

Fitting in Fitness: Design Concepts, Low-Fidelity Prototypes, & Evaluation Report

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Nov. 5, 2024

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Design Concepts and Alternatives

Based on the findings from our formative studies on university students' exercise habits, the team identified the key requirements our solution must address and implement. They are listed as below:

1. The solution will account for various factors affecting a student's daily schedule, providing optimal times for exercise.
2. The solution will recommend workouts based on individual student preferences and constraints, such as activity type (e.g., walking, weightlifting, sports, etc.).
3. The solution will monitor gym occupancy to help users schedule their workouts effectively.
4. Users will be able to track exercise progress and/or integrate data from other fitness services to provide comparisons and progress graphs over time.
5. Users will have the option to add friends and compare progress to enhance motivation.

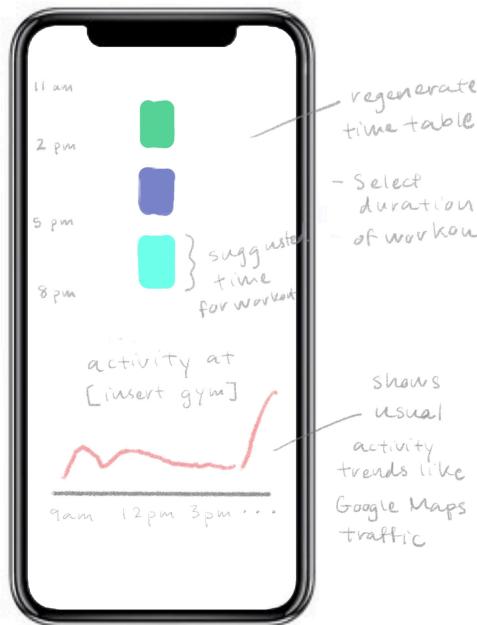
First Proposed Design

The diagram illustrates a proposed mobile application interface. The top section displays a weekly summary for the University of Toronto Fall Midterm S., showing exercise progress from Oct 15 to Oct 21. It includes a bar chart of daily exercise progress, a leaderboard for the current week, and a note about joining school groups. The bottom section shows a detailed log of a workout session for 'xxN00bxx' (User ID 1) on Thursday, with fields for duration (0h 20m), category (Cardio), points (200), and a note about exam season bonus points.

The above solution offers a platform where students can join groups specific to their respective schools, fostering community engagement. Students can log their exercise sessions by uploading images, with each session earning points based on the intensity and duration of the activity. The homepage features a leaderboard showcasing the top performing students with the highest total points for the current week, encouraging friendly competition. Users can explore other students' profiles to compare progress, coordinate joint exercise sessions, and discover new workout routines. To further motivate participation, weekly challenges are introduced, awarding bonus points to winners, who are recognized in a dedicated "past winners" section.

A potential disadvantage is the challenge of sustaining long-term user engagement, as is common with many gamified habit trackers and virtual platforms. Initial interest may gradually diminish over time, leading to decreased participation. The service would be required to consistently offer engaging challenges, community-driven content, and meaningful rewards to maintain the user base. It would be difficult to come up with interesting goals and rewards given there is no other incentive other than points.

