planit

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Value Proposition:

travel with a **game** plan.

Problem and Solution Overview

We sought to help travelers overcome the familiar struggles of planning for their destination trips. We found that one of the least looked-forward-to parts about traveling was the planning process. In particular, travelers weren't confident in their plans without the input and approval of family and friends, who were generally unmotivated to respond.

With Planit, we aim to gamify this planning process, allowing input from familiar faces to propel travel planning in an inherently engaging and motivating manner. Planit is designed to make travel planning fun while instilling confidence in trustworthy plans.

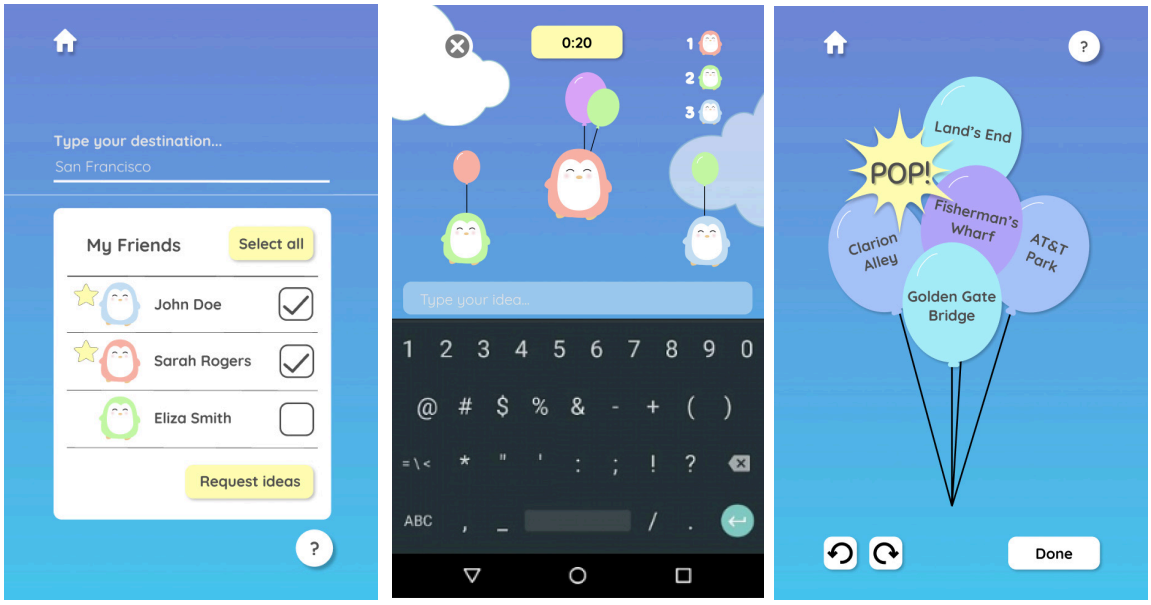


Image 1: Screens of the main three solutions: Be Confident, Be Motivated, Be Engaged

Task & Final Interface Scenarios

Simple: Request Ideas from Family and Friends

The user clicks the "+" button on the app's landing page to start a new destination-idea game. Clicking "+" leads the user to the request page where they [1] type in their travel destination and [2] select the friends they wish to request ideas from. A user's friends list is sorted by best friends, aka the most frequently requested friends, on top, then remaining friends, then phone contacts not yet on the app. After a user is finished typing a destination and selecting friends, the user clicks the "Request ideas" button and is directed to a customization page. On the customization page, a user can customize the request message being sent to friends, set the deadline for when they need ideas back by, and finally, send the request.

This task addresses the first of Planit's solutions: Be Confident. Because users are requesting personalized travel ideas from family and friends, instead of viewing strangers' suggestions from the internet, users gain confidence in those ideas. Furthermore, users can customize their request messages to incentivize friends to respond, making users gain confidence in knowing ideas will start to flow in.

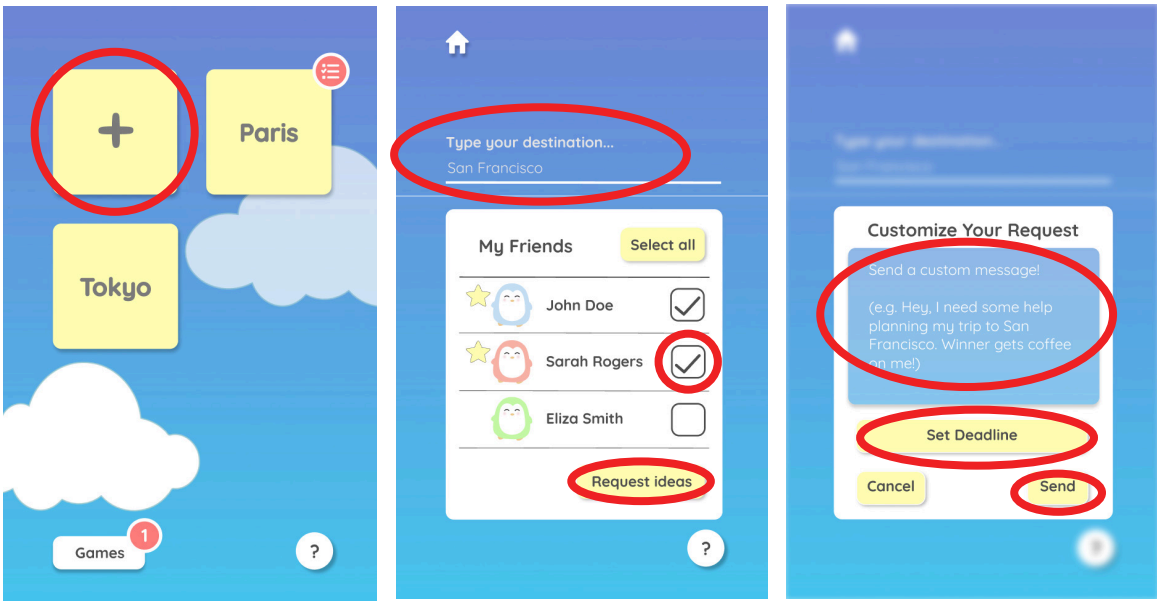


Image 2: Request Ideas from Family and Friends task

Medium: Give Ideas via Game

After a user has been invited to play a game, aka asked to generate ideas for a friend, a notification will pop up indicating a game is ready to be played. A user then clicks on the correct game location they are generating ideas for. Because the game requires live play, the user is then taken to a waiting page until all users who were invited to play the game are ready.

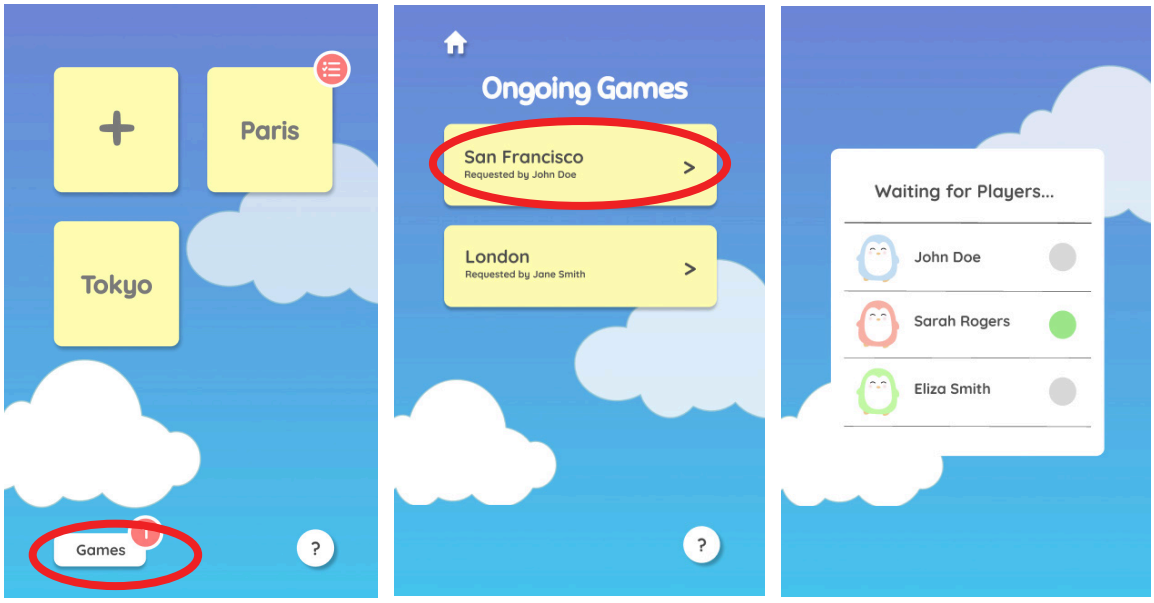
When all players are ready, users are taken to the actual game page. “Ready, Set, Go!” counts down to the start of the game, and when the game begins, users are to type in their ideas for what to do at the requested location.

