



Strengthen your friendships with new adventures!

Final Report
CS 147 Fall 2023
Threads and Trends
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Project Name & Value Proposition

Project Name

Playdate

Value Proposition

Strengthen your friendships with new adventures!

Team Member Names and Roles



Sachin Allums (he/him)

As our lead organizer, Sachin compiled heuristics, designed the logo, and organized many of the presentations and deadlines for the team. He served as a User Researcher, UX Designer, Mobile Developer, and Pitch presenter for playdate.

Mena Hassan (she/her)

Mena served as our head concept designer, leading most of our concept sketches and revised low fi and medium designs. She served as an actress, User Researcher, UX Designer, Mobile Developer, and poster designer for playdate.



Nicole Segaran (she/her)

As the figma and user experience expert of the team, Nicole led playdate for their medium fidelity prototype as well as for the experience prototypes. She served as an actress, User Researcher, UX Designer, Mobile Developer, and poster designer for playdate.

Kevin Tran (he/they)

Kevin was our technical lead, creating our website, editing together our concept video, and creating the high fidelity prototype in Flutter. He served as a User Researcher, UX Designer, and both Mobile and Web Developer for playdate.



Problem and Solution Overview

Young adults want to deepen their friendships, but they often aren't sure how they should go about doing this. Playdate is a mobile application that solves this problem by giving its users ideas for fun activities to do with their friends and giving them a deadline to do them. By allowing users to explore fun activities, share them with friends, and look back on what they've done together, we hope that playdate encourages people to follow through with making plans with their friends. Through providing a soft deadline for making plans with others, playdate introduces a sense of urgency and novelty into friendships that brings people together.

Needfinding

Interviews

Before we began our needfinding process, we tried to figure out what domain interested our team. All of the team members were interested in education and how relationships work, but as college students concerned about how we might meet new people after graduation, we decided on focusing on friendships in new contexts as our domain of interest.

For our needfinding process, we interviewed five participants with the goal of getting diverse perspectives from multiple age groups on how people approach and define friendship. After unpacking these ideas to guide the initial ideas for our project, we ended up interviewing two more individuals and asked them questions that dove deeper into how their friendships with others changed in new and online contexts.

For four of our interviews, we went to downtown Palo Alto and asked people ranging from their early twenties to late fifties about their views on friendship. Two of these individuals were parents with one working in the Health Care sector and the other working in the Business sector in education technology. One of these interviewees was a recent college graduate working as a software engineer, and the other was a high school senior. Another interview was with a Stanford graduate student in physics and was held at Arillaga family dining commons, while the last two interviews were with two recent college graduates over zoom. These last three interviews were all friends of various members of the playdate team.



Figure 1: The various places we interviewed participants. From left to right: Downtown Palo Alto, Zoom, and Arrillaga Family Dining Commons.

In all of these interviews, we were curious about the different qualities people look for in friends and how this guides their philosophies on interacting with others. We had two people present for most of these interviews, with one person asking the questions and another taking notes.

Synthesis

To unpack the interviews, we created empathy maps that captured different things that our interviewees said, did, thought, and felt. These empathy maps allowed us to more fully understand how our interviewees conceived friendship and to identify potential need areas that we could address with our project. Through this process, we identified some major takeaways that would heavily influence the direction of the rest of our project.



Figure 2: Nicole T. at Arrillaga Family Dining Commons

One of the most important interviews for playdate was with Nicole T., a Stanford Graduate studying physics. Nicole primarily made her friends through the various sports teams she was a part of. While we initially believed that this suggested that close friendships need to rely on shared interests, Nicole said some more things that shifted this assumption. She conceded that while the way she met most of her friends were through shared interests and social circles, the people that she really grew close to were the ones who she was able to

see in new contexts. Nicole told us the story of one of her swimming teammates who went on a terrible date with someone. During the date, the other person offered to make Nicole's friend some cheese waffles, which ended up tasting pretty awful. To rectify this, Nicole and some of her other teammates proposed the idea of all of them making cheese waffles together. This experience brought Nicole so much closer to these people, which led us to the following insight: close friendship thrives off novelty. If Nicole had only seen her teammates in the pool, she likely never would have grown closer to them.

Seeing others in different contexts is crucial towards building a friendship, and this finding was corroborated by our interview with Murat. Murat is the owner of multiple EdTech companies, and he often made his employees meet in person because he felt that seeing others face to face was crucial towards deepening their relationships and helping them work better together. This finding led us to a user need: helping people see their online friends in person. Our interview with Nicole A., a healthcare worker and mother who was concerned with her children's many online friends, supported this finding even further. Nicole A. believed that a person can't fully know someone else until they have met in person. She was concerned for her children's safety because they did not seem to have an issue trusting a person they had never met before. From this, we learned that people needed to feel safe with the people they might interact with online before even entertaining the thought of meeting them in person.



Figure 3: An empathy map unpacking our findings from Nicole T.'s interview

Our final takeaway came from an overwhelming sense that people wanted to have a more diverse set of friends. Nicole T. lamented in her interview that her friend circles, by virtue of being composed of people with similar interests to her, tended to be less diverse than she

would have liked. People were often seeking out ways to meet people who are unlike them, but they weren't always sure how they might go about doing this.

Overall, our needfinding interviews made us curious about how we could cultivate friendship with novelty, bring online friendships into in-person interactions, and introduce people to others who are different from them. These results, particularly the insight about novelty, would guide the rest of our project.



Figure 4: A summary of the different takeaways that arose from our needfinding process

POVs & experience prototypes

After our needfinding process, we evaluated the different empathy maps we had created for each interview and decided to select the three most engaging interviews to unpack and analyze more fully. We selected three users (Nicole T., Akshay, and Kaitlyn) who were all in their late teens or early twenties and generated a point of view (POV) statement for each interview. This statement detailed who these interviewees are, a tension we observed, a need it points to, and a potential avenue to use for brainstorming further. From each POV, we created at least 10 How Might We (HMW) statements that would serve as launching points for generating solutions to our identified needs. Below are the different POV statements we created along with the HMW statements that arose from them.

Nicole T. POV

- **We met** Nicole T., a 3rd- yr grad student at Stanford deeply involved in sports communities
- **We were surprised to notice** many of her friendships were anchored to one particular context, and she struggled to maintain those friendships across new contexts
- **We wonder if this means** people need help scaffolding friendships that persist across situational changes
- **It would be game changing to** help people introduce new experiences and contexts to their friendships, building more robust relationships overall

HMW Statements from Nicole T.'s POV

- HMW introduce novelty into pre-existing friendships?
- HMW reduce the activation energy for reaching out after situational changes have occurred?
- HMW support people in maintaining friendships while they transition to new contexts in their lives?
- HMW facilitate friendships that are centered around unique and niche hobbies or interests to foster deeper, more lasting connections?

Akshay POV

- **We met** a 28-year-old Software Engineer who moved 5 months ago to the bay area
- **We were surprised to notice** in spite of feeling as if he knew more about his friends because of social media, he felt less inclined to reach out to them
- **We wonder if this means** people need incentivization to reach out even though they know everything about each other
- **It would be game changing to** create a low stakes way for people to continue connecting and learning about each other, beyond the surface level knowledge that social media provides

HMW Statements from Akshay's POV

- HMW nudge people to be curious about each other beyond the information that social media provides?
- HMW provide low cost ways of making niche + meaningful experiences?
- HMW create social media posts that require more meaningful audience interaction?
- HMW design a system that rewards individuals for maintaining deeper, ongoing connections with friends they already know a lot about through digital platforms?

Kaitlyn POV

- **We met** an 18-yr old HS senior who loves social media
- **We were surprised to notice** that when communicating online, she prefers a low stakes interactions, but in-person she loves making elaborate plans
- **We wonder if this means** people maintain friendships differently digitally vs in-person
- **It would be game changing to** leverage these differences to make translating friendships across digital and in-person interactions easier

HMW Statements from Kaitlyn's POV

- HMW foster interactions that can continue both digitally and in-person?
- HMW create an easy way to communicate daily digitally with friends that feels similar to in person interaction?
- HMW help people make spontaneous, in-person plans?
- HMW we reduce the anxiety of transitioning between online conversations to in-person plans?

Top 3 How Might We Statements

- HMW introduce novelty into pre-existing friendships?
- HMW nudge people to be curious about each other beyond the information that social media provides?
- HMW foster interactions that can continue both digitally and in-person?

Solutions

In order to brainstorm solutions, we first narrowed our How Might We statements down until we were left with our three highest quality ones. For each of these statements, we used a Google Jamboard to brainstorm more than 10 potential solutions that would address each avenue for taking action identified in the HMW statements. We used a Heat Map technique to select both our top 3 HMW statements and our top 3 solutions. Every person had unlimited votes and would place a diamond tick mark next to any solution they liked. We would then group together similar solutions and debate the ones that received the most votes.

