# Sappling: An Interactive Platform for Creative Expression and Collaboration

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## Proposal Abstract

Sappling is a new application that aims to tackle some of the shortcomings of traditional social media, which currently dominates the way we interact with friends and other users online. In its initial phase, we plan to target a certain demographic of people that we feel would benefit most from the platform, such as engineers or musicians. As a part of my project, I plan to help identify which group we want to target in this development stage, using survey data and other metrics to measure different groups and their likelihood to benefit from this new platform. As some research suggests social media platforms are not simply 'tools' for engagement, but they are also part of a rapidly changing institutional and political landscape where they can influence both supportive and critical attitudes towards education (Van Dijck & Poell, 2018). Sappling aims to capitalize on this area of the social media space, where users are more likely to engage with each other and promote collaboration and positive social engagement that will drive higher levels of creativity and unfiltered expression. Along with determining the ideal user base for the initial launch of this project, the current application design will also require user testing and basic modifications to ensure that the design at launch is fit to accompany a variety of marketing efforts to promote the app to new users and make it attractive and intuitive.

The user interface and experience design will be my main focus for the project, as it aligns with the concentration I have chosen and the career I plan to pursue after graduation. Based on the current design, there are some key areas for improvement that I noticed in my initial evaluation. Some of these include: allowing the user to put the current task into a meaningful context, disclosing information in a progressive fashion, and defining shortcuts that are intuitive (Sridevi, 2014). I plan to create medium and high-fidelity prototypes of the application based on the current design, and perform user testing to measure the success of these

proposed changes and collect data on how the usability of the design can be improved. These prototypes and user tests will be completed by the end of this academic quarter, around the second week of March in preparation for the compilation of results and presentation before the quarter concludes. The current design and functionality will be compared to the new prototype to evaluate the effectiveness and usability of the new design, using data from a variety of different potential users. The project will also include a limited branding overhaul to create a more effective logo and marketing collateral to accompany the launch of the app to new users.

## Literature Review

The first concept that I want to emphasize in my project is Social Information Processing theory, which describes the relationship between social cues and how individuals come to make decisions and develop attitudes in a social setting. RM Gilbert (2019) conducted a study that explores the concept of universal usability, emphasizing the crucial need to design computer interfaces that accommodate diverse user populations. This analysis investigates how their study aligns with Social Information Processing theory, revealing the interconnectedness between universal usability and social interactions in the digital realm. The study underscores the importance of UX designers considering a wide range of users, acknowledging that diversity extends beyond physical abilities. This aligns with SIP theory's premise that individuals process social cues to navigate and interact effectively. Gilbert advocates for inclusivity in design, ensuring that interfaces cater to users with varying abilities. Such inclusivity fosters positive social interactions by accommodating diverse needs, promoting a sense of inclusivity and fostering positive social connections among users.

Additionally, the study's emphasis on user-centered design principles resonates with SIP theory's focus on interpersonal communication. It highlights the significance of involving users in the design process highlighting SIP's emphasis on how individuals interpret and respond to social cues. By involving diverse users in the design process, interfaces can become more technically efficient and socially relevant, addressing the varied ways individuals process information socially. The study also stresses the importance of clear and accessible communication within interfaces, which aligns with SIP theory's emphasis on effective communication channels in digital environments. Interfaces designed for universal usability

should facilitate effective communication, considering diverse needs. This resonates with SIP theory, as effective communication is essential for forming and maintaining social relationships.

I also analyzed the study “Exploring the relationship between web accessibility and user experience” (Aizpurua, A., Harper, S., & Vigo, M. 2016) to understand this relationship to SIP theory. The study’s emphasis on inclusive design aligns seamlessly with SIP theory, which posits that individuals engage in social information processing to form impressions and make decisions. Inclusive design principles, as advocated in the study, ensure that digital interfaces cater to a diverse range of users, considering not only physical abilities but also diverse needs. This alignment with SIP theory suggests that creating inclusive digital environments contributes to more effective social interactions and information processing. The study emphasizes the significance of inclusive design in cultivating positive social interactions. Creating interfaces that cater to a diverse user spectrum fosters a more welcoming and accessible digital space. SIP theory underscores the importance of social cues in digital interactions, and inclusive design guarantees the accessibility of these cues to everyone, fostering a positive social environment where users feel both included and valued.

Inclusive design not only addresses physical accessibility but also concentrates on enhancing communication. SIP theory underscores the pivotal role of communication channels in digital environments, and inclusive design ensures the accessibility and effectiveness of these channels for a diverse user base. Consequently, this facilitates more efficient information processing as users can engage meaningfully with the content and each other. SIP theory aligns with this perspective, emphasizing that diverse users bring varied perspectives and interpretations to social interactions. Inclusive design acknowledges and embraces this diversity, contributing to richer social information processing within digital environments.