The game is played as follows:

When a user enters an idea, a balloon appears on the user’s avatar’s back and the avatar proceeds to float a bit higher into the sky. As a user enters more and more ideas, more and more balloons appear and the higher the avatar gets. Since everyone is entering ideas at the same time, the goal is to have the highest avatar at the end of 1 minute. If your avatar is the highest, you win!

After playing the game, users are directed back to the Home page.

This task addresses the second of Planit’s solutions: Be Motivated. From our needfinding, we found that travelers weren’t confident in their plans without the input and approval of family and friends, **who were generally unmotivated to respond**. Giving ideas via this game creates competition between users, incentivizing them to give more ideas to win. As a result, friend and family users are more motivated to give input and generate more ideas.



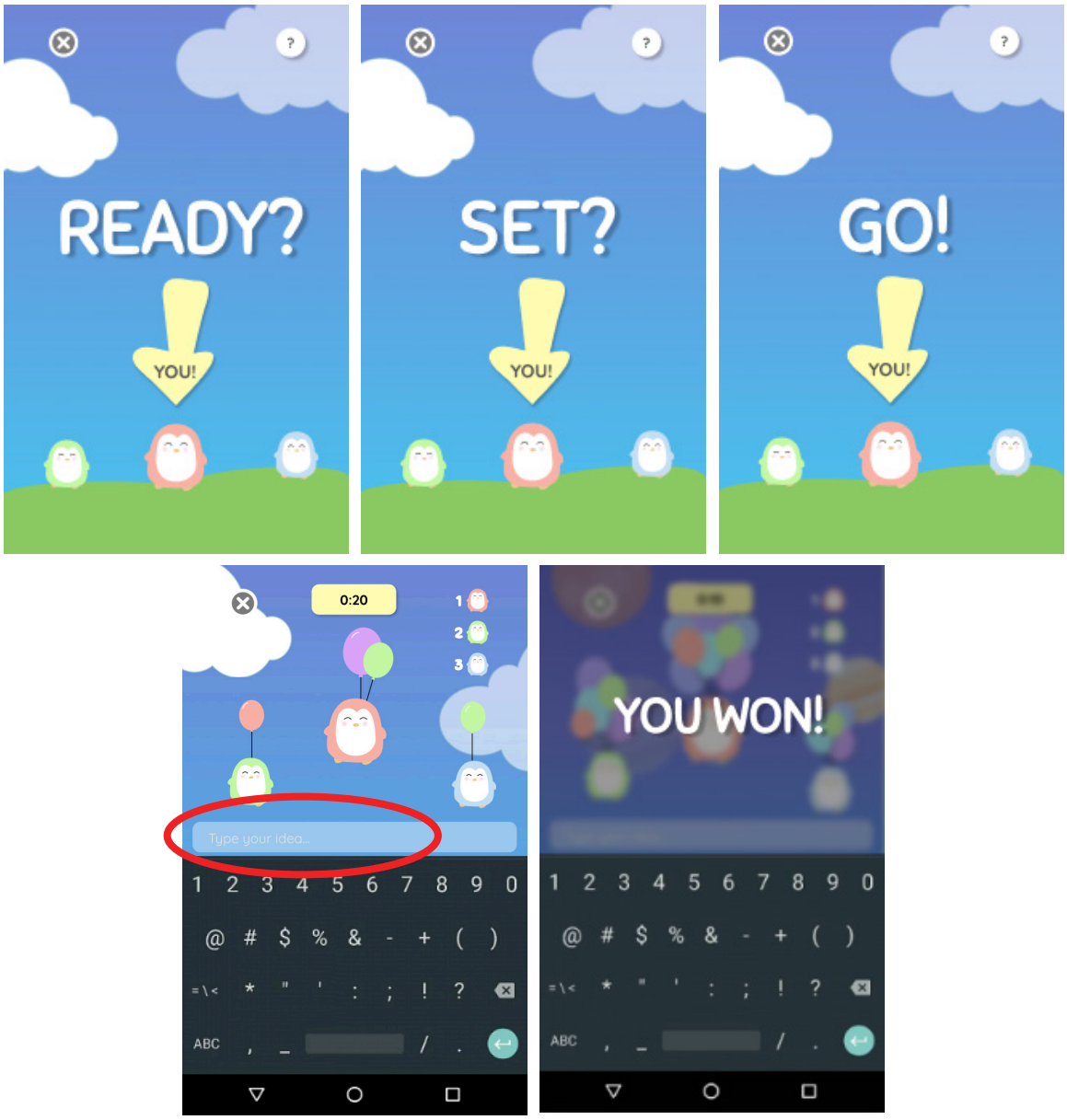


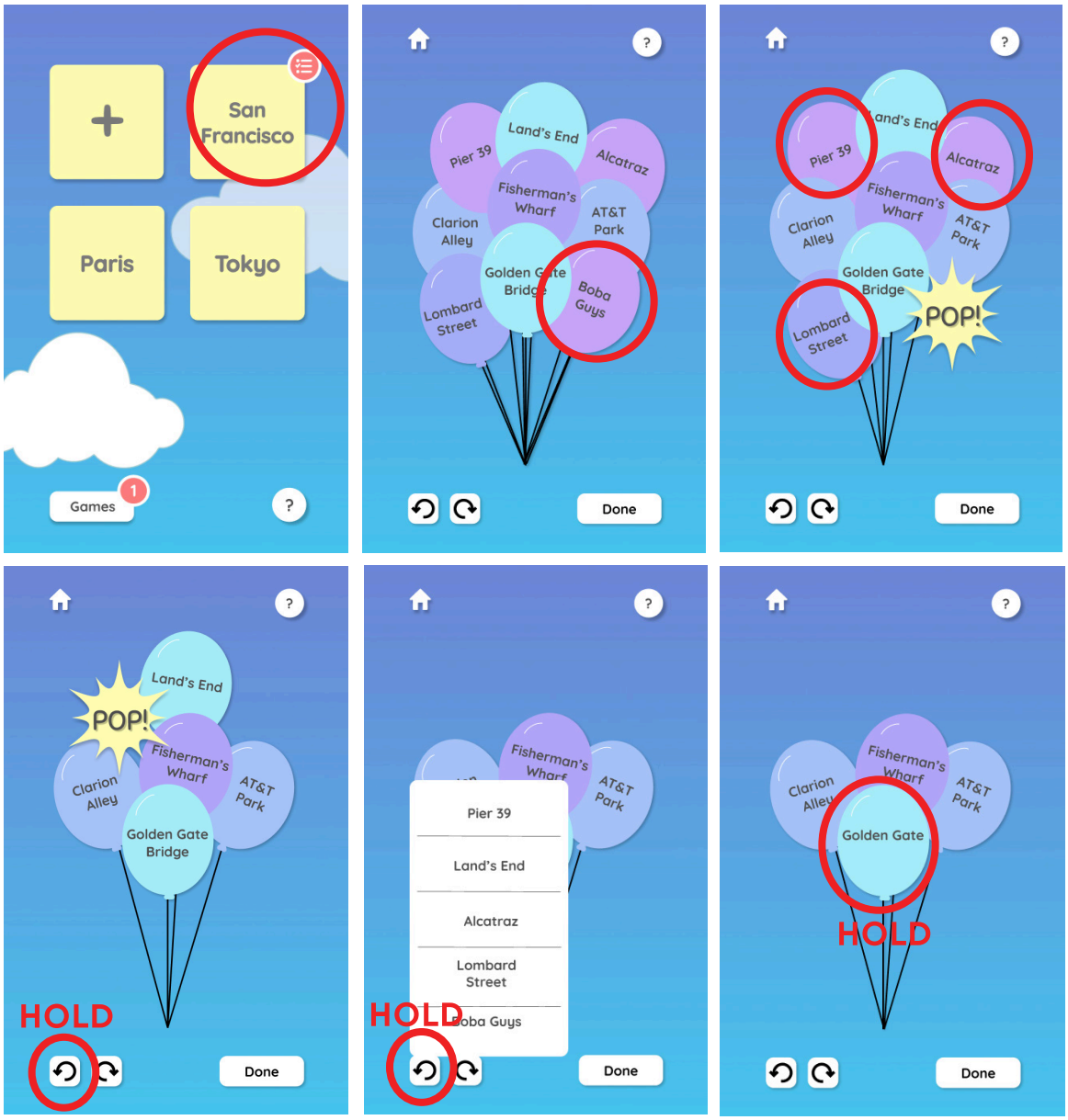
Image 3: Give Ideas via Game task

Complex: Choose and Share the Best Ideas

After a user's friends has sent back all of their generated ideas, the user will receive a notification indicating it's time to pick and choose the best ones. A user is taken to a balloon bouquet page, where each idea their friends generated is listed on a balloon. The user proceeds to pop (tap) the balloons that they don't like, removing the bad ideas.