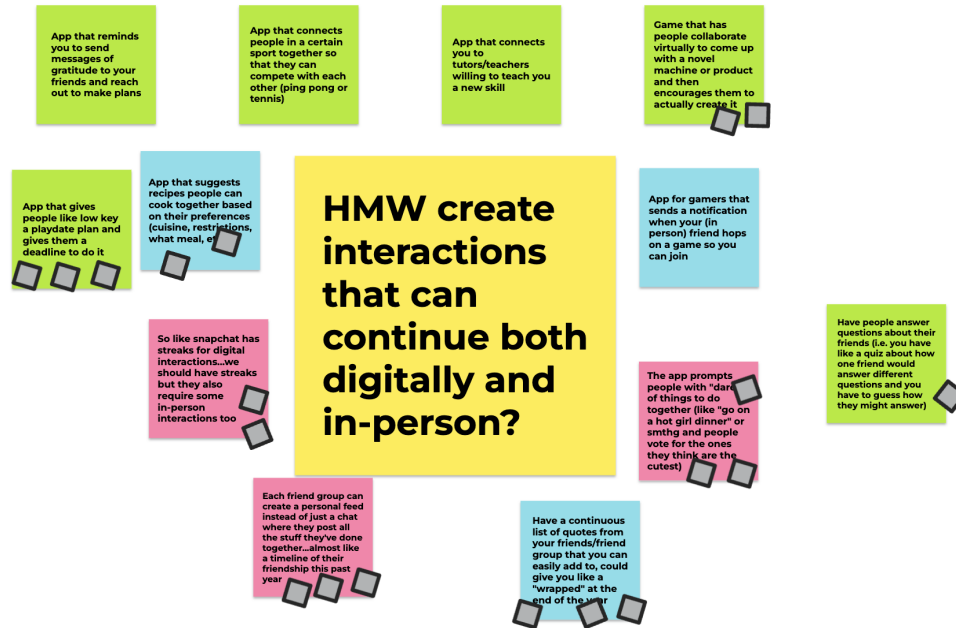


Figure 5: A Google Jamboard depicting all of the solutions generated from one of our top How Might We statements

Top 3 Solutions

- Create an app that nudges people to try out new lowkey “playdate” ideas + sets a deadline!
- Create an app that sends a daily, meaningful question for a user to answer and share with their friends
- Create an app that helps you plan your own elaborate “playdates” using crowdsourced information

Experience Prototypes

These solutions would only work for our users if some underlying assumptions were true. We first brainstormed different assumptions that our top three solutions depended on, and we then created experience prototypes to test the assumptions.

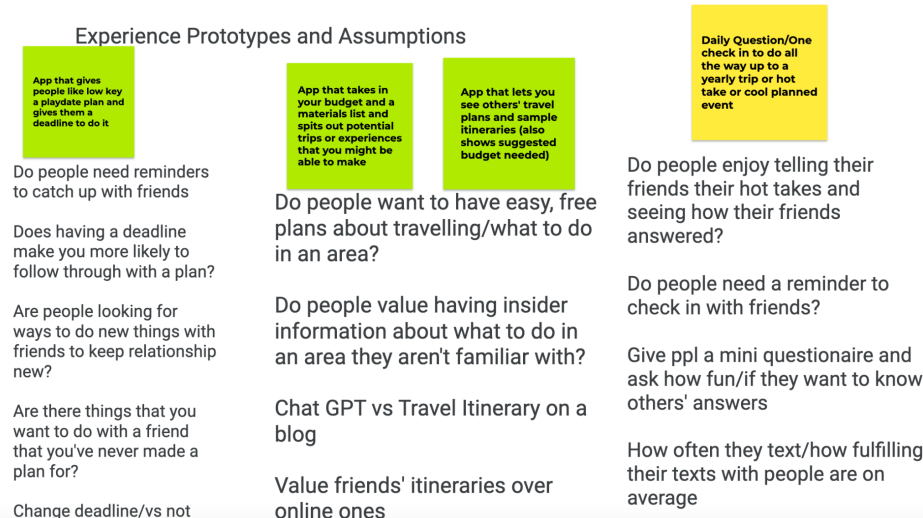


Figure 6: The different assumptions that supported our three solutions

Experience Prototype: Deadlines

Our first solution was an app that gives people a deadline to complete a playdate with others. This small solution would end up being our most promising one yet, and our brainstorming process helped us generate the name playdate for our team. In order for this solution to work, however, we had to test the following assumption:

Key Assumption: Having a deadline makes you more likely to follow through with a plan

To test this, we made a small experiment and conducted it with friends of the playdate team. These individuals were all in the age range of 18 to 30, and were texted one of two things. Participants saw one of the following two messages in figure 7 below. In both cases, participants were asked to do something kind for one of their friends and send a photo or video as proof of their act of kindness. In one of the groups, participants were given a deadline of 3 hours whereas the other group had no deadline.

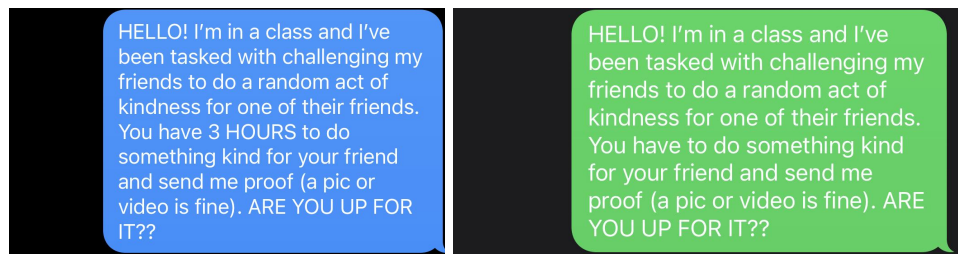


Figure 7: The two messages participants received for our Deadline Experience Prototype. In one of the groups (left), participants were given a deadline to complete an act of kindness while the other group (right) did not.

After 24 hours had passed since the texts were given to the participants, we checked to see who completed the task of doing something nice for their friends. Of the 3 participants we recruited for doing something nice for someone under a deadline constraint, 2 of them succeeded and completed the task within three hours. Of the 2 participants we recruited for doing something nice for their friends with no deadline, neither of them did this.

	Setup	Participants Recruited	Successful Participants
Deadline		3	2
No Deadline		2	0



Figure 8: The number of participants recruited and successful participants within each condition.

From this experience prototype, we learned that people are more likely to do certain actions when they are given a deadline. Vaguely telling someone to do something with no specific time frame to do it doesn't result in concrete plans. Ultimately, this experience prototype was quite successful and showed us that our underlying assumption that deadlines encourage people to follow through was correct.

Experience Prototype: Check Ins

For our second experience prototype, we wanted to test out an underlying assumption for our second solution: an app that sends a daily, meaningful question for a user to answer and share with their friends. We wanted to test the following assumption:

Key Assumption: people want a daily incentive to check in with their friends

This prototype had two parts and was tested with four participants. First, participants were interviewed about how they interact with their friends. We asked them how often they texted their friends, how they usually start conversations with friends, and how satisfied they are with the quality and depth of their conversations with friends. We found that people vary how often they text their friends depending on how close they are with them.

For close friends, people generally text them daily, but with loose friends (people they are not as close to), they typically reach out once a week. When people start conversations with their friends, they usually have a topic in mind that they want to discuss. In other words, people intentionally reach out to their closest friends. For their loose friends, people typically fall back on generic topics in their conversations with them. We also found that

people are usually not super satisfied with the quality and depth of their online conversations with loose friends, but people sometimes don't even want to have meaningful digital conversations in the first place.

For the second part of this experience prototype, we asked participants to reach out to someone with the following script:

"Hey, I'm participating in an experiment with my friend who is working on a project about meaningful conversations. He gave me a list of questions that are supposed to spark deeper discussions. Do you want to try one with me?"

If you could travel to any country in the world right now, where would you go and why?
 What is something that you are really proud of, but never get a chance to talk about?
 What is the most interesting or surprising thing that you learned recently?
 If you had to choose one song to be your theme song, what would it be and why?
 What is something that you are curious about, but haven't had the time or opportunity to explore?
 What is something that you are grateful for today?
 What is a skill that you would like to learn or improve?

Figure 9: The texts we sent to our different participants to encourage them to reach out

All of the participants reached out to a friend. Two of our four participants received a response from their friend, and we asked them to rate their satisfaction with the conversation they had after reaching out. From these two participants, one was highly satisfied with their conversation and the other one had a low satisfaction with their conversation.

From these findings, we concluded that our underlying assumption was not true. During this process, people felt slightly awkward about reaching out in this way, and if we had to do this part of the project again, we might have revised some of the language used in the text to make it more fluid. From the qualitative interview portion of the experience prototype, we learned that people don't tend to prioritize online conversations or interactions too frequently. From the reaching out part, we concluded that daily questions were an inconvenient and unsuccessful way to facilitate conversation between people. These findings would lead us to prioritize in person conversations and interactions later on.

Experience Prototype: Personal Plans

Our last experience prototype helped us test the underlying assumption behind an app that would allow people to crowdsource information to create elaborate playdates with people. This third idea was heavily influenced by Kaitlyn's interview, where she stated that she typically makes elaborate plans with her best friends to make the most of the time that she spends with them. She did this because her best friend attended a different school from her. Kaitlyn's plans were thoughtful, which contributed to meaningful experiences for her and her friend. Given this and the solution we came up with, we wanted to test the following assumption:

Key Assumption: People value having insider information about what to do with friends

To test this prototype, we interviewed two people. One of them was a researcher in her late 20s who had recently moved to work at Stanford and the other one was a friend of one of the playdate team members. For these two participants, we had them look at two different travel itineraries about how to spend a week in Paris. One of these itineraries was created by Chat GPT and the other one was written by someone on the internet, but we did not initially tell them that this was the case. We asked participants to rate how effective each itinerary was. We found that people rated the GPT itinerary an 8 out of 10 while the human itinerary was a 9 out of 10, and surprisingly, when they were told that one of these itineraries was written by Chat GPT and another was written by a travel expert, their ratings did not change. One participant stated that if the human written itinerary was by someone who had lived in Paris for 30 years, they would absolutely rate that itinerary higher and would be more likely to do the things suggested since these action items would more likely represent insider information.



Figure 10: One of our participants reading an itinerary generated by Chat-GPT

Based on our interviews, our assumption was supported mostly. We found that people believe that taking the advice of someone with immense insider knowledge about a place would be better than generic information. Because of this, we believed that an idea that was based on crowd sourced information would help get this level of information. However, since no one actually changed their ratings about the itinerary that was AI generated, this also showcases that people don't necessarily care too much about whether a plan is personalized or not: it should just be high quality. Therefore, these personalized plans and recommendations are more nice-to-have features in an app rather than something that should be its core functionality.

From these experience prototypes, we decided to combine some aspects of our third solution into our first one. The result was Playdate!

