8-Bit Palace
Arcade High Score Tracking App

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Google UX Design Certificate Case Study 1

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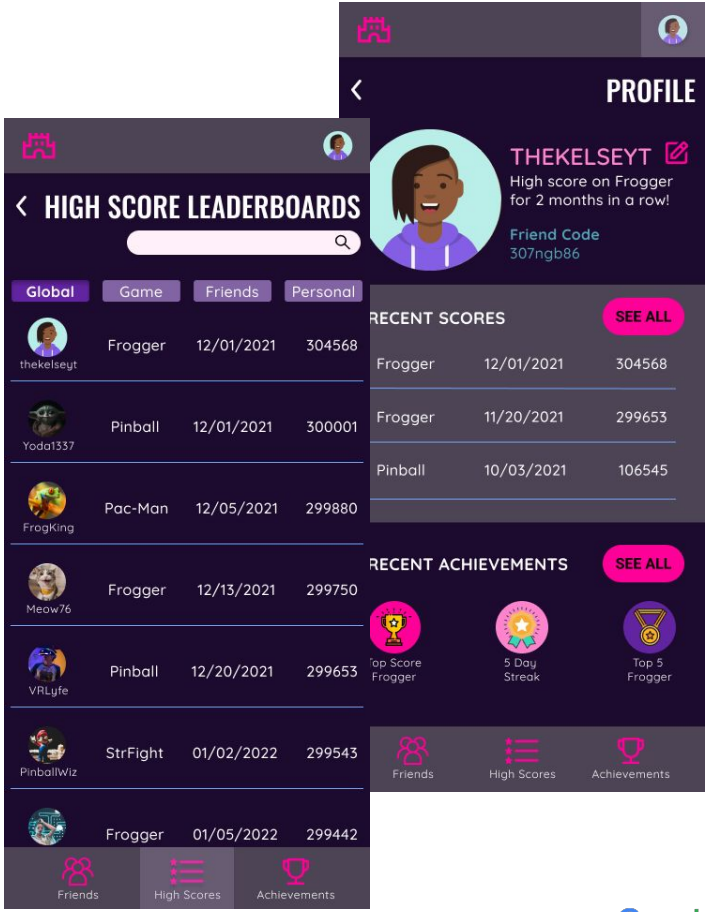
Project overview

The product:

8-Bit Palace is a modern arcade with a nostalgic retro vibe. As an update to retro arcade gaming, 8-Bit Palace gives their customers the opportunity to track and share their high scores with friends for a more modern gaming experience. 8-Bit Palace targets customers like youth who enjoy games and older individuals who still enjoy the nostalgia of classic arcades.

Project duration:

November 2021 - March 2022



Project overview

The problem:

Arcade game players are frustrated with not being able to track high scores across gaming sessions and share their scores with friends.

The goal:

Design an app for 8-Bit Palace that gives users the ability to view high scores and achievements and share them with friends.

Project overview

My role:

UX Designer designing a new app for 8-Bit Palace from conception to final design.

Responsibilities:

Conducting research, competitive analysis, paper and digital wireframing, low-fidelity and high-fidelity prototyping, usability testing, accounting for accessibility, and iterating on final design mock-ups.

Understanding the user

- User research
- Personas
- Problem statements
- User journey maps

User research: summary

I interviewed four individuals who had some experience playing arcade games both in the past and modern day. The interviewees came from a wide range of ages and experiences ranging from very young (age 11) to adult (mid-40s).

Going into the interview process, I was prepared to hear similar answers from interviewees regarding their experiences with high score tracking which would be similar the stereotypical experiences you would see in movies (they're fun and everyone who plays arcade games cares deeply about keeping their high scores).

What I found instead was a more varied response - many simply enjoyed beating their own personal best scores and connecting with friends and family over a fun gaming experience.

User research: pain points

1

Scores Reset

All interviewees were frustrated that modern day arcades typically reset scores daily or frequently which completely defeats the purpose of high scores

2

Difficult to Track

It is nearly impossible to track high scores today without writing them down with pencil and paper

3

Hard to Connect

Modern day gaming experiences are less about face to face social interaction than they used to be which makes it difficult to connect gaming with socialization

4

Transportation

Younger arcade-goers find it difficult to get to the arcade as frequently since they rely on adults or older siblings for transportation

Persona: **Artie Addams**

Problem statement:

Artie is a 12-year-old middle schooler who needs a way to track and share his arcade game high scores because he wants to beat his personal best high scores and share his accomplishments with friends.

