coalease

Create with Creators

CS 147 Winter 2021

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https://web.stanford.edu/class/cs147/projects/FinancialLiteracyHealthandResilience/Coalease/

Problem and Solution Overview

Moving into a physical space can be hard to accomplish and for small businesses in the creative industry (designers, artisans, custom creators etc.) this struggle is only amplified. Often, these small business owners not only have a hard time sourcing a physical space to work in, use as a studio or to sell their products in, but these spaces are often too: expensive, large and are difficult to navigate as a single leaser with regards to taxes, levies and associated legal fees. Coalease, is a platform that aims to bring creators together under one roof to lease together, complement each other's products (synergize) and build a creative community. Our goal is to empower small businesses owners by creating communities of individuals who share not only an artistic vision but a physical space.

Need finding Interviews

In our first round of need finding interviews, we focused primarily on Personal Finance, specifically talking to younger individuals about their personal struggles with handling their finances, we had the chance to learn from:

- Andrew – a startup founder who is on a leave of absence from Trinity University to pursue business
- Eleonor – a rower and junior at Clemson University
- Will – a Senior at Georgia Tech studying Computer Science
- Kaiulani (Kai) – a Highschool graduate that has not attended college yet

In this round of interviews, we learnt:

- Many younger individuals feel that they are thrown into the world having to manage their finances (taxes and budgeting)
- There's so much to learn that they feel stupid and overwhelmed, and therefore less willing to go out and learn
- The most common sources of information are: internet & family members
- Personal banking apps seem to be the most common mobile sources for financial info
- Gen Z individuals are more "open" with their finances in their communities
- For half of the interviewees, almost all of their money was in a checking account
- Younger individuals value income diversification

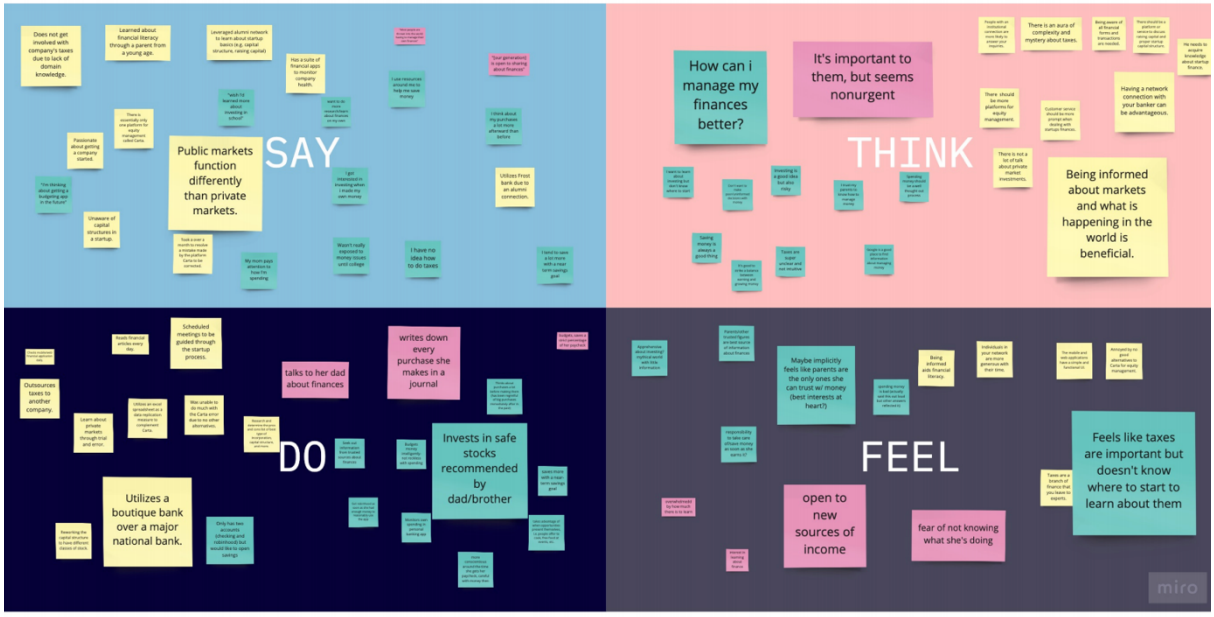

Figure 1. Need finding Interview's Empathy Map

In our second round of need finding interviews, we decided to use these insights and dive deeper into Business Finance and interview Small Business owners. During this round of interviews, we got to speak to:

- Gia Bahm – Founder and CEO of Unearthen, an LA based handmade jewelry brand, focused on custom rings and showcase pieces that Gia makes herself
- Chloe Harvel – a violin teacher, who runs her own studio teaching children and young adults, based in Nashville, TN

Using these Small Business focused interviews, we learnt:

- There is anxiety associated with following up with client payments by small business owners
- Many small business owners keep track of their current clients with physical planners and construct by hand monthly payments plans for each of their students in order to keep their finances secure
- <u>Despite the exponential increasing use of tools that allow businesses to operate completely virtually, many small creative businesses still need a physical space they can use to work on their craft and interact with customers</u>

POVs & Experience Prototypes

Final 3 POV Statements and a HMW sampling that stemmed from each POV:

1. **We met** Andrew, a college-aged entrepreneur responsible for the finances of his healthcare startup including raising capital, issuing shares, filing taxes, budgeting and payroll in addition to his own personal finances
   We were amazed to realize he does not fully understand taxes, despite having exposure to personal finance from a young age; he had to start from the very beginning learning everything he knows about taxes online
   It would be game-changing to make the process of doing taxes (both personally and in the startup) more digestible for him

   Sampling of the related HMWs:
   - HMW eliminate the need for him to fully understand taxes?
   - HMW change the way in which a person thinks about filing taxes?
   - HMW automate the tax upkeep process?
   - HMW make taxes something people are truly motivated to learn about?
   - HMW supply startups with everything they need to do taxes in an easily accessible manner?

