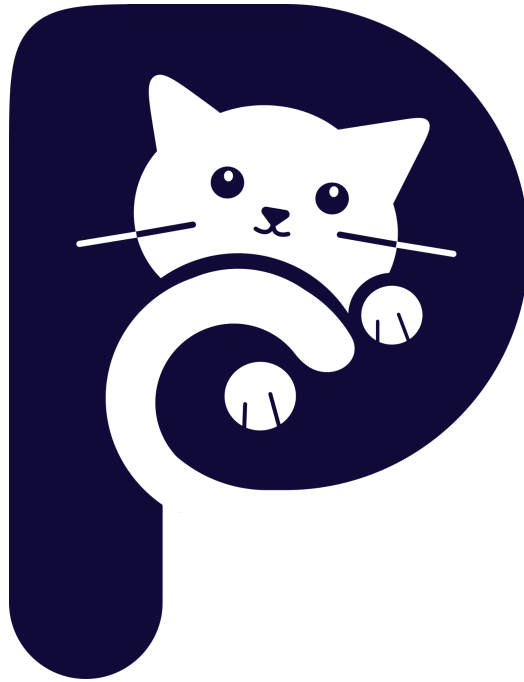HCI/d Capstone Thesis 2023-2024
KAUSTUBH SALGAONKAR

Purrfect Parents: Getting first-time feline adopters adoption ready!

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Table of Contents

1. Specialization Focus

Interaction Design

2. Executive Summary

2.1   Introduction

"Purrfect Parents" is a comprehensive mobile application designed to support first-time cat owners in becoming confident and responsible caretakers for their feline companions, *before they adopt a cat*. The project aims to bridge the gap between eagerness to adopt and readiness for cat ownership by putting users in an experience of having a cat and doing all the daily tasks while they interact with a virtual cat.

2.2   Objectives

I.   **Empower** potential cat adopters with the practical day-to-day skills necessary to provide a nurturing environment for their cats.
II. Create an intuitive and **user-friendly design** experience that guides users through daily cat care tasks.
III. **Educate** users on best practices for cat grooming, feeding, litter box maintenance, and playtime.

2.3   Main Research and Design Activities
Research
I.   **User Research:** Conducted interviews with potential cat adopters, shelter volunteers, and pet care experts to understand the challenges and needs of first-time cat owners.
II. **Observations:** Carried out fly-on-the-wall and AEIOU method observations, to understand the mind-set behind user/first time cat parents adopting cats of certain age and breed.
III. **Competitive Analysis:** Analyzed existing pet care apps and platforms to identify strengths, weaknesses, and opportunities for improvement.

Activities
IV. **Conceptualization:** Developed the concept and features of the "Purrfect Parents" app based on insights gathered from research and analysis.

V. **Prototyping:** Created wireframes and prototypes to visualize the app's interface and user flow, iterating based on feedback from usability testing.
VI. **Design System:** Designed the branding, UI elements, Typography and visual assets of the app to create a cohesive and engaging user experience.

2.4   Outcomes

I. **"Purrfect Parents":** Developed a fully functional design that provides users with personalized daily to-do lists, resources (learning cards after completing a task), and interactive tasks related to cat care.
II. **Improved User Preparedness:** Empowered potential cat adopters with the knowledge and skills necessary to confidently care for their cats, reducing the likelihood of cats being returned to shelters.

3. Design Challenge

Design Challenge centers around addressing the common struggle faced by first-time cat owners: *the lack of preparedness in providing optimal care for their feline companions.*

Many potential adopters exhibit eagerness to welcome a cat into their homes, yet they often lack the necessary skills to fulfill the responsibilities of cat ownership effectively. This gap between eagerness and readiness contributes to the high rate of cats being returned to shelters shortly after adoption.

The challenge was to understand the root causes of this unpreparedness and design a solution that empowers users with the guidance needed to confidently navigate their roles as cat parents.

By delving into the complexities of this problem, my aim was to develop an innovative experience that addresses the fundamental challenges of first-time cat ownership, **before the adopt a cat,** and promotes long-term, positive relationships between cats and their owners.

4. Project Brief

In recent years, there has been a growing interest in cat adoption, yet many cats remain in shelters awaiting homes due to potential adopters' lack of preparedness. Through visits to the Bloomington Animal Shelter, I observed a common challenge: the readiness of potential cat owners. Interactions with adopters and shelter volunteers revealed instances of cats being returned shortly after adoption, indicating a gap in adopter preparedness.

My personal decision to adopt a mature cat was influenced by the observation that while kittens found homes easily, adult cats faced longer waits. As an independent individual in the United States, I recognize that others in similar situations may desire to adopt but question their readiness to be independent caretakers. This hesitation, coupled with a lack of firsthand experience, contributes to the high number of cats awaiting adoption.

The project will focus on providing practical guidance on essential daily cat care activities, including grooming, walking, selecting appropriate products, and maintaining litter box hygiene. By the project's completion, participants should have an understanding of the day-to-day responsibilities associated with cat ownership, empowering them to confidently navigate their roles as cat parents.

Success will be measured by the transformation of participants into informed, self-assured, and caring cat owners capable of understanding what their day-to-day schedule will be like after having a cat.

Ultimately, the project seeks to bridge the gap between eagerness and readiness, enabling individuals to seamlessly integrate cat care into their daily routines while fostering positive human-cat relationships.

4.1   User Group

The primary target user group for the PurrfectParents space are individuals aged 19 to 28, specifically focusing on college students. This demographic represents a stage in life where individuals are eager to embrace companionship through pet ownership but may have uncertainties and lack comprehensive hands-on practical knowledge about cat care.

4.1.1 Characteristics of the Target User Group:

    I.   **Eager Enthusiasts:** This group has a genuine interest in adopting cats but may lack the practical know-how to navigate the responsibilities that come with cat ownership.

    II.   **Solos:** Many within this demographic may be living independently, making them the sole caretakers for their potential feline companions. Addressing the unique challenges of solo living is a key consideration.

    III.   **Digital Natives:** As college students, they are well-versed in digital platforms and are likely to have an app-based and multi-device integration solution for learning and community engagement.

The PurrfectParents space aims to empower this target user group with the practical knowledge needed to provide a loving and supportive home for their feline companions.

5. Fall Semester Briefing

In my Fall semester, my focus was on conducting broad research to understand how to educate potential cat owners about the skills, knowledge, and responsibilities required for cat care. However, at the start of this semester, after discussions with my peers, I realized that my capstone project felt cluttered, with too much happening at once. So, I broke down my goals into three parts, through my capstone project, I want to:

    I.   *Make potential cat parents aware of the necessary skills.*

    II.   *Make potential cat parents aware of the essential cat knowledge.*

    III.   *Make potential cat parents aware of their day-to-day responsibilities.*

Upon revisiting my interviews and research insights, I discovered that users need to understand what it's like to have a cat before delving into other cat care and knowledge areas. Additionally, consistent feedback from my class highlighted the importance of preparing cat parents to apply their practical knowledge to real-life situations. Therefore, I'm considering, **how might we better prepare potential cat parents to understand their day-to-day responsibilities before they adopt a cat?**

This establishes a strong connection between my research and project goal because skills and knowledge are more aligned with behavioral aspects and issues occurring due to those

behaviors after adopting a cat. However, I also recognize the need to first ensure that users understand what their daily lives would look like with a cat.

Therefore, the scope of my capstone project is to prepare potential cat parents to be **PurrfectParents** by simulating scenarios of how their daily schedule and activities will change after adopting a cat.

5.1   What helped me in the Spring semester from the fall?

Even though my project was refined during the Spring semester, I continued to build upon the work I had done in the Fall semester. This included insights gathered from interviews, secondary research, and observations. While I didn't directly use any wireframes from the Fall semester, the concepts I developed then served as a foundation for receiving ongoing feedback and making refinements aimed at practicality and a more focused approach.

Through secondary research, I discovered that users who interacted with virtual pets in the past developed caring habits. Interviews allowed me to refine my research questions, focusing on new adopters and cat owners with over a decade of experience. This helped me gain insight into what a long-term companionship with a feline looks like. These insights informed my holistic journey map. Additionally, observations at the shelter confirmed my assumption that college students tend to adopt adult shorthair cats due to their busy schedules and preference for low-maintenance pets.

Diving Into The Process...

6. Secondary Research

For my research purpose, I read several articles and established journals to gain insights into the aspects of my design; learning experiences, and human-animal interactions. "Technology for Bonding in Human-Animal Interaction" explores how technology can foster deeper connections between pets and their owners, showcasing methods such as visualizing the pet's world, shared activities through technology like Skype and sensory feedback through haptic vests (Väätäjä et al., 2017).

I also came across a beautiful reading, "Communi-cat-ive: cats attentive to owner's voice", which discussed the effect of communication on cat-human relationships (Geddes, 2022). Cats

seem to respond more to their owners' voices when spoken to in a higher-pitched, sing-song tone, similar to the way people talk to babies or pets. Researchers found that when strangers used the same tone or when owners spoke in a regular tone, cats were less attentive. This suggests that cats may tune into the tone of voice to detect when their owners are talking to them specifically. The study indicates that one-to-one relationships are crucial for strong bonds between cats and their owners, challenging the notion that cats are solely independent creatures. The findings highlight the sensitivity and communicative nature of cats, emphasizing the importance of considering them as individuals in human-cat relationships.

One key insight from my research is that users often send their cats back to shelters due to owners' unpreparedness in understanding cat behaviors and caring needs (Mundschau & Suchak, 2023). The impact of returns is not limited to cats, as it also affects the owner's wellbeing. The act of returning a pet impacts owners negatively, both mentally and emotionally. The study, "When and Why Cats Are Returned to Shelters", addresses the critical issue of cat returns to shelters after adoption, shedding light on distinct factors influencing short-term and long-term returns. While shelters aspire for cats to find their "forever homes," understanding return reasons is vital. Short-term returns, within 30 days, often result from specific cat-related issues like behavior problems or conflicts with other pets. In contrast, long-term returns, spanning over 30 days to 4 years, are more linked to owner-centric factors such as major life changes or financial challenges.

The research highlights the need for tailored strategies by shelters to address diverse return scenarios, considering both cat and owner dynamics, ultimately aiming to reduce overall return rates and enhance feline welfare. The findings underscore the importance of a nuanced approach in shelter management to effectively tackle the complexities of cat returns beyond the initial adoption period. Despite 50.6% reporting the problem that led to return emerging within 24 h after adoption, owners still procrastinate surrender, only using the shelter as a last resort. And most of these problems were related to cat care and needs that users were not prepared for.

Lastly, "Animal Companions as Motivators for Teammates Helping Each Other Learn" presents the MyPet product, demonstrating how technology can motivate students to engage in learning activities through the care of virtual pets.

These papers collectively enriched my understanding of the intricacies of human-animal relationships, from the design of multimedia for effective learning to the importance of

accommodating the unique caring needs of feline companions, and the role of technology in facilitating bonding and education in both human-animal interactions.

6.1 Goals

The primary objectives of the secondary research conducted for this project is to obtain a comprehensive understanding of the following:

I. **Learning Experiences:** To explore insights, theories, and learning methodologies relevant to the design of learning experiences, with a specific focus on multimedia learning principles, learning videos, and technology's role in enhancing education.
II. **Cat Parent Activities:** To delve into the intricacies of feline behaviors, and how current cat parents navigate through the daily cat care needs and are prepared for problem-solving strategies.
III. **Human-Animal Interactions:** To investigate the dynamics of human-animal interactions, including the impact of technology on bonding between humans and their pets, as well as its application in educational contexts through animal-themed motivational tools.
IV. **Virtual Ethology:** Applying Learnings to Real-world Cat Care Tasks for Potential Adopters. By understanding how people apply virtual knowledge to actual cat care, I can ensure that the learning experiences provided are not just informative but also applicable in real-life situations. This insight allows me to design virtual interactions that seamlessly translate into practical skills, preparing potential cat adopters to confidently and effectively care for their feline companions in the real world.

6.2 Methodology

The Methodology I followed for this research was by looking at a lot of academic articles, papers, and trusted journals from well-known sources. I searched through important libraries, and websites to find information that was relevant to my project. I used specific words like "multimedia learning," "cat behaviors," "streaks," "real vs. reel world," and "human-animal interaction" to find articles that matched what I needed. I made sure to pick articles that were up-to-date, credible, and directly related to what I'm studying. This approach helped me gather lots of different ideas, theories, and research findings that helped me understand more about how people learn, cat behaviors, and how humans and animals interact with each other.

6.3 Synthesis

The research papers collectively delve into diverse aspects of human-animal interaction, multimedia learning, and feline behavior. Technology emerges as a transformative force in strengthening human-animal bonds, showcasing innovations such as visualizing a pet's world, shared activities through technology, and haptic vests (Väätäjä et al., 2017).

The research on cat behavior suggests that cats pay distinct attention to the tone of voice used by their owners, particularly responding more to higher-pitched, sing-song tones commonly associated with "baby-talk." This finding highlights that cats, like dogs, respond to the emotional tone and inflection of human speech (Geddes, 2022).

Exploring the intersection of technology and social behavior in non-human animals highlights the sensitivity of animals to changes in their environment and the importance of empathy when introducing them to new settings (Rault & Huber, 2017). Finally, the MyPet educational tool, centered around virtual animal companions, proves to be a potent motivator for students, integrating animal-themed activities into learning and enhancing academic enthusiasm (Chen et al., 2005).

I also read two papers related to bridging the gap between virtual and real world. The commonality between the research on immersive virtual environments (Moura & Riecke, 2009) and Mobile Augmented Reality (Wu et al., 2022) lies in their focus on enhancing user experience and interaction within digital environments. Both studies aim to bridge the gap between virtual and real-world experiences to improve immersion and engagement. Additionally, they explore how these digital environments can effectively support learning, training, and other applications. Both studies acknowledge the importance of understanding the relationship between virtual and real-world experiences and their impact on user perception, cognition, and behavior.

These findings collectively contribute to a deeper understanding of human-animal interactions, multimedia learning, and feline behavior, offering valuable insights for both pet owners and educators.

7. Observations

The most influential and insightful activity I did after secondary research was conducting observations. I wanted to learn, see and draw insights from each and everything I observed. It was tough to connect with users for interviews who have abandoned their cats back to the shelter, and Bloomington Animal Shelter was the right place to start with for all the basic information I need. I got insights into users' preferences, adoption rate, overlooked cats, and past cases. This helped me to connect with my target audience through two visits and guidance from shelter managers.

Observations at the Bloomington Animal Shelter

7.1 Goals

The primary objectives of the observational research conducted for this project were to achieve the following:

I. **Understand User Behavior:** To gain insights into the behavior and decision-making process of potential cat adopters when they visit the Bloomington Animal Shelter. This includes observing their interactions with shelter staff, their reactions to the shelter's environment, and their responses to the resources provided.

II.   **User Demographics and Preferences:** To identify the demographics of potential cat adopters, including age groups, family compositions, and other relevant characteristics. Additionally, to explore their preferences regarding the age and personality of cats they consider adopting.

III. **Shelter Resources and Tools:** To examine the effectiveness of the resources provided by the shelter to educate and guide potential cat owners. This includes handouts, profile charts, and the influence of visual cues, like the whiteboard displaying adoption statuses.

IV.   **Influence of Shelter Layout:** To assess the impact of the shelter's layout and categorization of cats into different age groups and colonies on potential adopters' decisions.

V.   **Role of Shelter Staff and Volunteers:** To understand the role played by shelter staff and volunteers in counseling potential adopters, answering their questions, and facilitating the adoption process.

7.2 Fly-on-the-wall

7.2.1 Methodology

This method involved observing potential cat adopters during their visits to the Bloomington Animal Shelter. Detailed notes were taken on their actions, interactions with shelter staff, questions asked, and their responses. The key aspects observed included user demographics, the availability of resources, the shelter's layout, and the impact of interactions with staff on potential adopters.