Cooper, Sloan, Kelly, and Lewthwaite's (2012) work challenges conventional web accessibility metrics and guidelines by prioritizing people and processes. The authors advocate for a shift in perspective regarding the crucial role of human-centric approaches in enhancing web accessibility, urging the prioritization of people and processes over rigid adherence to metrics and guidelines. By prioritizing the human aspect of web accessibility, Cooper et al. acknowledge the social nature of online interactions, emphasizing the importance of considering users as active participants in the digital realm. The study recognizes web accessibility as a dynamic and socially influenced process. SIP theory suggests that individuals interpret and respond to social cues in digital environments, and Cooper et al.'s focus on user-centric processes echoes this sentiment. They argue that web accessibility is not a static checklist but an ongoing, socially influenced interaction between users and digital interfaces.

Additionally, this study stresses the significance of involving users in the design process, asserting that their experiences and insights are invaluable. SIP theory aligns with this perspective, as it highlights the role of collective input in forming and maintaining social relationships in digital environments. Prioritizing user participation, the study underscores the social aspect of the design process, recognizing that diverse user perspectives contribute to enhanced web accessibility. The authors advocate for considering varied user outlooks, challenging the traditional one-size-fits-all approach of conventional metrics. SIP theory aligns with this perspective, emphasizing that diverse user populations bring unique interpretations and responses to digital content. Cooper et al.'s approach, acknowledging and incorporating diverse perspectives, resonates with SIP theory's understanding of the dynamic and socially constructed nature of information processing.

Another focal point in my project work emphasized accessibility and the principles of developing digital interfaces that are inclusive and fair to a wide range of users. Brajnik, Yesilada, and Harper's (2012) study critically evaluates the validity and reliability of the Web Content Accessibility Guidelines (WCAG) 2.0, challenging the assumption that accessibility conformance, as outlined by WCAG 2.0, is a straightforward and easily measurable property. Through scrutinizing the validity and reliability of WCAG 2.0, the authors shed light on the nuanced nature of accessibility, stressing that it extends beyond mere checklist compliance. This aligns with the challenges encountered in UX/UI design, where achieving authentic accessibility requires a profound understanding of user needs, diverse perspectives, and the dynamic nature of digital interactions.

Brajnik, Yesilada, and Harper's (2012) work implies that achieving accessibility goes beyond conforming to technical standards; it necessitates a comprehensive consideration of the user experience. In UX/UI design, accessibility surpasses checkbox compliance, involving the creation of interfaces genuinely usable by individuals with diverse abilities. This perspective aligns with the evolving understanding of accessibility in design, where user-centric approaches prioritize inclusivity and a positive user experience. The study's exploration of the validity and reliability of WCAG 2.0 mirrors the challenges in ensuring a consistent and meaningful user experience. In UX/UI design, the reliability of accessibility features becomes pivotal for users who rely on consistent and predictable interfaces. Validity in this context extends beyond technical standards to encompass the usability and effectiveness of design elements, reflecting the dynamic nature of user interactions.

The study by Lazar, Jones, Hackley, and Shneiderman (2006) examines the severity and impact of computer user frustration. It compares frustration levels between student and

workplace users, exploring the implications for accessibility in UX/UI design. The research emphasizes the importance of minimizing frustration for all users, including those with diverse needs. User frustration is recognized as a prevalent and impactful aspect of the digital user experience. Factors such as task complexity, system reliability, and user proficiency influence frustration levels. This understanding becomes particularly relevant in the context of accessibility, where frustration can be magnified for users with diverse abilities.

The study highlights the direct implications of user frustration for accessibility in UX/UI design. Individuals with disabilities may face additional challenges, and frustration can be a significant barrier to a positive user experience. Therefore, interfaces need to be designed to minimize frustration for all users, accommodating varying levels of technological proficiency and diverse abilities. The comparison between student and workplace users provides insights into different contexts in which frustration arises. This understanding is crucial for UX/UI designers, as it informs design decisions that address the specific needs and challenges faced by users in different settings. The comparison enhances our understanding of frustration dynamics, contributing to a more comprehensive approach to considering accessibility for diverse user groups.

Lazar et al.'s study underscores the significance of inclusive design practices in reducing user frustration while upholding accessibility. Inclusive design involves developing interfaces that cater to a wide range of users and take into account diverse abilities and contexts. By integrating elements such as clear navigation, error prevention, and consistent feedback, designers can mitigate frustration and enhance digital experiences for all individuals. The research aligns with the user-centric approach advocated in accessibility-centered UX/UI design, stressing the importance of acknowledging and tackling user frustration to place users at the core

of the design process. Designers should empathize with the obstacles encountered by various user groups, including those with disabilities, and purposefully create interfaces that prioritize a positive user experience, thereby reducing frustration and ensuring universal access.