Second Proposed Design



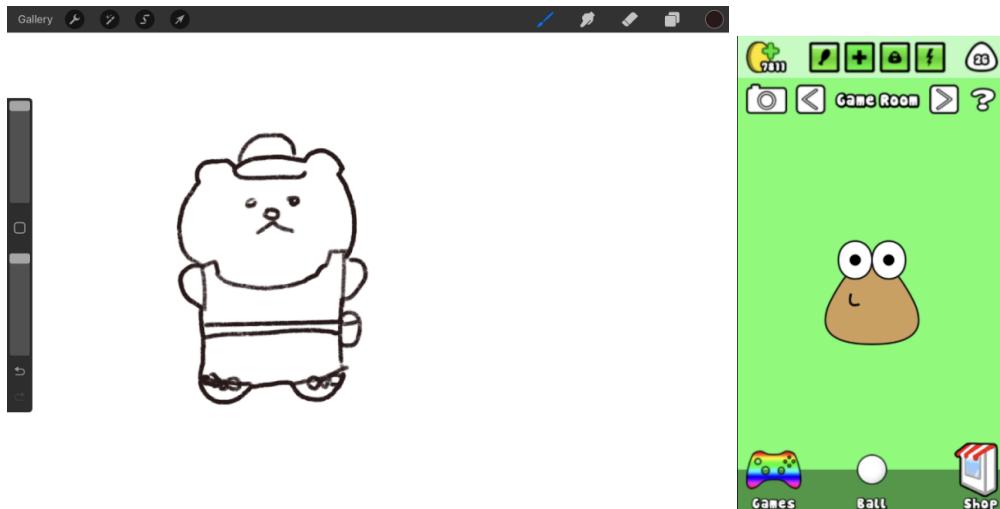
- **SELECT WORKOUT**
 - ↳ allow users to build their own workout templates
 - select from popular workouts
 - ↳ can let users see what other people are doing + try something new
 - See friend's goals and recent activity
 - kind of stealing Spotify functionality
(playlists, friend activity, etc)

The second solution the group proposed is a workout repository-style app. This app allows users to create customized workout routines in the form of "playlists" and browse others' playlists for inspiration. Additionally, users can view their friends'

playlists and discover popular workout routines created by other users. The app also includes a timetable generation feature and an activity trends chart, providing predictions on gym crowd levels at specific times to help users plan their workouts more effectively.

However, a significant challenge with this solution is the lack of motivational elements or incentives to foster consistent use. Unlike gamified platforms, it lacks a compelling competitive aspect to sustain long-term engagement. Moreover, users may find the process of manually inputting exercises into playlists tedious, which could create a barrier to usability and discourage regular usage.

Third Proposed Design



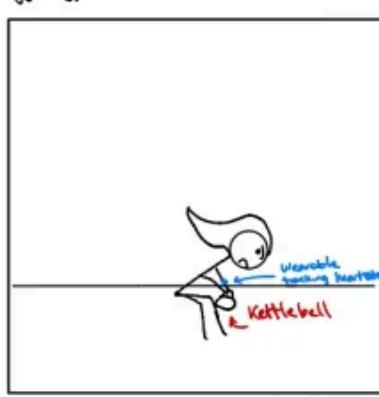
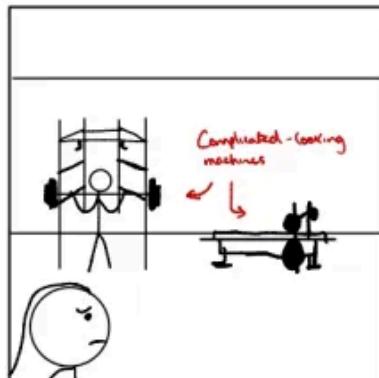
The final solution the team selected for further development is a Tamagotchi-style app, where users care for a virtual creature that grows and evolves based on their progress toward meeting exercise goals. Users can connect with friends

and compete by having their creatures battle for top positions on a leaderboard, fostering both accountability and friendly competition. The app includes a map feature that displays nearby creatures, providing real-time insights into gym occupancy and helping users determine optimal workout times. Additionally, a "browse" tab allows users to explore other users' workouts, incorporating the playlist functionality from the second solution to inspire new routines. To further enhance usability, the app offers a scheduling tab where users can input their availability and set target hours, generating personalized workout time slots that align with their goals and routines.

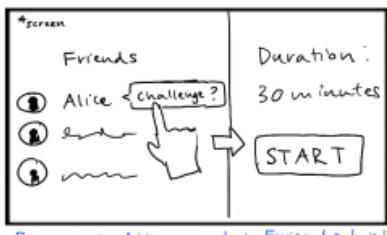
However, incorporating many different features introduces the risk of a cluttered and unintuitive user interface, which may hinder usability. Additionally, the focus on the game-like elements may overshadow the app's primary purpose as a fitness tool, potentially shifting users' attention away from their physical exercise goals and diminishing the app's effectiveness in promoting healthy habits.