7.2.2   Synthesis

The presence of handouts and informational materials within the shelter, as well as their utilization during counseling sessions, highlights the significance of providing easily accessible resources to educate potential cat owners. This can play a crucial role in preparing them for cat ownership. However, I feel that there is too much text information available. Just readings.

The shelter's division into different cat age groups and the focus on socialization for young and kitten cats underscore the need for potential owners to understand the specific requirements of cats at different life stages. Educating them about these nuances can contribute to better cat care. Moreover, every room had different toys and infrastructure. For instance, the kitten colony had more scratching posts and toys, also there was a volunteer specifically assigned to them. This highlighted the importance of care needed for kittens.

7.3 AEIOU Method

7.3.1   Methodology

The AEIOU method (Activities, Environment, Interactions, Objects, Users) was applied during the observation at the shelter. It served as a structured framework to capture a wide range of data, including the activities of potential adopters, the physical environment of the shelter, their interactions with staff and volunteers, the objects and resources available, and characteristics of the visitors themselves.

7.3.2   Synthesis

At the Bloomington Animal Shelter, I observed their efforts to equip potential cat owners with essential information and build their confidence. They emphasize key details like the importance of a first vet visit, appropriate litter and food choices, and provide general information that potential owners need.

I also noticed a preference, especially among college students, for independent and low-maintenance cats. They seemed less interested in kittens or cats requiring extensive attention. The way cats are housed, with newly admitted cats often being ignored in favor of those with profile charts on the wall, also influences the decision-making process. These profiles inform potential adopters if a cat needs to be adopted with a companion or can thrive alone.

In terms of behavior, individuals with busy schedules seek calm, humble, and easy-going cats, rather than hyperactive kittens. Surprisingly, people still apply for adoption even if a cat is listed as 'adoption pending.' This suggests that an emotional connection and meeting the potential owner's needs play a vital role.

Throughout the process, volunteers play a crucial role in overseeing visitors, providing accurate information, and ensuring that adopters stay motivated, informed, and confident in their adoption journey. They maintain transparency between the shelter and potential adopters.

8. User Interviews

After observations at the shelter, I wanted to get a closer look at several aspects of cat ownership; decades of cat ownership, new owners and experts highlighting the impact on cat's mental state when they are returned.

I conducted a total of 7 interviews; with 2 expert interviews, 2 experienced cat owners, and 3 potential cat owners. I feel that conducting interviews was a way for me to look out for the gaps between my design of last semester and plan for this semester. It was truly helpful to learn what are the motivations, pain points and perspectives of potential cat owners.

Interviewers Demographics

I.   Experienced Cat Owner, 22 and 27, Female and Male
II.   Potential Cat Owners, 23-27, Male and Female, College Students
III. Expert Interview, 40-48, Female, Shelter Manager

8.1 Goals

Gain insights into the diverse needs, preferences, and pain points of both experienced and potential cat owners to inform the design of the capstone project. This includes understanding their daily routines, challenges they face in daily routine, and their expectations for a digital solution to support new potential cat owners in their journey. Engage with stakeholders, such as the Bloomington animal shelter, to understand if my initial design concepts align with project goals and objectives within the issue of unpreparedness of owners. Explore opportunities for partnership and integration that keeps owners engaged in my design project.

8.2 Methodology

Conduct semi-structured interviews with individuals representing different user profiles, including long-term cat owners, new potential cat owners, and representatives from the Bloomington animal shelter. Explore topics such as their experiences with cat ownership, their current routines for caring for their cats, and their preferences for a digital tool to support their needs. Arranging meetings with stakeholders from the Bloomington animal shelter to discuss their perspectives on the project, gather input on their needs and requirements, and explore potential opportunities for collaboration.

8.3 Synthesis

I collected insights from interviews and grouped them into different categories on the affinity map I did in the earlier semester. This helped me identify the challenges, motivations, and what practical learning potential cat owners want. The whole process is aiding me in building my initial conceptual sketches for this semester which would be later translated into design concepts by getting feedback from target users and subject matter experts.

9. Journey Map
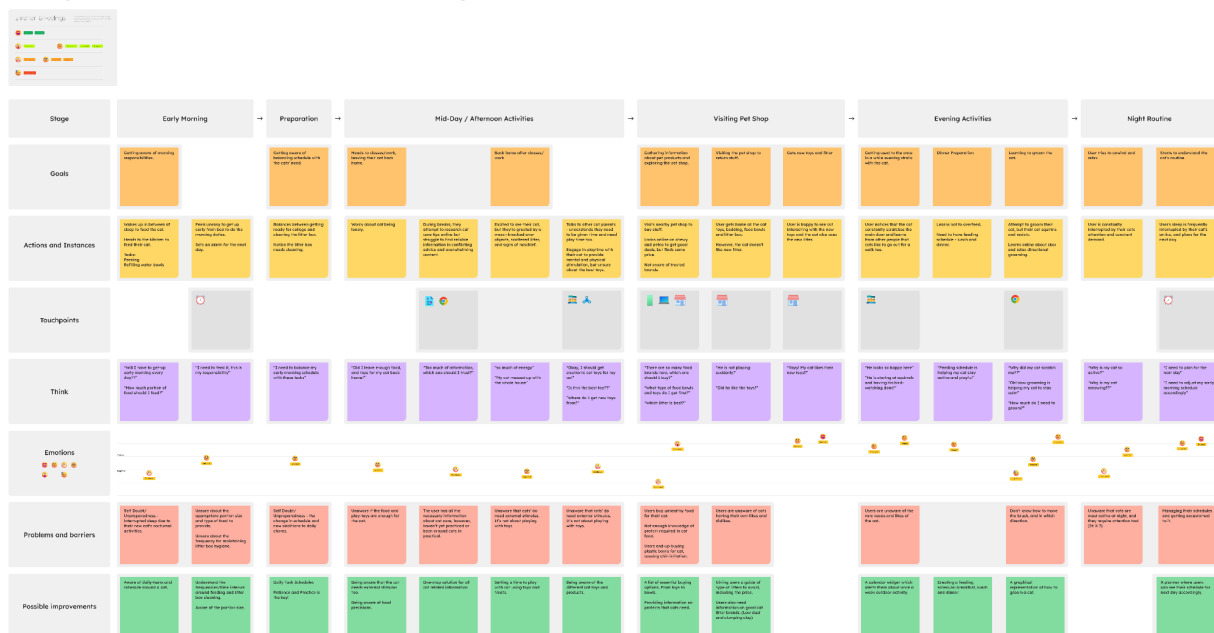
Updated Journey Map

9.1 Goals

The primary goal of creating the user journey map for this capstone project is to provide a comprehensive and visually accessible representation of the research findings and insights obtained throughout the project. Furthermore, it is intended to act as a dynamic reference guide, assisting in decision-making, project planning, and strategy development.

9.2 Methodology

My research interviews with experienced cat owners help me gain insights into their early days of cat ownership. Through interviews and discussions, I evaluated their experiences and the sources they relied on to prepare for becoming cat parents. Additionally, I did some research into the journey of individuals who might be new to cat ownership, considering their perspective and challenges as they navigate the process for the first time. Mapping out the various touchpoints and phases of the cat ownership journey allowed me to visualize the user experience more in-depth. By documenting user stories and narratives at each touchpoint, I captured the emotions, struggles, and success moments of new cat owners in their journey.

9.3 Synthesis

In analyzing the findings and potential design solutions, several key insights emerge for enhancing the user experience of new cat owners. Users express a need to be well-informed about daily tasks and schedules related to cat care, including feeding and litter box cleaning frequencies and portion sizes. They value the convenience of a daily task scheduler to help them stay organized and consistent. Patience and practice are emphasized as essential elements in mastering cat care routines. Recognizing the importance of providing external stimulation for their cats, users seek information on toys, treats, and other products to enrich their cat's environment.

Users also express a need for guidance on selecting appropriate cat litter types and brands, as well as incorporating outdoor activities into their cat's routine. A graphical representation of grooming techniques and a calendar widget for scheduling outdoor activities further enhance the user experience, along with a planner feature for viewing their schedule for the next day.

10.   Market Research

Before I started brainstorming, I wanted to see what's out there already tackling this issue. I was curious about how today's tech is handling it or if there are any similar products already in the market. It was like doing some homework before coming up with new ideas.

10.1 Goals

My primary goals for this market research project are:

I.   **Examine and Compare Virtual Pet Products:** I aim to examine and compare three distinct virtual pet products: Neopets, Giga Pets, and AdoptMe.com. By doing so, I want to understand the strengths and weaknesses of each product, shedding light on their user experiences, monetization strategies, popularity, and community interaction aspects.

II. **Gain Insights into the Virtual Pet Market:** Through market research, I want to get insights into the virtual pet market, including its current size, trends, target audiences, and user feedback. This research would help me understand the broader landscape in which these products operate.

III. **Explore the Intersection of Technology and User Experience:** By examining these virtual pet products, I aim to explore the intersection of technology and user experience in the context of virtual companionship. I seek to understand how technology has evolved to meet the needs and desires of users, both in terms of nostalgia and innovation.

10.2 Methodology

The methodology for this market research project involves a diverse approach, and here's how I plan to go about it:

I.   **Product Analysis:** I will conduct an in-depth analysis of each virtual pet product; Neopets, Giga Pets, and AdoptMe.com. This analysis will involve exploring the user experience, features, monetization strategies, and community interaction aspects of each product.

II. **Market Research:** Market research will involve gathering data on the virtual pet market, including its size, trends, and target audiences. User feedback and reviews will be analyzed to gain insights into user satisfaction and areas for improvement.

10.3 Synthesis

	ADOPT ME	neopets®	Giga Pets
Key Features	Chat and Interaction, AI generated Animals, Re-homing	Virtual World, Customization, Activities and Games	Portable Electronic Devices, Basic Interactions, Variety of Pets
Engagement	Virtual Adventures, AI Animal Trading, Games, Feeding	Immersive Web-based, Storytelling format, Quests and Games	Limited Buttons, Simple and Tangible Interface
Monetization Strategies	No Monetization Strategies	In-Game Purchases, Premium Purchases, Virtual Goods	One-time Purchase, Merchandise – Key chains, stickers, widgets
Reliability to Learn	No – Can be used for entertainment purpose only.	Yes, has features where users can learn about care and hygiene for pets	Yes – Some Features nudge user to clean, check health and feed the animal
User Base	Users who are curious about AI and virtual pet experiences.	Children to Adults, pet enthusiasts, gamers, collectors.	Children to Adults
Community	No Community	Message Boards, Online Contest, Events	Offline Showing Pets

Market research

Synthesis allowed me to consider the monetization strategies of these products. In my capstone journey, this has been most insightful because I was being repetitively asked about how the rewards worked. I considered this research as a way to look out for patterns and feasibility of these products catering to their respected user groups.

The market research reveals key insights into three virtual pet platforms: Neopets, Giga Pets, and AdoptMe.com.

I. **Product Overview:**
Neopets, a pioneer since 1999, offers a diverse virtual world where users adopt and care for unique pets, engaging in various activities and games. Giga Pets, emerging in the late 1990s, features pocket-sized electronic devices for virtual pet ownership with basic interactions. AdoptMe.com, a modern entrant, innovatively combines AI-generated animals, interactive games, and storytelling in a web-based platform.

II. **User Engagement:**
Neopets excels in user engagement through an immersive web interface, diverse activities, and a vibrant community. Giga Pets, with its simplified handheld device design, engages users through tangible, tactile experiences and a sense of

responsibility. AdoptMe.com stands out with AI interaction, interactive games, and a dynamic experience that includes re-adoption and trading.

III. **Monetization Strategies:**

Neopets employs a multifaceted strategy, including premium memberships, in-game purchases, virtual goods, and advertising. Giga Pets relies on device sales and occasional accessory sales. AdoptMe.com incorporates microtransactions, virtual currency, and potential advertising to generate revenue.

IV. **Popularity and User Base:**

Neopets maintains a significant and diverse user base, spanning age groups, attracted by engaging activities, customization, and community interaction. Giga Pets, popular in the late 1990s, appealed to children and collectors, offering a tactile experience and collectible nature. AdoptMe.com draws a younger demographic with its AI-generated animals, interactive gameplay, and constant evolution.

V. **Community and Social Interaction:**

Neopets fosters a thriving online community through forums, guilds, trading, contests, and events, enhancing the user experience. Giga Pets, lacking extensive online features, builds a community among collectors and fans who appreciate these devices. AdoptMe.com integrates community features directly into the platform, encouraging chat with AI animals, virtual pet trading, player-created content, and community challenges.

In summary, each platform has distinct strengths in engaging users and generating revenue. Neopets relies on its longstanding appeal and diverse activities, Giga Pets thrives on nostalgia and tangible experiences, while AdoptMe.com innovatively integrates AI and interactive elements to captivate a modern audience. The findings highlighted the importance of varied approaches in the virtual pet market to cater to different user preferences and demographics.

11. Brainstorming Activities

After finishing the journey map and market analysis, I had trouble picking from about 10 different ideas. It's common for designers to get stuck on their own ideas after working on them for months, and I was no exception! So, my next move was to test out my concepts and get feedback to narrow them down to the best ones.
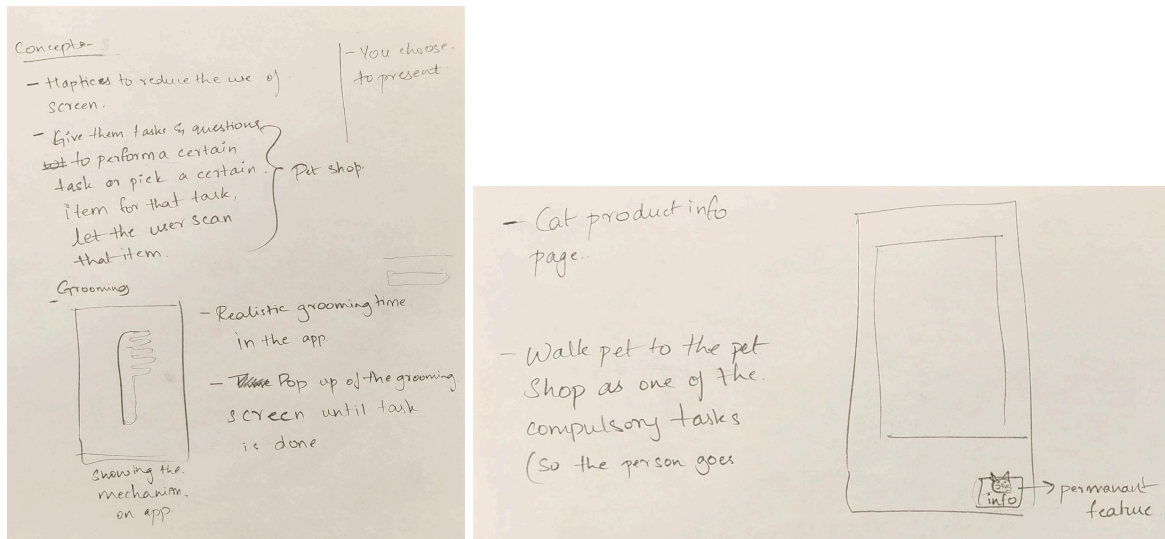
Brainstorming Sketches

11.1 Goals

The main goal during these brainstorming activities was to work together as a team on each other's project to improve and help the conceptualizing process with practical outcomes. I wanted to make sure that people using my project could learn about taking care of a cat while having fun. Also, I wanted to explore how different devices like phones and smartwatches could help people remember to take care of their cats. We brainstormed ideas and talked about them to see which ones were the best. By working together, we came up with new and exciting ways to make my project better for cat owners.