2. **We met** Gia, an online jewelry store owner and custom ring maker based in Los Angeles
   We were amazed to realize that Gia is anxious about incorporating a physical store and showroom with a workspace into her online business model especially with regards to the upfront cost and if her target market would be accessible with her new space
   It would be game-changing to reduce her anxiety before signing a long-term lease and transition part of her business into a physical space

   Sampling of the related HMWs:
   - How Might We provide Gia with a way to reduce her anxiety associated with expanding into a physical space?
   - How Might We make Gia feel more secure in her decision to expand into a physical space to access her customers?
   - HMW provide Gia with a way to understand how accessible her target market would be through her new physical space before signing a lease?
   - HMW combine the financials relevant to both Gia's online store and physical store in a way that she can easily understand and make important decisions with?
   - HMW show Gia how certain major decisions/changes (like owning a physical store) might affect the business as a whole?

3. **We met** Chloe, a young Southern violinist that teaches local kids and young adults the violin as a source of income
   We were amazed to realize that she has trouble with keeping her clients accountable as a "people pleaser" and therefore often receives class payments late
   It would be game-changing to enable her to stay financially organized with on-time client payments

   Sampling of the related HMWs:
   - How Might We provide a way to keep her clients accountable without the burden of reminding them to pay coming from her?
   - HMW incentivize clients to pay Chloe on time?
   - HMW entirely remove the burden of staying financially organized from her?
   - HMW provide automated reminders to keep both parties accountable?
   - HMW create a payment system for Chloe that doesn't require her to receive regular payments from her students?

Top 3 solutions:

1. A web app that will facilitate and organize the transition for small business owners into physical spaces. The app should be flexible for both micro-leases and long-term leases on store fronts and include a budgeting tool to keep track of: rent expenses, contractor pricing, interior designers, point of sale equipment (also provide reliable local recommendations)
2. A mobile application that attracts target markets closer to small businesses to ensure that physical storefronts do indeed draw in their customer base as expected. Inspired by "Pokemon GO," clustering people around different points of interest in order for them to receive something in return. Customers will be pinged about offerings: time-based discounts and challenge related special giveaways.
3. A platform that small businesses can use as turnkey solution to facilitate on-time client payments. Keeps track of clients and their payment schedules with automated reminders on late payments. Through a custom inputted "gamify" approach you're able to incentivize early payments by offering: discounts on future offerings, credits on future purchases and access to other custom offerings a business owner chooses to provide

Experience Prototypes:

Experience Prototype 1 – A slideshow with tasks that required the participant to share their screen and demonstrate how one would achieve each activity. Tasks that are required in the process of finding commercial properties, contractors and staying within a budget whilst doing so.

- Assumption being tested: It is a difficult process to organize and budget the setting up of a storefront
- What worked/didn't work: The test participant felt that there was an overwhelming amount of information not relevant to the property. Difficult to compare between contractors. Difficult to maintain order within Google Docs as the properties increased. Insightful that the initial step of utilizing Google to search the best and most trusted contractors was repeated. **Assumption proven.**

Experience Prototype 2 – A choose-your-adventure group of scenarios for the user to go through while screen sharing made with screens designed in Figma. Scenarios of discovering discounts of new shops while walking in a commercial area.

- Assumption being tested: People will go to a store they've never heard about, just because an app recommended
- What worked/didn't work: The test participant was not interested in discovering a store because of a discount. Took the shortest path possible in every scenario. Did not want to buy anything even with different offers. Though the test participant may not be representative of the whole population, this is a powerful and surprising insight. **Assumption disproven.**

Experience Prototype 3 – A Google Form asking the user questions about their behavior and decisions surrounding payment for services (and subsequent conversation about answers). Tasks that are required in the process of finding and paying for private lessons.

- Assumption being tested: Gamifying payments will incentivize clients to pay more up front for more lessons to earn rewards
- What worked/didn't work: Although the test participant would not be more likely to work on his skill outside lessons with incentives, discounted lessons were his #1 best incentive to pay more up front for more lessons. Cost was definitely his most important factor, so gamifying around helping him save money would be effective. **Assumption Proven.**

Design Evolution

Final Solution Description

From our experience prototypes, we were most intrigued by the proven assumption: It is a difficult process to organize and budget the setting up of a storefront. Although, we had a variety of solutions that could be possibly implemented to solve this problem, after further discussing with small business owners and creators we realized that the biggest hurdle experienced in the transition (in full or part) into a physical store, involves the cost. The expenses such as rent, taxes, levies and associated legal fees are both financially burdensome on one small business owner. If they choose not to transition into a physical space, they may limit their productivity which further reduces their financial well-being. With this in mind and after having further conversations with small

business owners, we decided to focus exclusively on creatives as our target users, and hence our value proposition: “Create with Creators.”

Our final solution is a mobile application that empowers small businesses owners by creating communities of individuals who share not only an artistic vision but a physical space. Specifically, allowing creators to find other creators and potential physical leasing options in their area, and concluding the process seamlessly with a signable legal leasing agreement for that group.

Design Tasks

Task 1 –
Complexity: Simple
Description: Find someone/other people to co-lease a physical space with
Rationale: Our value proposition (“Create with Creators”) remains one that is embedded into a building a community. We felt that finding like-minded creators to co-lease with, is a core part of the application and should be as simple and seamless as possible for new users.

Task 2 –
Complexity: Moderate
Description: Compare different leasing options to determine what space best represents you and your aesthetic
Rationale: Once you have started or are in the process of finding other creative co-leasers that match your aesthetic, it is just as important to find the right physical place. As a result of the various filters such as location and price, we labelled this as a moderate task, one that is just as vital as finding your co-leaser.

