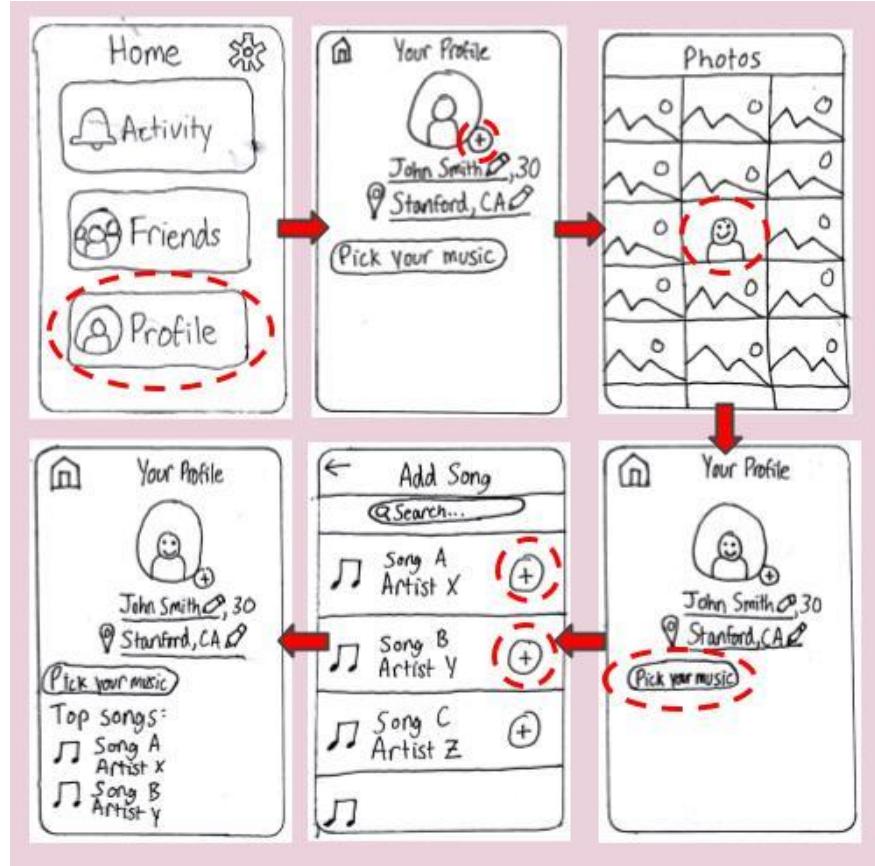


Figure 7: Simple Task Flow, Creating a User Profile

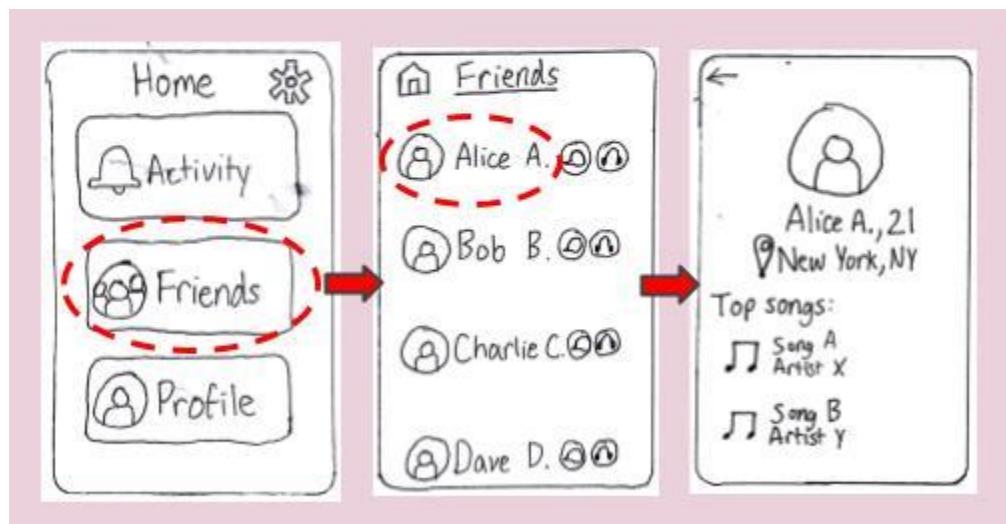


Figure 8: Moderate Task Flow, Viewing a Matches Profile



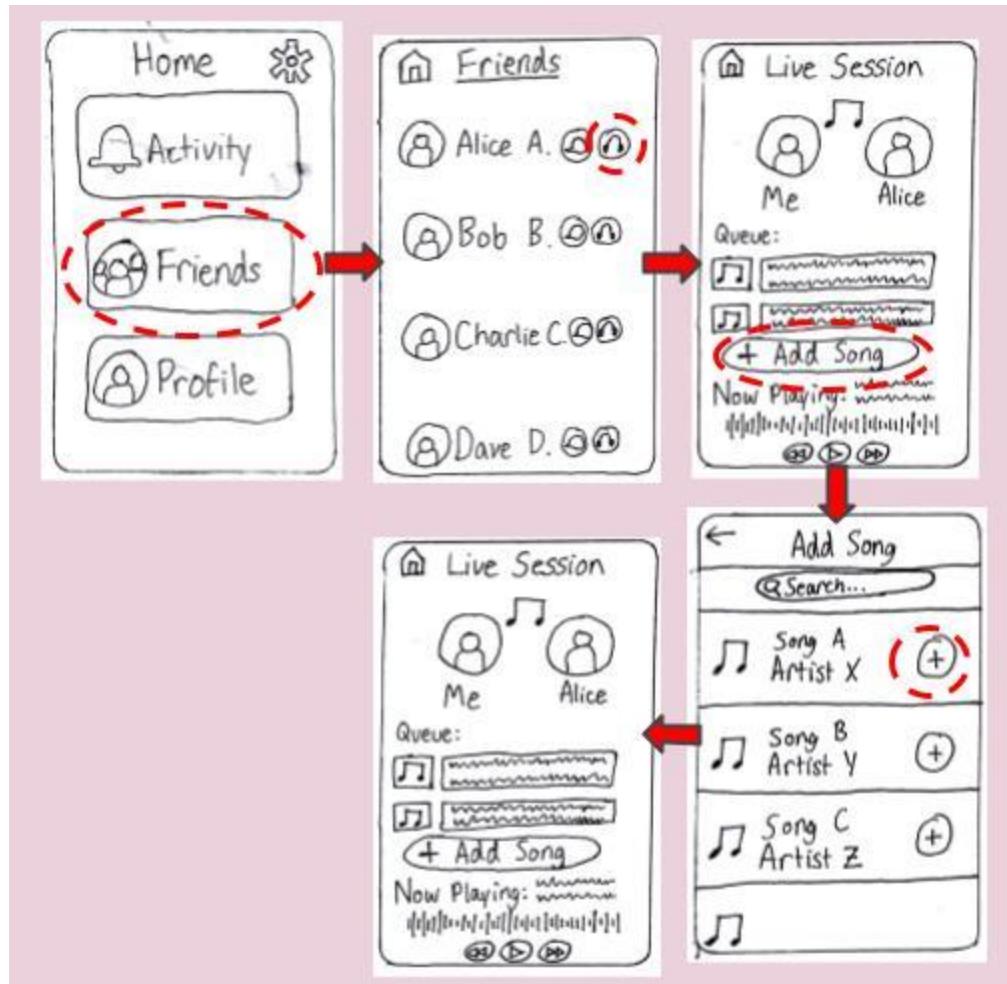


Figure 9: Complex Task Flow, Adding a Song to a Live Listening Session

Reasoning for Selection

Rather than create another social media app with a scrolling feed as the central platform, **we elected to go with the first of our two best design sketches** because it featured a simple UI, an understandable task flow, and a focus on person-to-person interaction. Each screen has ample white space, minimal text when applicable, and understandable places to initiate a task-flow. The second design we had, visible in Figure 6, had more options for the user but was also busier and more centered around an activity feed, which strays from the goal of our app to connect compatible listeners. Furthermore, we wanted to remain closer to the Studio mission of amplifying and augmenting user experience by providing a novel way of listening to and interacting with music, mainly through a live collaborative listening task.



The user profile is customizable, allowing for essential information without the stress of making a variety of choices. Viewing a friend's profile is even more accessible, with a very simple overview of the other user's information. In the early stages we believe it's best to have a more simple prototype that we can add onto, rather than a complex orientation before getting feedback. The primary feedback on our concept video was a lack of clarity surrounding concrete tasks, which is what we wanted to fix in this session of prototyping. Each task is distinct, quickly doable, and separate in a way that we hope will solve the issues we faced last week.