11.2 Methodology

To kick off the session, I provided an overview of my project and outlined the progress made thus far. Following this, each member of the design team shared their unique perspectives and sketched out concepts aligned with the project goals. Engaging in open dialogue, we discussed and exchanged ideas, offering constructive feedback to refine and enhance each concept further. Through collaborative efforts, we identified the most promising ideas and iterated on them collectively, leveraging the diverse expertise within the team. By actively listening to one another and fostering a spirit of collaboration, we generated a range of high-quality concepts that hold significant potential for the project's success.

11.3 Synthesis

The collaborative brainstorming sessions with other designers resulted in innovative design solutions that effectively address the goals of the project. By emphasizing the importance of responsibilities in pet ownership and integrating them into the user experience, I aim to create a design that not only entertains but also educates users. The multi-device interaction system, coupled with visual cues and prompts, ensures that users stay engaged and on track with their cat-care activities. Additionally, features such as interactive pet store visits and assistance requests enhance immersion and provide users with a comprehensive virtual pet ownership experience. Overall, the synthesis of ideas from brainstorming sessions has laid a solid foundation for further refinement and development of the design concepts.

12. Concept Validation

After narrowing down my concepts to the most important designs, I conducted a concept validation activity to see if the concept flow is fluent and to address the challenges and pain points identified by my target user group. This activity helped me ensure that the ideas made sense and effectively solved the issues or frustrations experienced by my users.
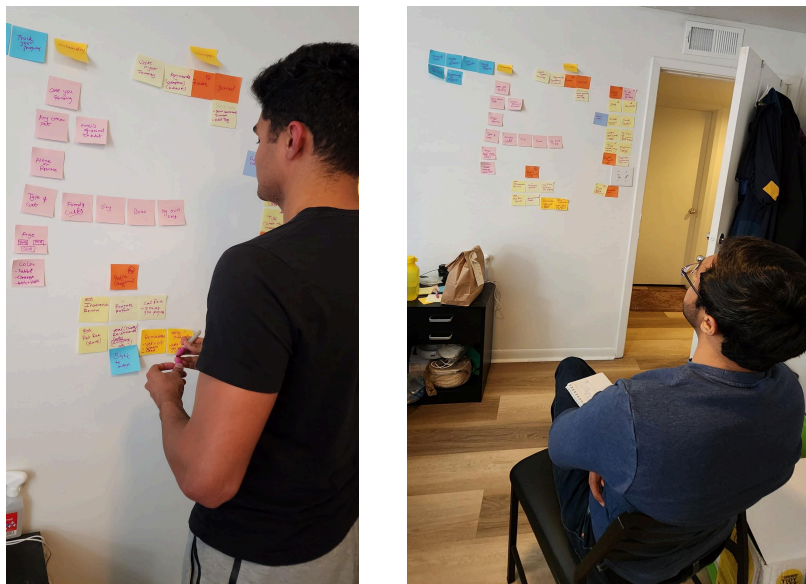
Concept Validation

12.1 Goals

The concept validation method employed in this capstone project aims to achieve several critical objectives. First and foremost, it seeks to confirm the viability and relevance of the project's underlying concept. By leveraging a visual and interactive approach, the method strives to gather constructive feedback from peers and designers, enabling the identification of potential improvements and flaws in the concept. Furthermore, this process serves as a crucial step in the project's ideation stage, guiding it toward a more refined and user-centered design. Ultimately, the goal is to ensure that the project concept aligns with user needs, industry standards, and the overall project objectives.

12.2 Methodology

In order to validate the concept of my capstone project, I implemented a structured and participatory methodology. This process began with the creation of a visual representation using post-it notes and sketches. I highlighted the primary project features on individual sketches and shared my notes, informing what sub-features nested within each primary element. This visual approach served as the foundation for the validation steps.

12.3 Synthesis

I.   Task Completion Insights:
    A. Users should receive clear explanations of why each task is important after they finish it. This feedback will help users understand the significance of their actions and may motivate them to continue engaging with the app.
    B. Providing this feedback in a concise and accessible manner enhances user satisfaction and encourages sustained use of the application.

II.   Integrated Daily Schedule:
    A. Implementing a daily schedule within the app allows users to organize their tasks more effectively and manage their time efficiently.
    B. By combining daily to-do tasks into a single, easily accessible schedule, users can quickly prioritize their activities and plan their day accordingly.

III. Limited Progress Saving:
    A. Instead of storing user progress FOREVER, I will be implementing a time-limited approach to data retention, such as saving progress for a maximum of 30 days.

B. This approach strikes a balance between providing users with the convenience of saved progress while ensuring that they don't forget the practices (day-to-day) after coming back on the platform.

C. After the 30-day period, the app automatically deletes saved progress, promoting urgency and encouraging users to stay engaged with their tasks.

13.   Low Fidelity Concepts

13.1 Goals

The goals for creating low-fidelity concepts for the PurrfectParent app include conceptualizing and ideating the layout and functionality, facilitating rapid prototyping and iteration. I also wanted to ensure that the focus on functionality and user flow is given equal importance, enabling early-stage user testing and validation throughout the design process. These concept wireframes serve as a foundational tool to visualize, refine, and communicate design concepts, ultimately leading to the development of an effective and user-friendly app for supporting responsible cat ownership.

13.2 Concept Flow and Wireframes
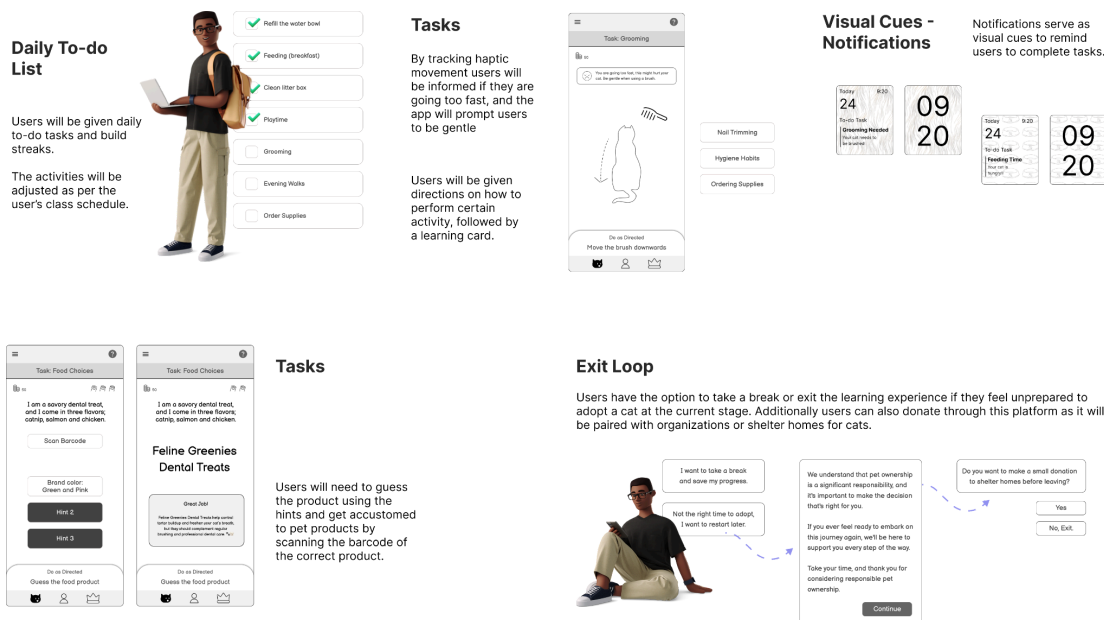
Conceptual Flow Wireframes

13.3 Synthesis

The synthesis process helped me identify gaps in my concepts and the flow of the story. For instance, I was unsure how users would exit the loop. Thus, while creating the low-fidelity flow, I was able to think through this and develop a concept around it. Additionally, I gained insight into which tasks should be prioritized and have high visibility. This also helped me make my navigation footer more concise.

13.4 Testing and Feedback
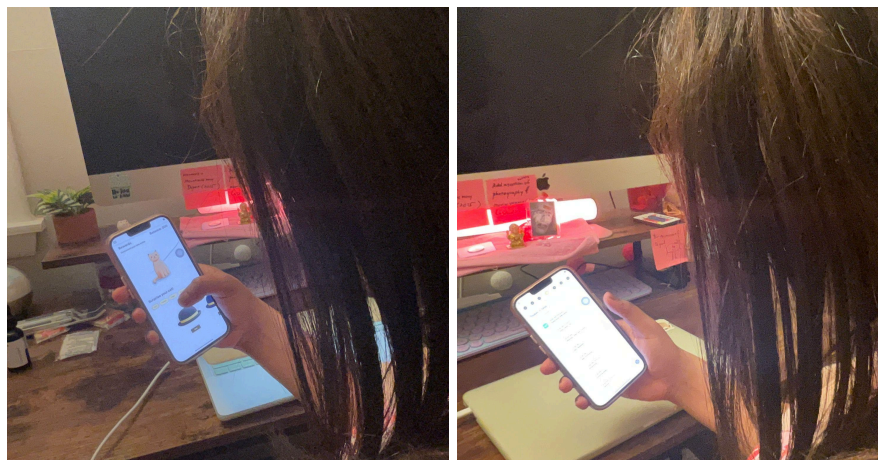
I tested these concepts with users and found a few loopholes.

I. **Explaining users about streaks:** There should be some help icon on each screen that will help users to understand any uncertainties or tips related to the activity.

II. **Ensuring that they understand the visual cues:** One major feedback I received was that the visual cues might not be evident, as it makes the smart watch interface look cluttered.

III. **Ensuring a finite period to save progress:** I found that having the progress saved for infinite periods of time, rather than just a few days, would not contribute to users' learning process. Having them restart their journey on the design and understanding the practical day-to-day life after a big break would be beneficial for the users and the cats too.

IV. **Prompt Learning Process:** They also suggested that giving them lives was a way to stop the learning process, instead having three hints without lives was more preferable to them.

14.   Mid Fidelity Concepts

Using all the testing feedback from low-fidelity conceptualization wireframes, I moved on to mid-fidelity wireframes. Below are some designed features:

14.1 Goals

The goal of creating a mid-fidelity prototype for my capstone project is to bridge the gap between the initial low-fidelity concepts and the final high-fidelity design. At this stage, my focus is on refining the concepts by incorporating more detailed design elements and interactive features while still maintaining a level of flexibility for iteration. This prototype will serve as a crucial tool for gathering feedback from stakeholders and conducting usability testing with end users. My goal is to validate key design decisions, refine user flows, and ensure alignment with capstone objectives. Ultimately, the mid-fidelity prototype will facilitate informed refinements before progressing to the final stages of development, maximizing efficiency and ensuring a user-centric design approach.

14.2 Wireframes and Concepts

Onboarding

Users will be asked to sync their calendar or upload their daily schedule, thus, helping them to immerse themselves in tasks and daily activities according to their schedules.

To-Do List
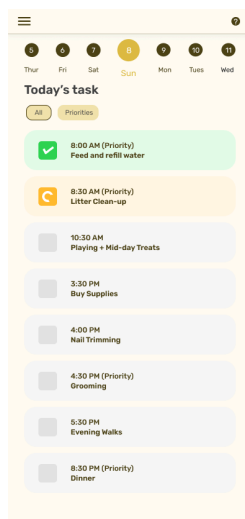
To-List will help them see all the tasks they have to do for today. There are visual indicators for them to see the completed, in-progress (in-continuation) and to-be-done tasks.

Profile Page

Users will be able to see their progress, number of days/weeks of streak, the rewards which they earn from activities. Along with this, users also have access to additional practice sessions where they can re-do the activities and add up to their score.
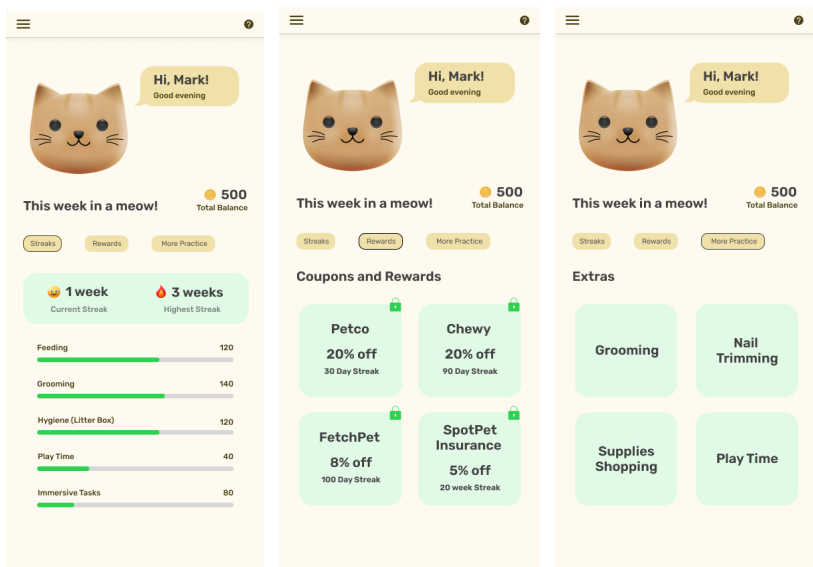
Visual Cues as Notifications

Notifications serve as visual cues to remind users to complete tasks. These visual cues will represent the task to be completed. For instance, an empty bowl for "feeding time", or a brush to indicate "grooming time".
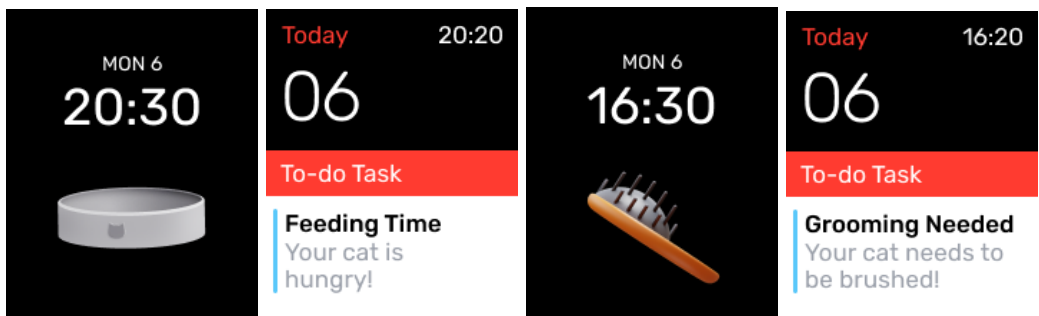
Rewards
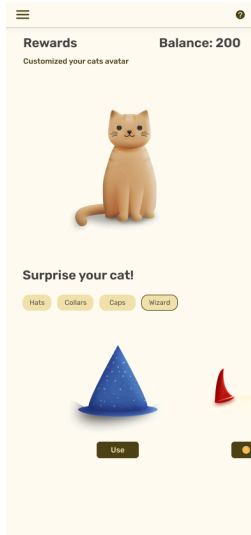
Users can use rewards (which they have earned from activities) to customize the look for their purrfect buddy!

Activities (In-app)

According to their daily to-do task, users will get activities during a particular time. These activities can be grooming, feeding the cat, or learning to clean the litter box.