If a user messes up a pop, the user can press undo to bring back the most recent idea, or hold undo to bring back any idea from any number of pops ago.
A user can also find out more information about an idea by holding down on a balloon. When a user holds down, a window pops up displaying a picture of the idea and a few facts.
Once a user is done popping all the ideas they wish to discard, the user can press the "Done" button. A window then pops up asking the user to confirm they are satisfied with the ideas they picked. Then, they are taken to the Final Plan page. On the Final Plan page, all the user's chosen ideas are listed, and there is an option to share the plan through the user's own phone messaging system.

This task addresses the third of Planit's solutions: Be Engaged. Choosing ideas by popping balloons keeps the user engaged with the balloon/game theme of our app. It allows users to have fun doing what is normally a tedious task.



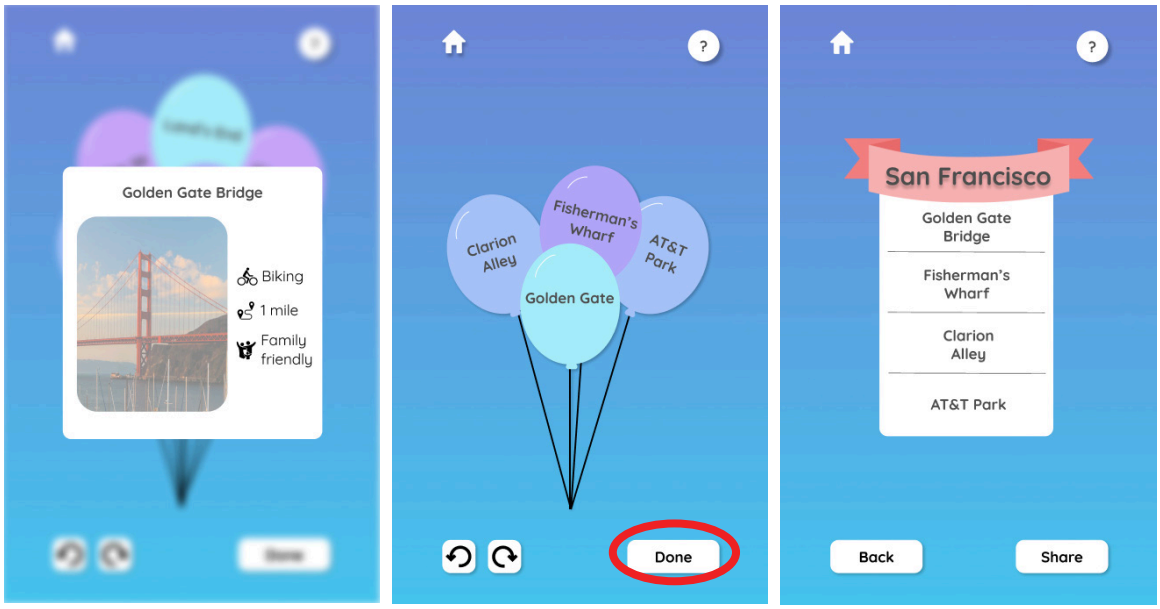


Image 4: Choose and Share the Best Ideas task

Design Evolution

[1] Initial Sketch

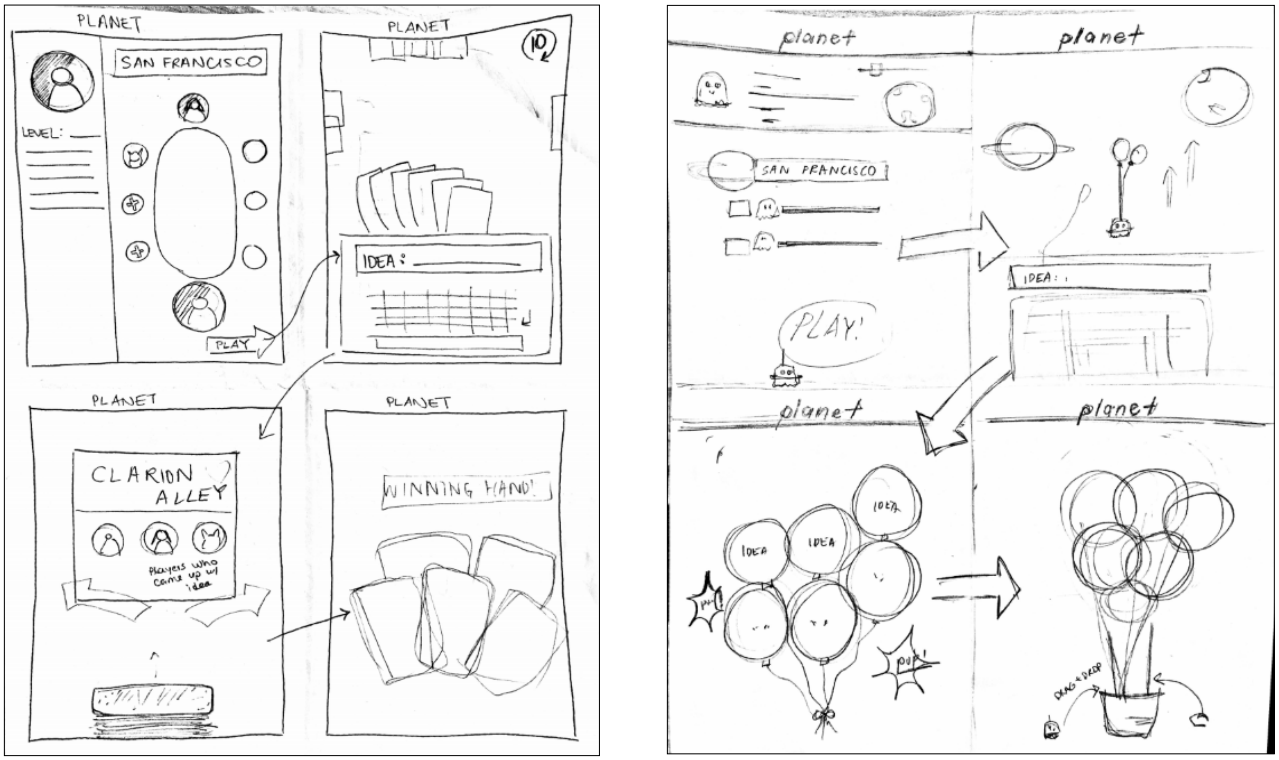


Image 5: Initial sketches of two interface design approaches

We explored two possible interface designs through initial sketches. The sketch on the left is a Poker/Tinder style interface where a user generates ideas via a card game and chooses ideas by swiping right and left. The sketch on the right is a Balloons style interface where a user adds more balloons to their avatar by generating ideas, and chooses ideas by popping balloons. We decided to go forward with the Balloons design because it had more effective synchronization, simpler verification, and a more consistent theme that reflects travel and exploration.

[2] Low-Fi Prototype

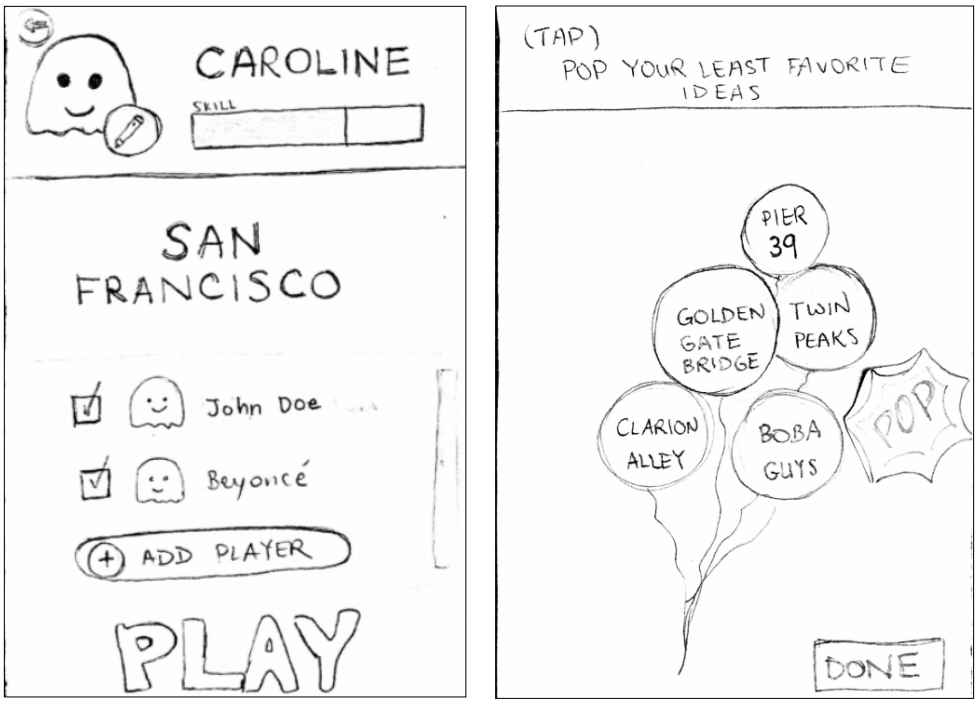


Image 6: Low-Fi Prototype

We tested our low-fi prototype with participants, including students and visitors to the university, who performed the three main tasks on the paper screens. One major finding was that participants didn't understand the feature of the map and thought there were too many screen changes going from the destination to selecting friends. In response, we got rid of the map completely and combined the destination and selecting friends features to a single page. Another major finding was that participants wanted the details of the ideas their friends generated. In response, we added a feature such that if you hold down on a balloon idea, a picture of the idea and a few facts popped up.