Hassenzahl, Diefenbach, and Göritz's (2010) examination of UX delves into the dimensions of needs and affect within the realm of interactive products. The analysis delves into the ramifications of their discoveries for accessibility in UX/UI design, emphasizing the convergence of user needs, emotional responses, and the establishment of universally inclusive digital experiences. The study illuminates the complex nature of user experience by identifying essential elements such as pragmatic needs, hedonic needs, and affective responses. Pragmatic needs involve fulfilling utilitarian objectives, while hedonic needs address users' aspirations for positive emotions and engagement. Affective responses encompass the emotional reactions users experience during and after interacting with a product. Recognizing these aspects is pivotal for creating holistic and meaningful user experiences.

The study's acknowledgment of pragmatic needs closely aligns with the fundamental principles of accessibility in UX/UI design. Addressing pragmatic needs for users with diverse abilities involves ensuring that digital interfaces are navigable, understandable, and usable. Consequently, accessibility becomes an indispensable aspect of the user experience, addressing the essential need for equal access and functionality for all users, irrespective of their abilities. Exploring affective responses highlights the emotional dimension of the user experience, where emotional reactions significantly influence users' perceptions of a product. Concerning accessibility, understanding and addressing emotional aspects are crucial, as users with disabilities may experience frustration or delight based on how effectively the design meets their

needs. A user-centric approach to accessibility considers the emotional responses of all users, aiming for positive and satisfying interactions.

Hassenzahl et al.'s work emphasizes the interconnectedness of user needs and affective responses, suggesting that a universally inclusive experience goes beyond mere functional aspects. Designing for accessibility involves considering the emotional impact of the interface, ensuring positive and emotionally satisfying interactions for users with disabilities. This perspective aligns with a broader understanding of accessibility, not merely as a checklist of features, but as a commitment to creating inclusive and emotionally resonant digital experiences. The insights from the study harmonize with the principles of user-centered design in accessibility-focused UX/UI design. By acknowledging and addressing both pragmatic needs and affective responses, designers can craft interfaces prioritizing usability, satisfaction, and emotional well-being for users with diverse abilities. A user-centric approach ensures that accessibility is seamlessly integrated into the user experience, enhancing both functionality and emotional resonance.

Furthermore, I explored the topic of collective identity and its correlation with the user experience on specific platforms. The study by Spears and Postmes (2015) extends the Social Identity Model of Deindividuation Effects (SIDE), scrutinizing the dynamics of group identity, social influence, and collective action in online environments. This analysis delves into the implications of their findings for User Experience (UX) and User Interface (UI) design, highlighting the significance of collective identity in shaping digital interactions. The SIDE model serves as the cornerstone for Spears and Postmes' exploration into online group dynamics, asserting that individuals, when part of a group, exhibit behavior influenced by the social identity

derived from that group. The anonymity and reduced social cues in online settings may amplify these effects, resulting in distinctive group dynamics and collective actions.

Within the context of UX/UI design, the study provides insights into how group identity and social influence mold user behavior in digital spaces. Designers must acknowledge that users often interact with online platforms as members of various groups, each with a distinct identity. This awareness is pivotal in creating interfaces that cultivate positive collective experiences, recognizing the impact of group identity on user interactions. The study delves into the concept of collective identity, accentuating that individuals align with a shared identity when engaging in collective actions online. This has implications for UX/UI designers as they contemplate how to facilitate and enrich positive collective experiences within digital interfaces. The incorporation of elements that reinforce collective identity can contribute to a more engaging and cohesive user experience.

Spears and Postmes extend the SIDE model by spotlighting the role of shared social identity in online collective action. This extension offers a nuanced understanding of how group dynamics shape user engagement and decision-making in digital environments. In UX/UI design, this suggests considering features that amplify positive aspects of collective identity, such as group recognition, shared goals, and collaborative functionalities. While the study emphasizes the impact of collective identity on online interactions, it also highlights challenges, including the potential for polarization and conflict within groups. UX/UI designers should navigate these challenges by promoting inclusive design practices, ensuring that interfaces strike a balance between promoting collective identity and addressing individual user needs and perspectives.

The study aligns with a user-centric approach to collective experiences in UX/UI design. Designers can leverage insights from the SIDE model to create interfaces resonating with users'

collective identities, fostering positive social interactions. Through the incorporation of features that reinforce shared identity and values, designers contribute to a more cohesive and satisfying digital experience. Spears and Postmes' exploration of group identity, social influence, and collective action online provides valuable insights for UX/UI designers, underscoring the importance of considering collective identity in the design process. This recognition of its influence on user behavior and interactions, coupled with a user-centric approach, empowers designers to create digital interfaces that resonate with users' social dynamics, fostering a sense of community and shared identity.