Design Evolution

Final Solution

From our needfinding, we found that the target demographic for playdate would be young people in their early 20s and 30s who want to maintain the close friendships they may have made in college or at a job. Our final solution was a combination of the first and third solutions tested out in our experience prototyping: an app that allows users to explore a variety of “playdate” ideas, find one that fits their preferences, and set deadlines to complete them with friends. We found in our testing that meaningful interactions between close friends, rather than more frequent low effort interactions, are much more effective at sustaining friendship, which is why we shifted our focus to getting users to take part in “playdates.”

In addition, our Experience Prototype 1 revealed that setting deadlines is critical to having people follow through on the things they reach out about. By making it easy for users to find novel ways to interact, and providing them with accountability through soft deadlines and reminders, Playdate helps users overcome the barriers they may face in sustaining their close friendships.

Tasks

Our solution quickly transformed into a dynamic platform designed to enhance the social interactions of our users by offering three main tasks, each catering to different user needs and engagement levels.

Task #1: (Simple) Exploring and Filtering Playdates

The first task is a simple task, which all Playdate users will likely engage in: exploring and filtering playdates. This feature is the cornerstone of the app, allowing users to tap into the plethora of playdate ideas our app hosts. Providing a seamless experience for this task ensures that users are not limited to mundane, overused ideas to hang out, but instead have access to a diverse range of activities that can spice up their social life. The filtering mechanism also allows users to tailor their search to their specific preferences, such as interests, budget, and even location (although this feature was part of our Wizard of Oz techniques). This personalized approach is crucial in helping users discover new and exciting ways to have fun that works for them, enriching their social experiences.

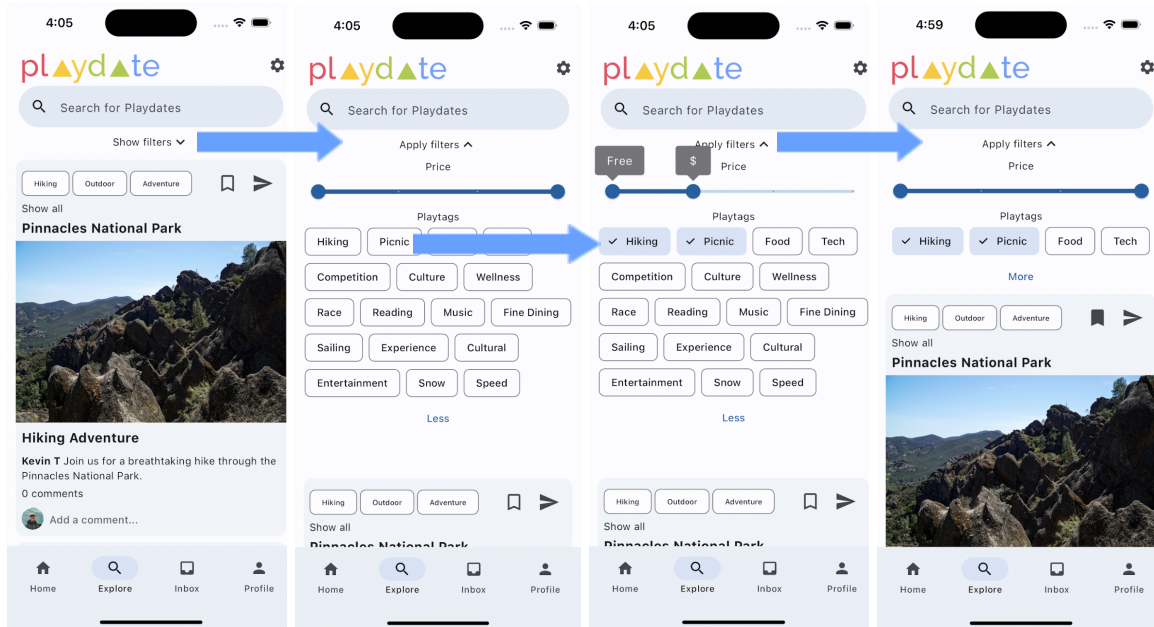


Figure 11: Exploring and Filtering Playdate Ideas on Playdate. The user selects the picnic and hiking tags, which changes the playdates that appear for them. They can then click the apply filters button to collapse the tags popup.

Task #2: (Moderate) Sending Playdate Invites

The second task is a moderate task, which a majority of Playdate users are likely to engage in: sending playdate invites. This feature taps into the social aspect of the app, enabling users to extend invitations for existing Playdates to their friends. What sets this task, and therefore the app itself, apart is the inclusion of a soft deadline with each playdate, a subtle yet effective way to promote accountability and commitment among friends. This aspect of the app not only facilitates social planning but also adds a sense of urgency, making it more likely for plans to materialize.

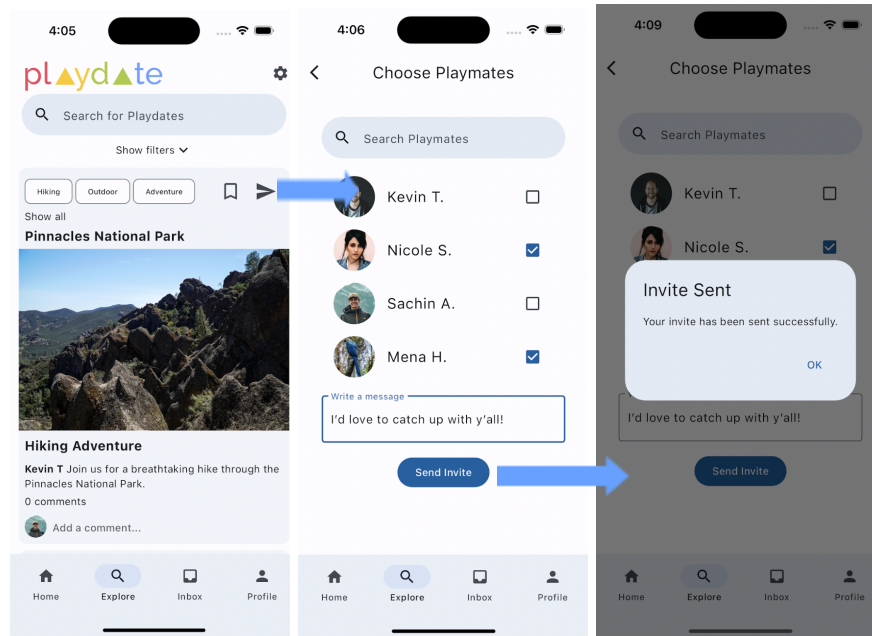


Figure 12: Sending Playdate Invites on Playdate. The user first clicks on the paper airplane icon to send a playdate and can then select who they would like to invite to the playdate. They can optionally write a message and will receive confirmation once it has been sent.

Task #3: (Complex) Creating Custom Playdates

The third and most complex task is tailored for the more avid Playdate users: creating custom playdates. This feature empowers users to add their unique playdate ideas to the app's crowdsourced database. It represents a deeper level of engagement, where users are not just participants but also contributors to the Playdate community. By allowing users to create and invite others to their own playdate ideas, the app fosters a sense of ownership and community spirit. This task is particularly significant for those who are deeply committed to Playdate's mission and are eager to help others find their ideal social activities. It contributes to a dynamic and inclusive digital environment, where users can share and discover playdate ideas that resonate with their interests and values.

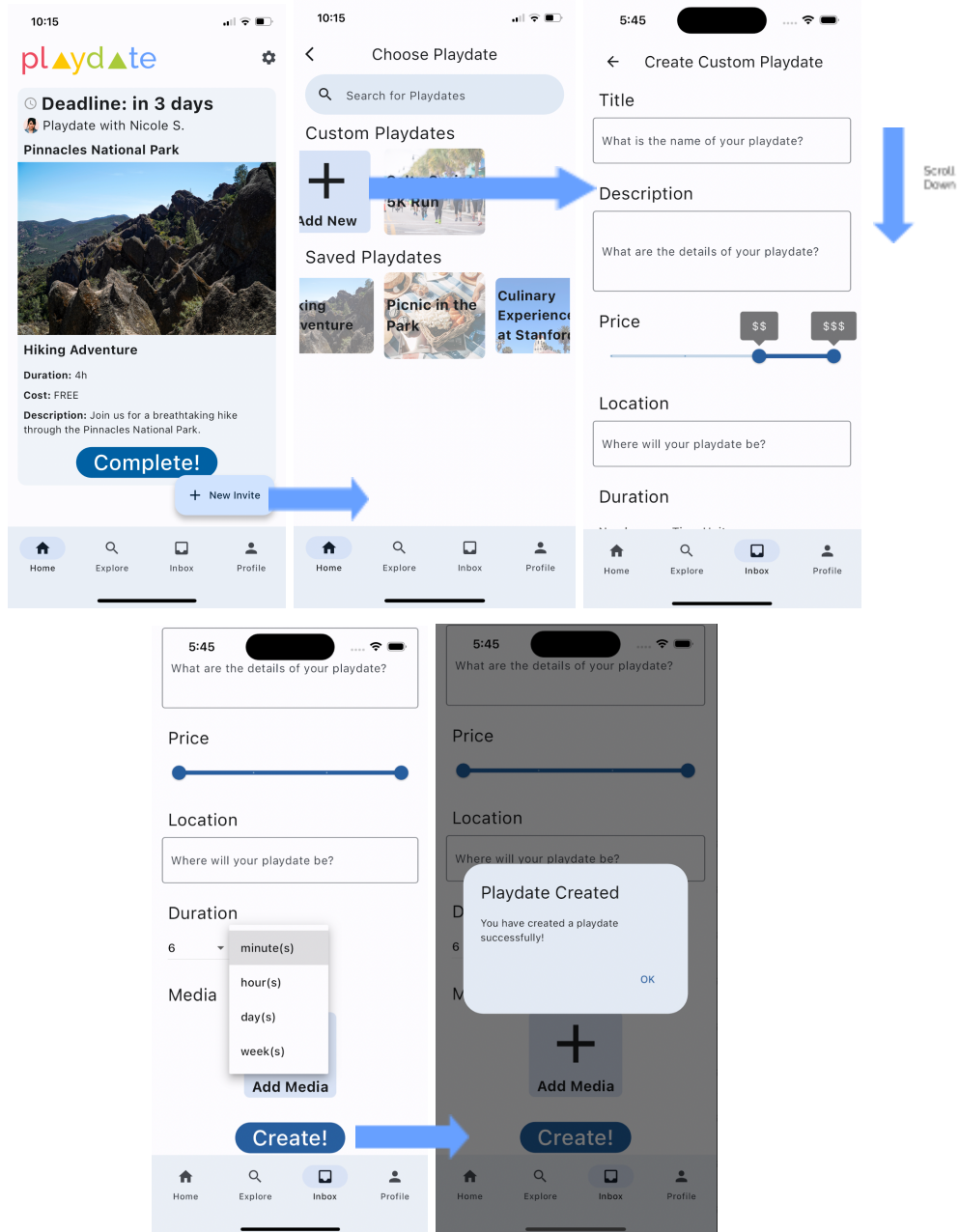


Figure 13: Creating Custom Playdates on Playdate. A user can tap on the new invite button on either the home page or the inbox page. They can then select add new from their custom playdates and then enter in all of the information needed for a playdate.