Storyboards

ALICE Works Out



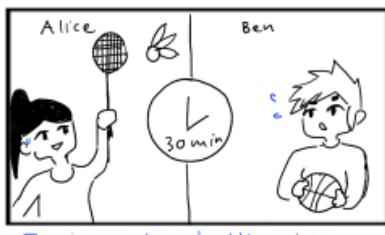
This high-level storyboard illustrates a user visiting her local gym and picking a workout from the app. She is able to browse workouts, select one, and log her progress in the app via the creature. The app enables users to browse and choose from various workouts tailored to individual preferences, with progress visualized through the evolving level and growth of a digital creature. This storyboard was developed to provide insight into user interaction with the system's principal features.

Title Ben competes with Alice**Storyboard**Page # Date: Notes: metric of measurement (kcal) & measuring instrument to be finalized

Ben sees Alice on his Friends List and decides to challenge her to a battle, he sets the challenge duration to 30 minutes



Alice receives a notification & accepts Ben's challenge, they each have 30 minutes to get more calories burned than the other



Their creatures battle when both Alice and Ben have completed their asynchronous 30-minute workout.



Ben's creature wins, as he has more calories burned than Alice in 30 minutes

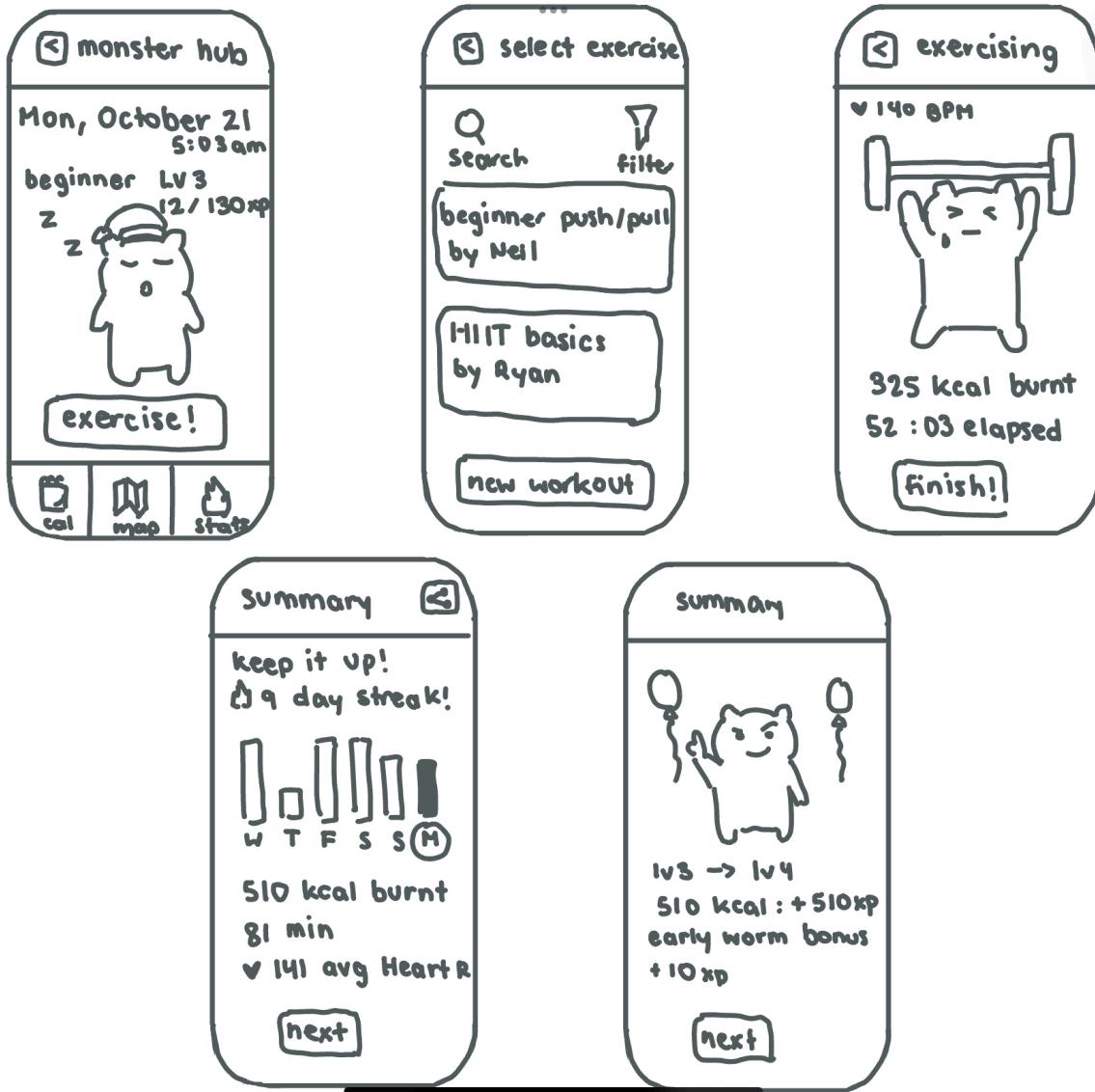


Alice is motivated to workout more, increase her overall stamina, and beat Ben's creature next time



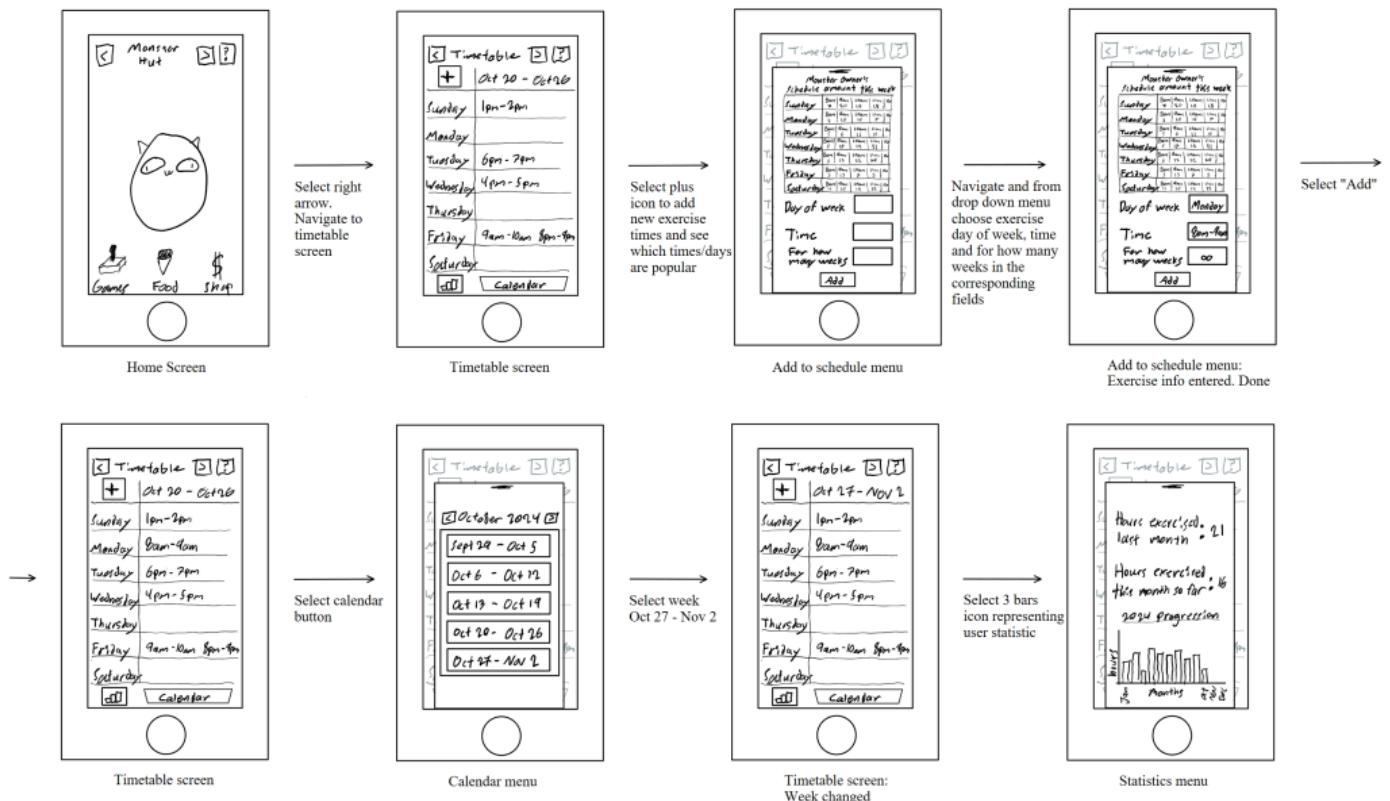
The second high-level storyboard depicts two users, Ben and Alice, utilizing the app's social and competition feature. Ben is able to add Alice to his Friends List, challenge her to a 30 minute workout, and have their digital creatures face off against each other. In this scenario, Ben's creature is victorious as his kcals burned, tracked via their smartwatches, is greater than Alice's. Motivated by her loss, Alice is inspired to improve her stamina, aiming to beat Ben and his digital creature in their next challenge. These features satisfy two key design requirements: the digital creature tracks the user's progress by gaining experience points and enables comparison to peers for friendly competition. This storyboard was drafted to gain insight into the user