Ren et al.'s (2012) investigation explores the establishment of member attachment in online communities by applying theories related to group identity and interpersonal bonds. This examination probes into the implications of their discoveries for User Experience (UX) and User Interface (UI) design, spotlighting the interplay between fostering member attachment and cultivating a collective identity within digital interfaces. The study employs theories concerning group identity and interpersonal bonds to clarify how online communities can enhance member attachment. By amalgamating concepts from social psychology and communication theories, the researchers strive to reveal mechanisms contributing to the formation of strong connections among community members.

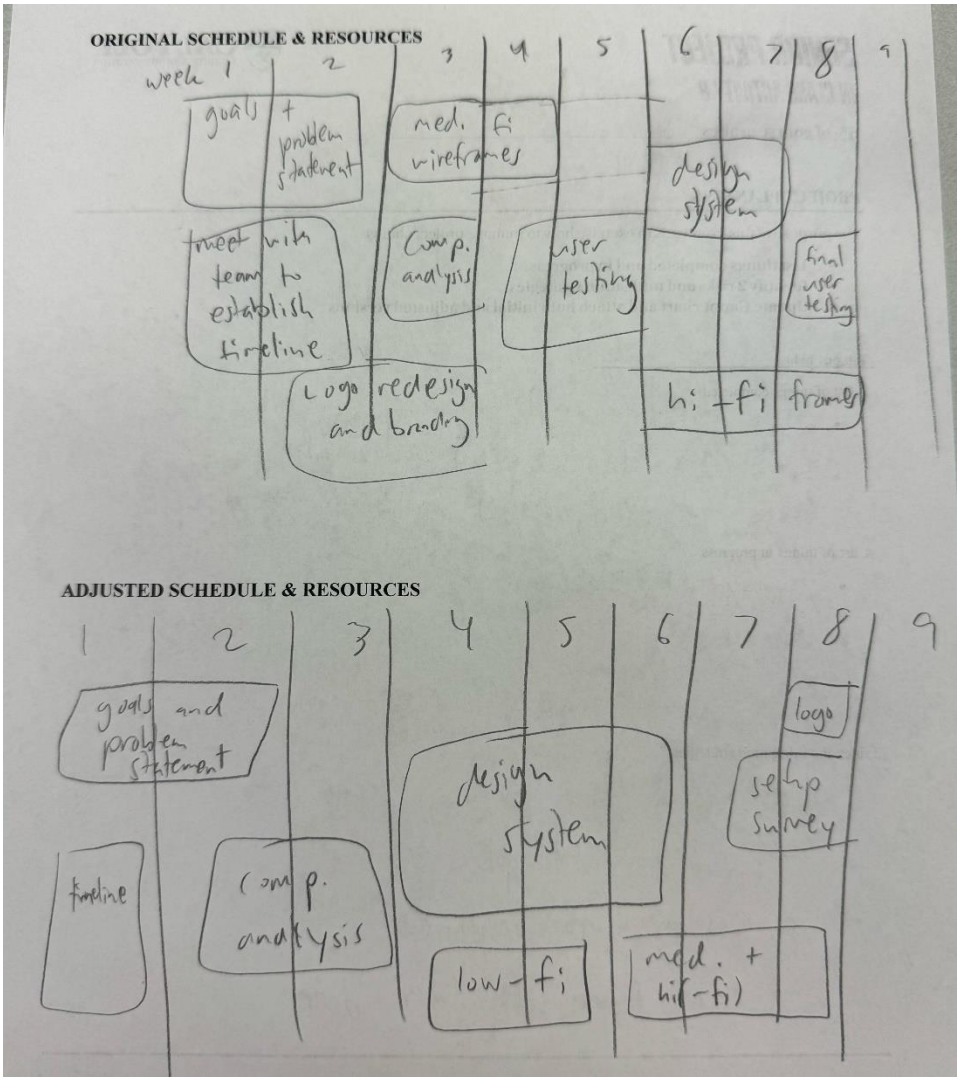
In the domain of UX/UI design, the study provides valuable insights into design principles that can nurture member attachment in online communities. Designers can leverage these insights to shape interfaces that transcend mere functionality, emphasizing the establishment of emotional bonds and a sense of belonging among users. The study underscores the importance of nurturing group identity within online communities, arguing that a robust group identity fosters a sense of community and belonging—fundamental elements for member

attachment. This aligns with the broader concept of collective identity in UX/UI design, emphasizing the creation of digital spaces where users encounter a shared sense of identity and purpose.

Incorporating elements that promote group identity, such as group recognition, shared goals, and collaborative features, becomes pivotal in UX/UI design. Designers, by creating interfaces that facilitate interpersonal bonds and a communal atmosphere, contribute to a positive user experience, encouraging users to form attachments within the digital space. The study suggests a close connection between member attachment, user engagement, and community retention. In UX/UI design, this implies a concentration on features that not only attract users but also nurture a sense of belonging and connection over time.