Activities (Immersive)

The main goal of this capstone project is to inform users about life with a cat, including discovering available cat products. As part of engaging bonus tasks, users will be presented with "guess me" riddles to solve. Simultaneously, they can explore the pet shop and scan the barcodes of products they think are the correct answers. This approach aims to familiarize users with the world of pet shops and the variety of products available in the market.
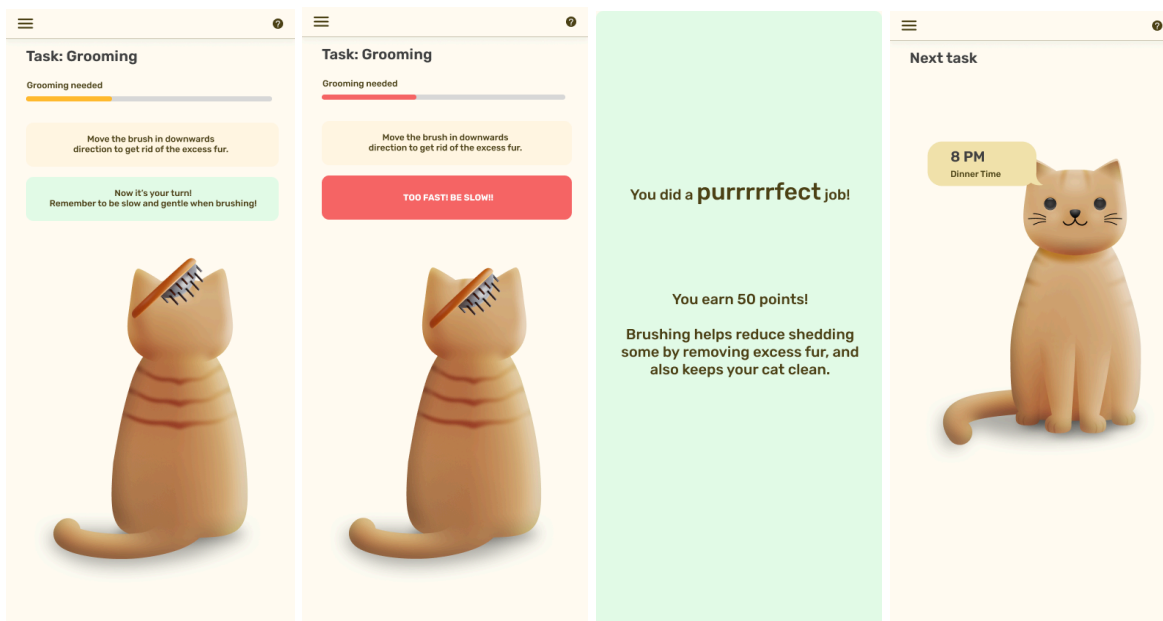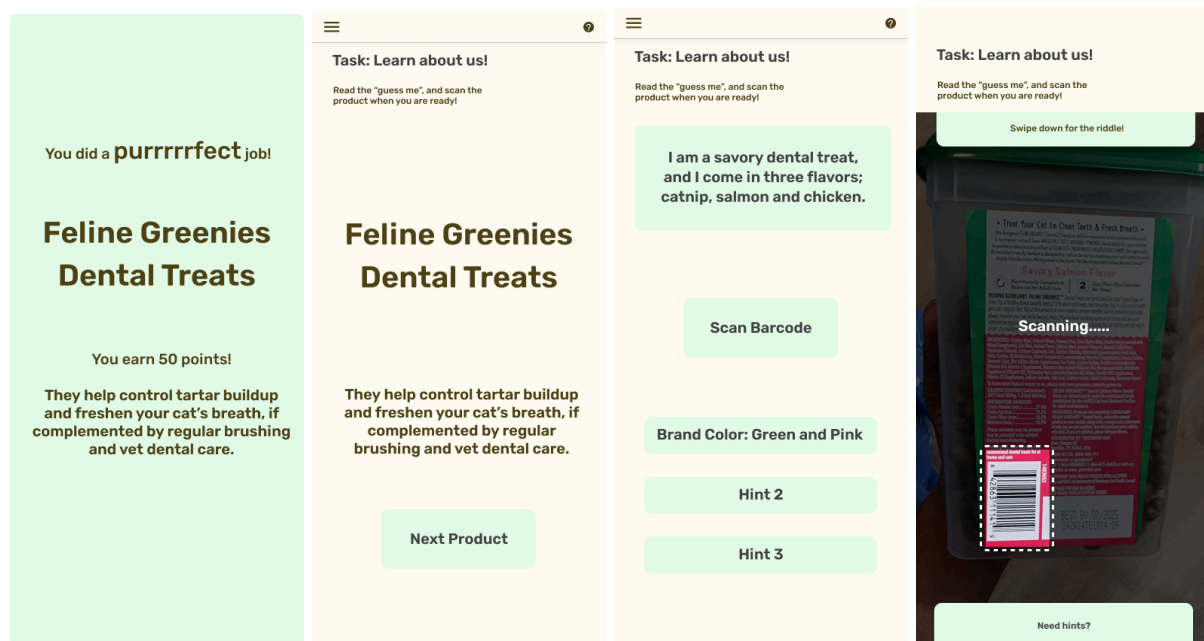
Successful completion of this will allow them to understand the necessity of each product, use cases and important nutritional information.

14.3 Testing and Feedback

I tested these concepts with users and found several areas of improvements.

I.   **Clear Labels:** Some labels needed clearer names, like changing "Surprise Your Cat" to "Purrsonalize". Issues with labels were noticed during mid-fi testing.
II. **iOS Design Guidelines:** While the visuals were good, there were concerns about whether the iOS system would accept certain notifications on watch interfaces. For example, emojis might not display correctly. So, for my hi-fi versions, I adapted the design to be more watch-friendly.

III.   **Daily Routine Representation:** Users often do tasks like cleaning the litter box, feeding, and refilling water at the same time. After testing with users, I made sure that similar routine tasks could be done together in the hi-fi version, simplifying the process.

IV.   **Visual Cues:** Users found the symbols for completed, ongoing, and incomplete tasks added too much visual clutter. To simplify, I planned to use more graphics or gifs on the to-do list, reducing the need for users to read a lot of text.

V.   **Design System:** Inconsistent font weights were found across layouts and pages, highlighting the need for a more consistent design system.

VI.   **Camera and Share Options:** Users enjoyed the "take your cat for a walk" activity and suggested adding access to the front camera for taking selfies with their virtual cat.

15.   Design System

After user testing, I created a design system to maintain consistency in the project's style. This system served as a guide for the project's overall look and feel.

Header

Rubik SemiBold
20px / 23px

The quick brown fox jumps over the lazy dog.

Title1

Rubik Regular
16px / auto

The quick brown fox jumps over the lazy dog.

Title 2

Rubik Regular
15px / auto

The quick brown fox jumps over the lazy dog.

Paragraph1

Rubik Regular
12px / auto

THE QUICK BROWN FOX JUMPS OVER THE LAZY DOG.
For more info

Body

Rubik Regular
10px / auto

The quick brown fox jumps over the lazy dog.

HeaderMain

Rubik SemiBold
26px / 23px

The quick brown fox jumps over the lazy dog.

Paragraph2

Rubik Regular
15px / auto

THE QUICK BROWN FOX JUMPS OVER THE LAZY DOG.

Primary (Main)	Stroke (Activity)	Tertiary (Opacity Block)	Default Font
#110B38	#110B381a	#110B38d	#111827
rgb(17, 11, 56)	rgba(17, 11, 56, 0.1)	rgba(17, 11, 56, 0.05)	rgb(17, 24, 39)
hsl(248, 67, 13)	hsla(248, 67, 13, 0.1)	hsla(248, 67, 13, 0.05)	hsl(221, 39, 11)

16.   Logo Design

While creating the logo, I kept in mind three adjectives; warm, cute and simple.

Existing Inspirations

Random
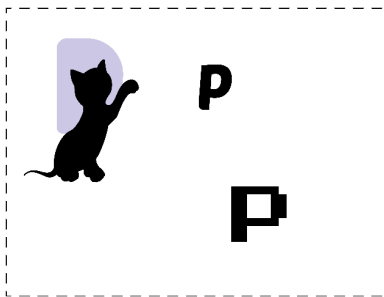
FURRNALLL

AI GENERATED - Inspirations
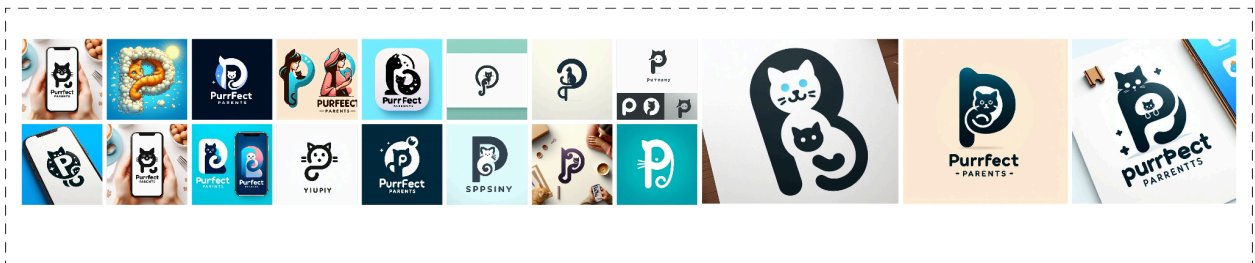
17.   High Fidelity

Using all the testing feedback from mid-fidelity wireframes, I moved on to high-fidelity wireframes. Below are all the designed features:

Syncing calendar during the onboarding process:
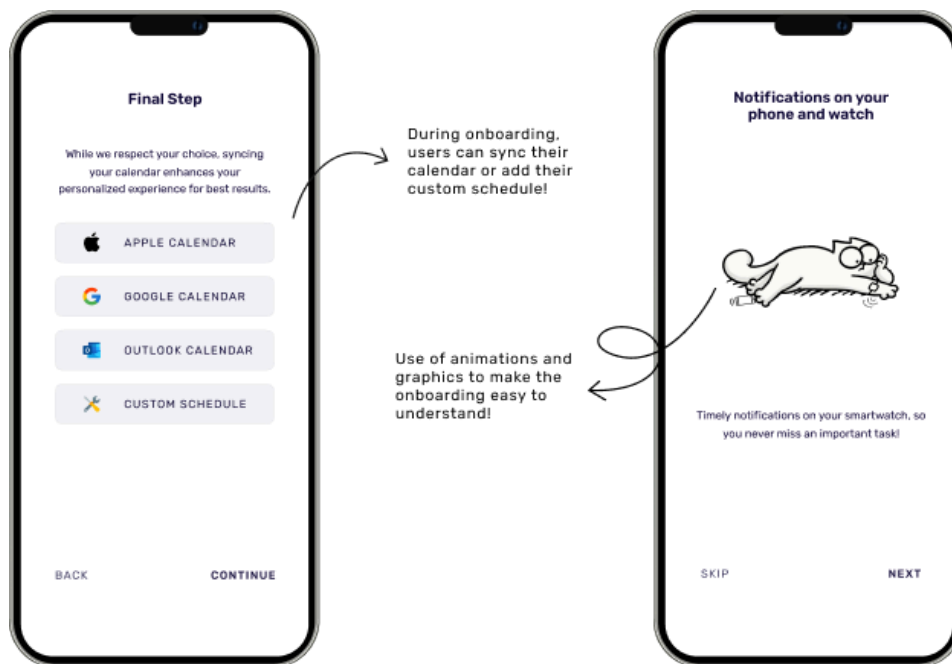
When users sync their calendar or add customized schedules, they will see personalized to-do tasks in the app according to their class schedule. This helps them avoid conflicts with their classes and understand when these tasks should be done in relation to their other activities when they get a cat in real life.

To-Do List
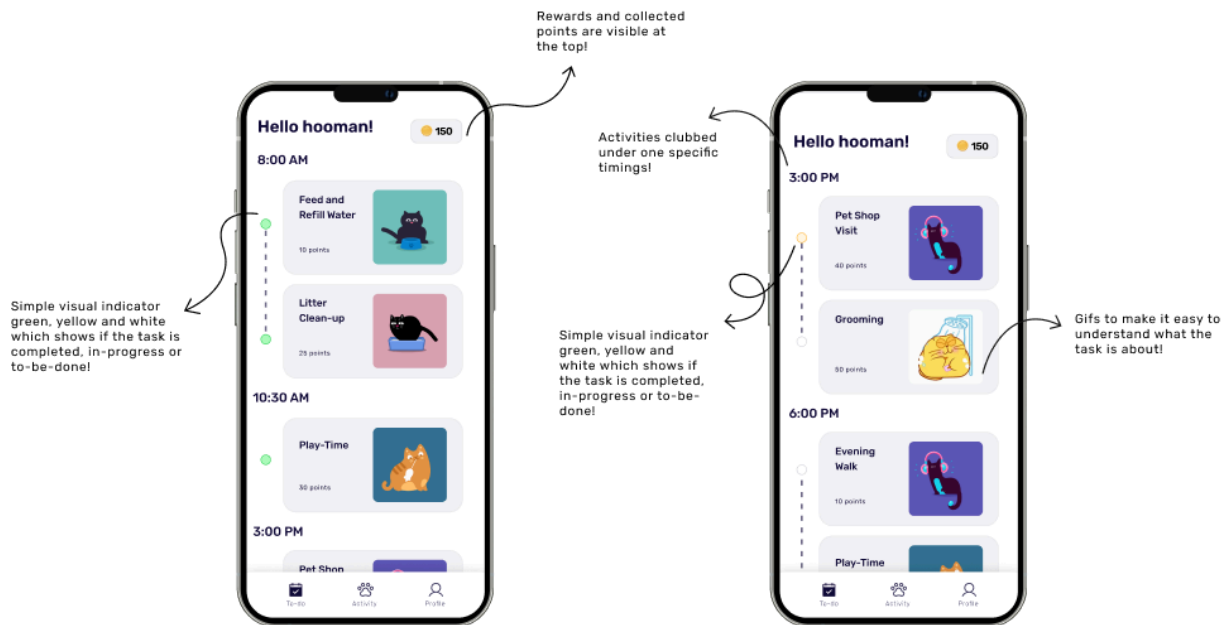
Rewards and collected points are visible at the top!

Activities clubbed under one specific timings!

Simple visual indicator green, yellow and white which shows if the task is completed, in-progress or to-be-done!

Simple visual indicator green, yellow and white which shows if the task is completed, in-progress or to-be-done!

Gifs to make it easy to understand what the task is about!

To-List will help them see all the tasks they have to do for today. There are visual indicators for them to see the completed, in-progress (in-continuation) and to-be-done tasks.

Activities (In-app)
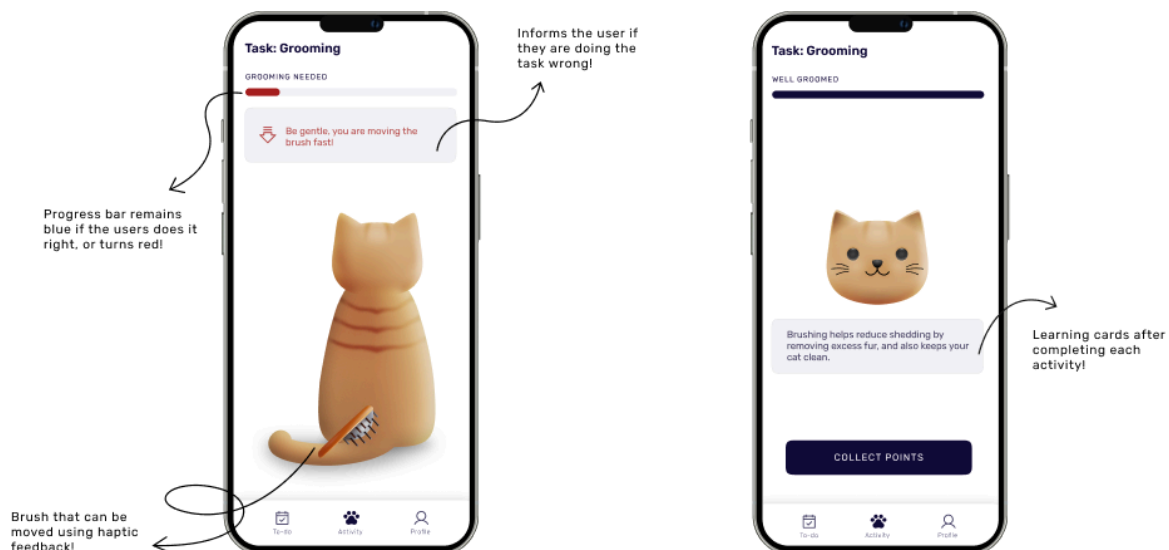
Informs the user if they are doing the task wrong!