Task 3 –
Complexity: Complex
Description: Navigate the collaborative discussion between prospective co-leasers and finalize a leasing agreement.
Rationale: If a creator now has a list of some great co-leasers and some preferred physical spaces, the handling of the logistical lease signing remains one of the significant challenges that are involved with bringing multiple people together to lease a space. The legal concerns are noted here and one that our application needed to handle consistently. As a result of this collaboration and logistical nature of the final step, we labelled this task as complex.

Visuals of the Major Steps in our Project’s Iteration

Initial low-fi sketches –
We designed the prototype in Marvel, using screens sketched out on an iPad. This allowed us to easily conduct interactive tests remotely with our lo-fi prototype. The

accessible link to the Marvel project is:
https://marvelapp.com/prototype/g0i77b4/screen/76670787

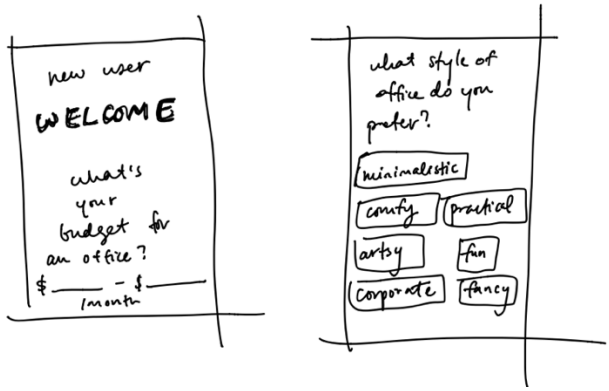

Figure 2. Low-fi (User welcome/onboarding flow)

Figure 3. Low-fi (Coaleasor discovery and Profile Flow)

Figure 4. Low-fi (Location Discovery flow)

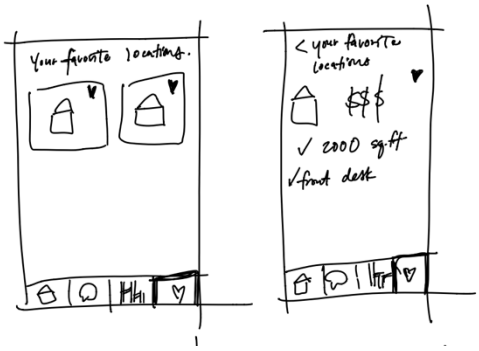

Figure 5. Low-fi (Favorites Tab (on locations) Flow)

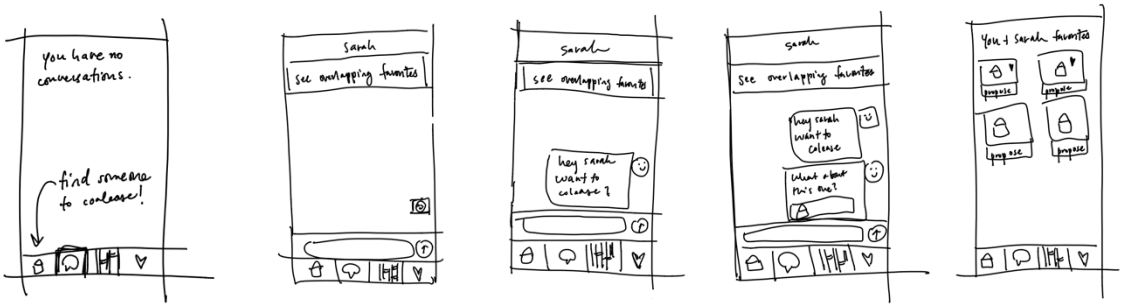

Figure 6. Low-fi (Conversation/chat Flow)

Figure 7. Low-fi (Lease signing/confirmation Flow)

Medium-fi prototype –
Our medium-fi prototype was designed used Figma, accessible through: https://www.figma.com/proto/PpUqsJcOmuoKbcS5EAS4e6/coalease?node-id=221%3A1210&scaling=scale-down

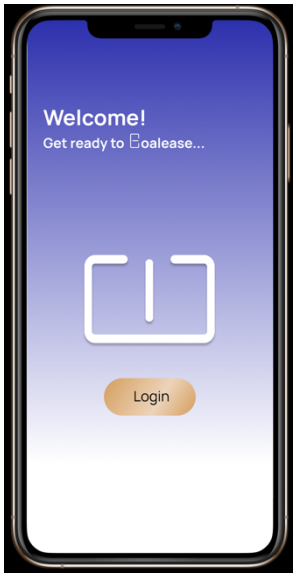

Figure 8. Medium-fi (Welcome page)

Figure 9. Medium-fi (Coaleasor Discovery Page)

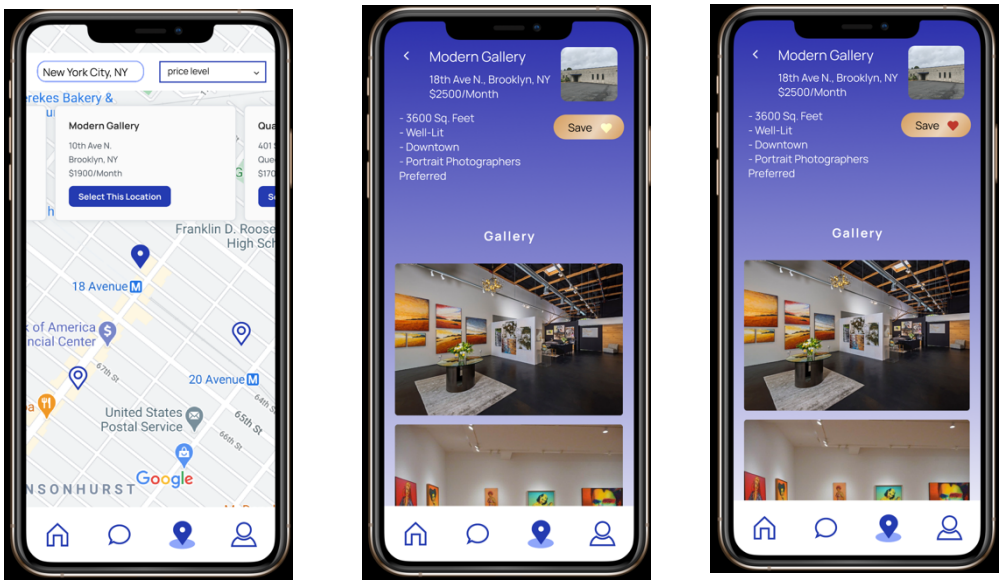

Figure 10. Medium-fi (Location Discovery Flow)

