



entourage

Final Report

CS 147 Winter 2022

Studio: Art & Digital Media

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I - Introduction

Value Proposition

Connect artists and fans through music NFTs

Mission Statement

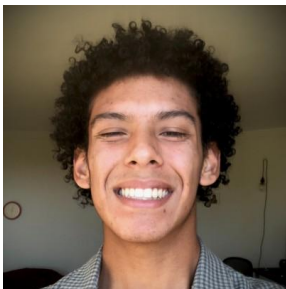
Enhance the music consumption experience through NFT campaigns released by musicians, with ownership providing fan status, exclusive content, and community engagement with other fans.

Problem/Solution Overview

Sharing love for music is driven by word-of-mouth connection, with authentic fan status limited to the integrity of the individual who preaches. As the NFT industry continues to grow and artists release more and more artworks, it becomes more difficult to pinpoint functionality of these digital assets. We want to create a platform that allows fans and musicians to utilize NFT technology to their advantage, using the uniqueness and exclusivity of an NFT to financially support the artist, connect fans with each other, and allow individuals to display and share their favorite music in a digital format.

Meet The Team

Emilio R.



User Researcher/Designer

Alahji B.



User Researcher/Designer

Ruslan A.



Designer/Developer

Nick W.



Developer

II - Needfinding Interviews

We initially started with our needfinding by collectively interviewing three individuals who were able to share their unique perspectives on their use of digital assets. We believed that it was imperative that we spoke to individuals with varying levels of knowledge and interests in digital assets which is why we were intentional in targeting individuals from different backgrounds.

We asked our participants some basic introductory questions followed by a range of questions about their familiarity and comfort levels with digital assets. Though we had a list of specific questions coming into the interview, we tried making the experience for our interviewees as natural and not scripted as possible as we were interested in listening to their personal stories, observing their demeanors, and understanding their emotions. Nonetheless, we did still maintain an interview guide to ensure that we were getting insightful information to help identify a problem space and attempt to address the pain points of our potential users. A list of guiding questions that we used to drive the interview is listed below:

- ◆ How do you expose yourself to digital media?
- ◆ How do you share the digital content that you enjoy?
- ◆ What do you value about digital assets?
- ◆ What sorts of digital assets have you interacted with?
- ◆ What form of digital assets do you own?

After talking to our participants about their experiences with digital assets, we realized that these experiences came in different forms. We were able to gather useful initial insights and identify the main concerns that our participants had interacting with their digital assets.

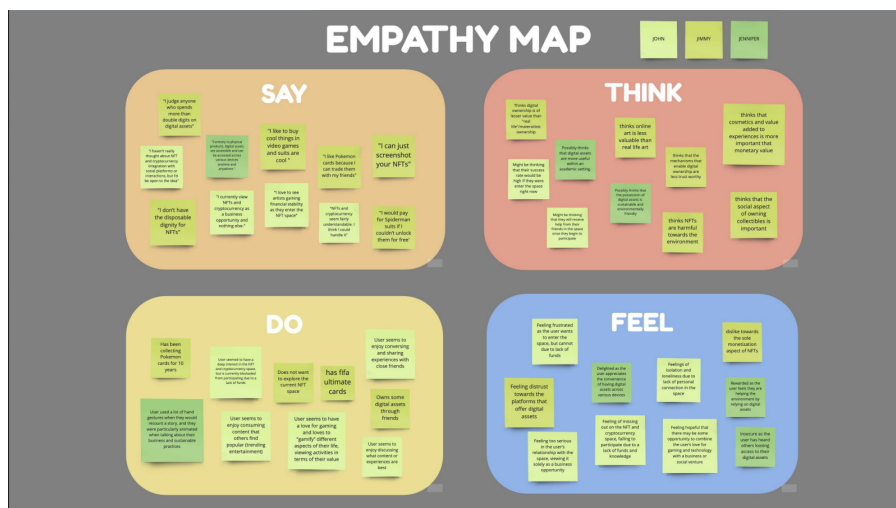


Figure 1: Empathy Map from Needfinding Interviews

III - POVs & Experience Prototypes

After conducting needfinding interviews with our participants, we later developed “Point of Views” and experience prototypes to get a better understanding of how we can help our stakeholders. Later, we came up with several “How Might We” questions to assist us with brainstorming solutions to address the pain points experienced by our interviewees.