Artie Addams

Age: 12
Education: Middle School
Hometown: Kansas City, MO
Family: Lives with dad
Occupation: Student

"I love going to the arcade! One time I got 3rd place in a racing game so my name showed up in the high score list - that made me so happy!"

Goals

- Have fun hanging out with friends
- Play a wide variety of games
- Get transportation to the arcade to play more often
- Track high scores between play sessions
- Beat personal best high scores
- Earn points towards rewards at the arcade

Frustrations

- "Some arcades reset their high scores at the end of each day which makes it impossible to track high scores"
- "I don't get to go to the arcade very often since I can't drive and need someone to take me"
- "It's more fun to play games with friends, but it's hard to find times to play with them"

Artie is a middle school student and an only child who lives with his dad in Kansas City. He loves going to the arcade but doesn't get to go very often since he relies on his dad for transportation and it can be difficult to coordinate times to meet up with his friends. Since he doesn't get to go to the arcade often, he is looking for a better way to track his personal high scores - he currently writes them down with pencil and paper so he can beat his personal best each time he plays. He spends most of his time outside of school reading, playing video games, and playing board games with his dad.

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User journey map

Mapping Artie's user journey was helpful to identify key feelings and emotions throughout his journey and showed that creating a high score tracking app would solve many of Artie's frustrations with arcade game high scores.

Persona: Artie Addams

Goal: Get to the arcade to play some games, beat personal best score, and show success to friends

ACTION	Find Transportation	Review Previous High Scores	Try To Beat Previous Scores	Check New High Scores	Let Friends Know New High Score
TASK LIST	A. Ask dad for a ride to the arcade B. Coordinate date and time to go C. Ride along with dad to the arcade	A. Locate scrap paper in wallet used to write down scores B. Review previously recorded high scores	A. Play game B. Play again until out of quarters/credits C. Review new high scores after each game	A. Compare new scores with old scores B. Write down new high scores	A. Take picture of arcade machine score with phone B. Text picture to friends C. Invite friends to play next time
FEELING ADJECTIVE	Anxious about finding a ride Excited to go to the arcade	Worried about losing scrap of paper with scores written on it Confused when unable to read some handwriting	Exhilarated while playing games Optimistic about beating previous high scores	Triumphant at beating personal best high score	Proud of accomplishing a new personal best Hopeful that friends can join next time
IMPROVEMENT OPPORTUNITIES	Arcade is easy to find on map app with identifiable hours of operation and navigation information	Create an app to track personal high scores Scores font size and type is customizable for ease of reading	App automatically captures new scores for each game	Alert or notification from app whenever personal best high score is achieved Tactile, visual, and audible notification options to alert	Sharing feature in app to share "new high score" achievement