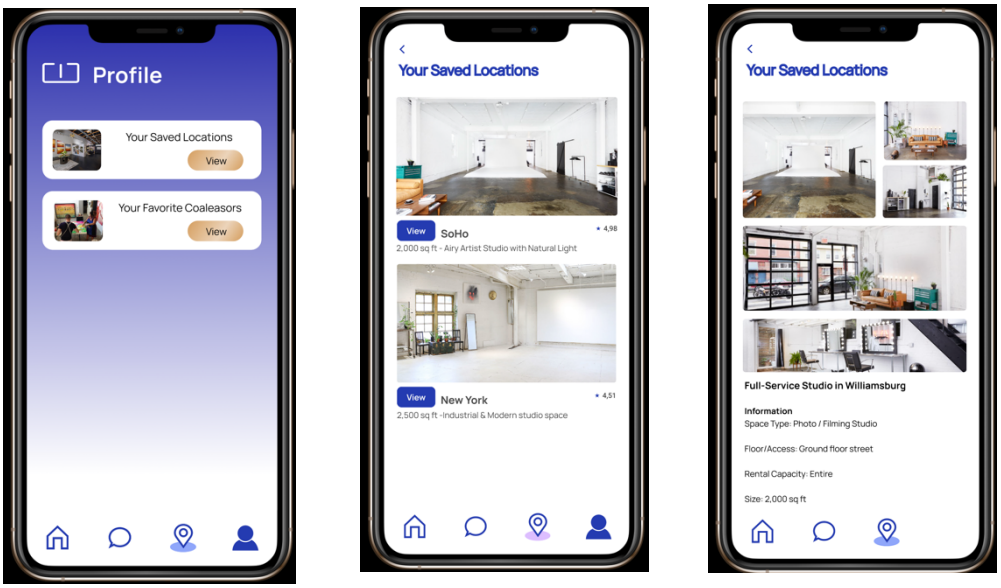

Figure 11. Medium-fi (Profile/favorites Flow)

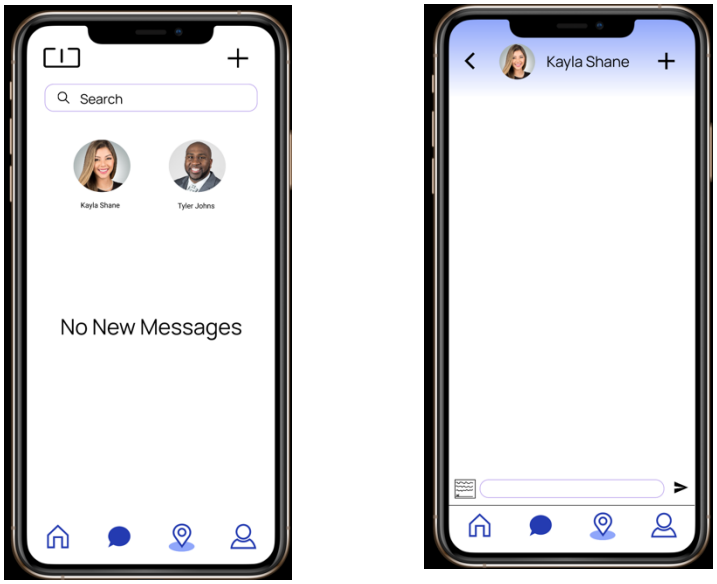

Figure 12. Medium-fi (Conversation Flow)

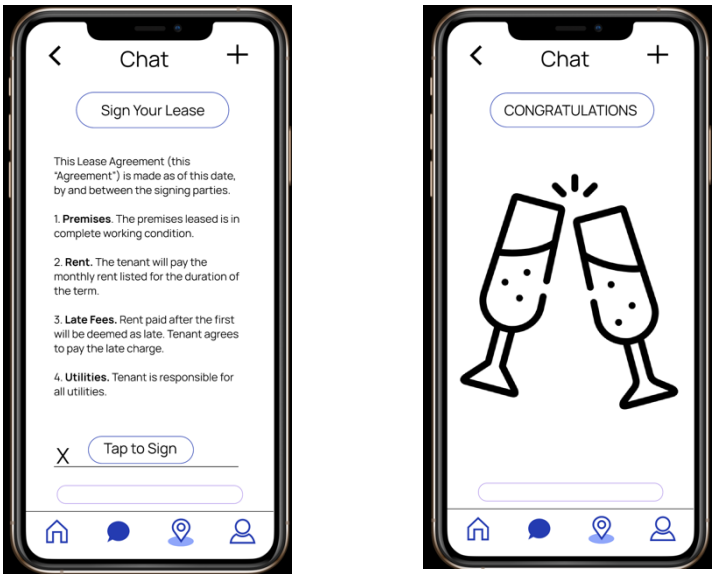

Figure 13. Medium-fi (Lease signing Flow)

Hi-fi prototype –
Our high-fidelity prototype was built utilizing React Native and Expo. Our development and testing relied on Apple Xcode's ios simulator. The final application can be downloaded here:
https://web.stanford.edu/class/cs147/projects/FinancialLiteracyHealthandResilience/Coalease/#prototype

Below is a storyboard walkthrough of each task in the final interface:

Figure 14. Hi-fi (Task 1 – Find someone to co-lease with)