POV: Luis

- ◆ **We met Luis**, a recent graduate from UF and an avid gamer who loves discussing his favorite movies, shows, video games, and music with his friends online.
- ◆ **We were surprised to realize that Luis** shares his favorite digital media content through word of mouth.
- ◆ **We wonder if this means that Luis** feels that conversation is the best way to express his enthusiasm for his favorite content.
- ◆ **It would be game changing** to streamline this sharing experience without losing the passion behind Luis’ satisfaction.

HMW’s Inspired by Luis:

- ◆ How might we share one’s favorite digital media?
- ◆ How might we represent one’s satisfaction with a piece of content?
- ◆ How might we eliminate the need for conversation?
- ◆ How might we standardize ranking digital content?
- ◆ How might we connect different media platforms?
- ◆ How might we connect people based on their favorite digital media?
- ◆ How might we strengthen existing relationships based on digital media?
- ◆ How might we change the need to share your assets?
- ◆ How might we make sharing assets/digital media more enjoyable?
- ◆ How might we gamify sharing assets/digital media?
- ◆ How might we make NFTs more equitable?
- ◆ How might we standardize digital assets in non-gaming environments?
- ◆ How might we change the way digital assets are shared?
- ◆ How might we incentivize the sharing of digital assets/media?
- ◆ How might we change NFTs to be more social inherently (like incorporating the social aspect into the NFTs directly)?

POV: Jennifer

- ◆ **We met Jennifer**, a Georgia Tech undergrad and business owner in her early 20s who constantly shares graphic designs, images, contracts, and videos with her suppliers and vendors overseas electronically.
- ◆ **We were surprised to realize that Jennifer** constantly fears for unauthorized and/or unintended use of her digital assets when sharing them with other people.
- ◆ **We wonder if this means that Jennifer** feels that digital assets (particularly documents, pdfs, and images) are not protected when shared with others.
- ◆ **It would be game changing** to be able to control the use and access of one's digital assets even after sharing them with others.

HMW's Inspired by Jennifer

- ◆ How might we share our digital assets?
- ◆ How might we protect our digital assets?
- ◆ How might we control the usage of our digital assets even when shared?
- ◆ How might we know who has seen our digital assets?
- ◆ How might we discourage recipients from using digital assets as not intended?
- ◆ How might we make sharing digital assets a trustworthy experience?
- ◆ How might we prevent unauthorized users from accessing the owner's digital assets?
- ◆ How might we praise people for not misusing someone else's digital assets?
- ◆ How might we make sharing digital assets easy?
- ◆ How might we encourage people to share their digital assets?

POV: Kozy Koala

- ◆ **We met Kozy Koala**, an NFT collection creator who has had successful sale of his nfts and is immersed in the web3/nft space.
- ◆ **We were surprised to realize that Kozy Koala** used NFTs to raise funds for a mental illness organization.
- ◆ **We wonder if this means that Kozy Koala** feels that digital assets are a way to do charitable work and help others.
- ◆ **It would be game changing** to allow other NFT creators to have Kozy Koala's impact and reach without preventing them from making profits.

HMW's Inspired by Crazy Koala

- ◆ How might we provide a mechanism to allow others to donate their proceeds to causes they care about with ease?
- ◆ How might we incentivize other people to donate a share of their proceeds?
- ◆ How might we discourage others from donating their proceeds?
- ◆ How might we make NFTs be seen as a way to lift others?
- ◆ How might we gamify donating proceeds from NFTs to charitable causes?
- ◆ How might we connect making NFTs to specific charitable causes?
- ◆ How might we praise people for donating proceeds from their NFTs?
- ◆ How might we expand the impact NFTs have?
- ◆ How might we make the experience of donating proceeds from NFTs more fun/rewarding?
- ◆ How might we encourage more donations by prompting users to share/tweet about their donations?

Once we finished gathering our responses for the POVs and HMWs, we collectively brainstormed several possible solutions narrowed it down to these three options:

- ◆ How might we gamify sharing assets/digital media?
 - **Solution:** Allow users to trade and display their assets for others to view
- ◆ How might we protect our user's digital assets?
 - **Solution:** Allow users to authenticate access to their digital asset through mobile alerts
- ◆ How might we provide a mechanism to allow others to donate their proceeds to causes they care about with ease?
 - **Solution:** Allow users to create & join communities centered around charitable causes

After brainstorming the following solutions, we decided to test some of our assumptions by organizing three different experience prototypes that addressed the pain points of our users.