experience with the social aspects of our system and how their exercise habits could be shaped by them.



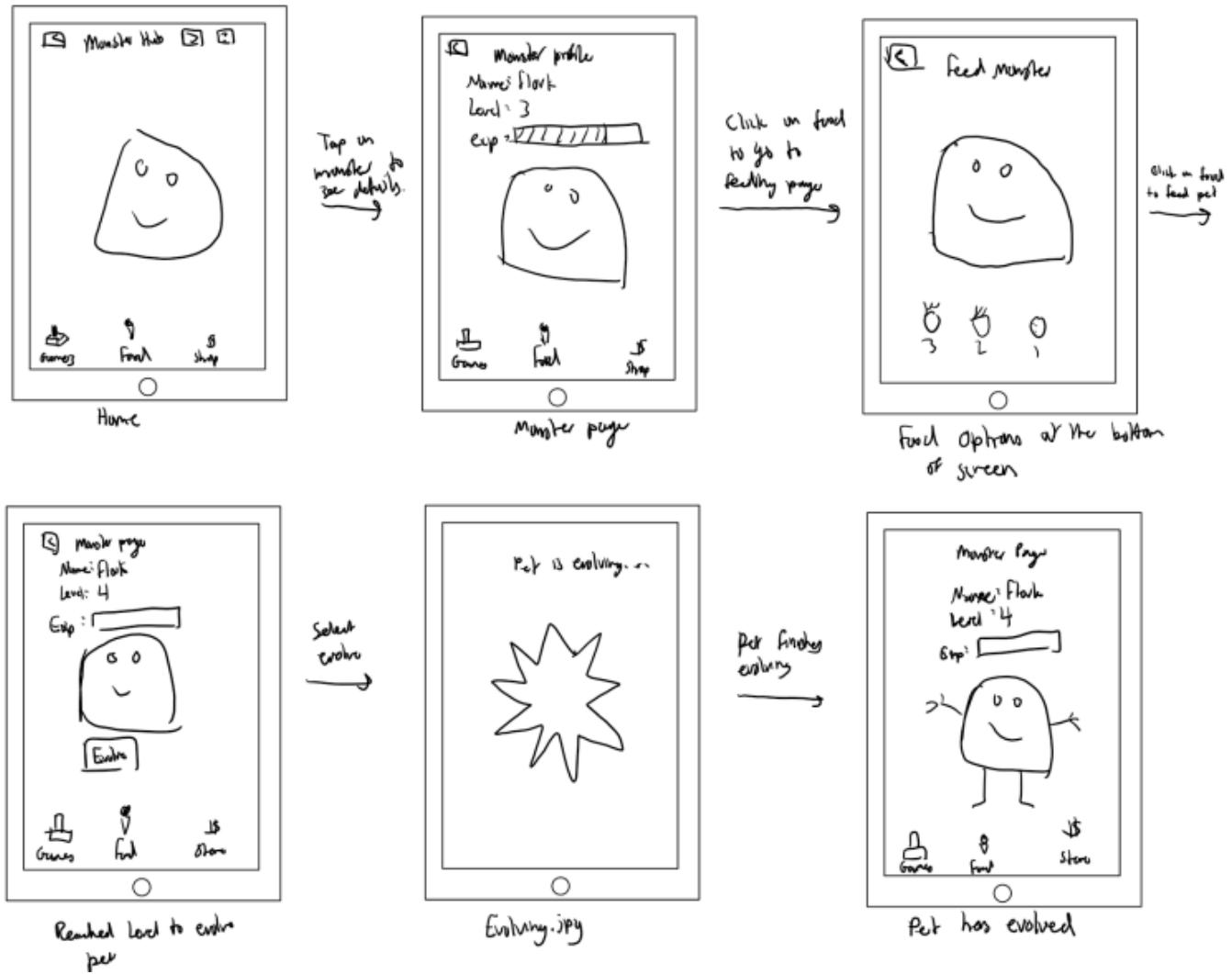
The above screen-level storyboard displays the screens the user would interact with during their workout, shown in the first high-level storyboard. Clicking the exercise button on the home screen allows the user to select or create a new workout, time themselves, monitor their results, and level up their digital creature. This screen-level