[3] Medium-Fi Prototype

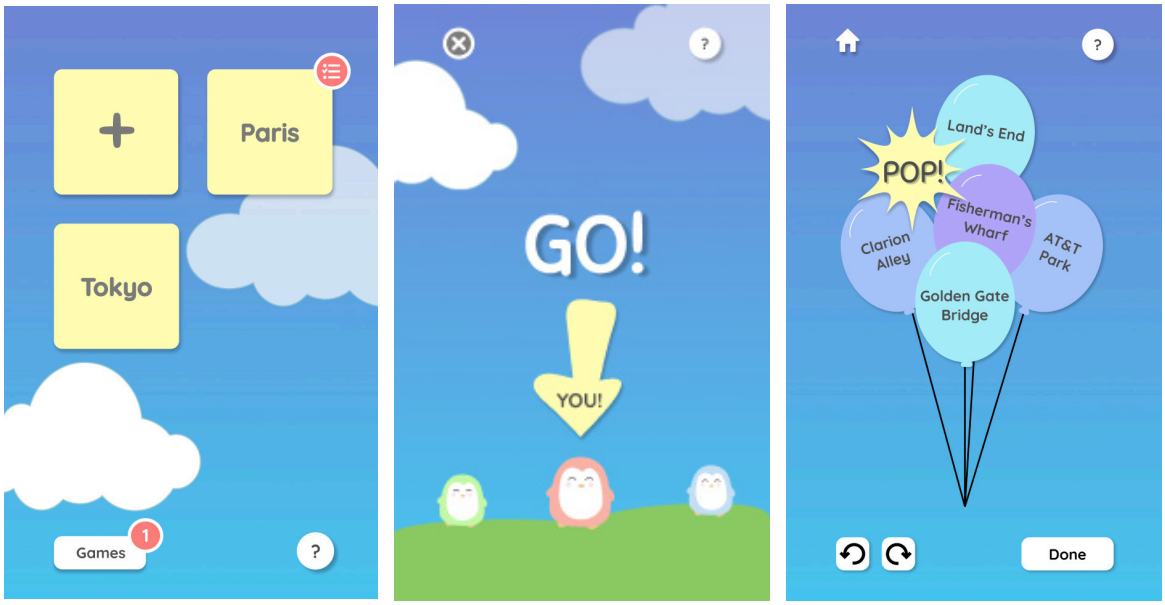


Image 7: Medium-Fi Prototype

We received a heuristic evaluation report from other students in our studio, which is discussed in more detail in the HE section below.

[4] High-Fi Prototype

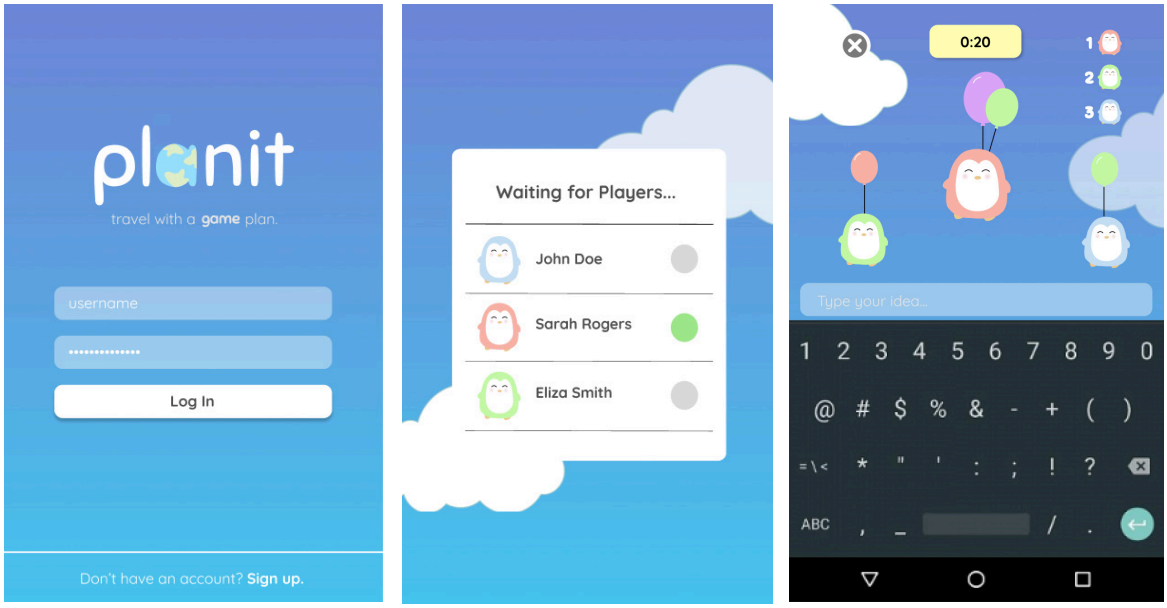


Image 8: High-Fi Prototype

Major Usability Problems Addressed

[1] H3 - User Control and Freedom

Issue: When sending a customized request for friends to play a game, users are unable to cancel the request.

Response: Adding a "Cancel" button to the "Customize Your Request" window so users are able to exit the screen instead of being forced to send a message.

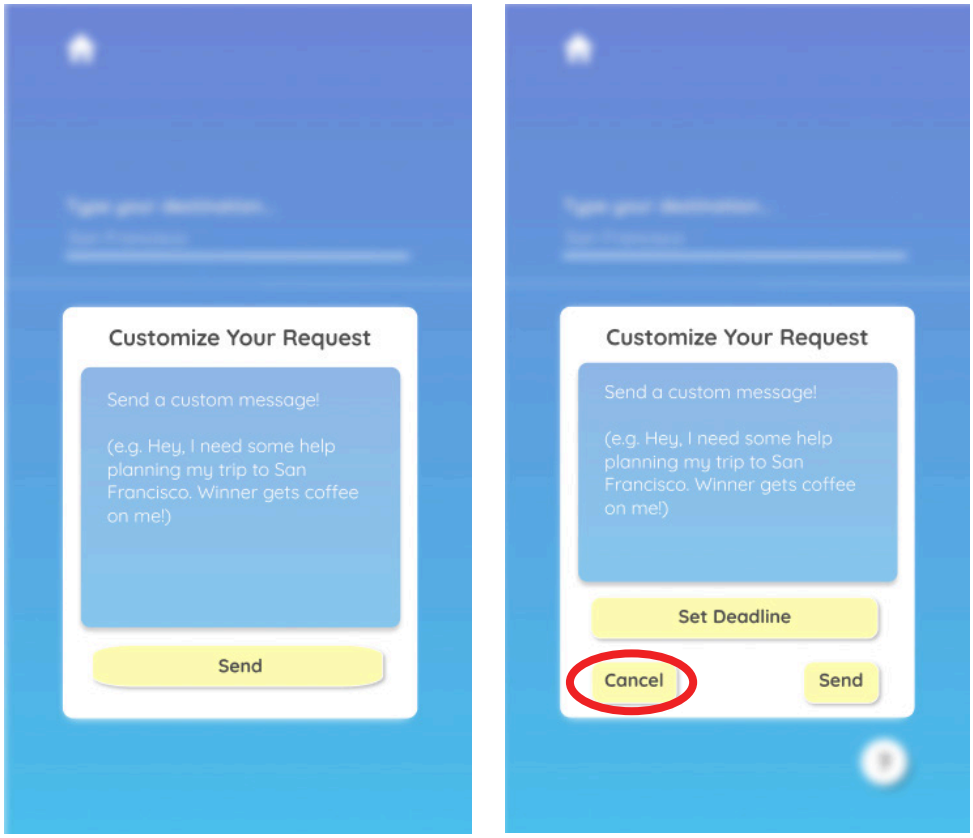


Image 9: Before (left) and after (right) screens of the customize request page. You can see the new "Cancel" button added.

[2] H8 - Aesthetic and Minimalist Design

Issue: If the user invites multiple people to play a game, it's possible that the screen that shows the other players will get very crowded.

Response: During the game, the top 3 players will always be shown in the top right so users know who is in the lead, etc. The actual screen will only display the user's avatar with the two closest avatars.