Progress bar remains blue if the users does it right, or turns red!

Brush that can be moved using haptic feedback!

Learning cards after completing each activity!

According to their daily to-do task, users will get activities during a particular time. These activities can be grooming, feeding the cat, or learning to clean the litter box.

Activities (Immersive)

PetShop - Finding the right product

Number of products went right or wrong will be shown visually above the riddle.

Riddles to guess the product.

Three hints; each hint will bring the user closer to their guess/product.

Users will scan barcode using this button, once they find the product.

Accessing the riddle again.

Accessing the hint again.

Barcode scanning.
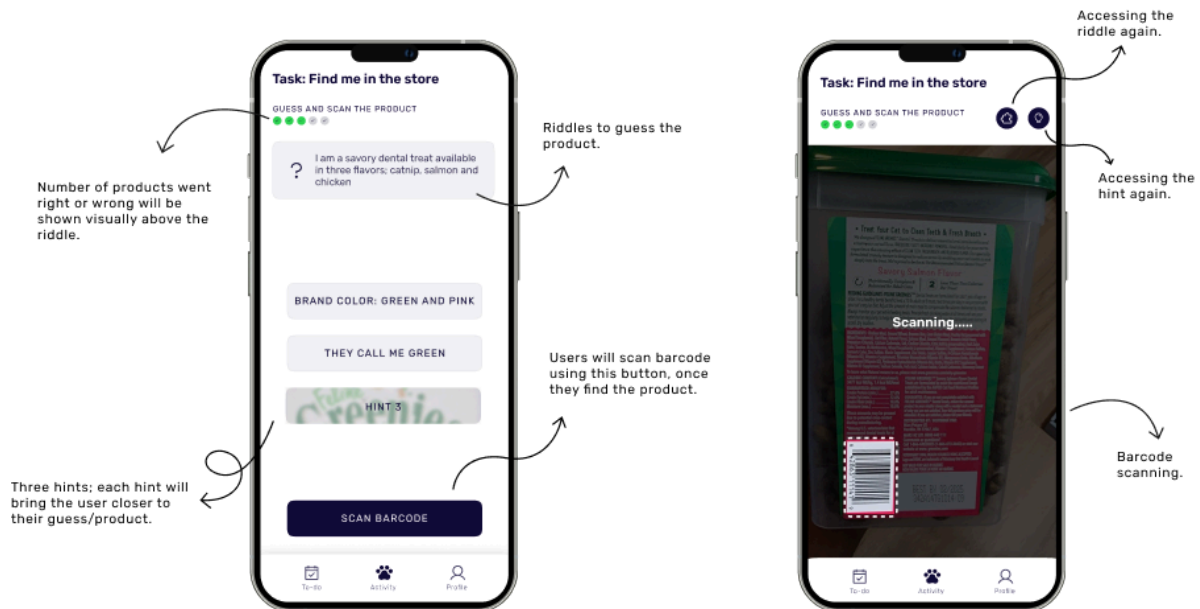
Users perform tasks within a pet store to familiarize themselves with a variety of available pet products.

Taking the cat for a walk!

Users have option to see saved pictures, click, and reverse the camera!

After they click the picture, they can either save or share it on their social media handles. Or they can also skip doing it.
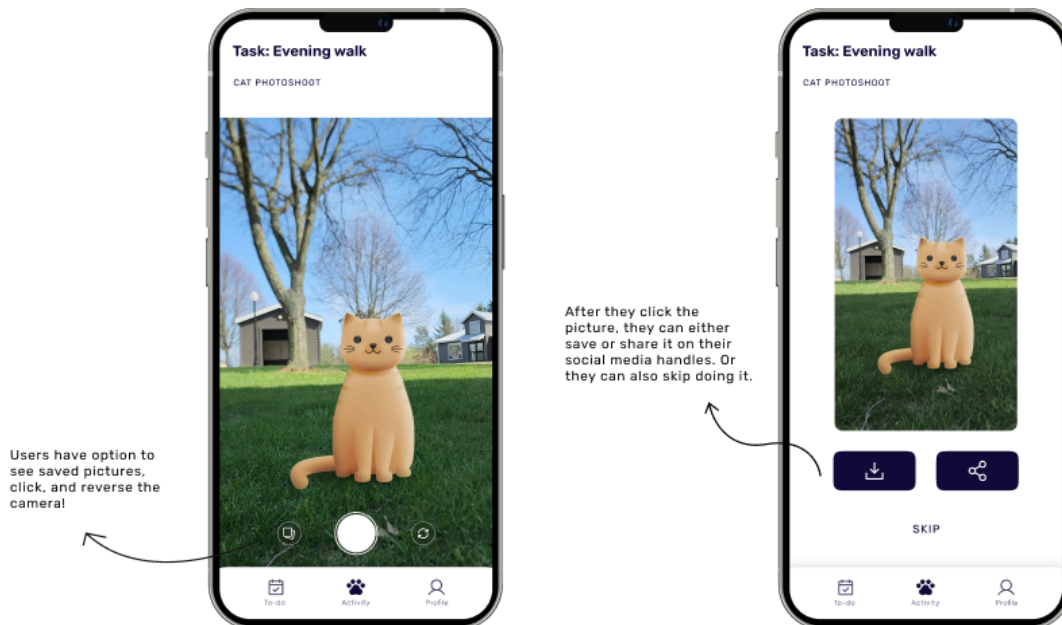
Users visit nearby outing spots and photoshoot their virtual cat to complete the task, emphasizing that the outing needs for cats and other pets are similar.

Rewards

Users can personalize their cat's appearance by using the points they earned from tasks. Items can be chosen from different categories.

Purrsonalize

Balance Points: 1300

Hats   Glasses   Caps   Wizards

20   10

To-do   Activity   Profile

Coupons

Locked   20 WEEK STREAK

SpotPet Insuranc

5% off   5% o

Criteria

You've shown incredible dedication in caring for your virtual pet!

- To celebrate your 100-day streak, enjoy an exclusive 8% discount at FetchPet.
- Use code at checkout to claim your discount.
- Offer valid and unlocks only after a 100 day streak.
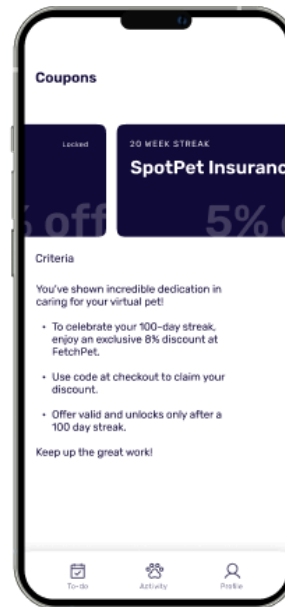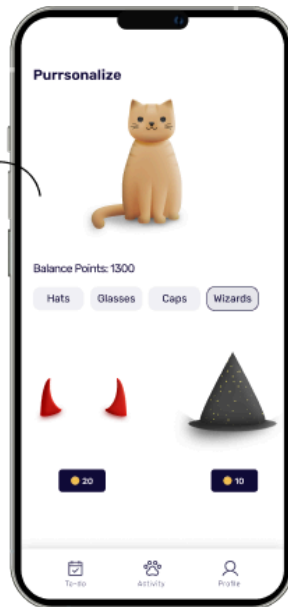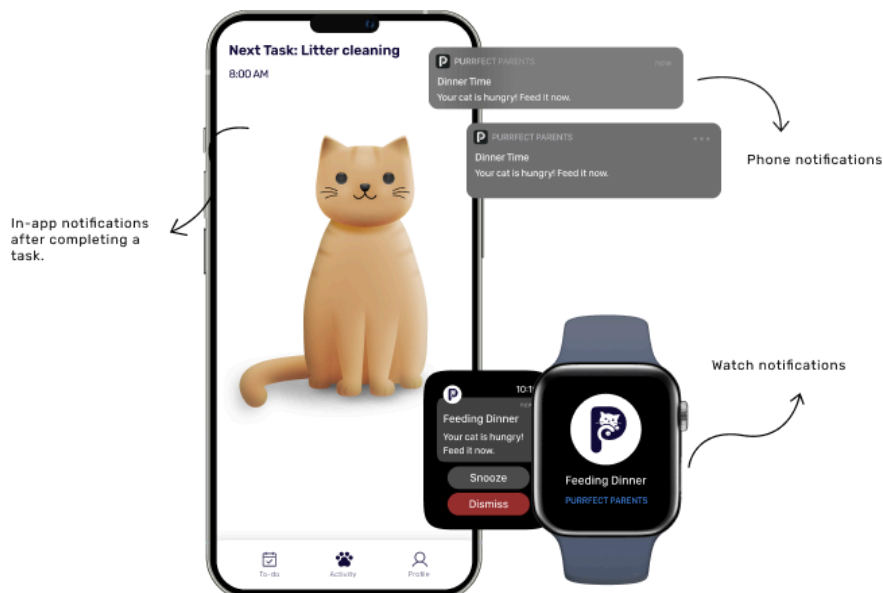
Keep up the great work!

To-do   Activity   Profile

Once users reach certain level of streak, they can unlock coupons from pet brands and use them after they adopt a cat!

Users can use rewards (which they have earned from activities) to customize the look for their purrfect buddy!

Visual Cues as Notifications

Next Task: Litter cleaning

8:00 AM

PURRFECT PARENTS   Now
Dinner Time
Your cat is hungry! Feed it now.

PURRFECT PARENTS   • • •
Dinner Time
Your cat is hungry! Feed it now.

Phone notifications

In-app notifications after completing a task.

10:1
Feeding Dinner
Your cat is hungry! Feed it now.

Snooze

Dismiss

Feeding Dinner
PURRFECT PARENTS

Watch notifications

To-do   Activity   Profile

Notifications serve as visual cues to remind users to complete tasks. These visual cues will represent the task to be completed.

18.   Product Video

After high-fidelity, I also conceptualized a product video, similar to the Wizard of Oz Experiment.

"Puurfect Parents" in action: https://youtu.be/trR9DJ6x0so

19.   User Testing

My final high-fidelity prototype testing went really well! I received a lot of positive feedback, with a few neutral comments too. Some users asked if the app would include breed-specific information, while others wondered about features like a "pamper your pet" with grooming tips or a "vet locator" for emergencies.

Even though the feedback raised some concerns, I want to stay committed to focusing the design solely on the pre-adoption stage. This ensures that users have a clear understanding of what their life will be like after getting a cat into their home.

20.   Future Scope

I want to take this project two steps further in terms of pitching it to Chewy or Petco and getting users on board.

I'm already in talks with Chewy about this project and may soon give them a presentation. Additionally, below is how this app design can reach the masses.

Through Social Media SEO: If users continuously scroll through cat memes, reels, or other cat-related content on their social media accounts, they can receive ads that redirect them to the app.

Through Shelters: When potential cat parents visit a shelter or show interest in adopting a cat, the shelter can invite them to join the app. Users can build streaks, learn, and later receive a report of their activities, potentially earning them priority adoption.

Some major improvements could also be made within the app:

Report Card: Users receive a report card, which can only be downloaded by adoption shelters, to assess the owner's preparedness.

Cat-Personalized Practice: Adding options to choose the cat's age and receive tasks related to it, teaching users how to care for kittens, adult cats, or elderly cats they are interested in.

Cat-Specific Training: When users visit the shelter, and since each cat has a profile tag - with a QR code, so when scanned through Purrfect Parents, users can access a quick crash course tailored to that specific cat's behavior and needs. Although this may seem like a separate capstone project, it's still a promising area to explore when "designing for non-humans".

21.   Reflection

As a designer, this was my first independent project. At the start, it was super overwhelming because I wasn't sure how it would turn out. Seeing my peers constantly change their topics made me question if my project even made sense or if I should change it too. However, what kept me committed to this project was the potential to make an impact and the personal connection I felt to it.

As a process, this journey has been instrumental in my growth as a designer, teaching me not to get fixated. Fixated. Yes, I was super worried about it. As I mentioned before, the project is very close to me, and every day working on it brought random, wild ideas, from having a

robotic cat to incorporating VR. But soon, I learned that even though this project is my brainchild, my baby, I need to be a strict parent—*a Strict Purrfect Parent.* Letting ideas go, putting them aside for revamping, and creating something practical.

Through this journey, I also discovered my own design process: think, make, break, repeat. And the only way out of this loop is by receiving constant, harsh feedback. My peers and instructors were a great source of constant critique, ensuring that I didn't fall into the trap of design fixation.

I believe that as a designer entering the corporate world, this project has taught me to look for flaws in my own designs first, bragging the mistakes so that I and other designers analyze them thoroughly through critique, and in the end what remains is the good part! Truly, a transformative journey!

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Appendix

I.   Brainstorming Activity

I teamed up with Warshitha, for category two, where we had enough insights from the research to sketch a few concepts and brainstorm ideas. Even though she was familiar with my project, I took the time to explain where I am heading this semester.

Warshitha, was very proactive in sketching and jotting down my ideas. We delved into the importance of "responsibilities" as a major focus and why it matters. I emphasized the significance of ensuring that through this project, users not only enjoy the experience of owning a cat but also understand the day-to-day responsibilities associated with it, such as feeding, grooming, and providing care.

As we continued our discussion, we explored the idea of making this design a multi-device interaction. We envisioned integrating it with various devices, including smartphones and smartwatches. By doing so, users could receive notifications and reminders across different platforms, ensuring that they stay on track with their cat-care activities regardless of the device they are using.
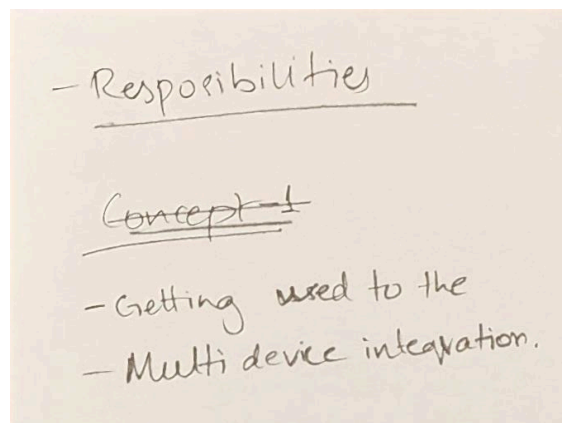
Furthermore, I elaborated on how the notification concept might work. For instance, if users are not keeping up with grooming their cat well, the smartwatch will display an animated fur covering, indicating that their cat is shedding excessively. This visual cue serves as a gentle reminder for users to take action. Unless they perform the grooming activity on the application, they won't be able to access the advanced features on their smartwatch, encouraging users to stay engaged and responsible in caring for their furry companions.

Together, Warshitha and I generated significant ideation outcomes. She made me realize that requiring users to complete tasks on the application before accessing their smartwatch might pose a challenge in emergency situations. After extensive brainstorming on this concept, we concluded that actions should serve as notifications rather than blockages. For example, similar to notifications, the smartwatch screen would briefly display a layer of fur covering the screen to prompt users to perform grooming activities on the app. This visual cue would not persist indefinitely but would reappear until the task is completed.

Another scenario involves an empty bowl icon on the smartwatch screen, signaling that the user needs to feed their cat. These visual cues serve as reminders for users to complete daily tasks within the app.

Moreover, my project aimed to immerse users in the experience of owning a cat. One concept involves prompting users to visit a nearby pet store and answer visual questions to familiarize themselves with available pet products. Warshitha noted that while this is a promising concept, users may benefit from knowledge on what constitutes a good pet product. In response, I created a scenario where users are tasked with finding a pet food product with a specific ratio of real salmon to flavored ingredients. By scanning product barcodes in the pet store, users receive feedback from the app on whether their choice meets the criteria.