Experience Prototypes

Prototype #1:

Description: Creating a personalized media collage for the participant

Assumption: Individuals want to own, interact with, and share digital assets and media

Successes: Connected with people online who participant wasn't so close to, lots of interaction on social media

Improvements: Process took long, could not see other's collages

Learnings: Connection was the most important factor of enjoyment

Validity: User was excited about to share their collage after curating.

Prototype #2:

Description: Creating a two factor authentication method where owner must approve alert on their device before recipient is able to gain access

Assumption: Users will not be annoyed by alerts and will respond to access requests swiftly

Successes: User felt in control of their digital assets and no longer feared it being accessed by unauthorized users.

Improvements: It would occasionally take long for the owner to approve access requests

Learnings: The recipient of the digital asset felt frustrated by having to wait until access was granted by owner

Validity: Owner of digital asset felt at ease when sharing their things with others and was not annoyed by alerts.

However, their response time to requests varied, which could be annoying for recipients

Prototype #3:

Description: Simulate joining/creating a community centered around a charitable cause when buying an NFT

Assumption: NFT buyers want to join and create communities

Successes: User “joined” a cause driven community associated with NFT they bought.

Improvements: Only tried one NFT and didn’t have a lot of time on Discord

Learnings: Process of organizing is tedious and discouraging

Validity: User appreciated the community driven focus on charitable causes

IV - Design Evolution

Our design process began through a series of rough sketches inspired by our needfinding interviews and experience prototypes. We wanted to transform the natural interactions and tasks revealed in the initial exploration into storyboards and application designs.

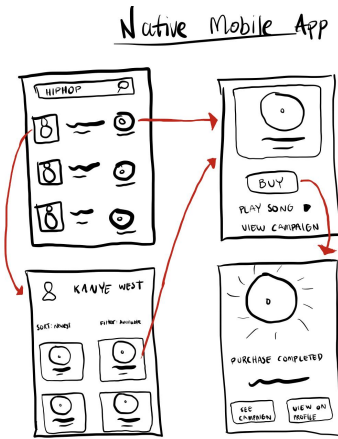


Figure 2: Initial sketches drafting mobile application storyboard

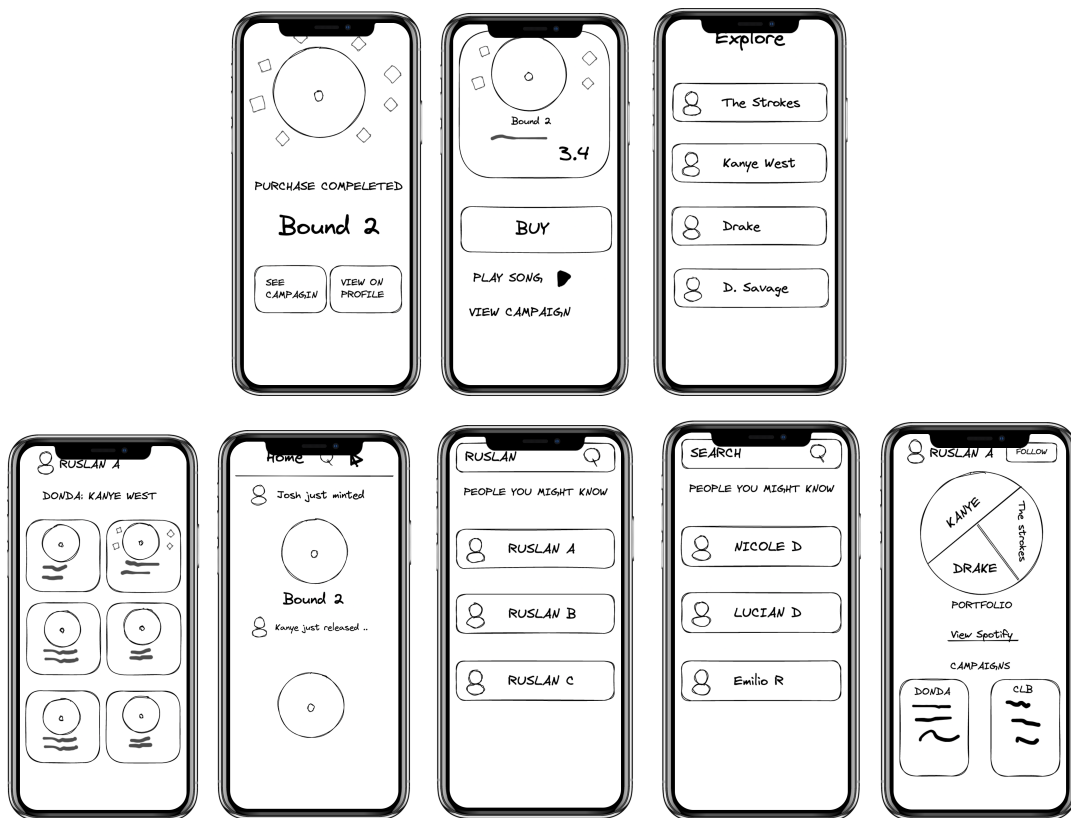




Figure 3: Low-fidelity prototype separated by task (three total task flows)