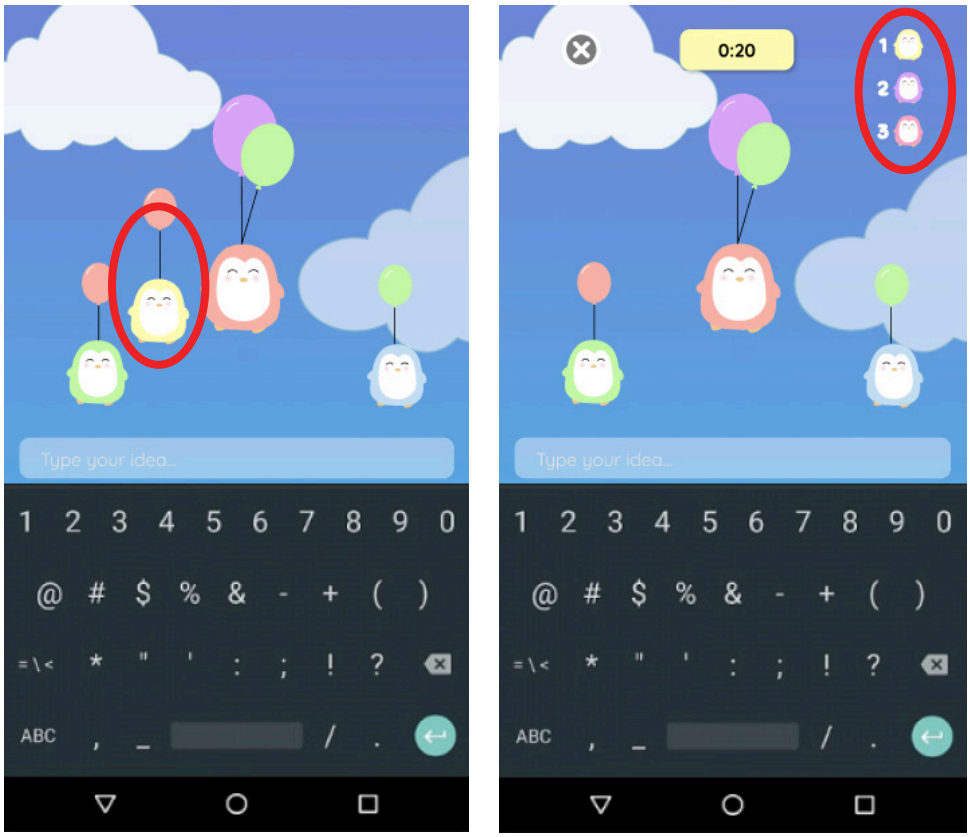


Image 10: Before (left) and after (right) screens of the game page. You can see the added status of the top 3 players, as well as at most only 3 avatars on the screen at once.

[3] H1 - Visibility of Status

Issue: When users go to the game page, it's unclear which games are currently in progress and which games are completed.
Response: Added an "Ongoing Games" label to the "Games" page so users are no longer confused about which game is completed or not. A game must be ongoing to appear there.

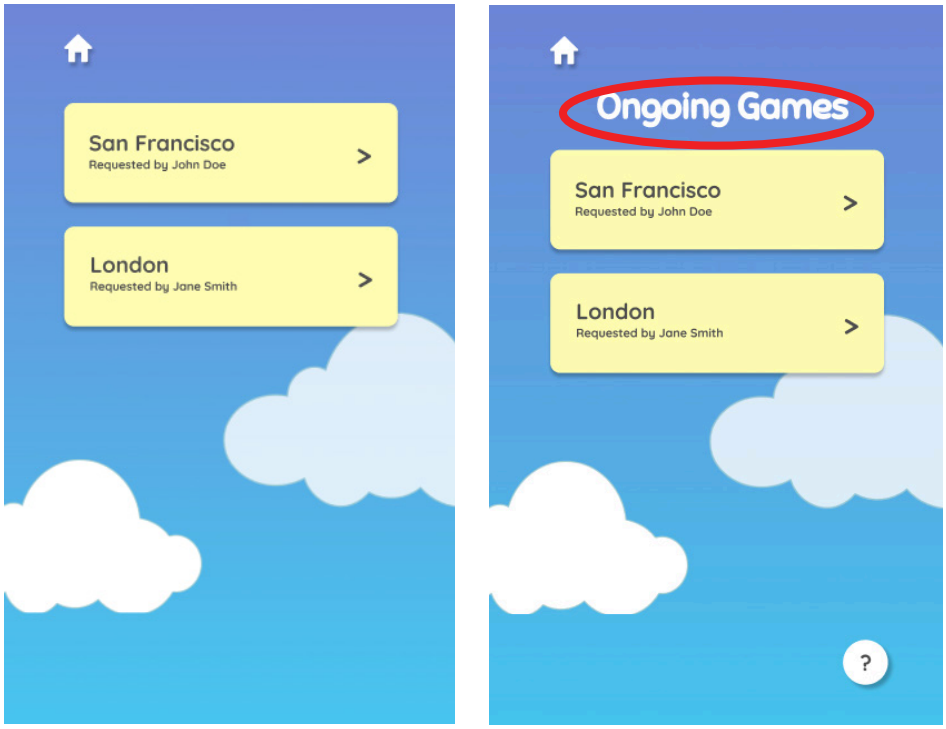


Image 11: Before (left) and after (right) screens of the games listing page. You can see the added "Ongoing Games" label at the top of the page.

[4] H3 - User Control and Freedom

Issue: There is no clear way to exit the game once you are in it.
Response: Added an X to the top left corner of the game screen, which lets users exit a game in the middle if necessary.

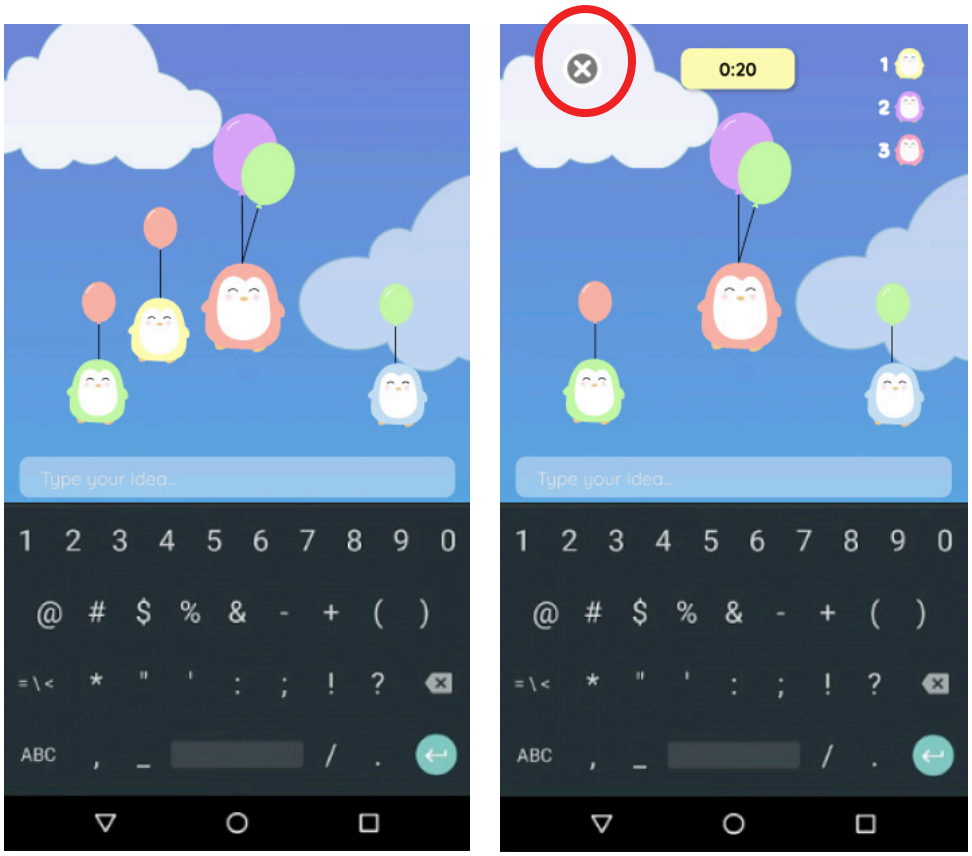


Image 12: Before (left) and after (right) screens of the games page. You can see the added "X" button at the top left of the page.

[5] H8 - Aesthetic and Minimalist Design

Issue: As the number of ideas that friends/family submit increases, the screen with the balloons could get crowded and cluttered.

Response: We now have a set maximum number of balloons that would be in a bouquet. If the number of total ideas exceeds that maximum number, as a user pops an idea, the slot would refill with another idea until all ideas have been filtered through.