Additionally, we brainstormed the feasibility of users requesting assistance. Each page of the app will feature a "Help" call-to-action button, providing users with information about the task at hand.

Our collaborative brainstorming sessions have led to innovative solutions that enhance user experience and immersion in the world of cat ownership. Working with Warshitha has been invaluable, and I am excited to continue refining these concepts as we progress with the project.

II.   **Interview Protocol for Experienced Cat Owner:**

Introduction

Hello, thank you for participating in this interview. My name is Kaustubh, and I am conducting research for my capstone project focused on preparing potential cat owners to be better cat parents. The insights gathered from this interview will help inform the development of a digital

tool to support cat owners. Before we begin, I want to assure you that your responses will be kept confidential, and your participation is voluntary. Do you consent to participate in this interview?

Participant Demographics

Age:
Gender:
Occupation:

1. Experience with Cat Ownership

- How long have you owned cats?
- Can you describe your experience with cat ownership? For example, how many cats have you owned, and what breeds?
- What motivated you to become a cat owner?

2. Daily Routine and Care Practices

- Can you describe the first thing you do in the morning regarding your cat's care routine?
- What time do you typically feed your cat(s) breakfast, and what type of food do you provide?
- Do you administer any medications or supplements to your cat(s) as part of their daily routine? If so, can you describe this process?
- How often do you clean your cat's litter box, and what method or products do you use for this task?
- Throughout the day, how do you ensure your cat(s) stay hydrated, and how often do you refresh their water bowl?
- Do you engage in any interactive play sessions with your cat(s) during the day? If so, what toys or activities do you use to keep them stimulated?
- How frequently do you groom your cat(s), and what grooming tools or techniques do you employ?
- Are there any specific health or medical care tasks you perform regularly for your cat(s), such as checking for signs of illness or injury?
- What time do you typically feed your cat(s) dinner, and is there a specific feeding routine you follow?

- Before bedtime, do you have any additional rituals or activities you perform to ensure your cat(s) are comfortable and settled for the night?

  Regarding challenges or pain points:

- Have you encountered any difficulties or challenges in maintaining your cat's daily care routine? If so, can you describe these challenges?
- Are there any specific tasks or activities that you find particularly time-consuming or burdensome in your daily routine of caring for your cat(s)?
- Have you ever faced any unexpected or emergency situations related to your cat's health or well-being? If so, how did you handle these situations, and what support did you seek?
- Are there any areas of your cat's care routine where you feel uncertain or lack confidence in your abilities? If yes, can you elaborate on these concerns?
- How do you prioritize and balance your cat's needs with your own daily schedule and commitments?

3. Use of Digital Tools and Resources

- Do you currently use any digital tools or resources to help manage or support your cat ownership responsibilities?
- If yes, could you please describe the tools or resources you use and how they have been helpful to you?
- If no, is there a reason why you haven't used any digital tools or resources for cat ownership?

4. Expectations and Preferences for a Digital Tool

- What are your expectations for a digital solution designed to support cat owners?
- Are there any specific features or functionalities that you believe are essential for such a tool?
- How important is ease of use and accessibility in a digital tool for managing cat ownership responsibilities?

5. Feedback on Initial Design Concepts
- Have you had the chance to review any initial design concepts for the Purrfect Parent app?

- What are your thoughts or impressions on the proposed features or functionalities?
- Are there any suggestions or improvements you would like to recommend based on your experience as a cat owner?

6. Conclusion

- Is there anything else you would like to add or discuss related to cat ownership or digital tools for pet care?

Thank the participants for their time and valuable insights.

III. **Interview Protocol for Potential Cat Owner:**

Introduction

Hello, thank you for participating in this interview. My name is Kaustubh, and I am conducting research for my capstone project focused on preparing potential cat owners to be better cat parents. The insights gathered from this interview will help inform the development of a digital tool to support cat owners. Before we begin, I want to assure you that your responses will be kept confidential, and your participation is voluntary. Do you consent to participate in this interview?

Participant Demographics
Age:
Gender:
Occupation:

1. Interest in Cat Ownership

   - Are you currently considering becoming a cat owner?
   - What factors or motivations are driving your interest in owning a cat?
   - Have you had any previous experience with cat ownership, either personally or through friends/family?

2. Knowledge and Preparation
   - How much do you feel you know about the responsibilities and care required for owning a cat?

- Have you taken any steps to prepare for cat ownership, such as researching or seeking advice?
- Are there any specific areas of cat care or ownership that you feel unsure or uninformed about?

3. Expectations and Concerns

- What are your expectations for the experience of owning a cat?
- Are there any concerns or challenges you anticipate facing as a potential cat owner?
- How do you envision integrating cat ownership into your daily life and routines?

4. Use of Digital Tools and Resources

- Do you currently use any digital tools or resources related to pet care or ownership?
- If yes, could you please describe the tools or resources you use and how they have been helpful to you?
- If no, is there a reason why you haven't used any digital tools or resources for pet care?

5. Preferences for a Digital Tool

- What features or functionalities would you find most helpful in a digital tool designed to support individuals considering cat ownership?
- How important is ease of use and accessibility in a digital tool for preparing for cat ownership?
- Are there any specific concerns or questions you would like a digital tool to address?

6. Feedback on Initial Design Concepts

- Have you had the chance to review any initial design concepts for the Purrfect Parent app?
- What are your thoughts or impressions on the proposed features or functionalities?

- Are there any suggestions or improvements you would like to recommend based on your perspective as a potential cat owner?

7. Conclusion

- Is there anything else you would like to add or discuss related to your interest in cat ownership or digital tools for pet care?

Thank the participants for their time and valuable insights.

IV.   Concept Validation Protocol

Objective: To validate and refine the concept of the capstone project through a collaborative and visual approach, involving peers and experienced designers for feedback and improvement.

Materials Needed:

- Post-it notes in various colors.
- Wall space for displaying the post-it notes.
- Sketching materials (e.g., paper, markers).
- Presentation materials (e.g., projector, screen, or printed sketches).

Step-by-Step Procedure:

1. Concept Representation:

a. Begin by identifying the core features of the project.
b. Create a separate post-it note for each primary feature, using different colors.
c. Use additional post-it notes of matching colors to represent sub-features within each primary feature.
d. Ensure that the post-it notes are clearly labeled and easy to understand.

2. Visual Context:

a. Create simple and clear sketches or drawings alongside the post-it notes to provide visual context.

b.   The sketches should help participants relate the abstract concept to real-world design.

3. Participant Selection:

a.   Invite a select group of peers and experienced designers who are familiar with the project's overarching goals.

4. Presentation Session:

a.   Conduct a presentation session where the project concept is showcased.
b.   Use wall space to display the post-it notes and accompanying sketches.
c.   Encourage an open and honest dialogue during the presentation.

5. Dialogue and Feedback:

a.   Participants are encouraged to ask questions and share their insights.
b.   Foster a collaborative atmosphere for constructive feedback and suggestions for improvement.

6. Analysis and Documentation:

a.   Document all feedback, questions, and suggestions during the presentation.
b.   Analyze the input to identify potential redundancies, design flaws, or areas in need of refinement.

7. Goal Achievement:

a.   Ensure that the project concept aligns with user needs, industry standards, and the project's objectives.
b.   Confirm that the concept makes logical sense and resonates with the intended user base.

8. Iterative Process:
a.   Use the feedback obtained to iterate on the project concept, making necessary improvements.
b.   This iterative approach ensures that the concept is continually refined and improved.

9. Next Steps:
    a. Use the validated concept as a strong foundation for the subsequent stages of project development.

    V.   User Testing Protocol: PurrfectParent

Stage 1 Introduction:

Welcome and Introduction:
- Greet the participant warmly and provide an overview of the user testing session.
- Clearly explain that the purpose is to gather feedback on the Purrfect Pet Companion app to improve its usability and user experience.

Informed Consent:
- Review and seek the participant's agreement with the informed consent form, ensuring they understand the nature of the test, its voluntary nature, and the confidentiality of their feedback.

Background Information:
- Collect basic demographic information such as age, gender, and previous experience with cat ownership or related apps.

Introduction to the App:
- Provide a brief introduction to the PurrfectParent app, highlighting its key features and objectives.
- Emphasize that there are no right or wrong answers – the goal is to understand their natural interaction with the app.

Stage 2 User Test Tasks:
Onboarding Task:
- Instruct the participant to go through the onboarding process, including syncing their calendar or uploading their daily schedule.
- Observe how easily they navigate through the questions and if the recommendations align with their expectations.

To-Do List Interaction:

- Direct the participant to the To-Do List feature and guide them to perform specific interactions, such as marking tasks as completed or in-progress.
- Monitor their understanding of the visual indicators for task status and assess how effectively they manage their daily activities.

Profile Page Exploration:
- Instruct the participant to explore their profile page and interpret the information presented, including progress tracking, streaks, and rewards earned.
- Evaluate how well they understand their progress and achievements within the app.

Visual Cues as Notifications:
- Introduce notifications to remind users to complete tasks, such as feeding or grooming their virtual cat.
- Assess participants' response to these visual cues and their effectiveness in prompting action.

Rewards Redemption:
- Ask the participant to navigate to the rewards section and redeem points for virtual accessories to customize their virtual cat.
- Evaluate the ease of this process and gauge their comprehension of earning and using rewards within the app.

Stage 3 Getting Feedback:

Task Feedback:
- After each task, prompt participants to share their thoughts, feelings, and any challenges encountered.
- Encourage them to think aloud and express their opinions openly regarding the usability and effectiveness of each feature.

General Impressions:
- Conclude the testing session with open-ended questions about their overall impressions of the app.
- Inquire about specific features they liked, disliked, or found confusing, and encourage suggestions for improvement.

Stage 4 Conclusion:

Thank You and Debrief:
- Thank the participants for their time and valuable feedback on the Purrfect Pet Companion app.
- Offer a debrief session to address any questions or concerns they might have and provide additional information about the project's goals and objectives.

Post-Test Interview:
- Conduct a brief post-test interview to gather additional insights or reflections on the overall user experience and any suggestions for enhancing the app's usability and user engagement.

VI.   AEIOU Protocol

Activities:

- Observe the activities of potential cat adopters as they interact with shelter staff and cats.
  - What specific actions are they taking? Are they interacting with the cats, asking questions, filling out paperwork, etc.?
  - How do their activities change as they progress through the adoption process?

Environment:

- Pay close attention to the physical environment of the shelter.
  - What is the layout of the shelter like? Are there dedicated areas for cat adoption?
  - How is the overall ambiance that affects the infrastructure of the adoption area?
  - Are there any elements in the environment that might influence the decision-making process of potential cat adopters?

Interactions:

- Observe interactions between shelter staff or volunteers and potential cat adopters.
  - What kind of information and guidance are they providing to visitors?
  - How do they engage with visitors and address their questions or concerns?

Objects:

- Take note of the objects and resources available in the adoption area.
    - What materials are provided to potential cat adopters, such as brochures, guides, or educational materials?
    - Are there any cat-related objects, like toys, scratching posts, or litter boxes, that are on display?

Users:

- Focus on the individuals visiting the shelter with the intention of adopting a cat.
    - What are their demographics? Are they families, individuals, students, or other groups?
    - How do they express their interest in adopting a cat, and what are their motivations?
    - Are there any common questions or concerns that potential cat adopters seem to share?
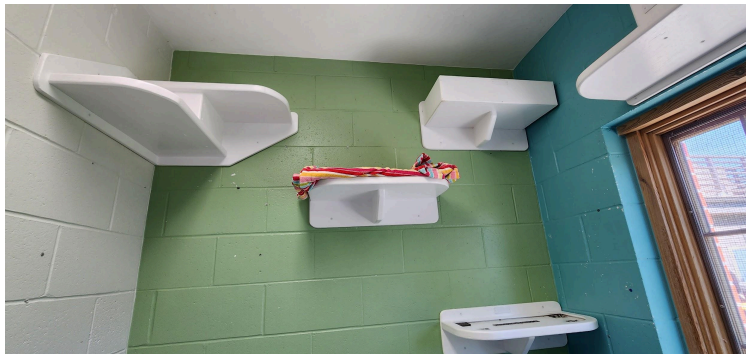
VII. Images from observations
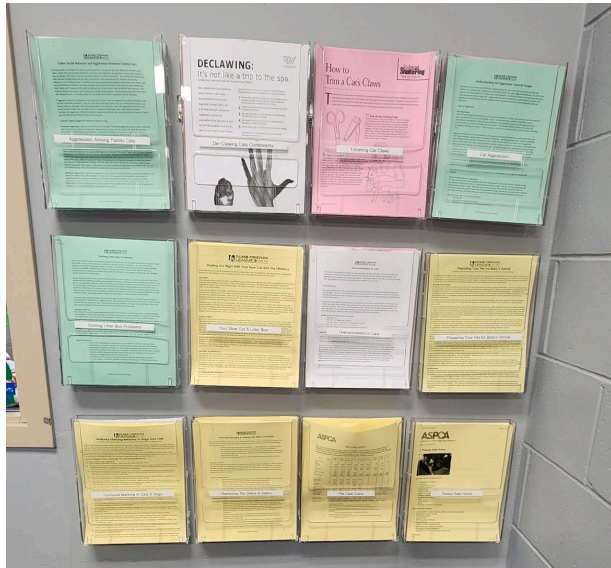
(1,2)Handouts and (3,4)Cat Friendly Environment. (4) Litter box: 2 cats = 2+1 = 3 litter boxes.
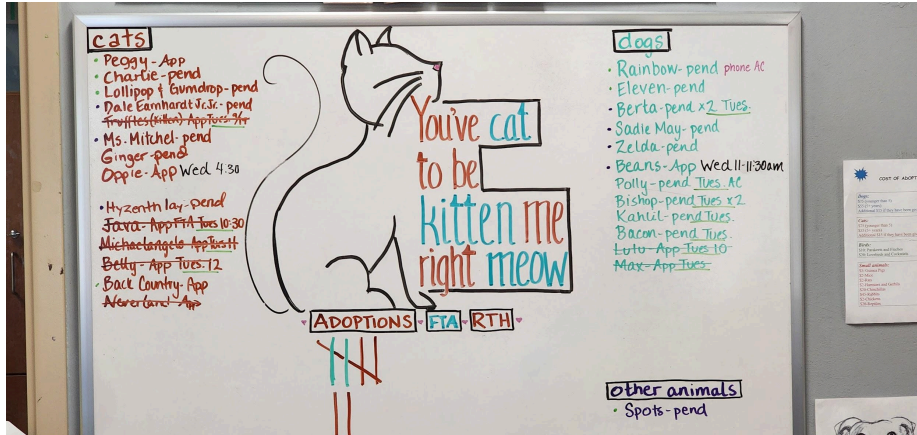
(1) Cat information white board. (2,3) Cat friendly environment. Multiple scratch posts and places to hide and go top.

Helpful handouts and profile tags stuck on the wall.

Cat Friendly High View resting areas

Different Cat colonies; (1) recently admitted/cage, (2) Middle age, (3) Kitten - glass wall

VIII.   Fly-on-the-wall

Day + Date: September 14, 2023. Thursday
Time: 2:00 PM - 2:40 PM
Location: Bloomington Animal Shelter

Fly-on-the-wall Observations:

❖   At the cat shelter, I noticed a diverse group of potential cat owners, including couples and international college students.

❖   The shelter provides plenty of resources in the form of handouts, some of which are posted on the walls inside the cat adoption rooms.

❖   Prospective cat owners visit various cat areas within the shelter and read profile tags to learn more about the cats.

❖   The shelter is divided into four areas for cat interaction: senior cats, middle-aged cats, young cats, and a kitten room. There are also caged cats who are newcomers to the shelter.