Prototype

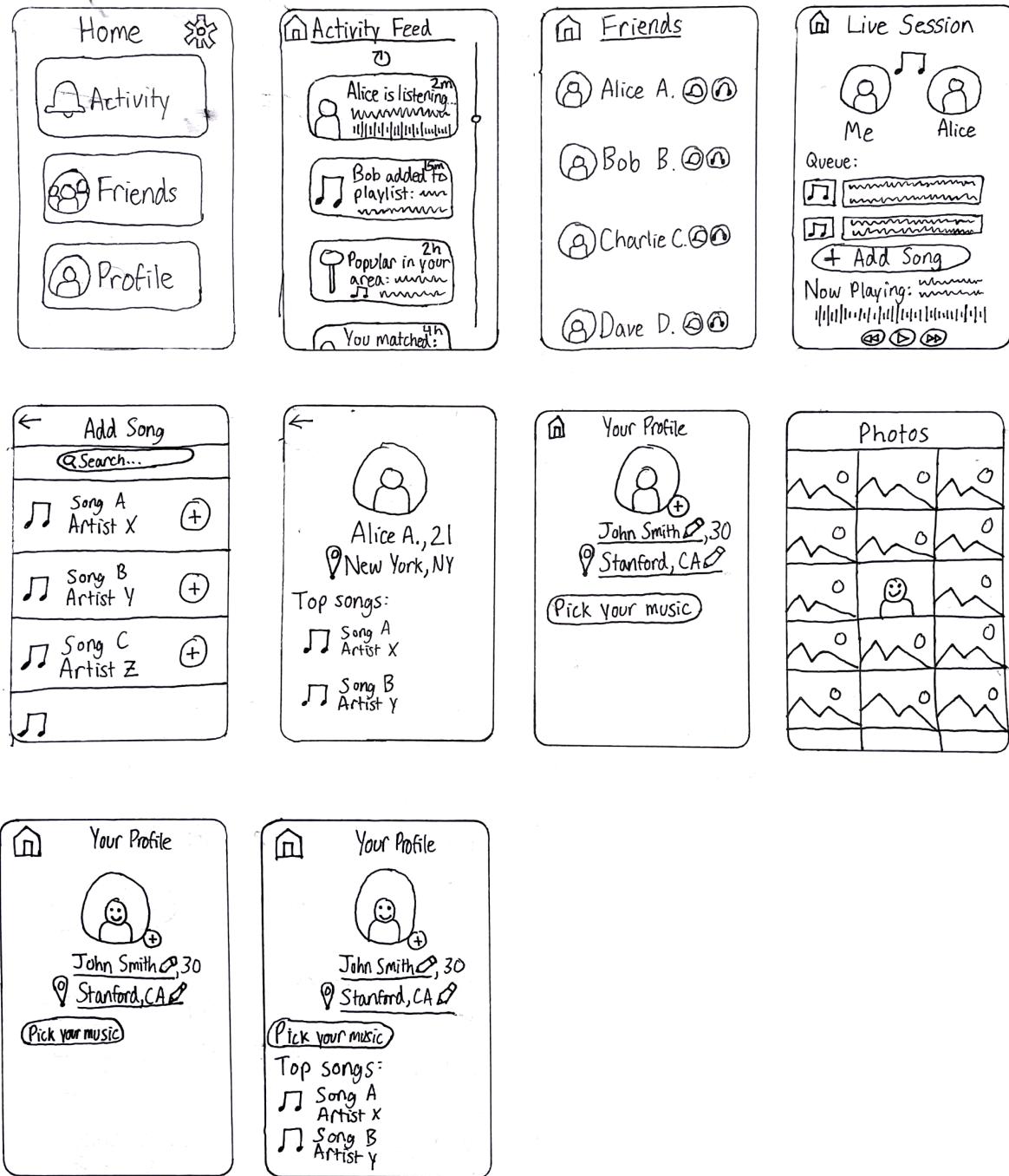


Figure 10: Screens generated according to our selected interface design. We uploaded these screens to Marvel to make our prototype.



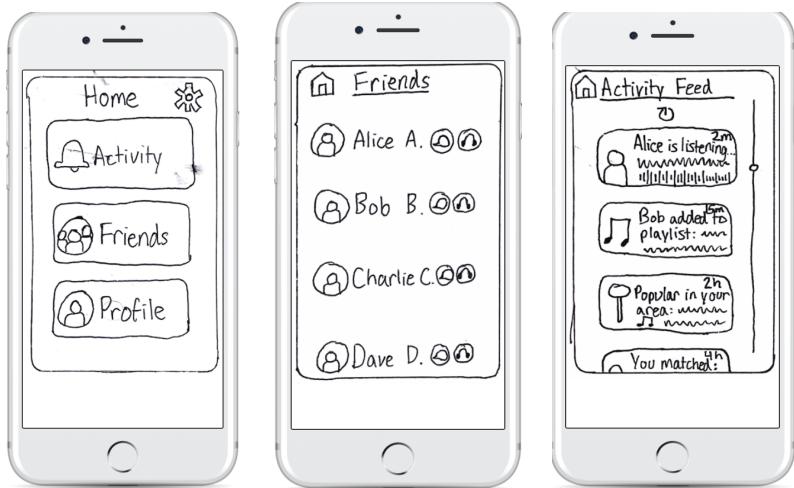


Figure 11: We linked our UI sketches together with hot zones using Marvel to simulate the user experience of using our app. You can view the prototype [here](#).