storyboard provided a draft for our low-fidelity prototype, enabling the team to choose which specific UI choices to retain and discard in the workout feature for the paper prototype.



This screen-level storyboard illustrates a draft of the scheduling process. Users are able to view the gym occupancy trends throughout the week, add preferred times to their schedule, and log their completed sessions for the week. This feature fulfills our primary design requirement by providing students with available times that account for gym occupancy, increasing the likelihood of desired equipment availability. This

Storyboard provided a draft and an understanding of the user experience with the scheduling feature.

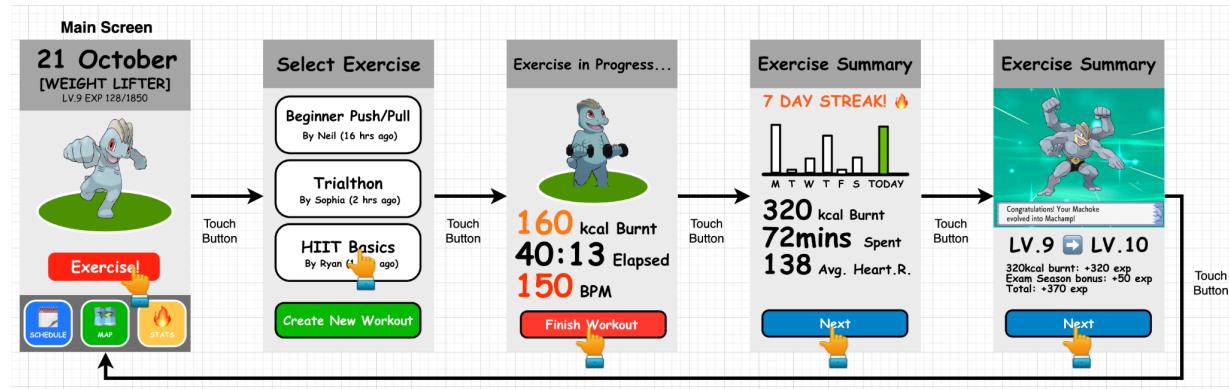


The final screen-level storyboard above is a proposal of the ways a user could interact with their digital creature. The user is able to view their creature's level progress and feed their creature food earned through their workouts. The storyboard displays and informs the team of a user interaction with their digital creature designed to provide