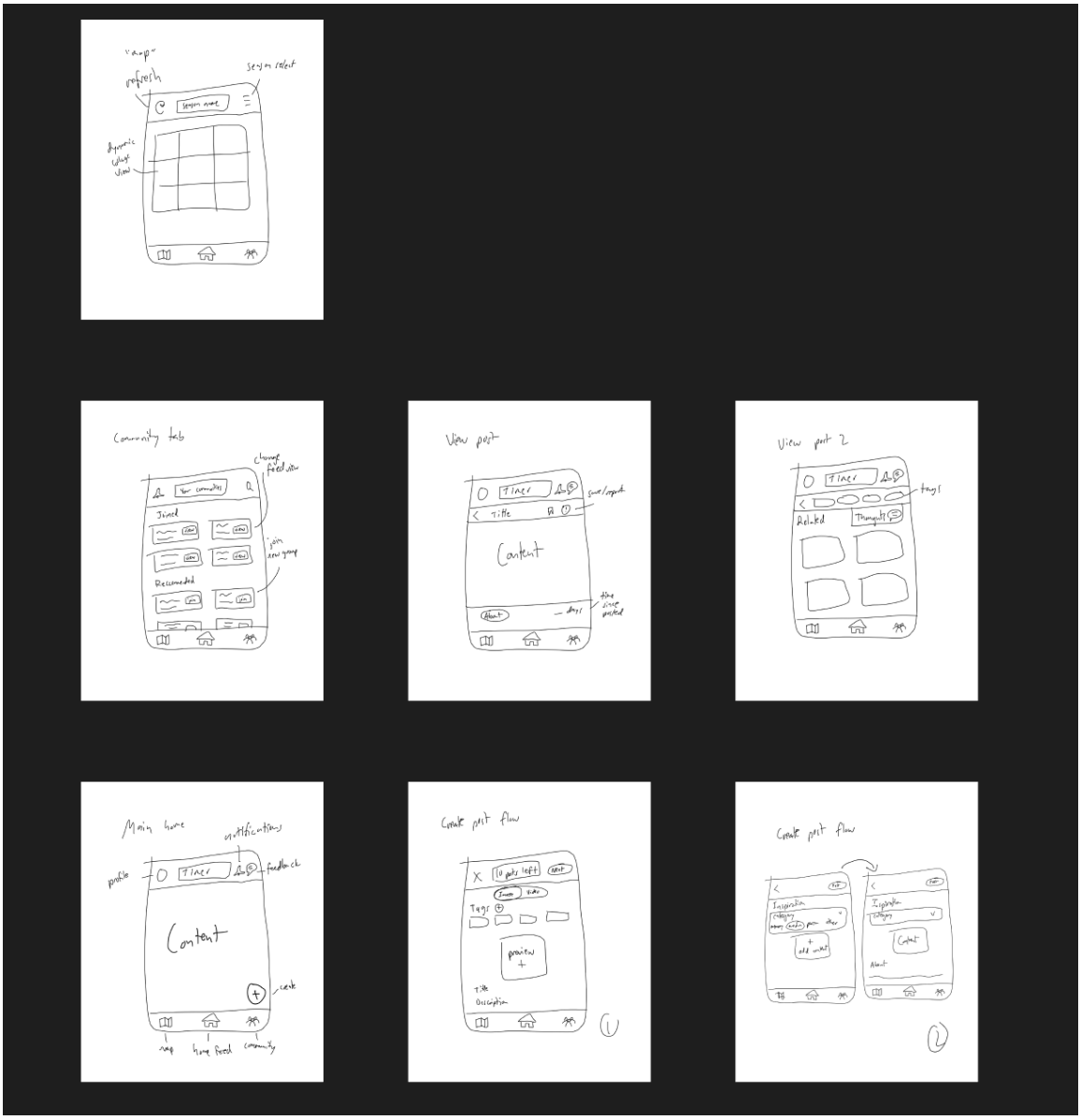
Designers should prioritize elements that sustain engagement and foster a positive collective experience. While recognizing the essential nature of building member attachment, the study acknowledges challenges such as balancing individual needs with group dynamics. UX/UI designers must navigate these challenges through a user-centric approach, ensuring interfaces strike a delicate balance between promoting a collective identity and addressing individual user preferences. This nuanced approach contributes to the creation of digital environments that not only facilitate member attachment but also resonate with users' emotional and social needs, fostering a sense of community and shared identity.