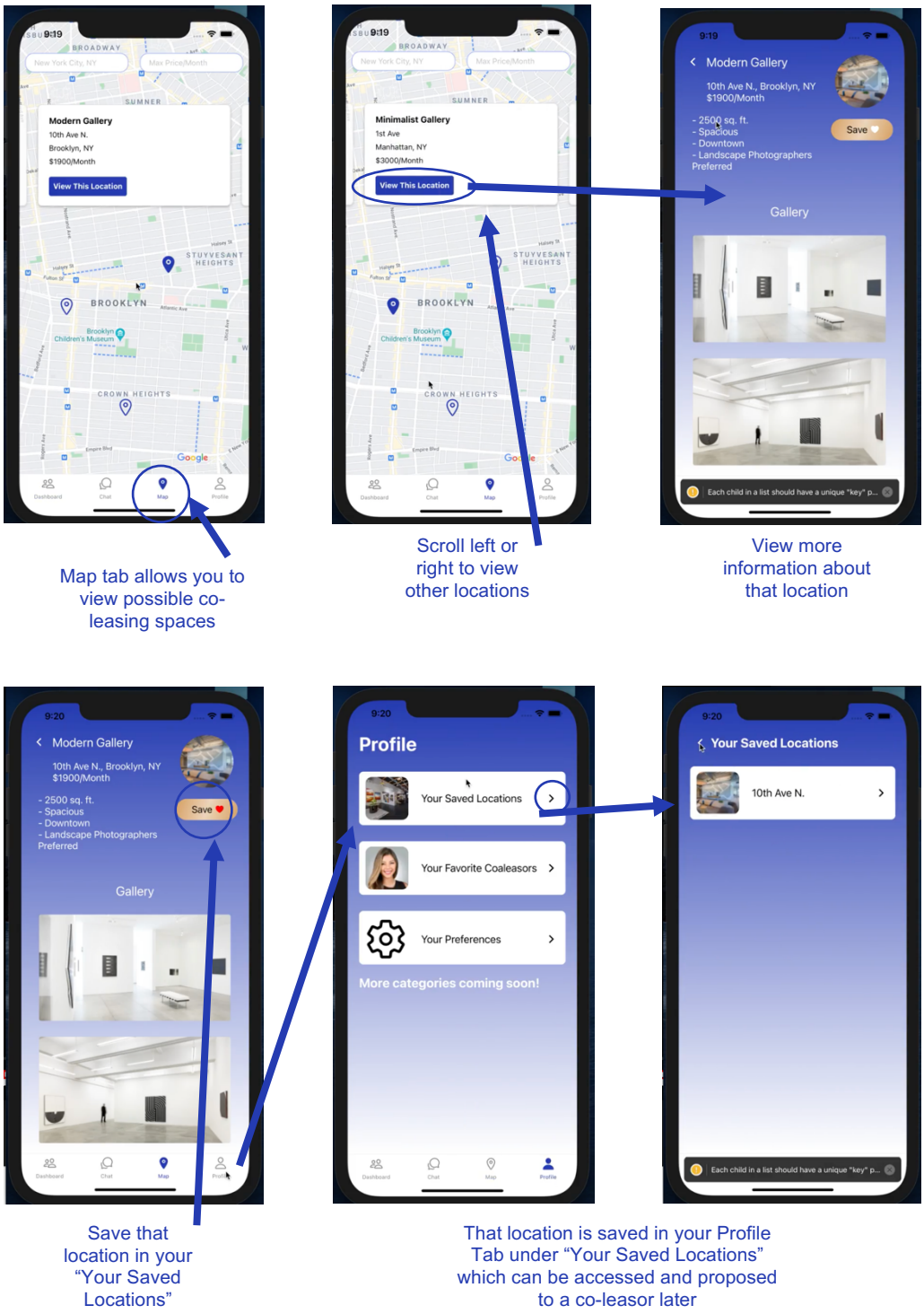

Figure 15. Hi-fi (Task 2 – Compare different leasing options)