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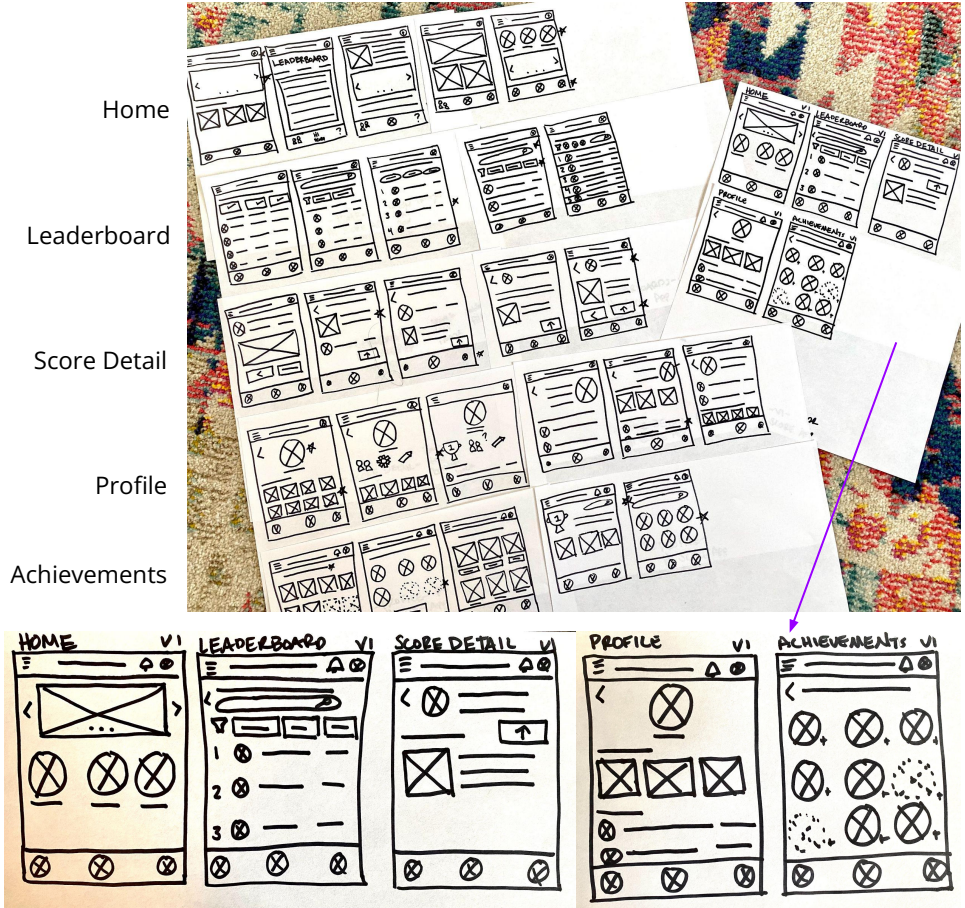
Starting the design

- Paper wireframes
- Digital wireframes
- Low-fidelity prototype
- Usability studies

Paper wireframes

Sketching out 5 different versions of 5 key pages for this app was very helpful to think more critically about user flow as well as common design elements. I found myself paying much more attention to apps I use every day and using elements I liked the best to further refine my sketches. As I sketched, I starred elements I liked most from the sketching process and combined these elements into a V1 paper wireframe showing a simple user flow to find and share high scores and achievements.



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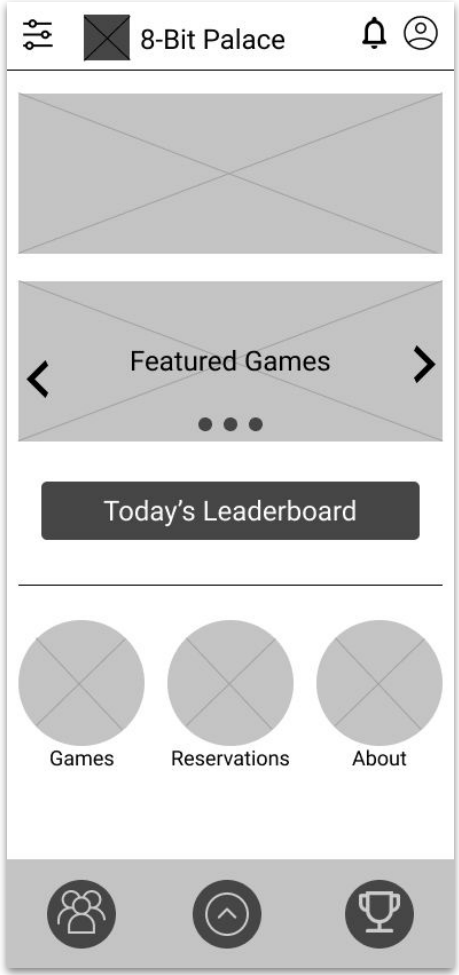
Digital wireframes

I decided to outline multiple user flows for initial digital wireframes using Figma. Two key user flows identified during research were viewing scores and achievements and sharing them with friends. I knew I needed to create scores, achievements, friends, and sharing mechanisms to achieve this and spent a lot of time refining the user flow during this stage.



Easy to find button to navigate to the score Leaderboards as the app's primary use case

Quick navigation icons for Friends, Leaderboards, and Achievements

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Digital wireframes

Secondary to sharing scores, based on my user research, I found that customers were equally excited about the concept of having achievements that could be shared outside of specific scores. To make things simple and intuitive, I used a modal concept to show details of scores and achievements along with the ability to quickly share these with friends from the modal.

The ability to drill down to see an achievement's details also allows users to quickly share achievements with friends.