# Project Schedule

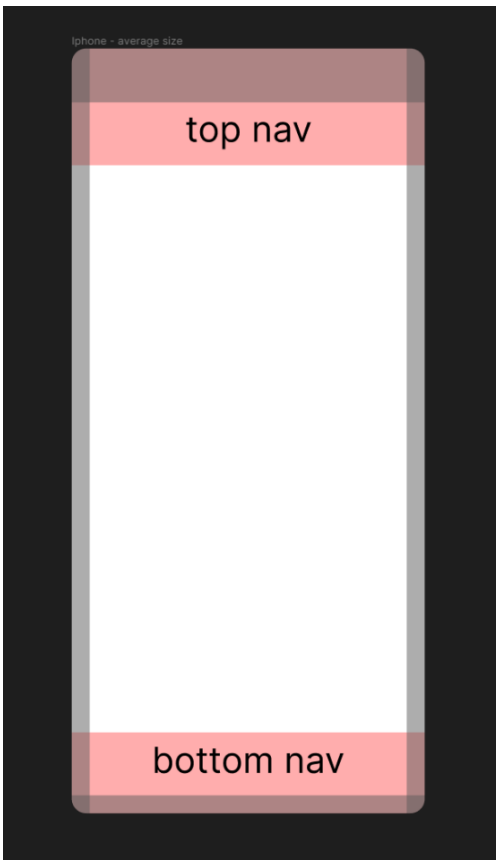



This was the timeline I used to plan my project. Initially, I planned to complete a case study involving users from the 3 university campuses that my friends and I represent, but due to time constraints and other concerns, I decided to focus on creating a new design system and the interactive prototype as the main elements of my project. I also decided not to move forward with the logo redesign at this point, as we got good feedback from peers and other consultants that enjoyed the current design. Moving forward, I plan to conduct the case study next quarter along with some additional marketing materials I created to drive new users to our app.