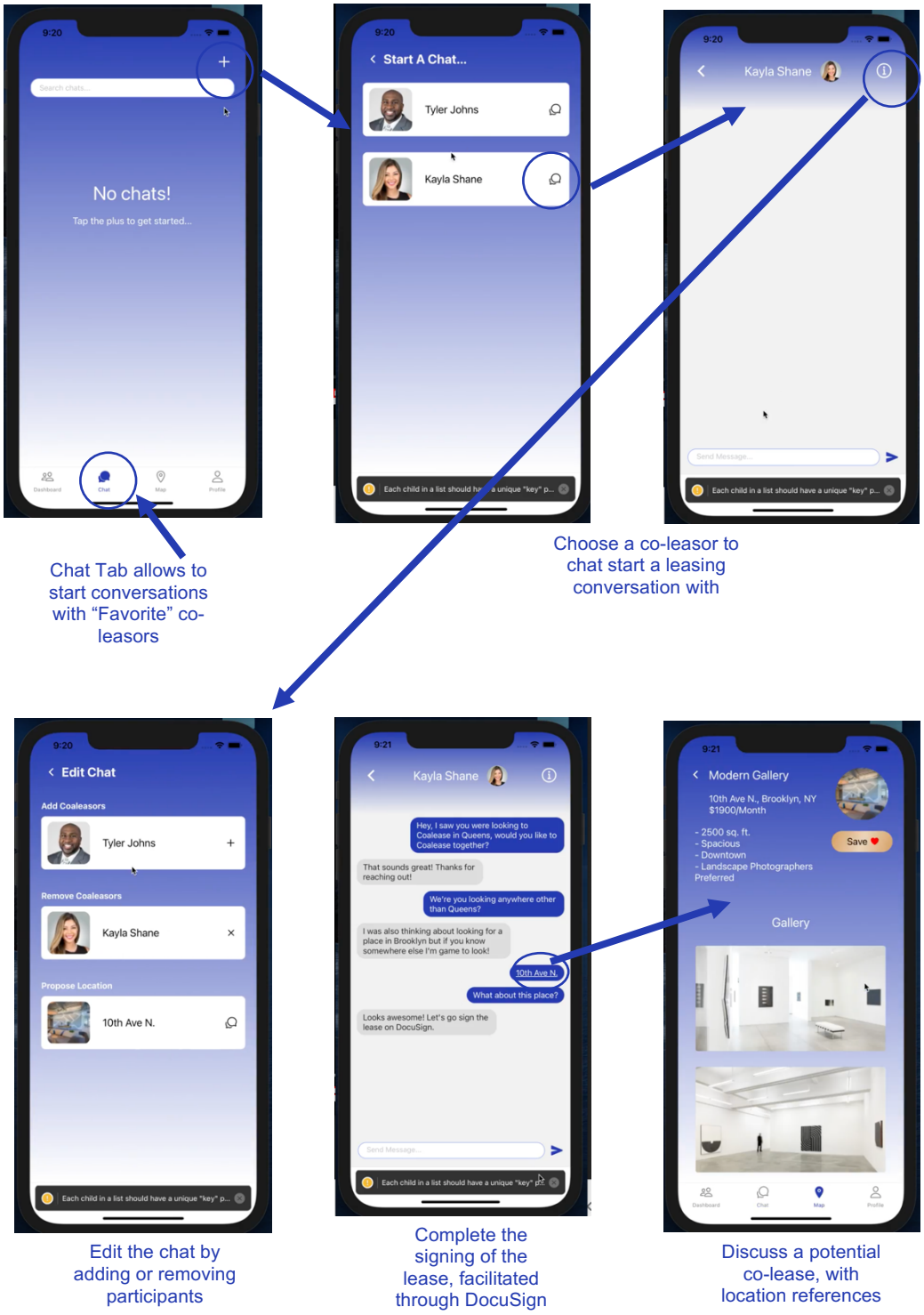

Figure 16. Hi-fi (Task 3 – Finalize a leasing agreement along with the other creators)

Design Changes

In the low-fidelity prototype stage, we received feedback from three individuals we interviewed. While these individuals were able to complete all of the given tasks and gave the low-fidelity prototype high praise, there were a few pain points that we addressed in our medium-fidelity prototype. They were confused by the heart tab on the bottom of the screen which was the tab to store the places and people that a given user liked. However, people would often click the heart tab while on a different page with the belief that it would simply favorite the location or person. Therefore, we changed the UI from a heart to a profile tab for the bottom right tab. We also received feedback on incorporating more about the field in which a person works. We decided to add more information on the profile card to fix this issue. The last change was adding a back button when viewing the detailed profile.

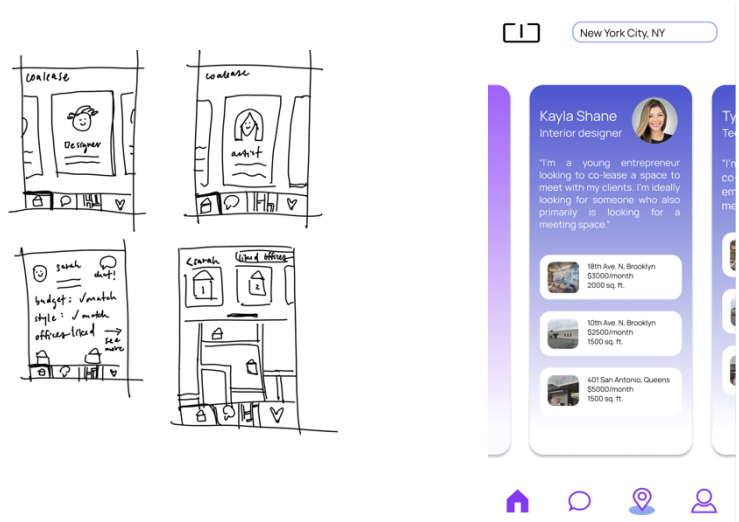

Figure 17. Low-fi and Medium-fi screens

In the peer heuristic evaluations four our medium-fidelity prototype, we had a few heuristic violations. The categories that had the majority of the severity 3 or 4 heuristic violations were H3: User Control and Freedom, H4: Consistency and Standards, and H7: Flexibility and Efficiency of Use. For H3, users had issues with adding other co-leasors in conversations. For H4, users felt the design was a bit overwhelming. For H7, users had problems discovering other co-leasor. Here is a list of the following heuristic violations:

- **H1: Visibility of System Status**
  - Problem: The process of co-signing a lease is asynchronous but doesn't tell the user when the other co-signer has signed the lease.
  - Solution: Add a notification to the chat window when the other user has signed the lease.

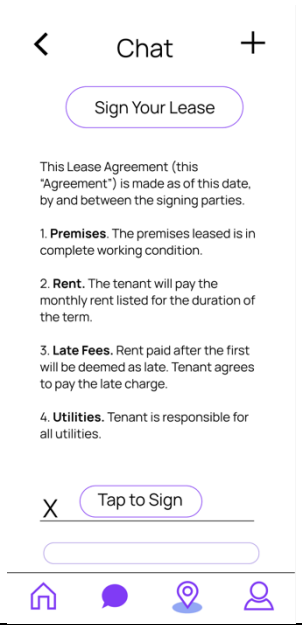

Figure 178. Relevant Heuristic Evaluation Screen

We did not implement this feature, because we intend on outsourcing contract signing to a platform such as DocuSign. Therefore, we wouldn't have confirmation of a completed contract.

- **H3: User Control and Freedom**
  - Problem: There is no way for users to remove other co-leasers from the group (if someone decides they don't want to coalease anymore)
  - Solution: Turn the plus sign to an information icon and add a details page that allows users to add or remove other users from the conversation.