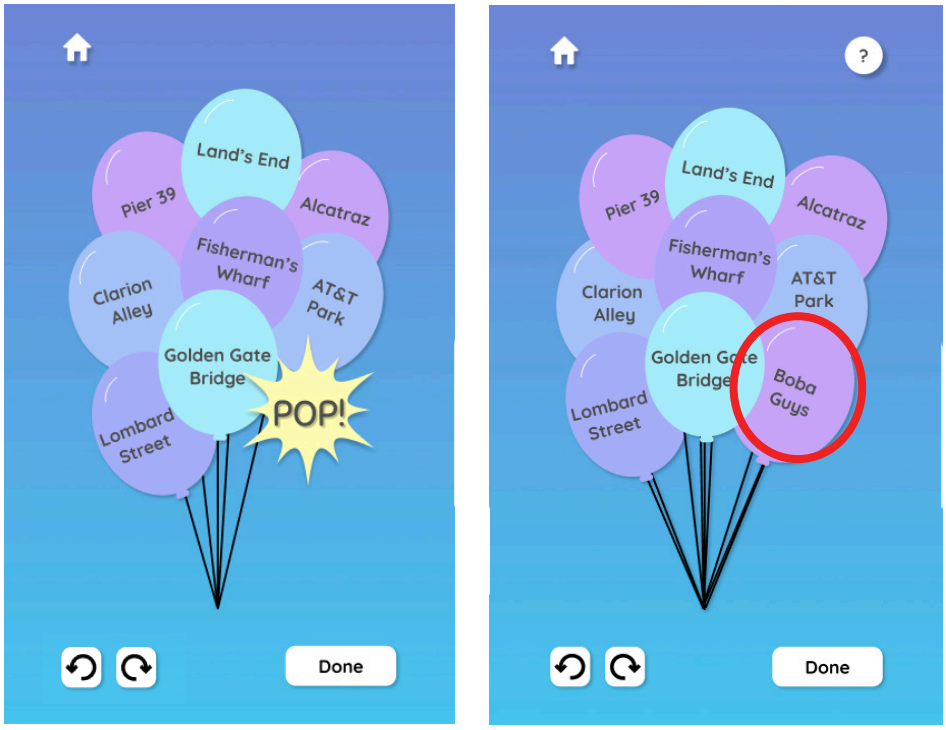


Image 13: Before (left) and after (right) screens of the balloon bouquet page. You can see even if there are more than a total of 9 ideas, after a user pops an idea, a new one flows into place.

[6] H7 - Flexibility and Efficiency of Use

Issue: Figuring out travel plans can be time sensitive. Because friends might procrastinate on playing the game, travelers might want to be able to set when they should get feedback by instead of waiting around for too long.

Response: We included a "Set Deadline" option for sending a request so that feedback on trip ideas can be received in time for an upcoming trip.

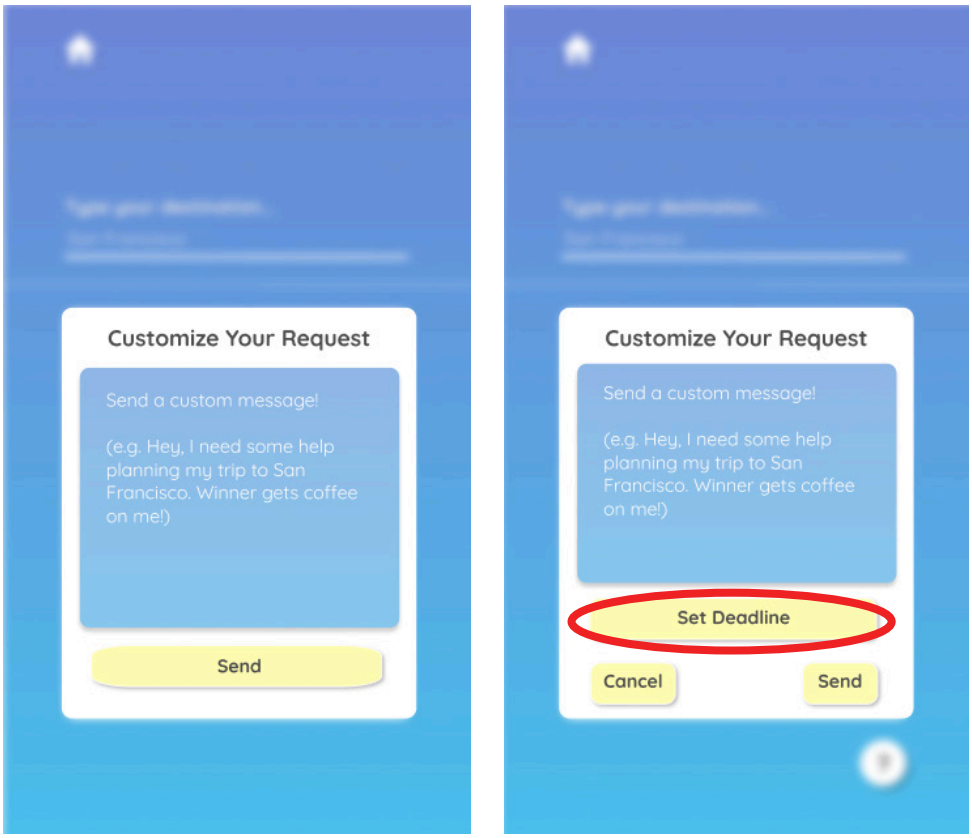


Image 14: Before (left) and after (right) screens of the customize request page. You can see the added "Set Deadline" button where users can pick a date they wish to receive ideas by.

[7] H10 - Help and Documentation

Issue: It is unclear whether users need to be online at the same time to play the game or if there is a specific time limit. Also, when a user enters the game, there are no instructions for how they win.

Response: We have included a question mark icon on almost all of our pages that would include instructions on how to execute a task on that given page. For example, how to play a game, how to create a new trip, etc.

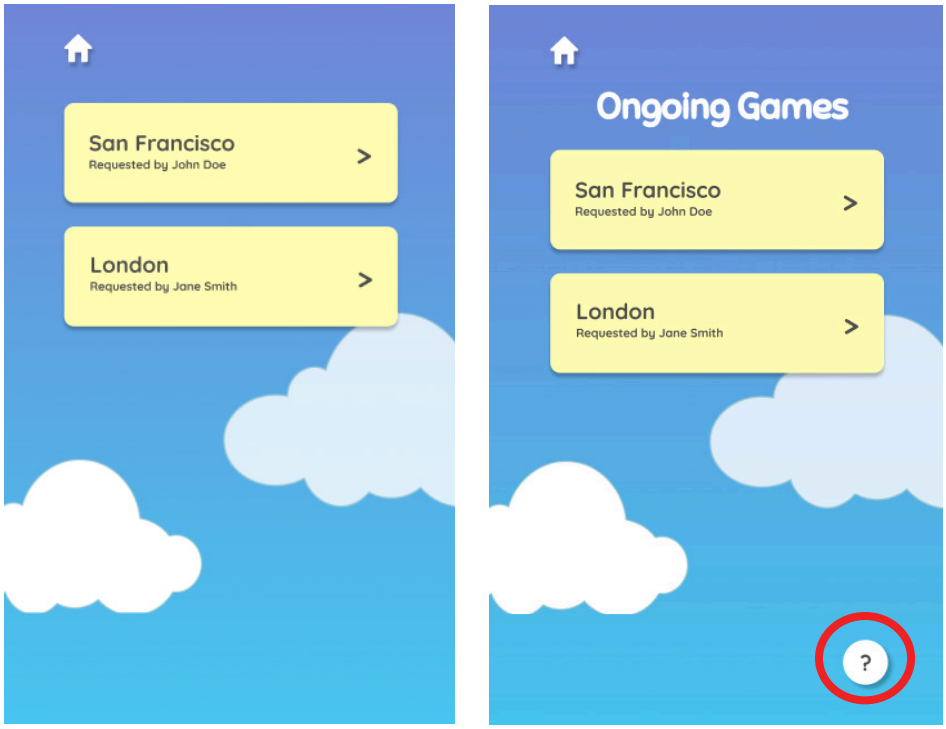


Image 15: Before (left) and after (right) screens of the ongoing games page. You can see the added question mark button that users can click on to receive instructions on what to do for that page.

[8] H1 - Visibility of System Status

Issue: Assuming that competitors do need to be online at the same to play, it is difficult to tell when all the competitors are online for everybody to play together.

Response: We have included an additional "Waiting for Players" page that indicates when everyone who is invited to play the game is online and ready to play. We are also operating under the assumption that all players are currently online.

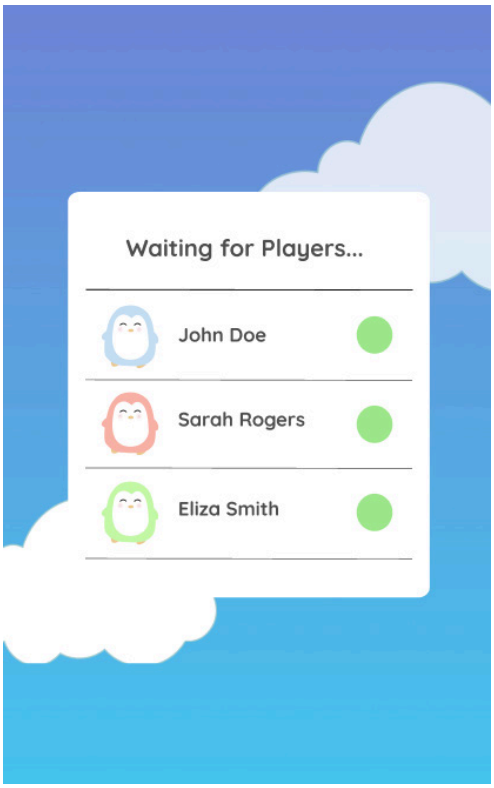


Image 16: The new page we added that indicates when invited players are online and ready to play.