To test our low fidelity prototype, we gathered a group of participants that best represented our target audience. Through their feedback and individual experiences, we implemented a series of changes carried forward into the medium fidelity prototype stage.

Major Design/Usability Changes Addressed

1. Simplifying task flows and highlighting actions

Within our low fidelity prototype, there were many features and possible actions present that were not crucial to completing the designated tasks. For example, when a user wanted to purchase an NFT, they were prompted with actions such as “play song” and “view campaign” in addition to “purchase”. This distracted and overwhelmed the user, which was something that our prototype participants expressed in their feedback.

2. Clarifying actions and maximizing efficiency of task completion

Our participants during the low fidelity prototype testing stated that some graphics were confusing and counterintuitive, resulting in lowered efficiency and more time required to complete tasks. For example, the pie chart visual design of an individual’s portfolio did not effectively indicate to the user information regarding an individual’s assets or the action to view the details of an individual’s assets. To fix this, only important statistics were highlighted in informational screens in a digestible format and button/action items were distinguished through a restructuring of the visual hierarchy.

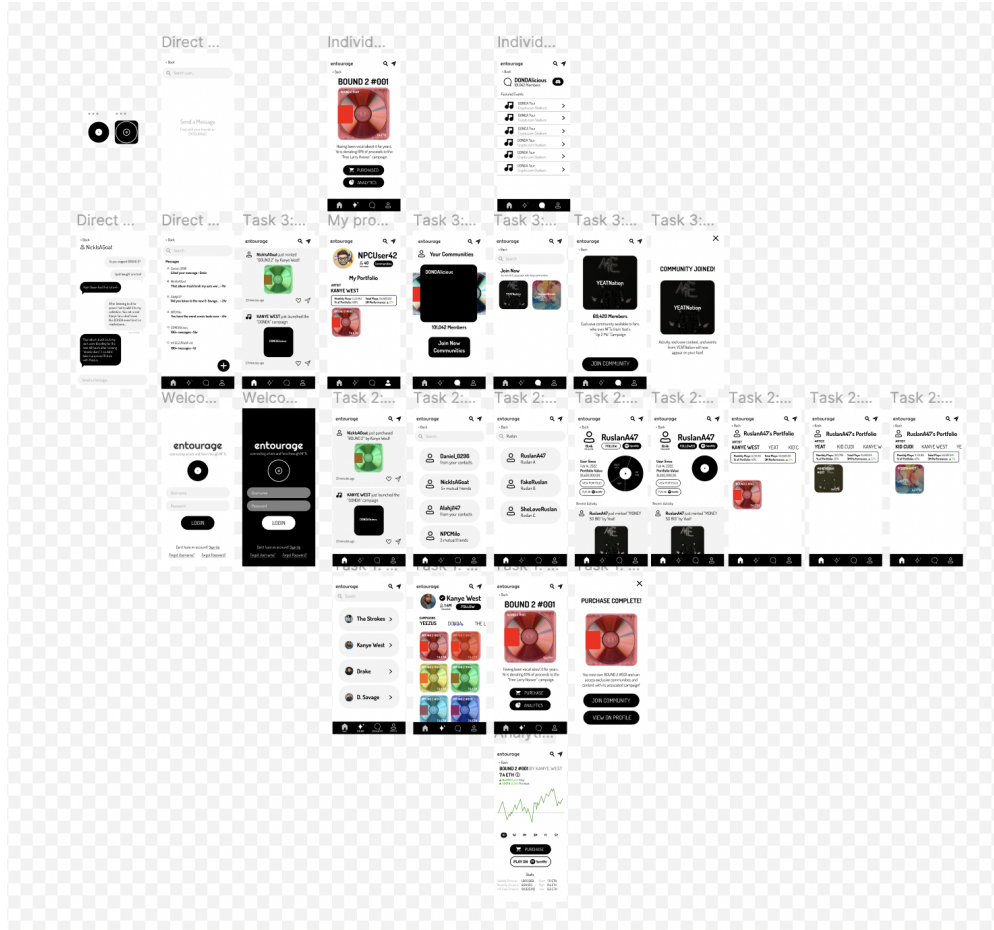


Figure 4: Medium fidelity prototype developed in Figma

After developing a medium fidelity prototype from our low fidelity prototype, we engaged in a series of peer reviews to test for violations of thirteen different design heuristics. The prototype was created and wireframes using Figma, which brought about some issues when it came to linking gestures and actions; a major portion of the revisions carried into the high fidelity prototype