The modal is front and center while the Achievements page is still visible in the background for anchoring.

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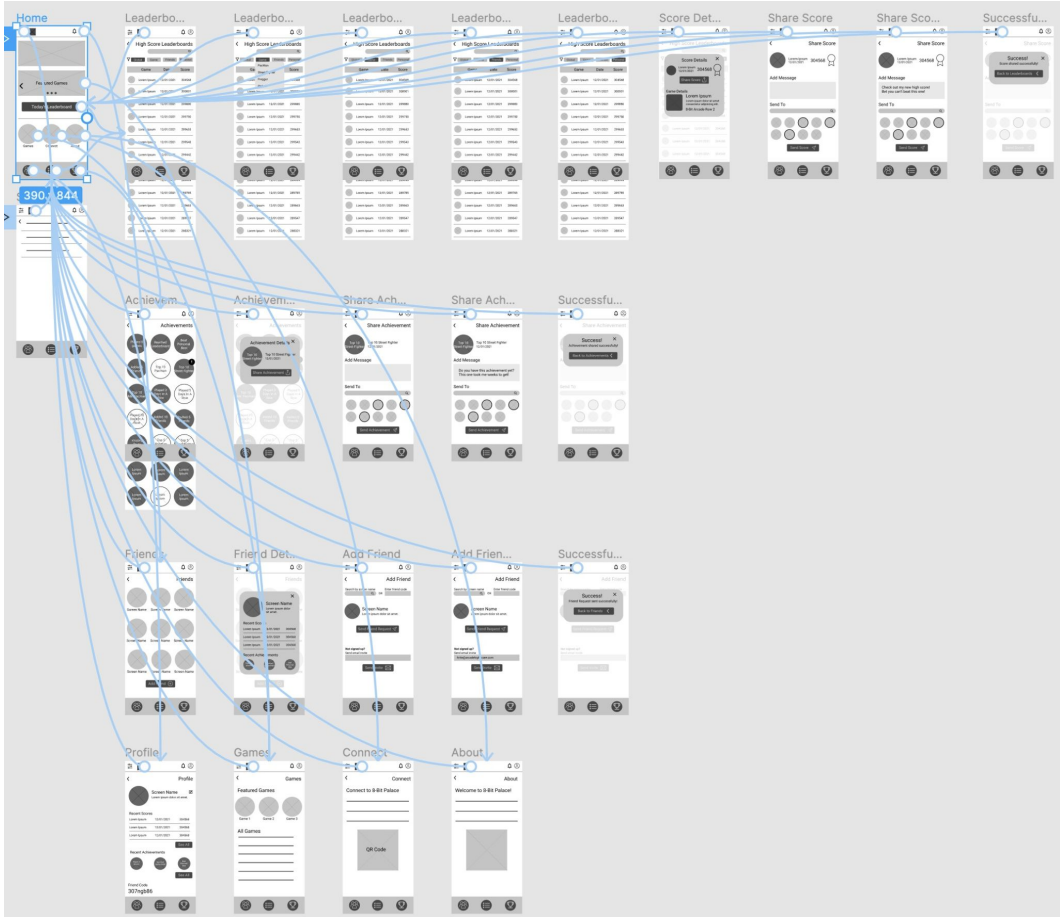
Low-fidelity prototype

The low-fidelity prototype included 3 main user flows with a few side flows such as a profile and about page for increased usability during user testing.

Main user flows:

- View and share high scores
- View and share personal achievements
- Add and view friends

View the 8-Bit Arcade high score tracking app [low-fidelity prototype.]



Usability studies: findings

I conducted an initial round of moderated usability testing with a low-fidelity prototype and another round of unmoderated testing with a high-fidelity prototype with 5 participants (age range 11-70). Findings from the first study helped guide the direction of creating high-fidelity mock-ups with a simplified user flow. Findings from the second study revealed a few key areas to refine in final designs.