## Results and Evaluation

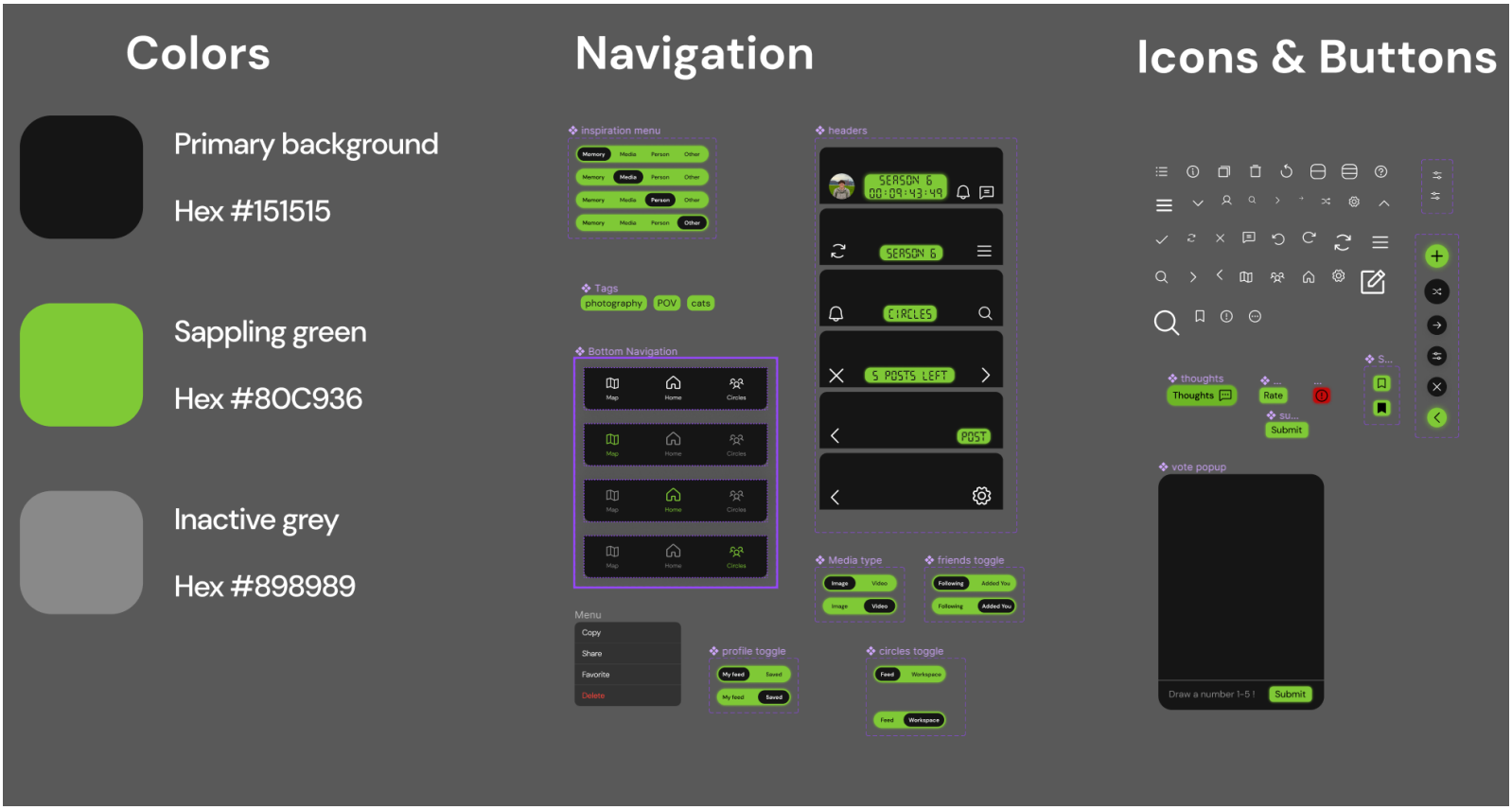



After I performed a competitive analysis of similar platforms, including apps like Reddit that emphasize a community structure, the first step in my design process was creating a set of wireframes to model changes to screens in our working design that could be refined to create a more seamless experience for our users. This helped me to visualize what elements needed to be created in my design system and the new layout of these screens.



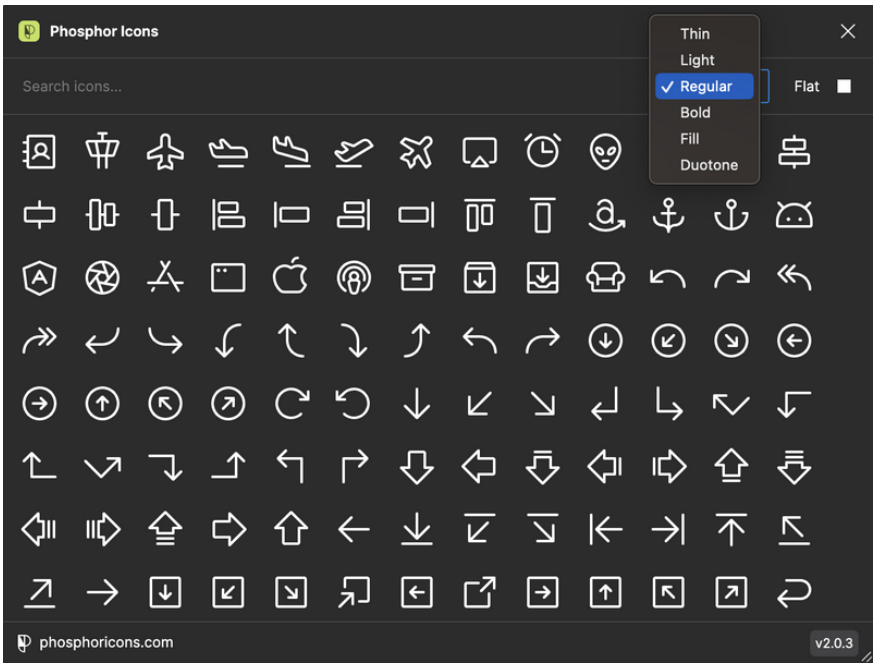

After working on my wireframes, I used this breakpoint screen to highlight the iPhone screen size, as well as the padding and space necessary to account for the top and bottom navigation.

Using this breakpoint allowed me to ensure all of my screens have equal padding with concrete numbers.



After creating the breakpoint screen to define padding and safe areas, I moved onto the creation of a design system. Our working version was lacking a component-based system, which will make further development more seamless. By creating a system of components, we can achieve nearly 100% cohesion across our design. Every single UI element is a component or variant of a component in. The prototype is comprised entirely of reusable components which is evident in the cohesion across the design. The design system was one of my main goals for the project, as I was looking to create a library that can be easily maintained and applied to future design iterations.

In my design system, I utilized icons from the Phosphor Figma plugin, which features a library of thousands of open-source icons. These icons can be filtered by thickness and shape type to ensure consistency. Icons are also searchable and indexed, which allowed me to achieve further consistency and scalability in my design system. I used flat, regular thickness white icons.



After revising my project timeline, the design system and Figma prototype became the main success criterion that I was aiming to complete in our 10-week timeframe. I am proud of the work I completed and look at it as a successful completion of the modified goals that I set when we revised our project schedule and goals. The documentation I was able to create using my Figma project serves as a comparison between the current working design and the updated user interface that I created throughout the duration of this project.