❖   I had a conversation with one of the foster parents who had come to pick up a young cat. She explained that they conduct medical checkups and isolate young cats for two weeks when they first arrive. This is to observe their behavior and ensure they socialize with humans before being placed with foster parents.

❖   I scheduled a follow-up call with the foster parent for the next week.

❖   I also overheard a counseling session, which seemed to be the final step before taking a pet home. The counselor provided valuable insights and handed out informational materials to the potential pet owners, and they appeared content and satisfied.

Day + Date: September 19, 2023. Tuesday
Time: 1:20 PM - 2:50 PM
Location: Bloomington Animal Shelter
Method: AEIOU

01:20 PM - 1:40 PM

- I arrived at the Bloomington Animal Shelter and was greeted by a volunteer who had an adoption counseling session to attend.
- I took this opportunity to observe **how volunteers counsel new adopters and address their concerns.**
- The adopters were a couple, both aged around 33-38.
- The volunteer provided information about the **cat's vaccinations and treatment while at the shelter and mentioned that the cat was allergy-free.**
- The couple **inquired about the cat's expected behavior**, and the counselor explained possibilities such as **hiding, sleepiness, and sneezing.**
- The importance of **scheduling a vet appointment was stressed** due to long waiting periods.
- Questions **about cat food** were answered, with the counselor providing sample food packets and **emphasizing gradual food transitions.**
- The couple asked about the possibility of returning the cat.
- The counselor mentioned they could bring their pet back anytime and **provided information on pet sitting services in town.**
- Another potential cat adopter arrived, diverting my attention.

2:00 PM - 2:20 PM

- The couple left with **cat care handouts.**
- I changed my seating position in the cat adoption area, **noting the presence of sanitizers and tissues - highlighting that the visitors should clean their hands before interacting with cats in each colony.**
- The cat area was divided into five sections: big cats, young cats, kittens, middle-aged cats, and newly admitted cats.
- The new observer seemed to explore all areas briefly before deciding where to visit first.
- He **initially interacted with kittens through a glass wall but didn't enter the enclosure.**
- He briefly **looked at cats in cages, then headed to the young cat colony.**
- He connected with a gray-black cat named "Papa Gray," **known to be adoptable with another cat.**
- **He then visited the big cats colony.**

2:20 - 2:35 pm

- I entered the big cats colony and observed the observer.
- **He spent time with a quiet, sleeping cat for about 5 minutes.**
- I asked if he liked the cat, and he explained **he was looking for a calm and easy-going cat as a PhD student with a busy schedule.**
- A volunteer informed the observer that the cat was pending adoption, but he continued petting the cat.
- The volunteer suggested **he still apply, as sometimes applicants don't follow through.**

2:35 - 2:40 PM

- The volunteer returned to the reception desk.
- The **observer reviewed the cat's profile charts, pleased to find the cat was neutered.**
- The volunteer returned and revealed that the person who applied for the cat earlier hadn't shown up.
- The observer was informed he could apply, and he looked happy.

2:40 - 2:50 PM

- I observed the interaction between the observer and the front desk manager through the window.
- The **observer appeared confident while filling out the adoption application.**
- Once the application was complete, **the volunteer marked a "2" next to the cat's name on the whiteboard, making the observer very happy.**

IX. **Market Research**

Product Overview

A. **Neopets**

Neopets' History: Neopets, introduced to the digital realm in 1999, quickly became a pioneer in the virtual pet market. Developed by Adam Powell and Donna Williams, this online platform transported users to the imaginative world of Neopia. With its diverse cast of virtual creatures,

Neopets offered a unique blend of pet ownership, gaming, and community interaction. Over the years, it has grown and evolved to become a beloved brand.

Key Features: Neopets' core concept revolves around the adoption and care of virtual pets, affectionately known as "Neopets." These pets come in various species, colors, and personalities, offering users a wide range of choices. Key features of Neopets include:

I.   Virtual World of Neopia: Neopets takes place in the fictional world of Neopia, a vast and diverse land with different regions and themes, such as Faerieland, Tyrannia, and Mystery Island.
II.   Activities and Games: Users can engage in various activities and games to earn Neopoints, the in-game currency. These activities include quests, customization, and user-created content.
III. Customization: Neopets can be customized in terms of their appearance, using items and paint brushes, allowing users to create unique and personalized pets.
IV.   Community Interaction: The platform boasts a strong and active community, with user forums, message boards, and trading post features, enabling social interaction and collaboration.

B.   GigaPets

Giga Pets' History: The Giga Pets brand emerged in the late 1990s, during the heyday of handheld electronic pet devices. These portable companions gained popularity and captivated users with their simple yet engaging approach to virtual pet ownership. Giga Pets became a part of popular culture and fostered a sense of responsibility and connection.

Key Features: Giga Pets offered a different take on the virtual pet experience, characterized by:

I.   Portable Electronic Devices: Giga Pets were pocket-sized electronic devices featuring LCD screens and a few buttons for navigation. They were known for their compact design and convenience.
II.   Variety of Pets: Users could choose from various pet options, such as cats, dogs, and other creatures. Each model often featured a specific pet type.
III. Basic Interactions: Users cared for their virtual pets by feeding, playing with them, and addressing their needs for rest and cleanliness. Neglect could lead to the pet's unhappiness or even demise.

C.   AdoptMe.com

"AdoptMe.com" Overview: "AdoptMe.com" is a modern entrant into the virtual pet landscape, offering a unique and innovative experience. Its approach involves the adoption and care of AI-generated animals, combining elements of AI interaction, gameplay, and storytelling in a web-based platform.

Key Features: "AdoptMe.com" presents users with a novel approach to virtual pet ownership, characterized by:
I.   AI-Generated Animals: Users can adopt and care for AI-generated animals, each with its own characteristics and personality traits.
II.   Interactive Games: The platform offers various interactive games, such as guessing games and virtual adventures where the AI animal guides users through stories and choices.
III.   Chat and Interaction: Users can chat with their AI pets and interact with them through a chat interface, fostering a sense of connection and companionship.
IV.   Customization: "AdoptMe.com" provides options for personalizing the AI animals and their surroundings.
V.   Re-Adoption: Users have the option to put their adopted AI animals up for adoption again, creating a dynamic and evolving experience.

User Engagement

  A. Neopets

The user experience on Neopets is characterized by an immersive, web-based interface that provides a rich and interactive environment. Neopets' user interface is designed to be visually appealing and easy to navigate. Users can explore the diverse regions of Neopia, interact with their Neopets, and access various features through a well-organized menu system. The platform's bright and colorful design, along with its user-friendly navigation, contributes to a visually engaging and enjoyable experience.

Engagement: Neopets excels in engaging users through its wide range of activities. Quests, games, and customization options keep users entertained and motivated to return to the platform regularly. The sense of ownership and attachment to the Neopets, combined with the opportunity to interact with a vibrant community, fosters a strong sense of engagement. The platform's extensive lore and storytelling elements further enhance the immersive experience.

B. Giga Pets

Giga Pets offer a unique user experience with their pocket-sized electronic device design. The user interface is simplified and tailored to the device's small LCD screen and limited buttons. Users interact with their virtual pets through basic button presses and simple menu options. While the interface lacks the sophistication of web-based platforms, it provides a straightforward and nostalgic experience for those who appreciate the charm of handheld devices.

Engagement: Giga Pets engage users through their simplicity and tangible nature. Users experience a sense of responsibility by carrying their virtual pets with them, tending to their needs throughout the day. The limited interactions and feedback offered by the device contribute to a different form of engagement that may appeal to a specific audience, particularly those who enjoy collectibles and the tactile experience of caring for a virtual pet.

C. AdoptMe.com

"AdoptMe.com" offers a web-based user interface, accessible from various devices. The interface is designed to accommodate a broad range of users, and it leverages modern web design principles. Users can interact with their AI-generated animals, access games, and engage with the platform's various features through a visually appealing and responsive interface.

Engagement: The user experience on "AdoptMe.com" is driven by interactivity and innovation. Users engage with their AI animals through chat interfaces, play games, and participate in virtual adventures where they make choices to influence the narrative. The chat feature fosters a sense of companionship, while the interactive storytelling aspect keeps users engaged and invested in their AI pets. The dynamic and evolving nature of the experience, with the option to re-adopt or trade AI animals, adds to the platform's uniqueness.

Monetization Strategies

A. Neopets

Revenue Model: Neopets employs a multifaceted monetization strategy, allowing it to generate revenue from various sources. The primary revenue streams include:

I. Premium Memberships: Neopets offers premium memberships, such as Neopets Premium, which provides users with exclusive features, faster site access, and additional customization options. Subscribers pay a monthly fee for these privileges.

II. In-Game Purchases: Users can make in-game purchases using the virtual currency known as Neocash. Neocash can be bought with real money and spent on items, wearables, and customization options.

III. Virtual Goods: Neopets hosts a bustling virtual economy where users buy, sell, and trade virtual goods in the form of items and collectibles. Users often spend real money to acquire valuable in-game items.

IV. Advertising: Advertising plays a role in generating revenue, as the platform displays ads to users. These ads can be in the form of banners, sponsorships, or promotions from partner brands.

B. Giga Pets

Revenue Model: Giga Pets, in its heyday, generated revenue primarily through the initial purchase of Giga Pets devices and potential accessory sales. The monetization strategy is characterized by:

I. Device Sales: Users purchased Giga Pets electronic pet devices, and this one-time purchase provided the primary source of revenue. The devices often featured different virtual pet types to appeal to collectors.

II. Accessory Sales: Giga Pets occasionally offered additional accessories, such as keychains, cases, or special device variants, which could serve as supplementary sources of revenue.

C. AdopteMe.com

Revenue Model: "AdoptMe.com" employs a revenue model that incorporates microtransactions, virtual currency, and potentially advertising:

I. Microtransactions: Users have the option to spend real money on virtual currency or items within the platform. This can include purchases of in-game currency or virtual goods that enhance the experience.

II. Virtual Currency: The platform may introduce a virtual currency that users can purchase with real money. This currency can be used for various in-game transactions and purchases.

Popularity and User Base

A. Neopets

User Base: Neopets has maintained a significant and active user base since its inception in 1999. The platform's appeal transcends age groups, with users spanning from children to adults. The user base is diverse, including pet enthusiasts, gamers, collectors, and those who appreciate the platform's rich lore and community interactions.

Popularity Factors: The popularity of Neopets can be attributed to several key factors:

I. Engaging Activities: The platform offers a wide array of activities, games, and quests, keeping users entertained and engaged over the long term.
II. Customization: The ability to customize and personalize Neopets and their surroundings allows users to create unique virtual companions.
III. Community Interaction: Neopets fosters a strong sense of community through user forums, message boards, and trading features. The sense of belonging and collaboration enhances the platform's appeal.
IV. Nostalgia: Neopets holds a special place in the hearts of those who grew up with it, and nostalgia plays a role in retaining and attracting users.

B. Giga Pets

User Base: Giga Pets enjoyed significant popularity during their prime in the late 1990s and early 2000s. The user base primarily consisted of children and teenagers, as well as individuals who appreciated the simplicity and collectible nature of the devices. Giga Pets fostered a sense of responsibility and ownership in users, much like caring for real pets.

Popularity Factors: The enduring popularity of Giga Pets can be attributed to:

I. Tactile Experience: Giga Pets offer a tactile and hands-on experience, appealing to users who appreciate the physicality of caring for a virtual pet.

II. Collectibles: Giga Pets became collectibles in their own right, with different models and designs, attracting collectors and enthusiasts.

III. Nostalgia: Like Neopets, Giga Pets evoke nostalgia among those who owned and cared for these handheld electronic devices during their childhood.

C. AdoptMe.com

User Base: "AdoptMe.com" has emerged as a modern and innovative virtual pet platform, drawing users who appreciate its AI-generated animals and interactive features. The user base primarily consists of a younger demographic, including children and preteens, who are curious about AI and virtual pet experiences. Additionally, older users may be intrigued by the platform's unique concept and gameplay.

Popularity Factors: The popularity of "AdoptMe.com" is driven by:

I.   AI Interaction: The concept of AI-generated animals that can chat and engage with users offers a novel and intriguing experience.

II. Interactive Gameplay: The platform's interactive games and storytelling elements make it engaging and appealing, particularly to younger users.

III. Constant Evolution: The dynamic nature of the platform, with the ability to re-adopt and trade AI animals, creates an evolving experience that keeps users engaged.

IV. Accessibility: The web-based nature of the platform ensures accessibility across various devices, making it easy for users to join and interact.

Community and Social Interaction

A. Neopets

Community Features: Neopets has a thriving online community where users can engage with one another through various features:

I.   User Forums and Message Boards: Neopets hosts user forums and message boards covering a wide range of topics, from gameplay strategies and customization tips to off-topic discussions. These forums facilitate user interaction and provide a platform for discussions and exchanges.

II. Guilds: Guilds on Neopets are user-created communities focused on specific interests or themes. Users can join guilds, participate in activities, and connect with like-minded individuals.

III. Trading Post: The Trading Post allows users to trade items, Neopets, and currency. Users can negotiate and make trades, fostering a sense of community interaction and collaboration.

IV. Contests and Events: Neopets regularly organizes contests and events where users can showcase their creativity, participate in challenges, and win prizes. These events promote community engagement and friendly competition.

Impact on User Experience: The community features of Neopets play a significant role in enhancing the user experience. Users often form connections, share knowledge, and collaborate on various activities, adding a social dimension to the platform. The sense of belonging to a larger community contributes to the long-term engagement of users.

B. Giga Pets

Community Features: Giga Pets, being handheld electronic devices, do not have extensive online community features like web-based platforms. However, there is a sense of community among collectors and enthusiasts who appreciate these devices.

I. Offline Sharing: Giga Pets encourage offline sharing among users who physically connect their devices or show off their virtual pets to friends and family. This physical interaction adds a social aspect to the experience.

II. Collectors' Communities: Collectors and enthusiasts of Giga Pets often form online and offline communities to discuss, trade, and showcase their collections. These communities contribute to the sense of belonging.

Impact on User Experience: The community interaction related to Giga Pets is primarily among collectors and fans who share a passion for these devices. It adds a social dimension to the experience, as users connect with others who appreciate the nostalgia and uniqueness of Giga Pets.

C. AdoptMe.com

Community Features: "AdoptMe.com" integrates community and social interaction features directly into its platform:

I. Chat with AI Animals: Users can chat with the AI-generated animals they adopt, fostering a sense of companionship and interaction.

II. Virtual Pet Trading: The platform allows users to trade their adopted AI animals with others, leading to a sense of community engagement and collaboration.

III. Player-Created Content: Users can create and share content within the platform, including stories and experiences related to their AI pets. This feature encourages user-generated content and interaction.

IV. Community Challenges: "AdoptMe.com" occasionally hosts community challenges and events that encourage users to participate, compete, and engage with one another.

Impact on User Experience: The community and social interaction features on "AdoptMe.com" are integral to the user experience. The ability to chat with AI animals and interact with other users through trading and content creation contributes to a sense of community and connection.

X.   Early Concepts

Levels

Before we delve into the design solution, let's explore the key elements of this design: the levels—beginner, navigator, and expert. Users will progress through these levels as they enhance their learning knowledge within the app.

The app has three levels; beginner, navigator and expert. These levels are determined by the total points users have earned after completing learning modules!

Onboarding

Are you renting an apartment?	Will you be staying alone or have a rommie?	Why should understanding the cat's behavior and body language be considered?
Yes	Yes	Positive impact on humans
No	No	The emotional needs of the cat
		Next

Understanding the user's living situation, preferences, and expectations offers personalized recommendations. As part of the onboarding, when a potential cat owner joins the platform, they'll be asked about their daily routine—whether they stay alone, rent an apartment, or have ever had a cat. This will help the design to provide them recommendations for adopting a cat once they reach "expert" level.