[9] H3 - User Control and Freedom

Issue: Once a user taps "Done" on the balloon bouquet page, it appears that they are no longer able to edit their list anymore, even if they might have accidentally tapped that button before they were ready to create their finalized list.

Response: We will include a confirmation pop-up on the balloon bouquet page when a user clicks "Done." This prevents accidentally clicking "Done" and moving to the next page as well as allowing the user to stop and edit if needed.

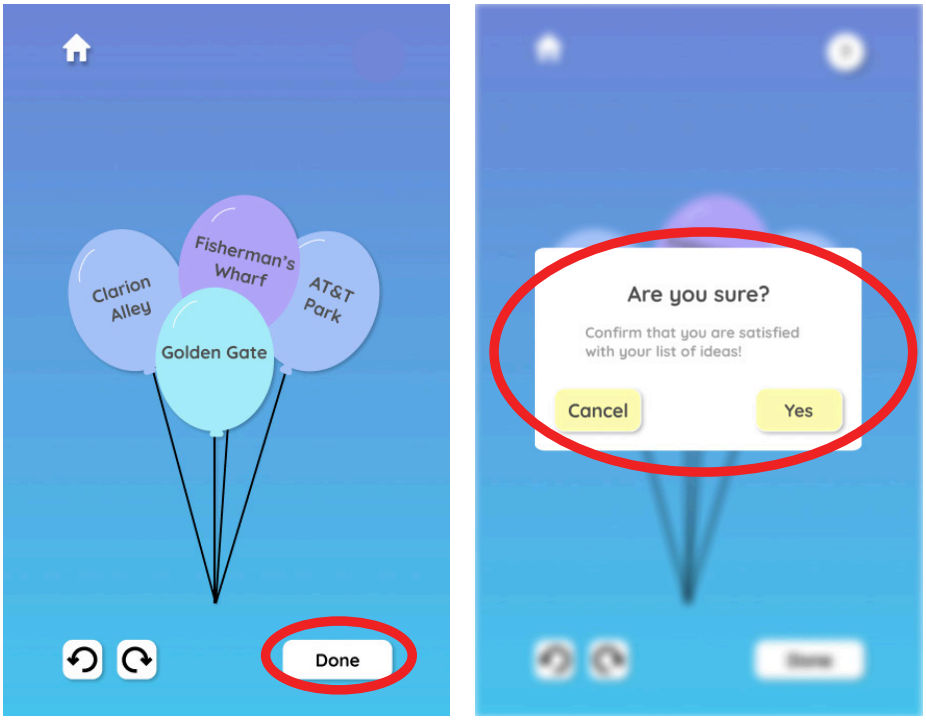


Image 17: Before (left) and after (right) screens of the balloon bouquet page. You can see after clicking the "Done" button, a window pops up asking the user if they are sure they wish to continue.

[10] H3 - User Control and Freedom

Issue: If a user decides that they change their mind on the balloon bouquet page and they want, say, Boba Guys to be back on their ideas list, they would have to go through a long series of undoes to include it back on their list.

Response: We will include the feature that if you hold down on the undo button on the balloon bouquet page, you can go back through all the options you deleted and select a specific one to bring back/undo, not necessarily the most recently deleted one.

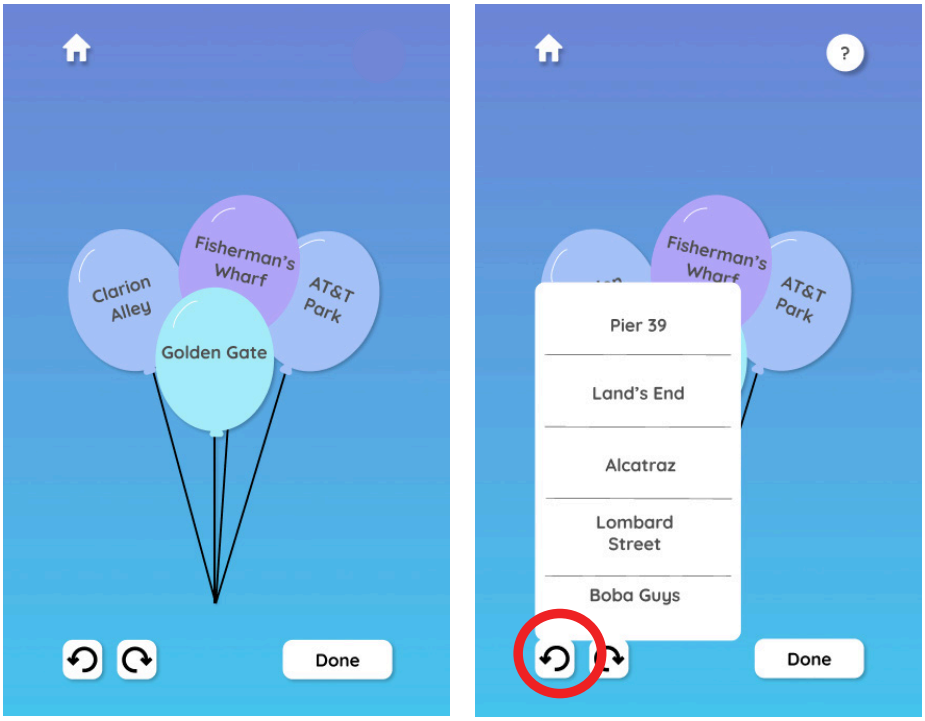


Image 17: Before (left) and after (right) screens of the balloon bouquet page. You can see the new feature of when holding down on the "Undo" button, all previous pops appear and the user can select a specific one to bring back.

Justifications:

[11] H7 - Flexibility and Efficiency of Use

Issue: If a user gets a lot of ideas for a certain location, on the balloon bouquet page, it might be cumbersome and time consuming to pop every single idea that the user doesn't like.
Justification: The violation stated that it might get cumbersome for users to pop balloon ideas one at a time, and their solution was to implement an option to select multiple balloons at a time to delete all at once. We do not think this is a solution because users would have to individually select the balloons they want to mass delete anyways. Also, this would take away from our "gamifying" idea of popping balloons.

[12] H7 - Flexibility and Efficiency of Use

Issue: Users might need to drag around the screen on the balloon bouquet page to look at all suggestions, which can take too much time.
Justification: The violation stated that users would need to drag around the bouquet screen to look at all suggestions, and the fix was to implement some list view of all the ideas. We didn't think it was a good idea to implement the list view because users would still need to scroll in a list anyways, and it takes away from our "gamifying" idea of a balloon bouquet.

[13] H5 - Error Prevention

Issue: When users are playing the game, it's unclear whether or not their entries are valid suggestions.
Justification: We are operating under the assumption that a user will play the game with the correct intentions and input reasonable suggestions.

[14] H3 - User Control and Freedom

Issue: When a user pressed the "Games" button they are taken to the games page, but there is not a back or exit button. The home button can take them backwards, but this was not clear originally.
Justification: The violation stated that "there is not a back or exit button, but the home button takes them back." The fix they suggested was to add a back button, but we already have a button to take users back, which is the home button that was already there. We do not think it is reasonable to change our home button, that matches with the rest of the application, or implement two back buttons.

[15] H5 - Error Prevention

Issue: On the balloon bouquet page, holding to read essential information can be annoying, especially if a user would like that information to stay on the screen handless. This also reduces how much additional information can be added to the info popup (e.g. including navigation to a website of the location).

Justification: The violation stated that holding to read essential information is "annoying," but we had designed this aspect of additional information to be quick access; if users wanted in depth information about the place, they would naturally resort to outside resources. The fix they suggested was to switch the "tap" and "hold" functions between popping the balloon and getting additional information. We thought this was unintuitive, going against the tap to pop instinct, and we also believed holding to pop a balloon would take too much time for users if they have a lot of ideas to pop.