Description

Our prototype has three main pages that can be accessed from a home menu page. Activity feed, Friends list, Profile page. In terms of Task flow, the activity page is not directly linked to the 3 tested tasks, but served as a representation for future prototyping and helped give insight as to whether users would incorrectly navigate or if task discovery was indeed intuitive.

Our UI was heavily influenced by the design of LinkedIn, Spotify, and Tinder, combining aspects of matchmaking, music selection, and activity feeds. However, as it stands, our UI is significantly more simple than Spotify and LinkedIn, and is more similar to Tinder in its simple page layout and minimum paths for task flows.



Testing

Participants

Our participants were all music listeners in their mid twenties, selected for their niche interests in music and their interest in making playlists. All of our participants are somewhat tech savvy, and we believe they would be potential downloaders of our application.

1. Master's student, listens to music for 6 hours per day, fan of classic hip hop
2. Undergraduate student, avid playlist builder, fan of 70s rock
3. Undergraduate student, listens to music while practicing squash, listens to music from another country

Environment

We conducted the interview with our first participant in person, and the other two over Zoom, with our participants "hugging" their laptop so we could see their phone screen using our prototype.

Tasks

Simple: Customize your profile with a photo and a song.

Moderate: Navigate to a friend's profile.

Complex: Start a live listening session with a friend and pick a song to add to the queue.

Usability Goals

Our main usability goals were to have each participant complete each task quickly and easily without becoming confused by the app or needing to ask the facilitator questions.

Procedure

We began our testing by giving the participant an overview of the app's intended use and our vision for it. We stressed to the participants that we wanted to focus on ease of use and navigation. We gave the participant our prototype via Marvel, and gave the participants one task at a time to complete starting from the home screen, and timed each task.

Key Measurements

In our testing, we focused on how easily users were able to complete the three tasks. When users found navigating the app confusing in any way, we asked them what they were struggling with in order to target any possible pain points. To obtain a



quantitative measurement about the simplicity of our UI, we timed each participant while they completed the tasks.

Roles

We rotated being the facilitator, note-taker, computer, and observer in each interview. We did not have a need for a computer during the in person interview, so we had our fourth team member take notes as well. The computer also measured the time it took each participant to get through each task.



Results

Timing Data

	Participant 1	Participant 2	Participant 3
Simple: customize profile	0:07	0:08	0:13
Moderate: view friend's profile	0:07	0:24	0:08
Complex: add song in live session	Incomplete (hot zone was incorrect)	0:11	0:16

Participant Feedback

- All three participants said that they found the UI "straightforward"
- In the second interview, the facilitator gave the name of the task as "view *match's* profile", rather than "view friend's profile" which confused the participant, leading to the longer time to complete the task
- Two participants were temporarily confused when they tried clicking on profiles further down the friends list in the moderate task, for which we had not made screens
- Two participants commented that they liked the design of our "Live Listening" screen

Participant Recommendations

- A participant recommended making it more clear how to create a live listening session; the small headphones icon was not clear enough
- Some participants felt our UI was slightly generic. One participant in particular told us they we should find a way to "spice it up"

Discussion

All participants were able to complete all tasks fairly quickly and easily, with the exception of one error in the online prototype. All participants commented that the interface was straightforward to navigate, which we had prioritized with our prototype.

Based on participant feedback, we will clear up the language disparity between "friends" and "matches." These terms are intended to refer to the same thing.



Additionally, we have decided to reevaluate our UI to add elements that make the user experience fun. As mentioned above, we prioritized efficiency with this iteration of the prototype—we were elated that our participants found our UI easy to use. However, given the feedback, we realize there are elements that we must add to our prototype to get our target audience to seek out our app.



Appendix

Consent Form

Iron Man Team 2's prototype is being produced as part of the coursework for Computer Science course CS 147 at Stanford University. Participants in the experimental evaluation of this prototype provide data that is used to evaluate and modify the interface of Iron Man Team 2. Data may 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 Corbin Schmeil, Sebastian James, Connor Hogan, and Steven Kohl or with Professor James Landay, the instructor of CS 147:

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

Participant anonymity will be maintained 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 Iron Man Team 2's research. I understand that I may withdraw my permission at any time.

I give consent to be videotaped during this study:

Yes No

I give consent to be audiotaped during this study:

Yes No

I give consent for video or audio recordings from this study to be shown to people not directly involved with this research during/in class, seminars, reports, or scientific presentations.

Yes No

Name _____

Participant Number _____

Date _____

Signature _____