Design Evolution

Initial Sketches

During the initial sketches stage we brainstormed a variety of design directions, including mobile and web applications, wearables, and AR/VR options. After analyzing the novelty and feasibility of each sketch, we decided to proceed with the mobile application, given its accessibility and ease-of-use. We entertained the idea of a watch and AR set, however, since no one on our team had much experience with this and since many people do not have access to these devices, we decided against pursuing them further.

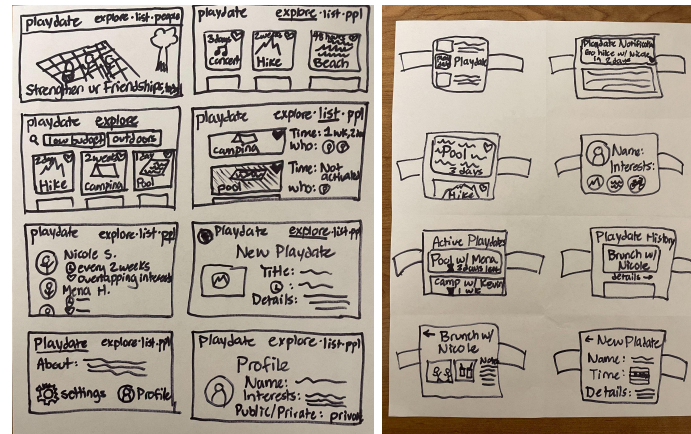


Figure 14: Initial sketches of web and watch applications for playdate.

Lo-fi Prototype and Evaluation

From there, we began sketching out task flows for our three tasks on a mobile platform. We sketched all our final lo-fi prototype pages digitally on an iPad to make the prototype look as clean as possible for user testing. User testing was conducted on four participants in our target demographic. Each participant was asked to navigate through our key task flows on the app and think out loud as they went. We used their comments to gain qualitative feedback, and we also kept track of quantitative metrics such as number of misclicks and asked them to rate the difficulty of navigation to evaluate our lo-fi prototype.

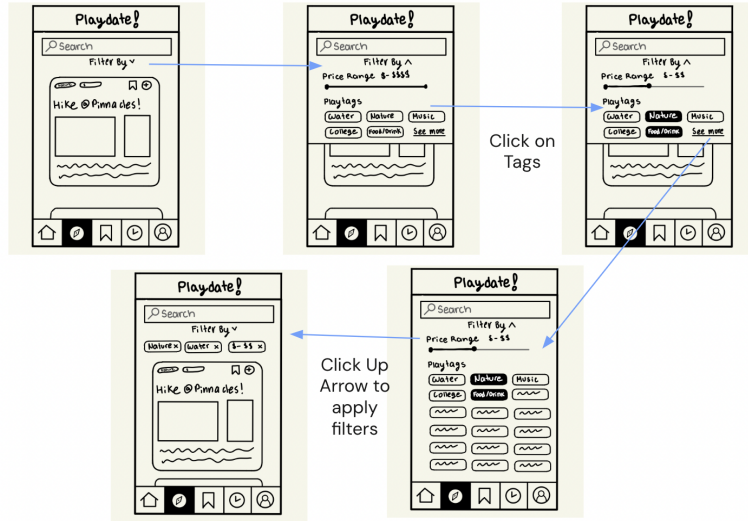


Figure 15: Lo-fi Prototype of Exploring and Filtering Playdate Ideas on Playdate

People generally found playdate to be intuitive and something they would consider using. We asked participants to rate the likelihood that they would use this app on a scale from 1 to 10 with 10 being definitely use. Across our participants, we had a mean score of 6.75, but one user in particular rated our app a 2. This gave us more insight into who we might overlook in our design: people who are already quite content with their friendships or who are overly concerned about their privacy over the internet probably would not use playdate.

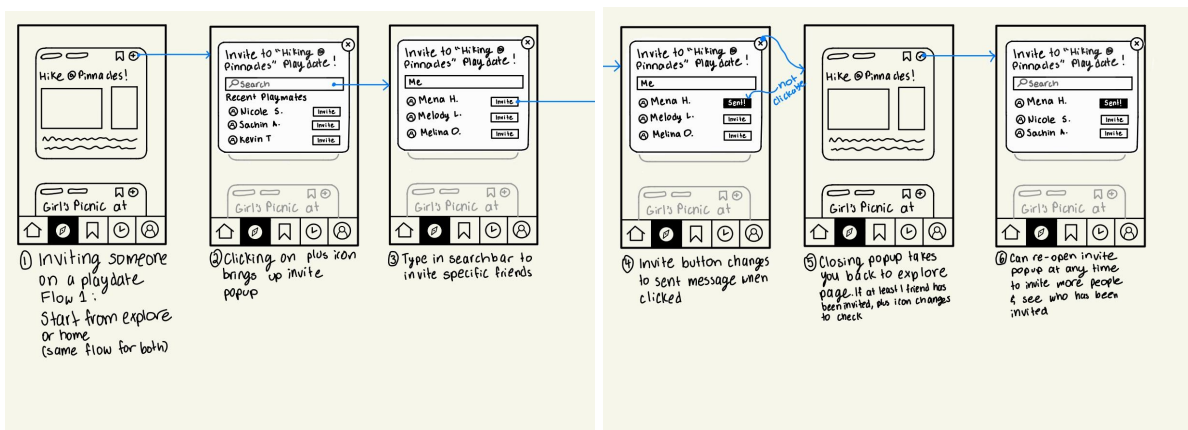


Figure 16: Lo-fi Prototype of Sending Playdate Invites on Playdate

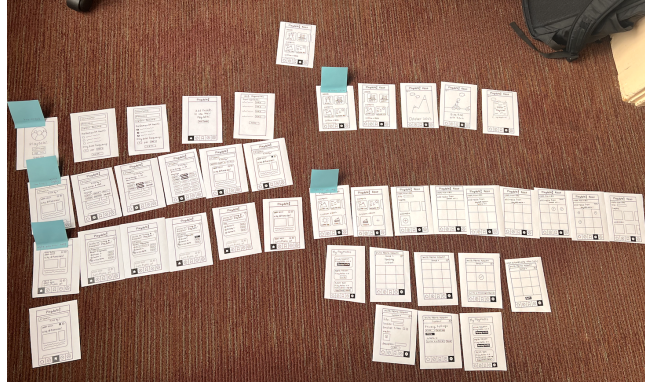


Figure 17: Full Lo-fi Prototype

User testing showed us that most of the workflows of our app were easily navigable, with an overall complexity of navigation score of 2.75 and a misclick rate of 11 total misclicks. However, during our testing, we realized the importance of choosing universal icons for our app, as some of our icons were easily misinterpreted (i.e. original Explore icon was a compass instead of a magnifying glass). In addition, there was overwhelming feedback to change our task flow for creating new playdates to allow users to set the logistics of the playdate before potentially inviting people to it, instead of having users invite people to the playdate first. What's more, many users struggled to find where they could create a custom playdate since this was hidden in our profile page. Later on, we decided to give users multiple opportunities to create custom playdates from different pages to allow for complete user control. We made these decisions through having multiple meetings as a team and by collecting studio feedback. To see details on these changes please reference Figures 20 and 22.

Med-fi Prototype and Evaluation

In the medium-fi prototype, we addressed the feedback from our usability testing and expanded upon our original designs. This version was created in Figma and had the same task flows previously mentioned.

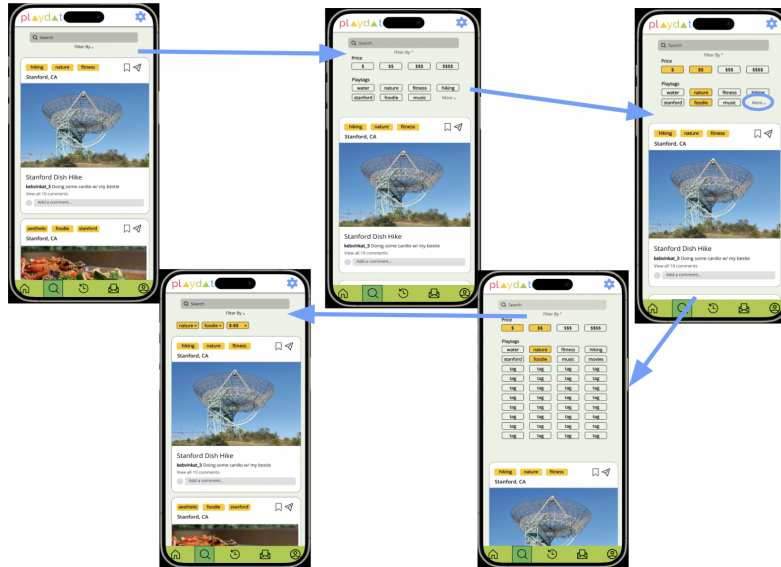


Figure 19: Med-fi Prototype of Exploring and Filtering Playdate Ideas on Playdate. Note that the explore icon changed from a compass to a magnifying glass, a more universal icon for “search” or “exploring.”