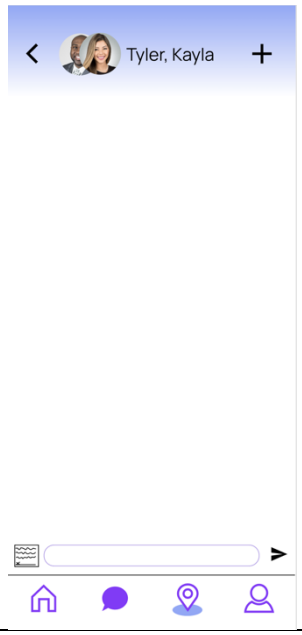

Figure 19. Relevant Heuristic Evaluation Screen

We implemented this feature for our high-fidelity prototype.

- **H3: User Control and Freedom**
  - Problem: Adding a co-leasor has no approval process from the person being added, so they could be added when they don't want to be.
  - Solution: In the chat details page, allow the users to send "requests" instead of just being able to add other co-leasors; this gives agency to the other co-leasors.

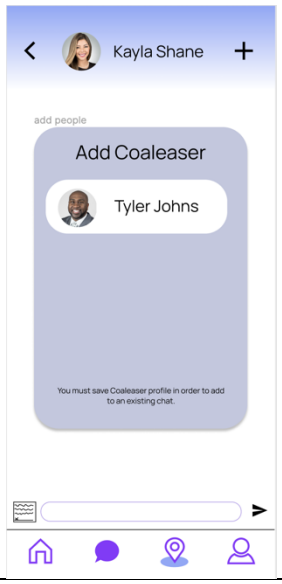

Figure 20. Relevant Heuristic Evaluation Screen

We did not implement this feature fully due to no two-way communication currently. However, we intend for the communication to only be available once two co-leasors match.

- **H3: User Control and Freedom**
  - Problem: The user has no ability to hide their profile on the platform when they're not looking for a new lease.
  - Solution: Add a "hide profile" toggle switch to the profile page.

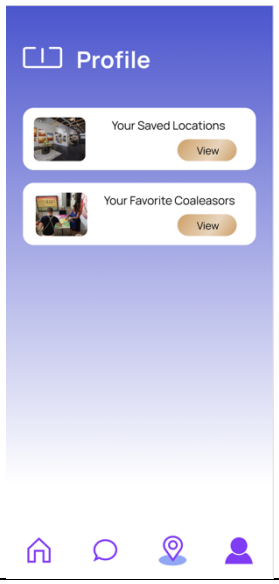

Figure 21. Relevant Heuristic Evaluation Screen

We did not implement this feature.

- **H4: Consistency and Standards**
  - Problem: The user is placed into discovering other co-leasors immediately after login, which can be overwhelming as an initial screen.
  - Solution: Create a home screen, where you design your own profile or look at your favorite locations and co-leasors.

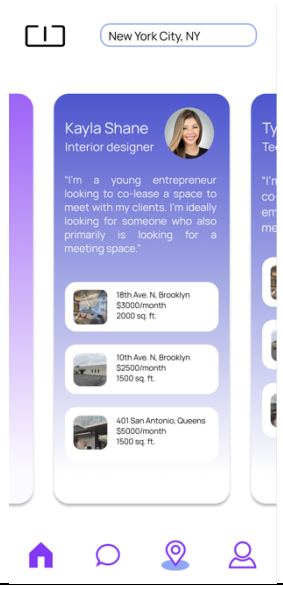

Figure 22. Relevant Heuristic Evaluation Screen

We were not able to implement this change due to time constraints; however, we expected a login flow that would start a user on the profile page where they insert their information and location preferences.

- **H4: Consistency and Standards**
  - Problem: On the Sign Your Lease page, the “sign your lease” text at the top looks like a button.
  - Solution: Remove the blue outline from the “Sign your lease” text at the top of the Sign Your Lease page, to make it look less like a button.

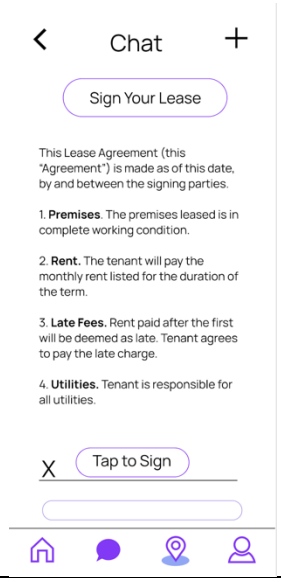

Figure 23. Relevant Heuristic Evaluation Screen

We implemented this change and removed the title.

- **H5: Error Prevention**
  - Problem: There is no confirmation button once users click “sign this lease”.
  - Solution: Add a confirm or cancel option after the user clicks “sign this lease”.

Figure 24. Relevant Heuristic Evaluation Screen

We decided to outsource all document signing to a third-party.

- **H6: Recognition not Recall**
  - Problem: On the lease and the chat, the address/name of the property is not shown anywhere. Users may not remember the details of the property they are signing for.
  - Solution: Either link to the property the users intend to co-lease or include its name at the top of the page (or in a details section).