Major Usability Problems Addressed

1. No option to start new message/conversation from messages tab

Violation: Only option to start a new message is through individual posts on the feed, which may be confusing to users as it is most intuitive to start a conversation through the messages screen

Fix: Add a new message button on the messages screen

2. No clarity regarding what artist belongs to on asset page

Violation: Requires the user to recall information and does not focus on the musician/artist, going against creator centered values

Fix: Specify the artist with text on the asset page

3. Ambiguity on individual profile page regarding number of followers

Violation: Number adjacent to icon and follow button could be associated with the number of users the individual follows or the number of followers the individual has, causing confusion and inconsistency between screens

Fix: Add text to clarify that the number refers to followers the individual has

4. No clarity on cryptocurrency and NFT terminology and vocabulary

Violation: Confuses users who are new to the space, only appealing to the audience familiar with the technology and excluding other groups of potential users

Fix: Implement an informational page which contains explanations of the relevant terminology and technology in a beginner-friendly format

5. Spotify feature only linked on individual assets

Violation: Inconsistent with engagement throughout the entire platform, where implementation on portfolio would focus on media/art and make content more accessible to all users (those with visual impairments, etc.)

Fix: Create playlists for each user's portfolio and link on profile page

6. Lack of clarity on footer navigation menu

Violation: Icons during initial med-fi render were not paired with labels. Icons could be interpreted differently and confusing to some users, while labels would provide clarity and highlight the features of the platform

Fix: Add text to clarify different tabs in footer navigation menu

Minor Usability Problems Addressed

Changes based on severity 1-2 heuristic violations:

1. Clarifying terminology, specifically “campaigns” vs. “communities” regarding NFTs and fan groups
2. Improved descriptions for individual music NFTs
3. Included verified artists to differentiate musicians from users/consumers
4. Improved text style and made styling consistent across all screens

Further Changes

5. Removed message feature on feed posts, keeping only like interaction to remove clutter and simplify user experience.
6. Some trade offs were made as we evolved from our med-fi to hi-fi:
 - A. Login was dropped—this feature was not needed to demonstrate the core functionality of Entourage and only distracted from time we preferred to spend on completing the 3 core tasks. It's also unnecessary to have login and only adds more friction to the sleek user experience that we are aiming for in this prototype.
 - B. Task 2 S4/S5 was dropped—This scene was not worth implementing due to repetitive features and also due to features that go against our values. For example, these screens show off portfolio value and we believe this only takes away from the focus on art and community-building. We know that there are some inherent financial challenges that we must address in having exclusive communities accessed via NFT purchase, and this number being used to flex value only exacerbates the issue. Furthermore, this page has an option to play a snippet on Spotify, but given Spotify's recent refusal to adequately punish Joe Rogan, we feel that we should leave them out of this app.
 - C. Analytics page finer details—We got rid of the play on Spotify button for the same reason cited above and we removed the small statistics at the bottom of the screen as we felt they may overwhelm users in a space that is already new and confusing (NFTs). This is also why we have decided to only show the most recent week on the graph, but may give users more control as development progresses.
 - D. We tweaked our med-fi and hi-fi community joining flow—the original community flow presented users with an option to join a community or join the discord which didn't make sense since you have to join the community to join the discord. We moved these prompts into different steps and went minimalist with the joining discord option by just having the logo in the individual campaign screen.

- E. In the "Join Now" screen for communities, we ended up having 1 community image per row instead of 2. We feel this better shows off the community and gives users the chance to not be overwhelmed, something we really prioritize in an app in such a new space.