One of the biggest changes from our lo-fi to medium-fi prototype was the use of color to place emphasis on different buttons. We initially decided on using a green color scheme with yellow buttons to use as emphasis for what users could click on.

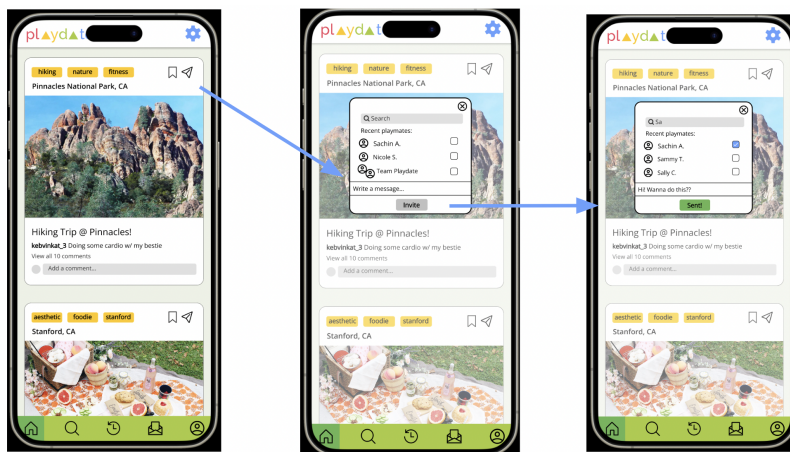


Figure 20: Med-fi Prototype of Sending Playdate Invites on Playdate. Each arrow represents a tap that the user could make.

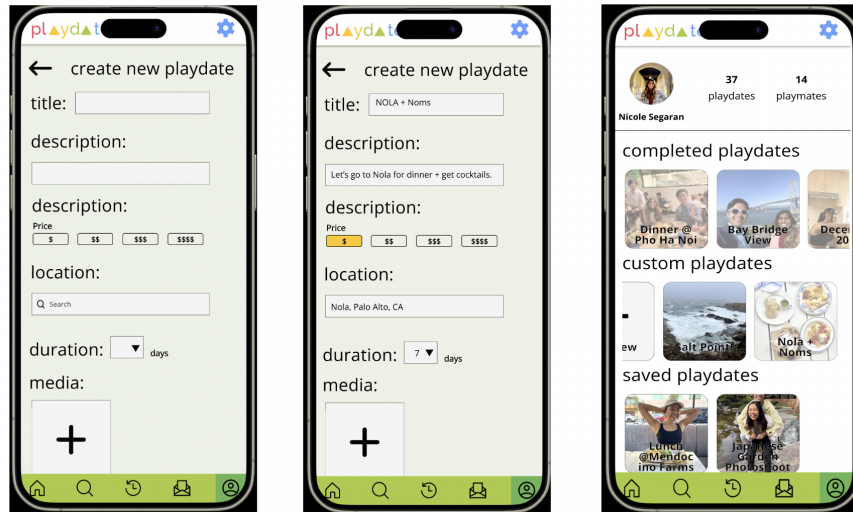


Figure 21: Med-fi Prototype of Creating Custom Playdates on Playdate. Note that in the medium-fi prototype, users can create the playdate logistics and then go back and invite people, unlike our lo-fi prototype.

To evaluate our medium-fi prototype we passed our designs to other studio members for heuristic evaluation. We received 105 heuristic violations overall, 23 of which were severity 3-4 issues. The lower severity heuristic violations led us to make some more generalized changes such as fixing the uniformity of components across the app, providing more signposting to prevent and help users troubleshoot errors, and emphasizing deadlines within our task flows. Most notably, to address the last general error, we redesigned the Home Page to populate a user's active playdates, in order to emphasize an urgency to finish them.

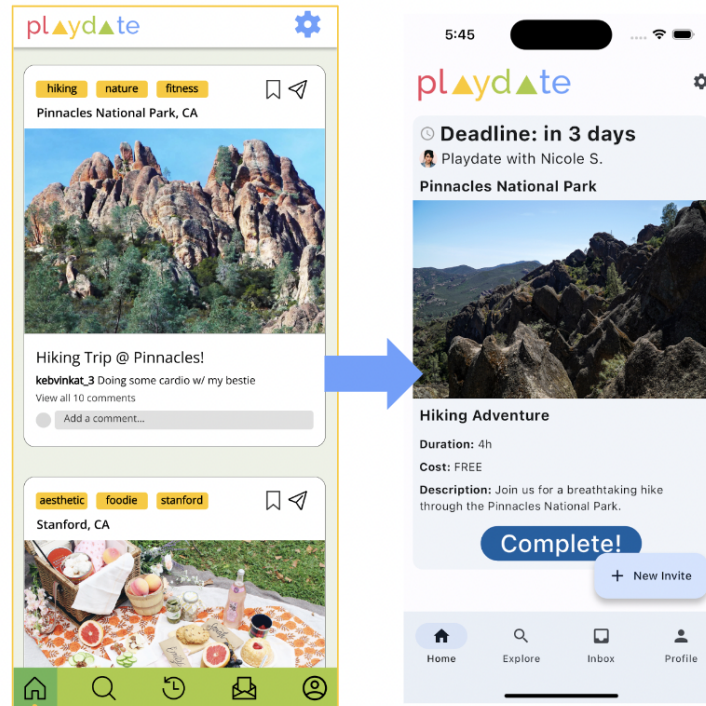


Figure 22: Med-fi Prototype of Home Pages versus Hi-fi. Note that now the Home Page hosts active playdates to emphasize a user's ongoing deadlines.

Out of the 23 severity 3 and 4 issues, 8 of them were part of a task flow we discontinued when moving to our high-fidelity prototype (recapping your playdates by viewing videos), as the task itself was extremely complex and had low user impact, and therefore we did not address those. However, for the remaining 15, we went task by task and implemented changes to address them. Fixes are organized below by [Task] / [Heuristic Evaluation Problem #] / [Type] / [Severity].

Account Setup / Heuristic Evaluation # 4 / H5 / Severity: 4

- Issue: There's no way to get back to the first page after choosing to Sign Up
- Fix: We added a back button to sign up pages to allow users to get back to previous pages.

Account Setup / Heuristic Evaluation # 7 / H3 / Severity: 3

- Issue: "Continue" button looks clickable even before 3 interests are selected
- Fix: We disabled "Continue" button until 3 interests are selected so users know they cannot move on

Account Setup / Heuristic Evaluation # 11 / H7 / Severity: 4

- Issue: On the very first page, there is no log in or forgot my password button
- Fix: We added ways for users to login and reset their password

Create a Custom Playdate / Heuristic Evaluation # 55 / H1 / Severity: 4

- Issue: There was no way to visibly "Save" a Custom Playdate
- Fix: Made "Create" button discoverable and kept it disabled until Custom Playdate form was filled out

Create a Custom Playdate / Heuristic Evaluation # 58 + #60 / H2 / Severity: 4

- Issue: Creating custom playdate form has two fields named 'Description'
- Fix: We changed one field to 'Tags' instead of having two 'Description' fields, which is confusing.

Create a Custom Playdate / Heuristic Evaluation # 64 / H5 / Severity: 3

- Issue: When the back arrow is clicked from Custom Playdate form, there is no confirmation of cancellation.
- Fix: We added a confirmation dialog when the back arrow is clicked so users do not lose their information if it is clicked on accident

Create a Custom Playdate / Heuristic Evaluation # 54 / H3 / Severity: 4

- Issue: No way to go back after clicking on Create a Custom Playdate
- Fix: We added a back button to create a custom playdate page.

Create a Custom Playdate / Heuristic Evaluation # 51 / H4 / Severity: 4

- Issue: Custom Playdate form uses slide in transition to fill in information all at once
- Fix: We changed this page to not use the slide in transition.

Create a Custom Playdate / Heuristic Evaluation # 67 + 74 / H6 / Severity: 3

- Issue: 'Duration' and other fields meaning is unclear on create new custom Playdate page.
- Fix: We added a description of input wanted for each field to help users understand what it means.

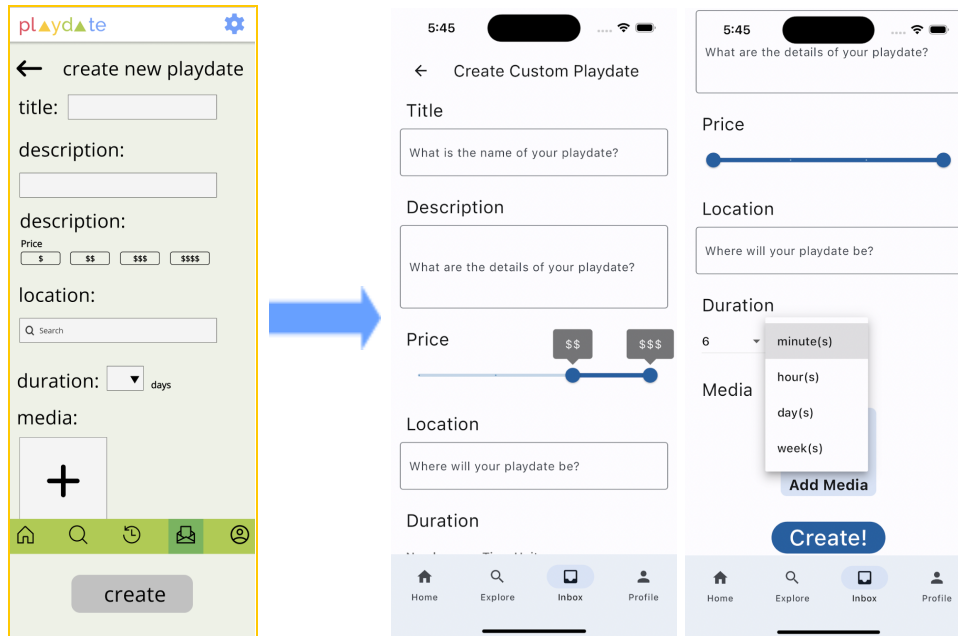


Figure 23: Med-fi Prototype of Create Custom Page versus Hi-fi. Note that now the Create Custom Page has a back arrow to return to the Profile Page. It also has a "Create" button that users can scroll to. More descriptive descriptions have also been added to input boxes, and redundant inputs were taken out/clarified.