FurryFriend
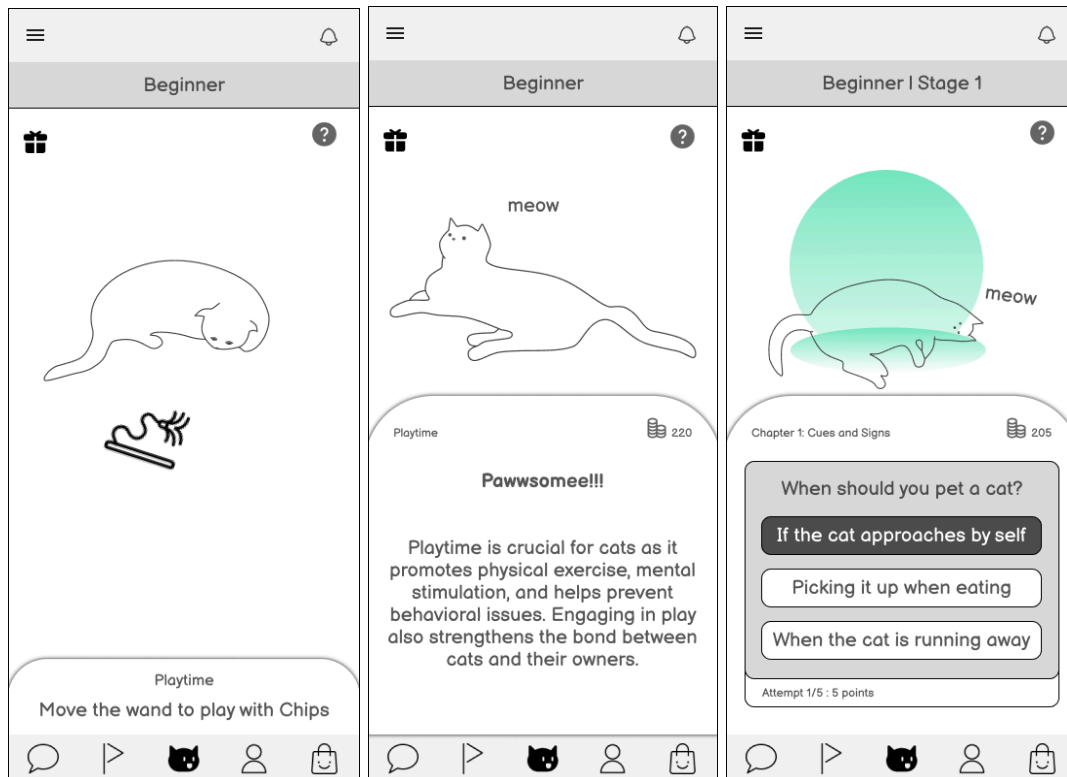
An interactive space for users to communicate and learn cat behaviors and master each chapter.

Users will have to practice calling their cat by its name every time they log in and start learning. The first step of every learning chapter will be calling out their cat. Research shows that cats can recognize their owners' voices, thus, making users call their cat by name forms a crucial bonding step.

In this space, users will encounter learning quiz decks. Each question will reward them with some points - unless they don't guess the right answer. Users will be provided with an explanation of the correct option regardless of their choice. Moreover, Users have the option to view the chapter details

Users will also perform random tasks like playing with their virtual cat, earning bonus points. Through my primary research the biggest common misconception I came across was that cats are low maintenance and do not require much attention like dogs. However, research says that cats do need external stimuli that would keep them entertained like any other house pet.

Pet Shop
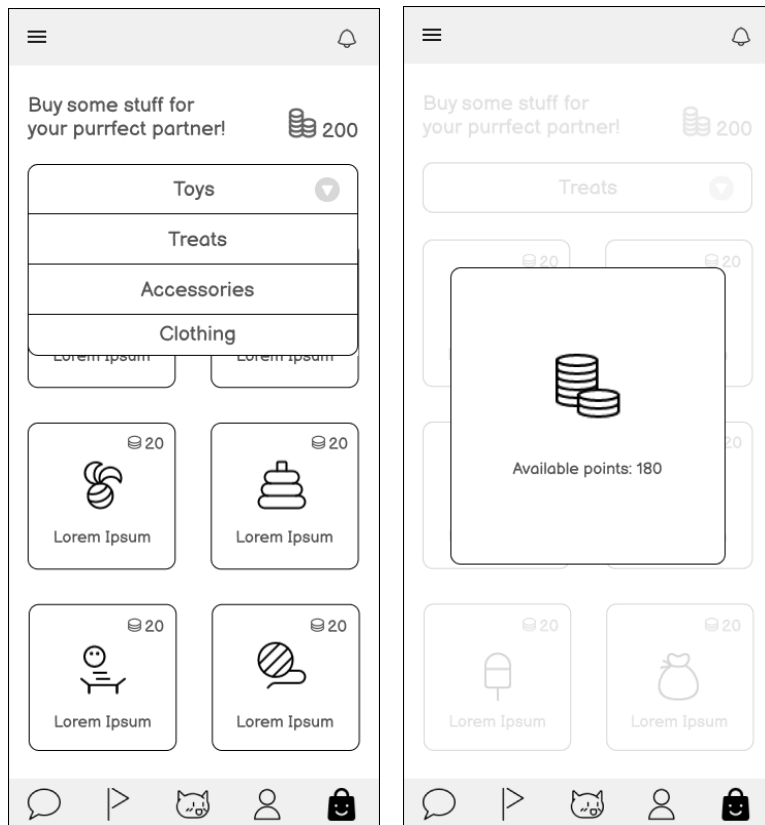
Users can redeem their points to buy virtual accessories for their pets. User interviews showed that people do believe that cats are low maintenance and do not require financial care. However, talking to subject matter experts and successful cat owners, it is evident that managing a cat financially is similar to other midsize pets.

Pawwket
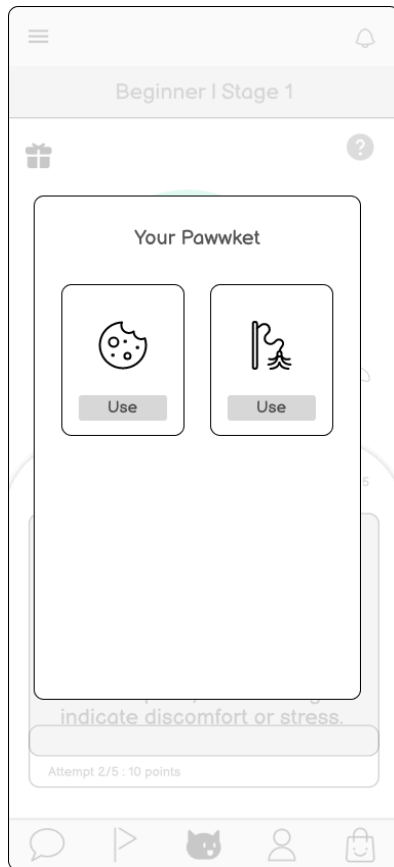
Once users accumulate enough points, they can visit the pet shop to purchase virtual goodies and treats for their cat, which will be reflected in their virtual pocket.These treats will be available to the users in their cat space!

Journey
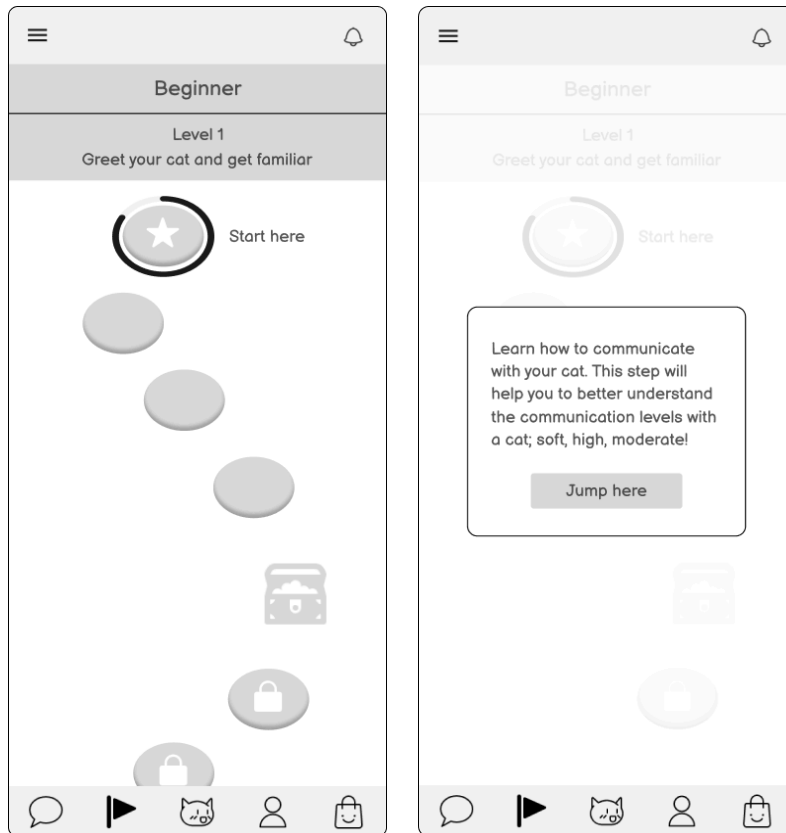
In the Journey section, users can track their progress through chapters. They won't have access to later chapters until they complete the initial ones. Users can see their learning modules and get a brief understanding of what these modules consist of.

Discovery

The Discovery page is where users can ask questions, start conversations, or comment on posts. Text in this space will be tagged as "beginner," "navigator," or "expert." My primary research showed that there is a need for community engagement, however, subject matter experts fear if the information available on any online forum can be trusted or not. Thus, the user has the freedom to consider the information as trusted or not, by making decisions based on the tags. And these level tags will be gained as they progress through their learning journey.
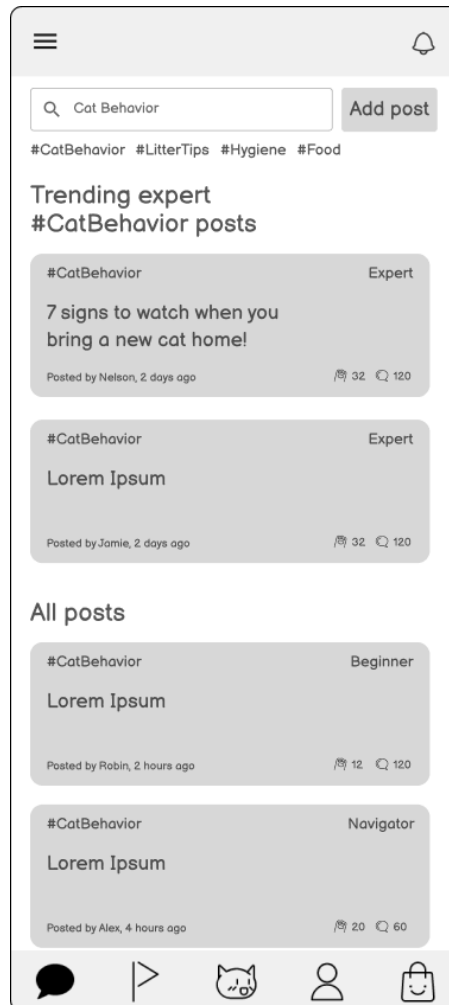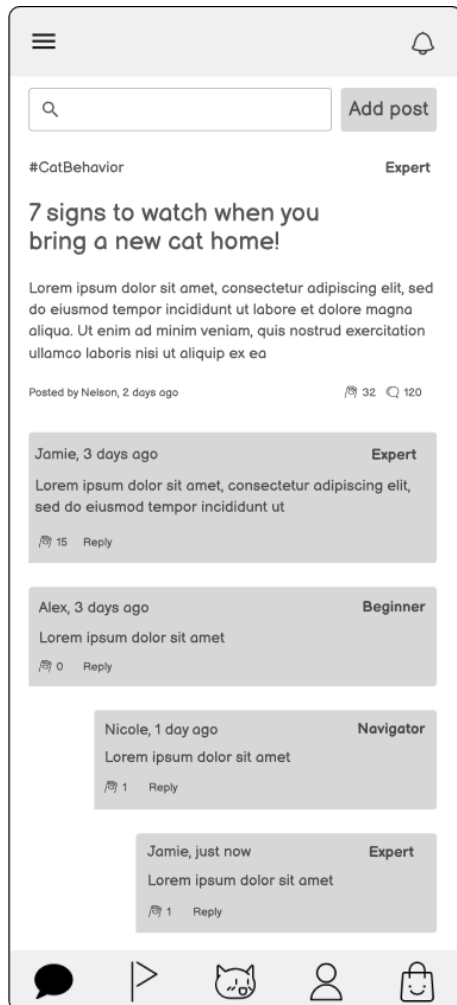
Users can upvote others' comments or posts—these upvotes, called meows, contribute to their level of expertise.

Profile
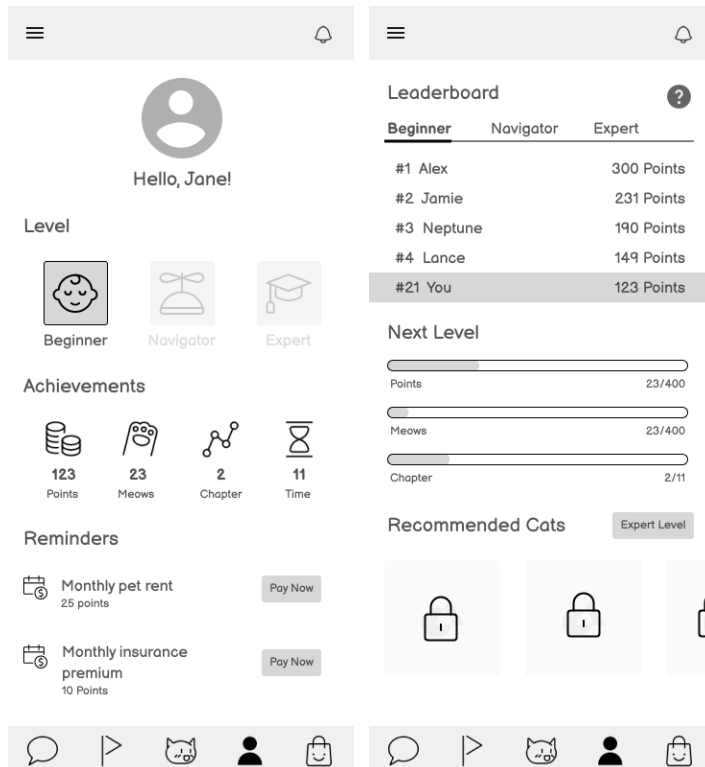
Users have access to their overall statistics, progress and how far they are from achieving their next level badge. They can also view upcoming point deductions, such as monthly rent payments and insurance premiums.

Users will have access to a leaderboard, showcasing leaders from each level—expert, navigator, and beginner. Upon reaching the expert level, users can view recommended cats based on their onboarding responses.

Working of the reward system

There are three types of rewards: Points, Meows, and Milestones.

    I.   **For Points:**
        A. 5 points for the first correct attempt.
        B. Each subsequent correct attempt increases points by 5 (10, 15, 20, 25).
        C. Deduct 5 points for each incorrect choice.
        D. 20 bonus points after completing each activity.

II. **Meows:**

    A. Every 30 meows convert to 5 points.

III. **Milestones:**

    A. Achieving threshold points for each level allows users to move to the next level.

    B. Beginner Level - 0 to 400 points

    C. Navigator Level - 400 to 600 points

    D. Expert Level - 600+ points

Planning of chapters and stages

The learning chapters or modules in chapter are planned based on ongoing research, insights from expert interviews, readings, and associated with the journey map created during my research.