Round 1 findings

1. Some app terminology was confusing
2. Many users took multiple clicks to find specific app pages
3. The Add Friends page was confusing for most users

Round 2 findings

1. The dark black screen made it difficult to see shadows for emphasis
2. Some back buttons between pages weren't functioning properly

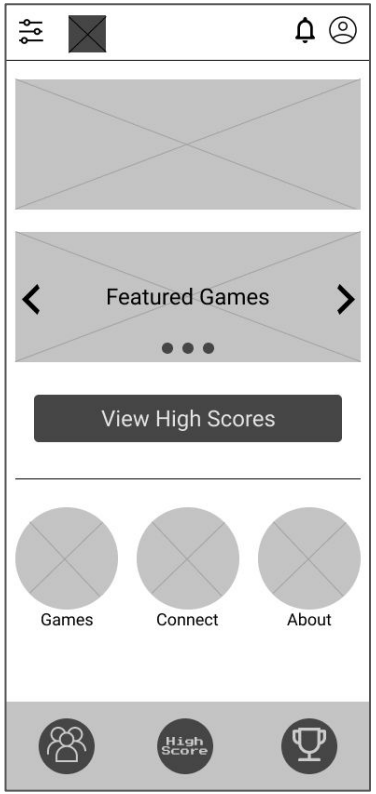
Refining the design

- Mockups
- High-fidelity prototype
- Accessibility

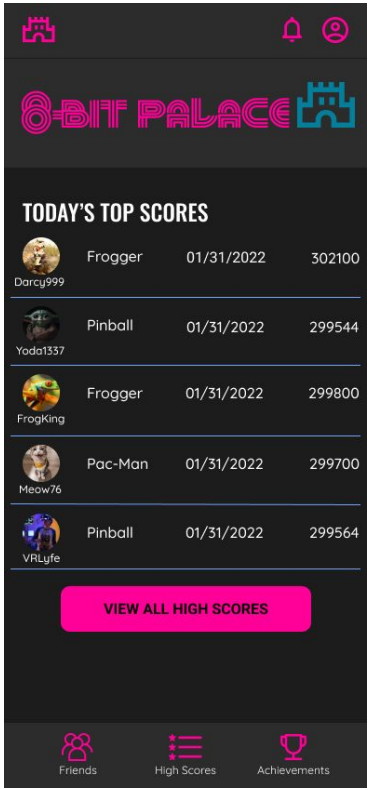
Mockups

Initial usability testing showed that some user flows were confusing and iconography wasn't intuitive. I adjusted designs to **improve icons** with text and simplified the overall user flow by **removing unnecessary screens and components** in the app.

Before usability study



After usability study



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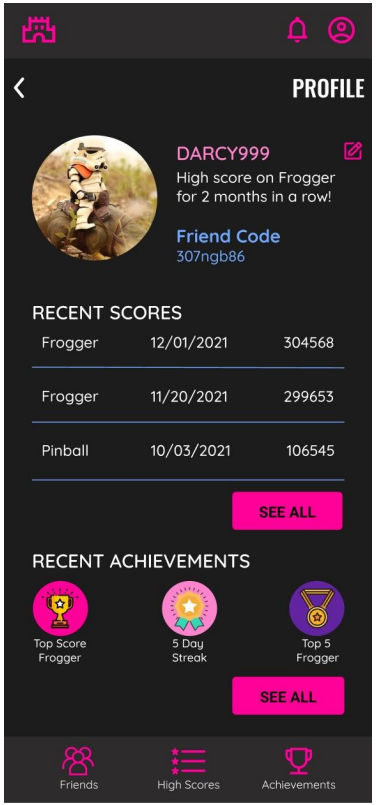
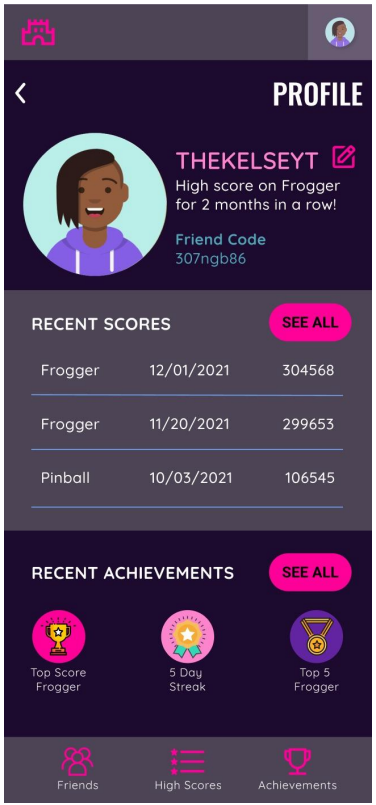
Mockups

After developing high-fidelity mockups, users felt the designs were nice but felt a bit busy and lacked polish. I added some **visual dividers** and **improved the color scheme** and text sizes to clean up designs even more.