Filter and Explore Playdates / Heuristic Evaluation # 94 / H3 / Severity: 3

- Issue: There's no way to close expanded tags menu button
- Fix: We added a 'less' button for people to be able to close the expanded tags menu.

Filter and Explore Playdates / Heuristic Evaluation # 96 / H3 / Severity: 3

- Issue: There's no way to explicitly 'Apply' filters.
- Fix: We added an 'Apply Filter' button to the filters menu.

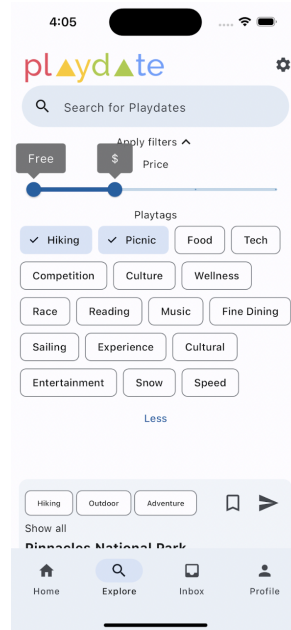


Figure 24: Hi-fi prototype showing changes to the filter menu, including the specification of an “Apply Filter” button and a Less button to reduce the expanded tags menu.

Miscellaneous/ Heuristic Evaluation # 46 / H1 / Severity: 4

- Issue: No confirmation message when Save button on Playdates displayed on home is clicked.
- Fix: Icon fills in when a Playdate is 'saved.'

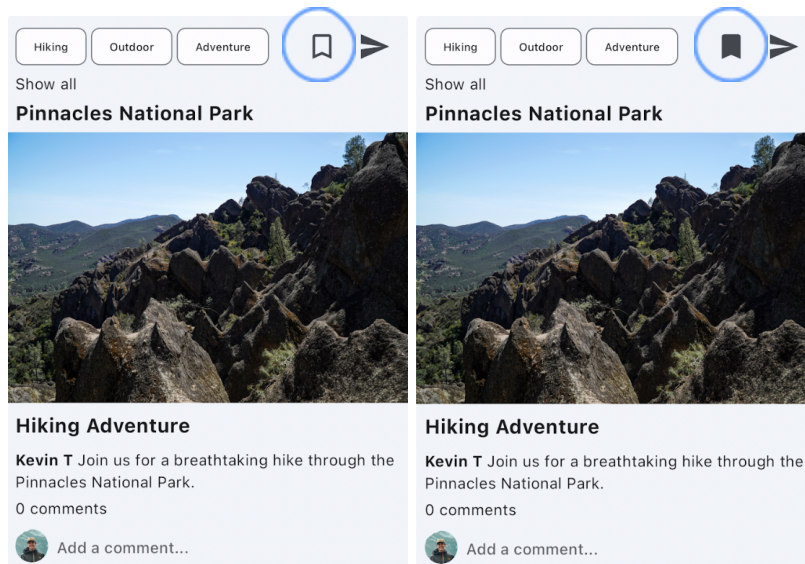


Figure 25: Hi-fi prototype showing functional save button, whose fill changes to indicate whether or not the post has been saved.

Miscellaneous/ Heuristic Evaluation # 101 / H4 / Severity: 3

- Issue: The style of images and overflowing text is not consistent in the app. In the past playdate section, all images below text have a lower gradient. However, the saved playdates and custom playdates have images in their original color.
- Fix: We made the pictures below any text always a lower gradient.

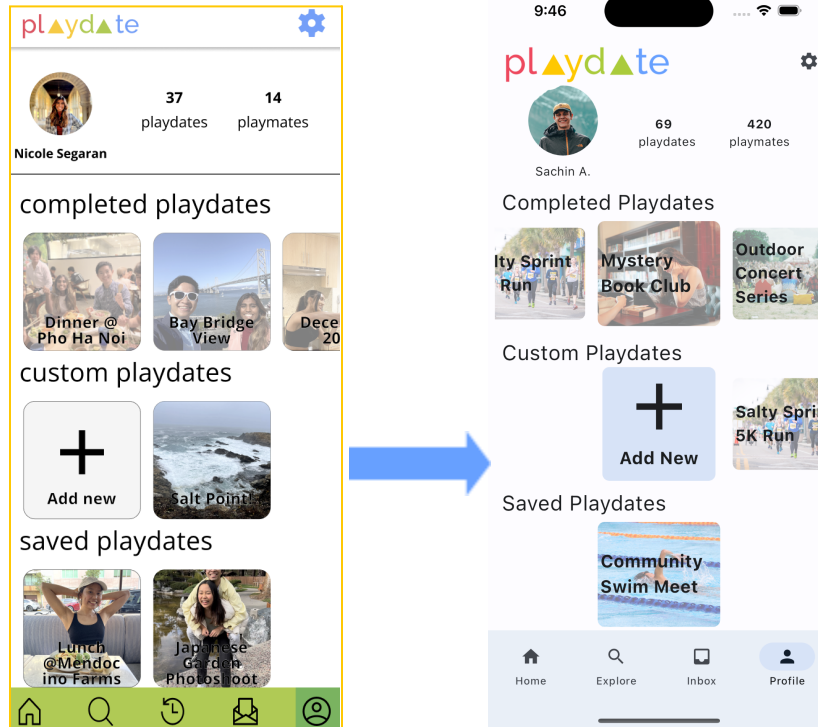


Figure 26: Medium-fidelity versus Hi-fidelity profile pages. Note that the hi-fidelity prototype now has all images with text above it grayed out.

Throughout the heuristic evaluation process, we learned that we needed to have a more cohesive feel to our app that would make it seem more playful and playdate-like. We initially thought we might make playdate have a monochromatic palette, but from feedback in studio, we changed our logo to be what it is today.



Figure 27: Our logo was initially a dark green, which inspired the green look of our app in the figma file. After other people in our studio commented on how our app could feel more fun, we decided to switch up our color palette.

Our design had a small intermediary step between our medium fidelity and high fidelity prototypes since we decided to first implement playdate in FlutterFlow. FlutterFlow is a low code builder for mobile apps that allows someone to easily download code into Flutter. Some of the initial font stylings and default settings in FlutterFlow helped inform the design we wanted for our final prototype such as having softer background colors for our different play tags. More information about how we evolved from our FlutterFlow design to our high fidelity prototype is in the Final Prototype Implementation section.

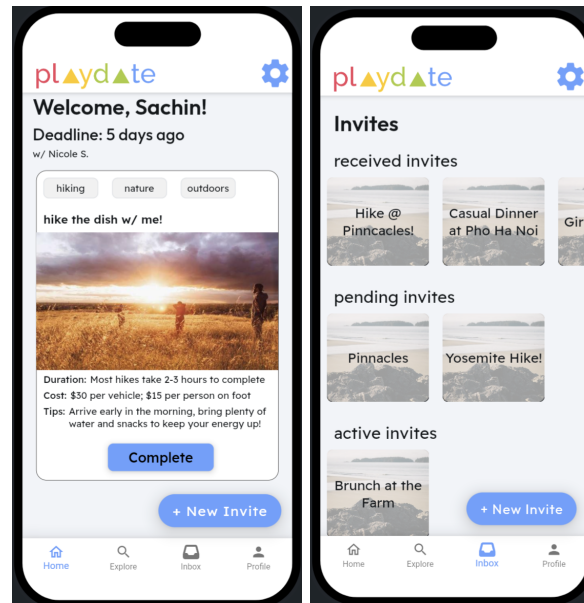


Figure 27: Screenshots of our home and inbox screens in FlutterFlow. We liked the background gray color and some of the default fonts provided by FlutterFlow.

Values

Identified Values

Throughout our creation of Playdate we identified three core values we wanted to keep at the core of our design process: authenticity, accessibility, and playfulness.

Authenticity

As we explored competitors of Playdate, we realized that there are many apps out there that claim to boost social engagement and interaction. However, very few work to build authentic, genuine interactions between users that truly benefit their social well-being. To achieve this, Playdate has been deliberately designed to steer clear of superficial engagement features commonly found in other social apps. For instance, we made a conscious decision to exclude 'liking' capabilities and other low-effort, yet addictive forms of interaction. These features, while popular, often lead to a more passive and less meaningful

form of engagement. By eliminating them, we encourage our users to actively reach out and connect with one another, thereby fostering deeper and more authentic interactions.

A unique aspect of Playdate is the nature of the content or “posts” on our app. Unlike many social media platforms where the focus is often on aesthetics, sponsorships, or self-promotion, Playdate emphasizes sharing meaningful moments between friends. This approach is designed to highlight the importance of real-world, in-person connections, even while users are interacting through the app. By showcasing genuine experiences and interactions, we aim to inspire our users to prioritize quality time and authentic relationships over superficial online exchanges. One thing that we didn't get the chance to fully implement was having people input their own photos of the playdates they went on into their profile page. Currently, playdate posts are activities that anyone can do, and we hope that by only having your personal photos and memories be viewed by you and the person you completed a playdate with, playdate stays true to being authentic and supportive for friendships.