V - Final Prototype Implementation

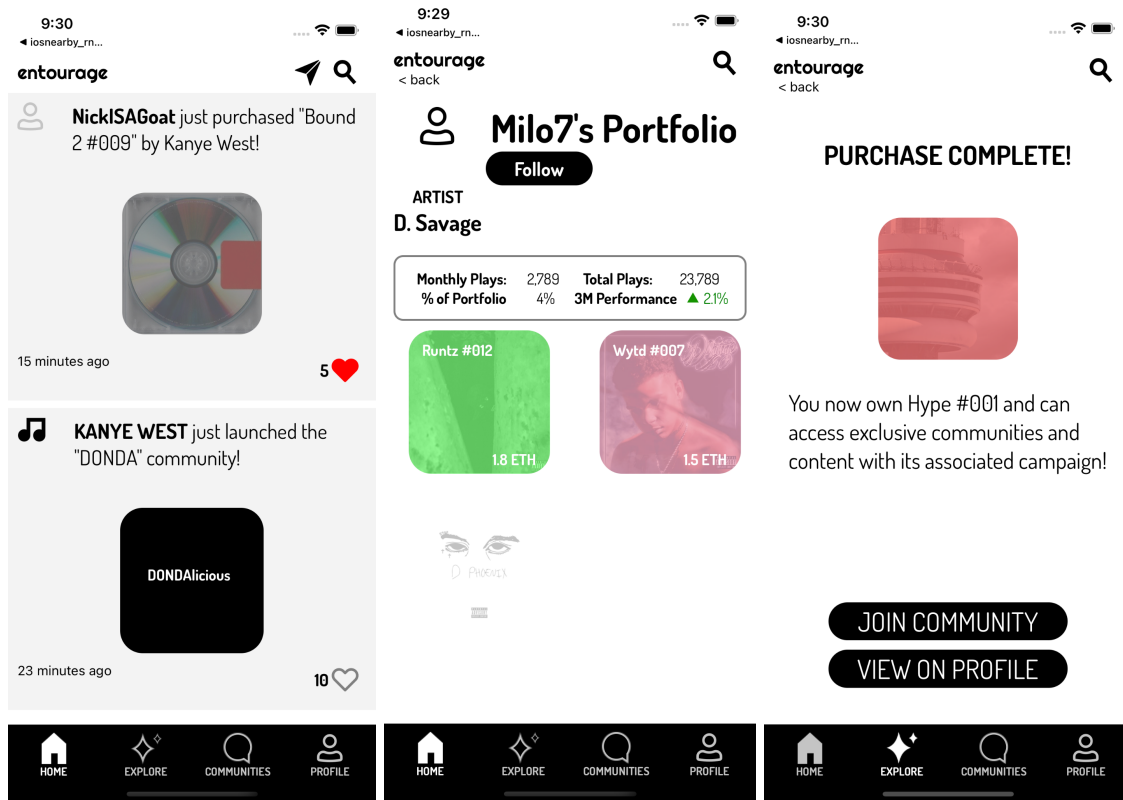


Figure 5: Final prototype implementation

Tools

For our high-fidelity prototype implementation, a series of different tools were used. As our medium fidelity prototype was designed and wireframed using Figma, we continued to use the platform to tweak and create new visual assets. For our application framework, we used React Native. To build and simulate the prototype, we used Expo (Cli + Expo Go), Github.

We used React Native (RN) because we believe in the motto “Learn once, write anywhere.” Specifically, we believe that in order to get our prototype out to as many users as possible, we’d need a cross-platform solution and RN is one of the best tools for the job. In addition, we used the Expo suite to make the development flow easier and minimize our reliance on unreliable software such as XCode as well as making use of the Expo Go app to be able to quickly share our prototype.

In regards to creating design elements, Figma was a great tool as it allowed us to collaborate effectively between ourselves and test visuals efficiently. For any illustrations and design tasks that required more flexibility, however, Adobe Illustrator was utilized.

Wizard of Oz and Hard-Coded Data

Ideally, our platform would vet the NFTs and verify the artists on the platform but due to time constraints, we hard coded the NFTs offered for sale in a Wizard of Oz fashion. Along the same lines, we also had to hard code the communities associated with NFT campaigns. Lastly, we pre-populated some of the received messages in our chat feature.

VI - Summary & Next Steps

The best part of music is enjoying and sharing with others. Throughout the duration of this course, we have worked to develop ENTOURAGE, a platform that allows its users to own a piece of their favorite music and engage with other fans within their respective communities. Our team transformed our ideas from design sketches to a full, high fidelity prototype built with [Insert tools used]. After loads of feedback from our peers and evaluators, we realize that there are many logistics and conceptual problems to work out if we intend to move forward with the project. However, during this process we learned a lot about how the design thinking process applies to application design and look forward to implementing these ideas to future projects!