Other Changes:

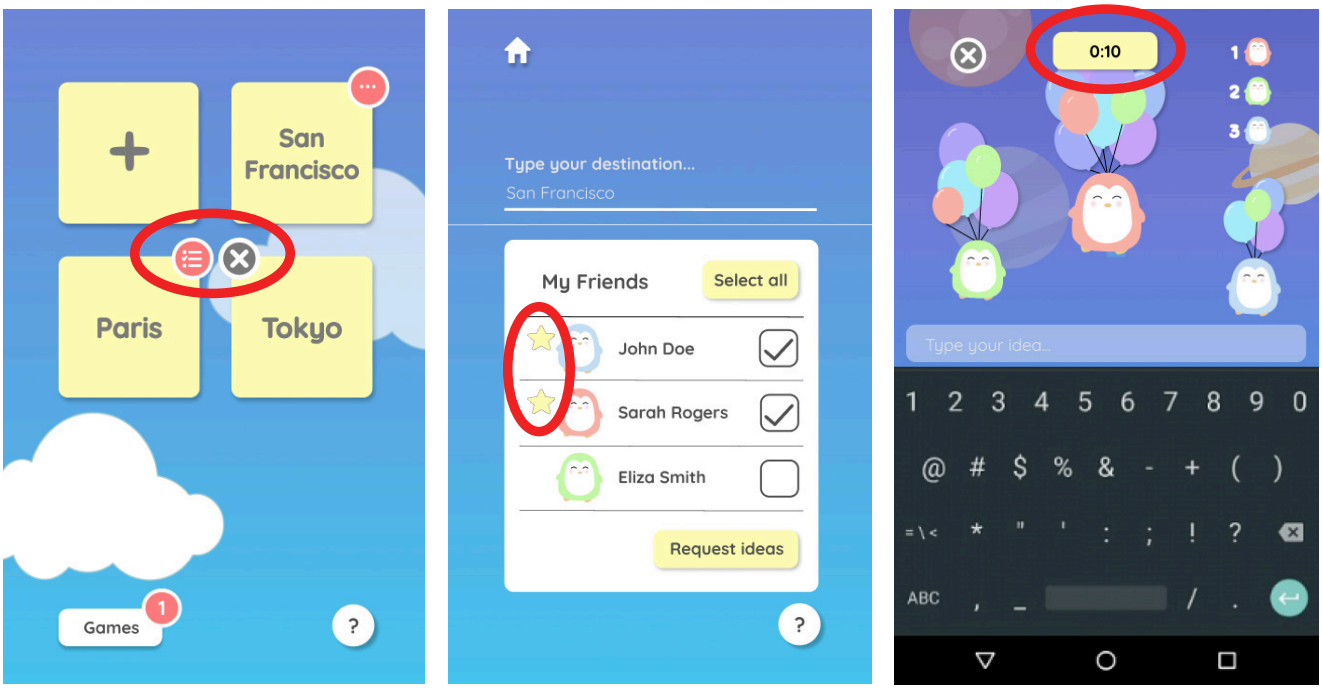


Image 18: Other notable changes in our high-fi prototype are circled in red.

[1] We added a feature, when selecting friends to request ideas, if you scroll down, you have the option to quickly invite friends who are NOT YET a user on the app to join and play.

[2] We got rid of the finish line and instead made the entire game time-based; users each have 1 minute to generate as many ideas as possible and thus get their avatar to be the highest. The highest avatar at the end of 1 minute wins.

[3] We updated the icons in the home page; we are using "..." for in progress and a todo list icon for when the user still needs to select and filter ideas.

[4] We implemented a feature such that when a user holds down on one of their plans, current or past, an X pops up so they can cancel invites or planning at any time.

[5] We added a "best friends" feature, when selecting friends to request ideas, so that the most common people you request ideas from are located at the top of the user's list.

Prototype Implementation

How Tools Helped

We used Android Studio and GitHub to develop the application, and Figma and Adobe InDesign to design the application. Using Android Studio, we were able to overcome many limits of the medium-fidelity prototype. For example, we were able to implement user input/typing, all buttons, and a timer countdown. GitHub allowed us to collaborate and communicate easily within our team and it helped prevent any merge conflicts within our code. Figma also allowed us to collaborate and communicate easily within our team because we could all access and edit our app designs as once. With the tools in Figma, we were able to design user interfaces with a clean and consistent appearance.

How Tools Did Not Help

One of the biggest challenges of using Android Studio was matching the design elements to our prototype. We started off building our app for a Nexus 4P. Because we had prototyped for an iPhone, all of our screens were now distorted and stretched. We had to resize all of our pages. We then quickly realized that no one really uses a Nexus 4P anymore, so we had to switch to emulating on a Nexus 6P. As a result, we had to resize our pages again. However, we found out that the given 6P emulator dimensions weren't accurate as we didn't account for the android's frame. We had to resize a third time.
Another challenge we faced was smoothly implementing the animation and rising up of users' avatars. We had difficulty giving users a scrolling/continous floating effect by constantly shifting the background, so we settled for every 3 ideas a user inputs, the background changes, giving users the illusion of "rising."

Lastly, we could not implement the “live” part of the game to have 3 users play all at once. We hard coded what was necessary.

Wizard of Oz

Our application can be used in two different perspectives: a user requesting ideas and a user giving ideas. This means we would normally need two different people/phones to demonstrate our tasks. Because we only have one Nexus 6P, we show both scenarios from one phone, and we have two different simulations for each perspective. For example, by pressing the “+” button, we enter one perspective, and by pressing the “Games” button we enter the other.
Additionally, we do not have the “live” feature of our application implemented yet. To address this problem, we simulate all three invited friends are online and ready to play the game (Image 19).

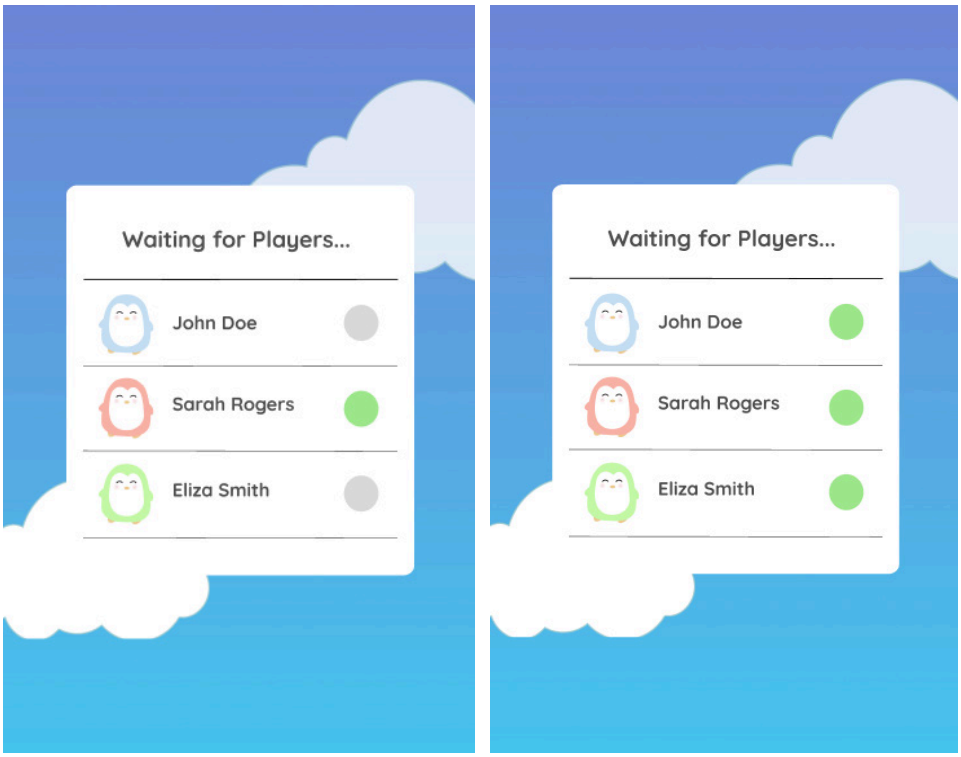


Image 19: Screens indicating that all invited players are ready to play the game.

Hard-Coded Data

Because we operated under the assumption that users have used our application before and because we could not implement the "live" feature of our application yet, much of our data was hard-coded. This includes existing plans on the home page (e.g. Tokyo), users already having friends in their friends list, and existing games on the "Ongoing Games" page. To make our demonstration of the application smoother, we also hard-coded all of the user's received balloon ideas. We made it so all the ideas were for San Francisco. As a result, we also hard-coded the hold-to-reveal details feature of each balloon idea.

What is missing and what might you add in the future?

Currently, we are operating under the assumption that users will follow the rules of the game and play fairly. In the future, we would add error-checking to ensure that users are inputing valid suggestions vs repeats and gibberish. We would also account for live play and a possible "offline" option for users who live across the world. Additionally, we considered adding a feature that allows users to customize their own avatars.

Summary

We began this quarter with a broad theme: travel, and within the first few weeks, we managed to narrow our focus down to travel planning. Throughout numerous needfinding interviews on this topic, we discovered that many travelers weren't confident in their plans without the input and approval of family and friends, who were generally unmotivated to respond. With POVs and HMWs, we brainstormed various ways to address this problem. We eventually decided on an application that gamifies this entire process, allowing input from familiar faces to propel travel planning in an inherently engaging and motivating manner. We went through several iterations of our idea, beginning with dozens of sketches, moving on to low and medium-fi prototypes, and finally ending up with a high-fidelity prototype that embodies our three core mission statements: "Be Confident," "Be Motivated," and "Be Engaged."