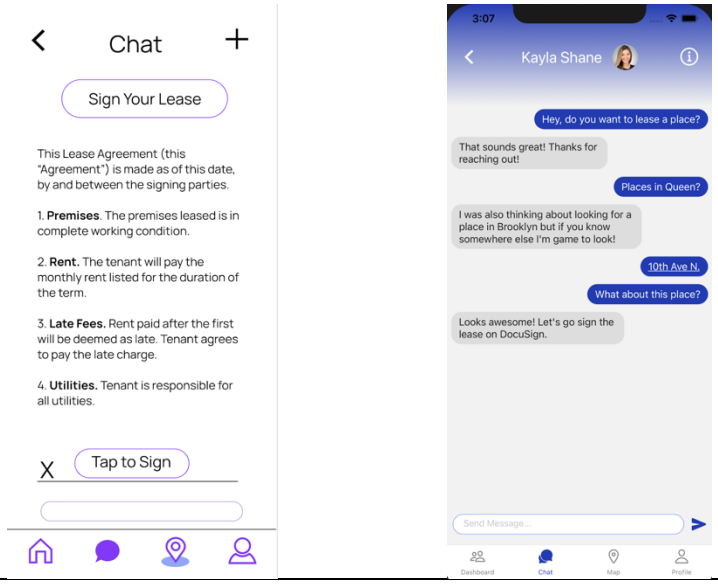

Figure 25. Relevant Heuristic Evaluation Screen

We implemented this feature by having the property be displayed when proposing a location, which allows the user to see a detailed listing of the property once clicked.

- **H6: Recognition not Recall**
  - Problem: After signing a lease, users don't have a way of viewing the signed lease. Users may want to see the details of their lease(s).
  - Solution: In a separate "leases" section, display signed and unsigned leases.

Figure 26. Relevant Heuristic Evaluation Screen

We did not implement this due to time constraints.

- **H7: Flexibility and Efficiency of Use**
    - Problem: There is no way to filter potential co-leasers. If the user has “saved" several co-leaser profiles, then it may be difficult to find the correct user to add to the lease in the chat.
    - Solution: Add a search bar or other filter functionality, such as a “most recently added” filter.

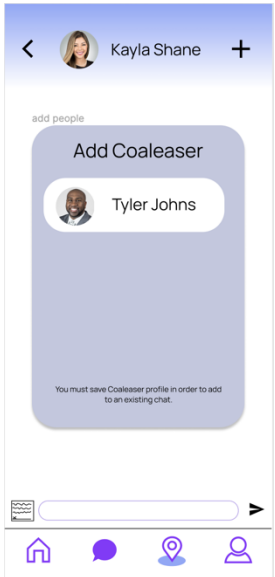

Figure 27. Relevant Heuristic Evaluation Screen

We did not implement this feature due to time constraints.

- **H7: Flexibility and Efficiency of Use**
    - Problem: It may be helpful for users to search for other users instead of having to swipe to eventually find each other.
    - Solution: On the home page, add a search bar to search for people.

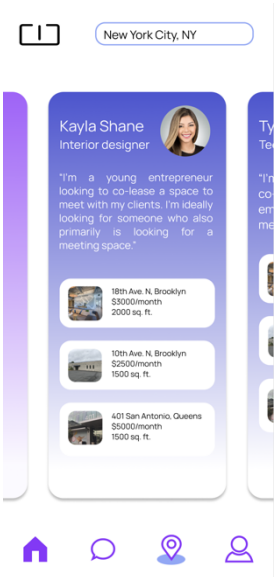

Figure 28. Relevant Heuristic Evaluation Screen

We added a search bar that would allow users to not only filter for locations but for individuals as well.

- **H7: Flexibility and Efficiency of Use**
  - Problem: it is not currently clear what is the most effective way to search for the best co-leasors (i.e. map view versus searching by location).
  - Solution: Clarify the purpose of having a map view vs user view (which is on the home page). Or possibly consolidate the screens into one search screen.

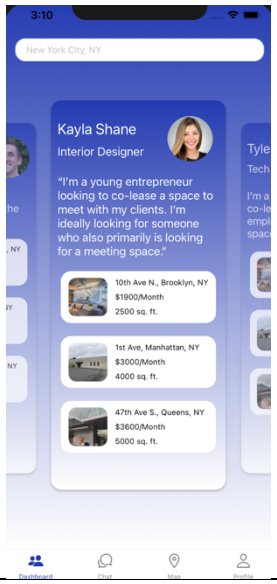

Figure 29. Relevant Heuristic Evaluation Screen

We implemented a change to fix the bottom tab icons to make where to find information clearer.

Final Prototype Implementation

Tools

For our prototype, we used Figma for the design and React Native to implement the application. Both of these tools suited our needs very well – Figma allowed us to mock several different potential designs before settling on one we liked while simultaneously maintaining the flows between screens and React Native was a language that most of us were familiar with, so we were able to iterate quickly on our work. There weren't many limitations that we noticed in either case; both tools were well-suited to the tasks we needed to accomplish.

Wizard of Oz Techniques and Hard Coded Data

As far as Wizard of Oz techniques and hard-coded data were concerned, we had to implement hard-coded data in conjunction with a Wizard of Oz technique to implement the chat functionality. In an ideal world, we would have implemented a fully functioning chat feature so that users could talk to each other, but we did not have the requisite time or experience to implement it. Additionally, we hard-coded the profiles of the users and the locations to be leased in the app; in the final version of the app these would be uploaded by actual users on the site. Finally, the maps screen had a screenshot from Google Maps as its background; in the final app, we would probably utilize Google Maps' API to be able to place locations on the map for the users to browse.

Summary & Next Steps

One of the main learnings we took away from this project, was the inherent iterative nature of design thinking. The ultimate product is never perfect but is consistently improved based on the most recent user findings. We also learned the importance of user feedback in the design process, as something that should be informative as you build instead of a once-off final test. From our studio theme, we were able to really understand the multifaceted nature of finance and how it affects people personally, but also the unique nature small business owners interact with finance, as something both personal and professional at the same time. In terms of our project, we learned exactly how important it is to consider the social construct behind a product like this and how you can create that ultimate community building within a niche market, like creators.

If we had more time, we would have love to add more to the profile aspect of the project, possibly including "mood boards" for a creator's aesthetic and perhaps removing the profile picture all together. Additionally, we would like to complete deal

signing on the app as opposed to outsourcing this to other services like DocuSign for a more integrated experience. Finally, as a team we learned a lot through this project and enjoyed applying the design thinking approach to come up with a usable product that solves a tangible problem that creatives experience.