Furthermore, Playdate incorporates reminders for users to spend time with their friends. This feature is particularly impactful in overcoming the inertia that often affects stagnant friendships. It provides a gentle but effective nudge, encouraging users to break the ice and reach out, thus facilitating the rekindling of friendships and the creation of new memories. These reminders serve as a crucial tool in breaking down barriers to social interaction and fostering a culture of proactive engagement. From our needfinding, we found that in person interactions are extremely important at fostering connection, so we wanted to include this nudge to make online interactions into in person ones.

Accessibility

It was also important to the group that our app serves all users equally. We did this in many ways as we were designing, such as avoiding color schemes that may be difficult for some users, making sure text is large enough, and even implementing a dark/light mode to allow users to avoid eye strain. Alt text was included in the final prototype so that the app would work with a screen reader for users with visual impairments. We hoped to make the experience of exploring and filtering playdates more accessible to those who may have financial constraints by including price filtering, and also hoped to cater to users from all cultural and regional backgrounds by allowing users to select from a wide range of interests and activities.

Playfulness

Lastly, the app centers playfulness in every aspect of its design. We wanted Playdate to put the 'joy' back into spending time with friends, and so it was key to make it a joyful app to navigate. From ensuring seamless user experience, to our vibrant color scheme and fun transitions, we hoped to create a product that users can really enjoy. We also included quirky easter eggs for users to discover, like tapping the logo to change the background color settings of the app.

Value Tension

In addition to these core values, there were several other values we kept in mind while designing Playdate, naturally leading to conflicts as we balanced them all.

Sociability vs Privacy

Balancing sociability and building a vibrant digital community, versus privacy, was tricky to maintain. In this final prototype we prioritized users being able to see as diverse a range of playdates as possible, but in the future it may be important to allow users to narrow their visibility depending on their preferences. In addition, we opted to let anyone be friends and send invites with anyone, but in the future features like blocking, or only being able to add a friend once they accept a request, may be additional steps that are important to take to protect a user's information and boundaries.

Deep Connections vs New Ones

By focusing on strengthening one's deep connections with their closest friends, playdate deemphasizes the joys of meeting new people in niche activities. While we want people to make sure that all of their closest friends feel cared for and that their friendships are valued, we recognize that this might make people feel as if it is not worth it or not as important to continue meeting new people.

Deadlines can make friendships feel like work

While deadlines are extremely important for encouraging people to follow through on the plans that they've made, by providing even these soft deadlines, playdate might make friendship feel a bit more like work or a task someone has to complete. This might stress people out about the playdates they feel they must complete, which is not our intention whatsoever.

Thoughtfulness vs Accessibility

By giving people access to high quality, meaningful plans, we might reduce the thoughtfulness that a friend could pour into making a really thoughtful activity to make someone else feel special. We hope that our custom playdates give people the ability to make unique plans for their friends, but we understand that this might still fall short of capturing the thoughtfulness involved with making an elaborate plan with a close friend.

Final prototype implementation

We developed our high fidelity prototype as a functioning mobile application that runs without any additional supporting software on iOS, Android, and Web browsers. The following section will walk through the process we took to turn our medium fidelity prototype into an app.

Tools Used

We took a two-phase approach to building our final app: creating the UI app layout using FlutterFlow, and finally implementing a polished user interface and functionality using Flutter.

The first phase of our app was built in FlutterFlow, a no-code tool that allows users to design Flutter apps using a visual editor very similar to Figma. This allowed our team members to help design the app without having previous knowledge of Flutter. The platform was also online, allowing us to collaborate easily without using version control software. While this allowed us to have very rapid iteration, it was severely limited in aesthetic customizability and scripting. Some of the functions for button actions on FlutterFlow would make it quite difficult to deploy as an actual app. This led us to our second phase of development: Flutter.

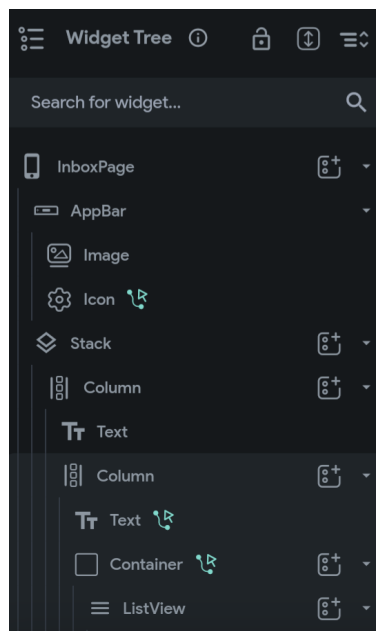


Figure 28: The widget tree in FlutterFlow is the exact same as the widget tree one would use in Flutter. This made it extremely easy to transition from FlutterFlow to Flutter as all of the UI elements were already complete.

The second phase of the app was coding the entire app in Flutter, a cross platform framework for mobile and web development. The programming language used was Dart,

and while it was much more flexible to develop our app's full vision, it was much harder to pick up. Therefore, the last phase was completed by our lead developer.

Coding our app in Flutter allowed us to customize our theme, maintain greater consistency, and polish UI details. Our original plan was to easily polish up code generated by exporting FlutterFlow, however there were too many external dependencies to do so. Therefore, the whole app was re-coded from scratch. Here is one example of a page on phase one (FlutterFlow) and phase two (Flutter)

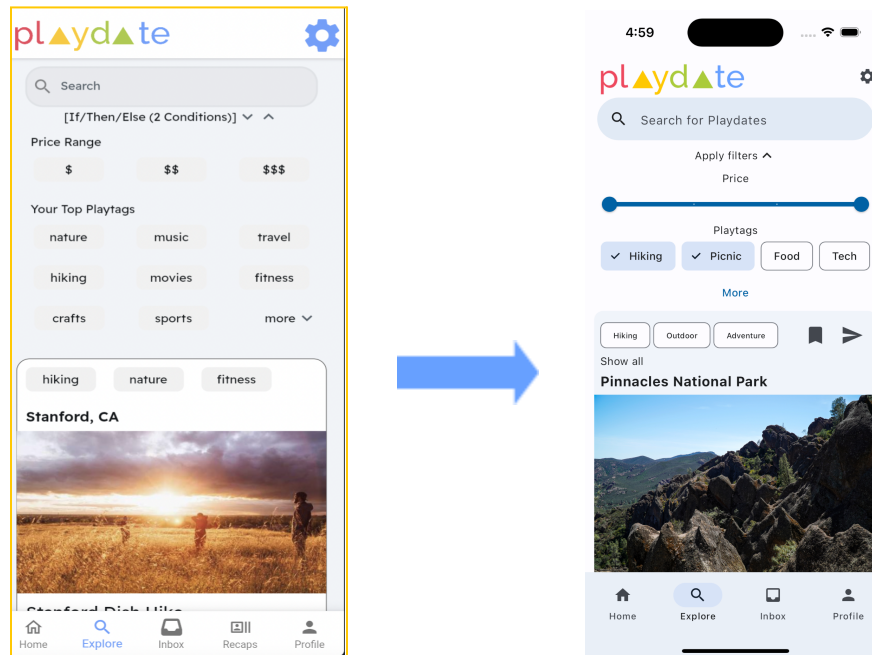


Figure 29: The evolution of our Explore Page from FlutterFlow to Flutter.

The re-coded Flutter also allowed us to implement animations, greatly improving the smoothness and 'feel' of our app and helped contribute to our design goal of making our app feel fun to use. Using Flutter allowed us to create dynamically-generated themes for our app, and by clicking the logo on the top left, you can change the app's theme.

Finally, Flutter allowed us to make massive improvements in the accessibility of our app. Dark mode helps reduce eye strain using the app at night, and every image and icon is annotated with semantics, allowing the operating system's native screen reader (such as iOS VoiceOver) to read a description of an image, making the app usable for visually-impaired users.

One con of Flutter is that we weren't able to deploy our app to Expo, the most commonly used way to show off teams' work at the CS147 design exposition. This small downside didn't seem big enough for our team to use React Native or another language to code playdate

since three of our team members had all had previous experience with Flutter and FlutterFlow.

Hard-Coded Data and Limitations

We were able to code all but one primary task into our application. We allow users to explore, filter and save playdates; view, accept and complete playdate requests; create custom playdates; and view completed and upcoming playdates on the profile page. We also revamped the home page, displaying important at-a-glance information such as the deadline of the next upcoming playdate.

We decided to sunset the 'Recaps' page from our lo-fi and medium-fi prototypes. After extensive usability testing and heuristic evaluation, we realized that this feature was not core to our app's functionality and values, and many people already use recap features in dedicated photo apps such as Apple Photos and Google Photos. This feature would also require by far the most programming effort to implement integration with a system's media library, animations and drag-and-drop editing, while not contributing as much to our main goal of strengthening friendships through new adventures.

Since all of our tasks occur in the context that a user already exists and has friends on the platform, our prototype operates under the assumption that a user has already created an account and added several of their friends from their contacts. Additionally, as our app does not have a dynamic database for the backend, several components of our app state are also hardcoded, typically pertaining to the database of playdates that exist for users on the app.

Hard Coded elements include:

1. User profile picture images, name, added friends, and completed playdates.
2. Existing playdates on the app, including playdate invites and custom playdates..
3. A playdate's image, tags, comments, location, title, and description.
4. A user has upcoming, planned, pending and past playdates.
5. Most common playtags and the order of posts in the explore page

Additionally, the price range filter for the explore page's state is not externally accessible, so the displayed playdates are not updated when the user changes their desired price range.

Wizard of Oz Techniques

We tried to avoid using Wizard of Oz techniques, or techniques that simply appear to magically work within our app, but we did have to include some features in order to create a finished product. Here are the techniques we used below:

Simulating tags: While this app does not have a dynamic database to pull fresh data to create playdate posts, it does have a way of changing what is displayed from a static database to respond to user action. One essential feature of our app was being able to filter ideas of playdates based on their preferences, and in our high-fi prototype, we allowed

users to select playtags of activities they were interested in, and the explore feed would change to display only playdates that included aspects of the playtags. While the post's playtags and the array of playtags were hard coded, the playtags were selected to represent many common interests that appeared across the database of playdates. In a fully functional app, playtags would be dynamically generated using a language model from the description and location of the playdate, helping users filter without the burden of manually tagging posts.