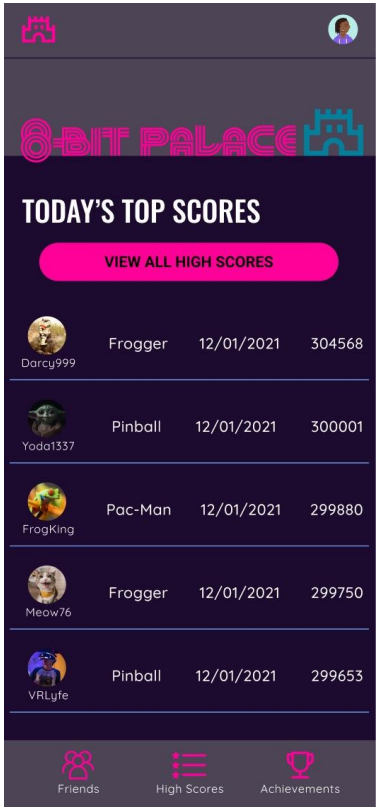
Before usability study 2

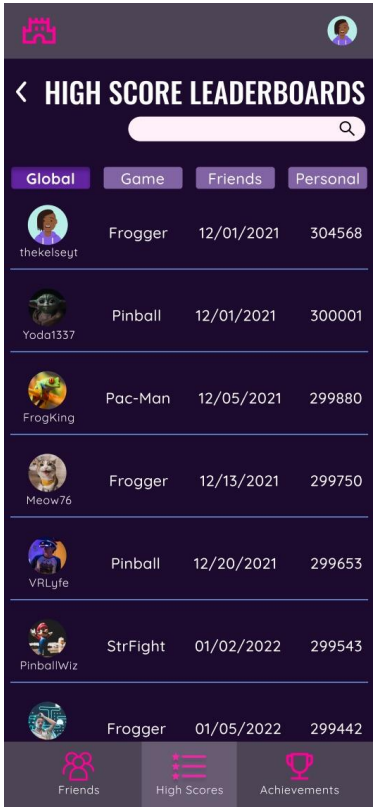


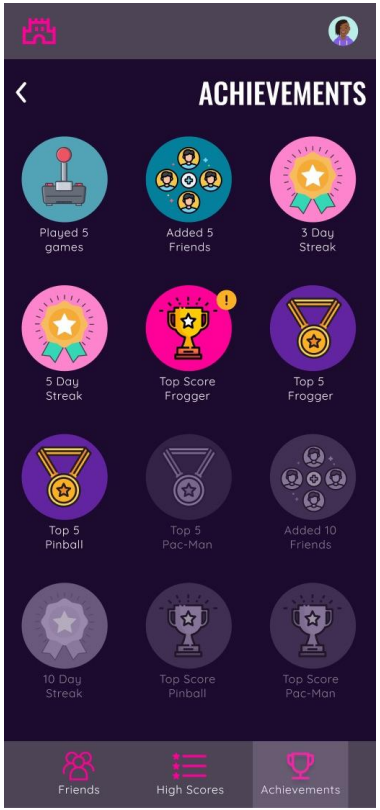
After usability study 2

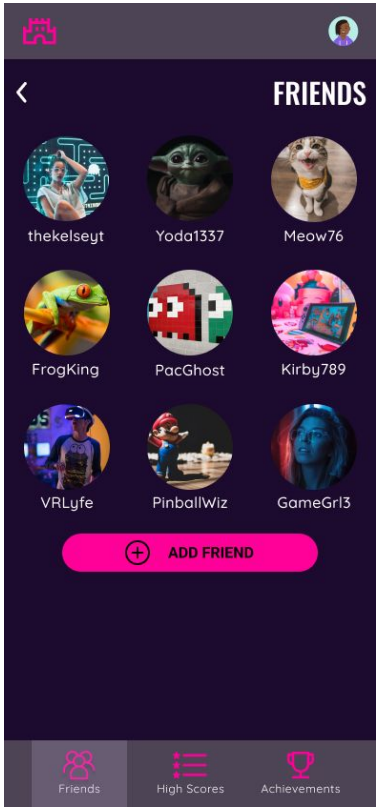


Key Mockups









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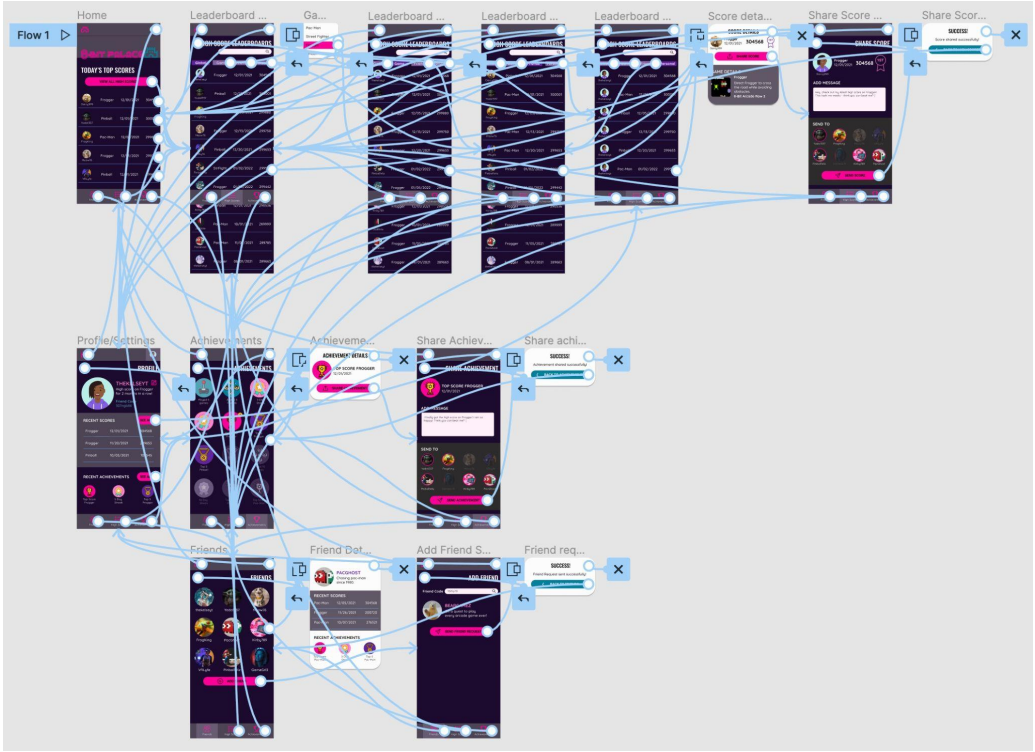
High-fidelity prototype

The final high-fidelity prototype simplified user flows, included simple animations to create a more intuitive experience, and incorporated the use of space, size, and color to create a more delightful user experience. I also used Figma's ability to create modals as overlays on an existing screen when prototyping instead of building out full new screens for pop-ups within the app.

View the 8-Bit Arcade high score tracking app [high-fidelity prototype.]



Accessibility considerations

1

I conducted usability studies with two color-blind participants and ensured all color contrast ratios were accessible and easy to view and read.

2

Buttons and icons were made large enough to press with consideration for those with limited mobility.

3

Main icons are paired with text (i.e. Friends, Achievements, High Scores) for ease of navigation without relying completely on possibly unknown imagery..

Going forward

- Takeaways
- Next steps

Takeaways

Impact:

This app is exciting for users and makes them want to visit 8-Bit Palace more frequently for a more connected arcade gaming experience.

Quote from the final usability study:

“This is so cool! I would definitely use this to track high scores when I go to the arcade and could see my friends doing the same.”

What I learned:

I learned so much about the entire UX research and design process during this project since it was the first one for my portfolio! My main takeaway was to ensure I truly understand the personas I’m designing for so I can build solutions that solve their problems instead of just solving for my assumptions of their problems.

Next steps

1

Conduct a final round of usability testing with polished final designs to ensure main problem areas are solved with this app

2

Research other user pain points with arcade games to pitch updated versions of this app with more problem areas solved

3

Continue to iterate on designs based on user feedback and areas of need

Let’s connect!

Thank you for reviewing my case study for the 8-Bit Palace arcade high score tracking app! If you’d like to see more of my work or chat about my experiences on product teams, please contact me at:

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