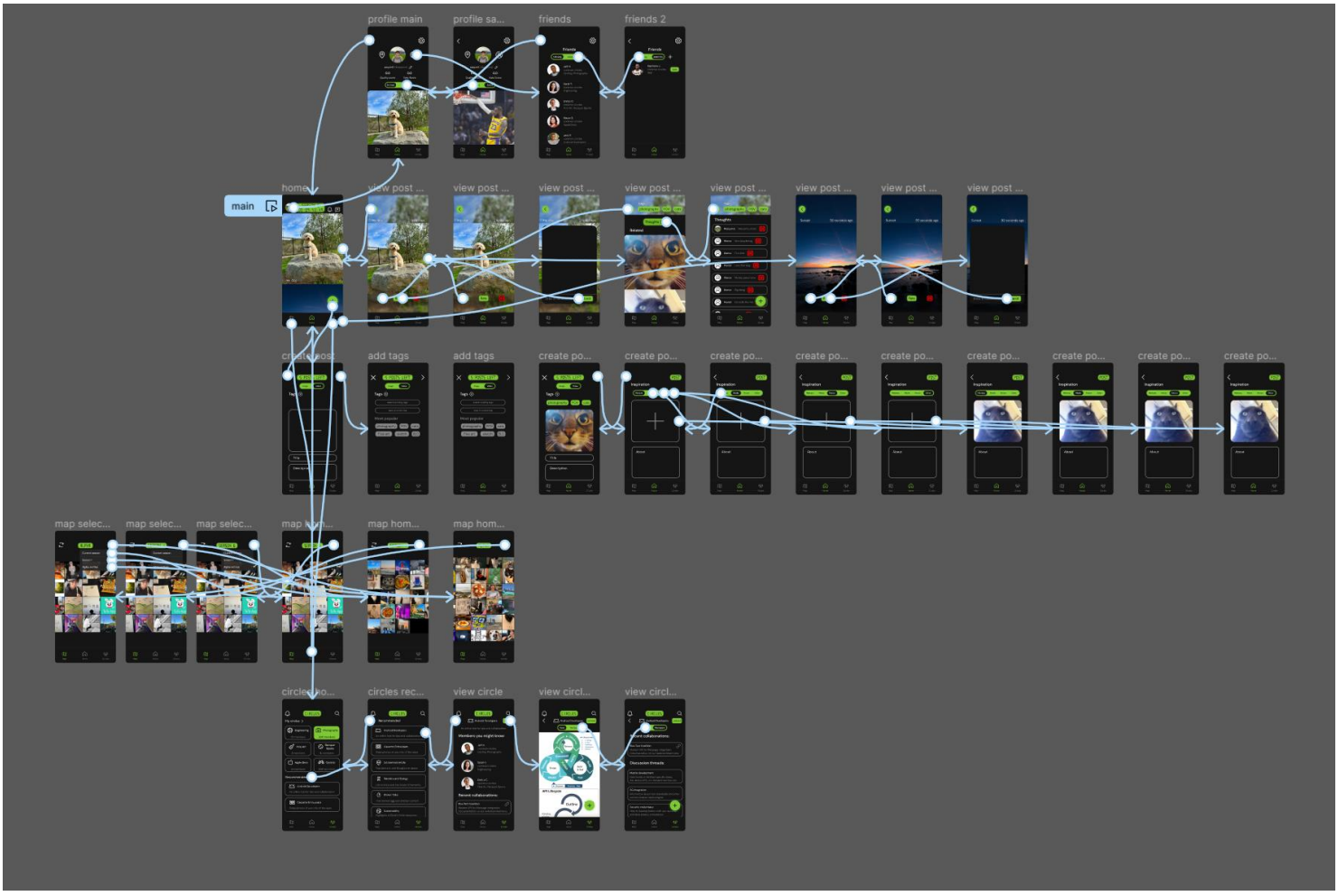
Due to my revisions to my initial timeline and goals, I chose to forego the survey and logo design, shifting my focus during those weeks to additional marketing materials that have been a long-term goal in our previous work on Sappling. I created a logo that we plan to use for flyers that will hopefully drive new traffic from our university campuses and other locations that we will post them in. Unfortunately, I cannot share the logo in this documentation as we are planning to roll out the initiative after the quarter is concluded. My friends and I are also working on a puzzle and landing page that users will be directed to from the flyer, which are currently still in development. These efforts tie back to the research I conducted surrounding Social Information Processing theory and other psychological considerations in Human-Computer Interaction design.

While most of my formal education surrounding User Experience has come in the form of interaction design and wireframing, this has given me a unique opportunity to experiment with non-conventional user experiences that blend printed and digital media. The goal for these promotional materials is to create an experience that is simultaneously seamless and unrefined, prompting those that interact with our designs to be more cognizant of their thought process and change the narrative surrounding digital interactions and the way we interact with various communities online. I am excited to see where this initiative takes our platform as we continue to

gain new users and develop a product that will hopefully change the digital landscape involving social media.

## Completed project

Here is a link to my interactive prototype, which I have included a screenshot of below. The design showcases the existing UI and functionality of the app, after I redesigned the main flows using the new component-based design system. I also included some new features that will soon be implemented into the working version.



My Figma project also includes documentation of the current design, highlighting the changes I made in my project. Here is a link to the entire project, which also contains the prototype.

https://www.figma.com/file/LykClqZOG9Nh8MdDrbIDWu/Sappling-redesign?type=design&node-id=39%3A598&mode=design&t=nGPJHWqUt2zBxn4N-1

Thank you for taking the time to check out my process and work.

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