Search engine: While the search bar did not have a ranking algorithm in it, it did allow users to search for playdates in the database. The query was stripped of case and checked against playdates' locations and titles, displaying posts that matched.

Sending and receiving invites: Since there was no dynamic database, there was no real-time interaction between users. Therefore, we pre-populated a user's friends and received invites for playdates. When a user accepts a playdate, they are prompted to agree to a deadline to complete the playdate, and informed that it was sent to the invitee. When a user invites their friends to a playdate, they are informed that they have successfully completed the action.

Reminders to complete a playdate: In the full implementation of the app, notifications would be periodically sent out close to the deadline if the user has not completed the playdate with their friends. Currently, the user gets a large reminder of their next playdate's deadline whenever they look at the home screen or start up the app.

Completing a playdate: Finally, when a user completes a playdate, they are given a confirmation that they have successfully completed it, and the playdate is hidden from view.

Reflection & Next Steps

Key Learnings About the Design Thinking Process

We had many learnings about the design thinking process throughout our project. In particular, we discovered the importance of being thoughtful during the needfinding stages, iterating constantly, and having a diverse and communicative team.

Several of the insights we had as a result of our user needfinding interviews and experience prototype tests were very unexpected. For example, an insight we discovered from a needfinding interview that guided some of our key tasks going forward was that although people know more about their friends through social media, this makes people less likely to reach out to friends because they feel as though there is nothing new to discuss. We discovered very early on that in order to pinpoint meaningful contradictions, we had to let go of any preconceived notions of what we thought people's preferences and experiences may have been. During the needfinding process, it is important to let the interviewees speak about what they know. Everyone makes sense to themselves, and it is important to let them talk fluidly about their thoughts in order to better inform the next steps of the design process.

Additionally, we consistently iterated over Playdate, from the start of the quarter until the day of the Project Expo. While some parts of our low-fi prototype remained similar in the final hi-fi prototype, we had some features that were completely overhauled (i.e. the recaps feature). Our two main phases of design revisions were after our low-fi experience prototype testing and after our medium-fi heuristic evaluations. Our final hi-fi prototype took into account feedback from users, feedback from classmates and our TA, and our original needfinding insights to create a user experience our entire team was proud of.

Another key learning we had is that it is much easier going through the design thinking process with a diverse and communicative team. Our team had very diverse skill sets that complemented each other very well, including design, programming, and organizational skills. This helped us delegate work and collaborate much more efficiently. Our team was also very communicative throughout the project, and kept each other updated on our progress. This meant that if any team members were struggling with any of their individual portions, someone else could always offer their help.

Key Learnings About Studio Theme

Since our entire team was interested in social relationships, the Threads and Trends theme was the perfect studio for us to explore this further. We had to think critically about how exactly we wanted to incorporate crowdsourced information in our application, and the tradeoffs of different features, such as anonymity. One of the key learnings from our studio that also had significant implications for our Playdate is when creating online communities, it is important to consider how to incentivize people into staying involved in your community.

This is one of the main guiding principles behind why our team decided to focus on strengthening close friendships instead of creating new friendships as Playdate's primary goal.

We initially struggled to incorporate crowd sourced information into our project idea, especially when we were creating experience prototypes and coming up with solutions. We eventually learned that, in order to make a crowdsourced app, we needed to make crowd sourced information the cornerstone of how people interact with one another on playdate, not an afterthought.

Key Learnings About Playdate

One of our most important key learnings while creating Playdate was to not grow too attached to just one idea. When planning for our first user interviews, our team realized that we were all interested in analyzing social relationships, and specifically exploring if online interactions can become as fulfilling as in-person interactions. After conducting our first few rounds of user interviews, we quickly pivoted our goal based on our insight that although many people crave more in-person interactions, this doesn't mean that they want online interactions to be a replacement for it. Going forward, we focused on creating a product that facilitated in person interactions instead. People could create and plan activities using Playdate, and then actually do the activity in person.

Another key learning that we applied throughout our design phases was that close friendships thrive off of novelty, but many people do not know how to inject novelty into their long-term friendships. In both our project name, UI, and functionality, we wanted to capture a fun, child-like energy to emphasize the low-stakes use and novel ideas. Based on one of our HMW statements about making adult playdates, we settled on "Playdate" as our app title. Each of our key tasks (Filtering/Exploring Playdates, Inviting Someone on a Playdate, and Creating a Custom Playdate) helps people discover new, fun ideas to do with friends and provides an easy way to share them.

Next Steps

Our first next step would be to link our hi-fi prototype to an actual backend database. Currently, all the data on our app, including the users, posts, and past completed playdates, are hard-coded in. Connecting our prototype to a backend database would allow a user's actions to persist over different reloads, which is necessary for a functioning app with real users.

In our low-fi and medium-fi prototypes, we included a "Recap" tab on our bottom navigation bar (Figure 22). This feature was not included in our high-fidelity prototype due to the programming effort required and the fact that it was not core to our app's values. Our rationale for not including the "Recap" feature in our final prototype is expanded on in more detail in the "Hard-Coded Data and Limitations" section. In our final prototype, we instead allow people to view the details of their completed playdates from their user profile.

However, if given more time, we would like to implement a “Recap” feature to allow people to more deeply reflect on their Playdate experiences and appreciate the people and moments that matter to them.

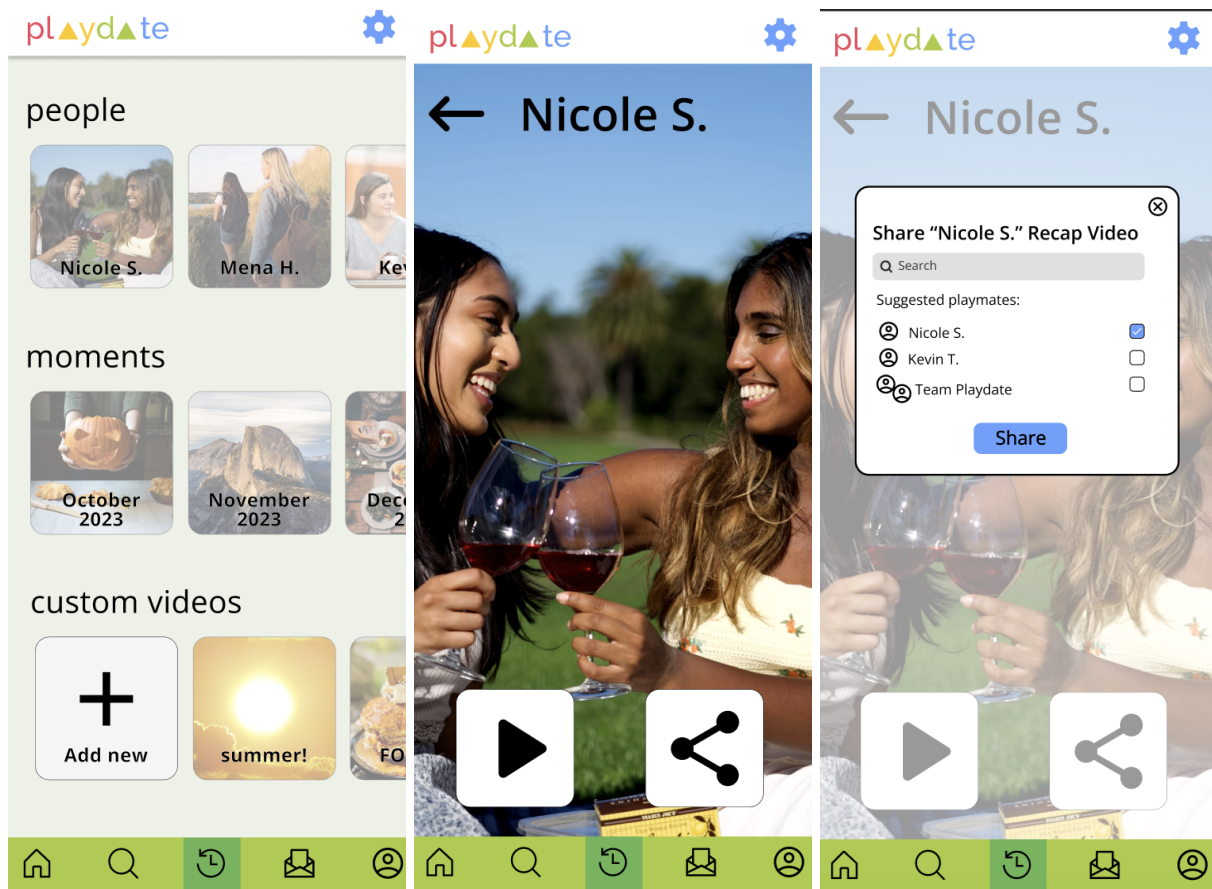


Figure 30: Our “Recap” Feature from our medium-fi prototype which we did not include in our high fidelity prototype due to programming limitations. This feature allowed users to watch video recaps of people and moments that Playdate compiled, as well as create their own custom recap videos. Users could share these recap videos with other users, or “playmates”.

We would also like to send push notifications to users. We would like to be thoughtful about how we notify users that a playdate deadline is approaching, in order to encourage them to complete the playdate within the timeframe while ensuring the deadlines are not causing them stress. In addition, users would be notified when they receive a playdate invite, when a friend accepted their invite, and when they have not engaged with Playdate in a long time.

In terms of actually releasing the app, we would first release it to our target population: young adults in their 20s who are having trouble maintaining friendships and staying social after college. We would reach out to recent Stanford graduates, as well as other recent graduates through our personal network. Similar to our approach to needfinding interviews,

we could also visit Palo Alto or San Francisco and ask any new graduates we meet to try out Playdate.

Ultimately, playdate was a joy to create, iterate on, and implement. We hope you enjoy using it and that you apply some of the ideas and values within the app in your everyday life.