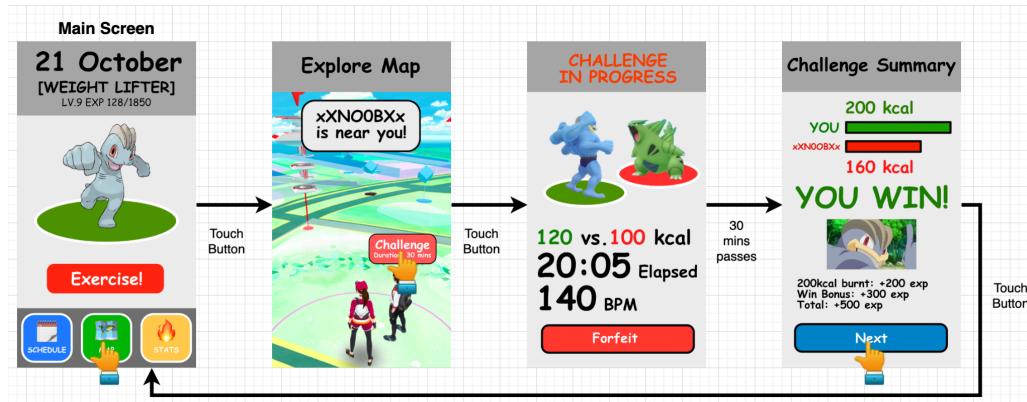
motivation for further exercise that may be included in our low-fidelity and high-fidelity prototypes later on.

Paper Prototype

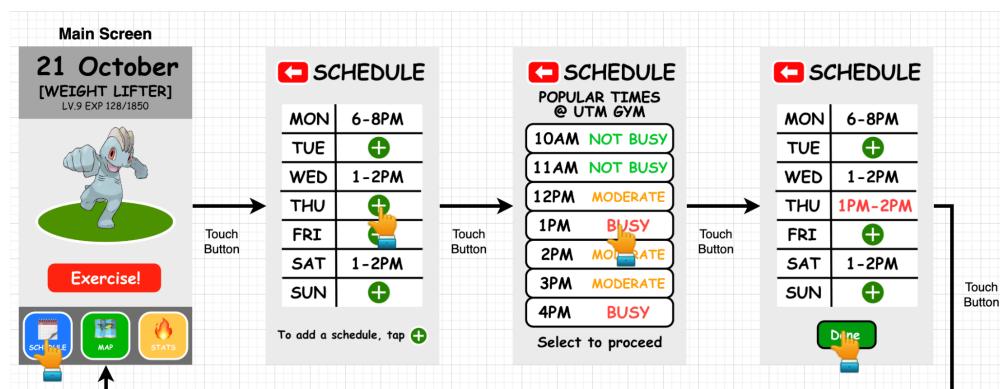
Feature 1: Logging New Exercise



Feature 2: Player vs. Player Challenge



Feature 3: Creating Exercise Schedule



Paper Prototype Methodology

The paper prototype was designed on a computer and then printed, cut, and aligned for the think-aloud and heuristic analysis sessions. Any dynamically changing elements (e.g. the time slot the user selects in the “Creating Exercise Schedule” feature) were prepared on a sticky note, which was then attached or detached as needed.

It features a main screen with buttons to access all three main features. Once a button is touched, the first screen responsible for that feature will be loaded (by the computer). All feature workflows will return the user to the main screen once completed. Specific instructions on the output response are labeled in the above flowchart diagrams based on the user input.

Feature Rationale, Advantages, and Disadvantages

1. Logging New Exercise

- Rationale: This is the core “gameplay” of the solution which involves the user selected from a variety of curated and custom exercise “playlists”, performing the workout, and then logging their statistics of that session - resulting in the growth of their creature. Due to this being the primary feature of the team’s solution, it was necessary to include in the prototype.
- Advantages
 - The workflow of choosing, beginning, finishing, and logging a single exercise session is designed to mimic the workflow of the many existing workout tracker apps for a lower barrier to entry.

- A dedicated separate screen is included specifically for the character level-up/evolution event, to properly reward the user for their commitment to exercise.
- Disadvantages
 - Since the solution serves as a more fun and motivational tool to assist exercise, it does not have any detailed, specific features geared towards more advanced exercisers who may want to properly log every aspect of their workouts (weights, sets, etc.).
 - The option to select pre-made workout “playlists” exists, but does not provide much apart from a simple description of what the overall session would be.

2. Player vs. Player (PvP) challenge

- Rationale: This feature was heavily inspired by the results of our interviews from A1, where peer to peer competition was an effective motivator for exercising even when self-motivation was lacking. The team desired at least two major, distinct methods of motivation in the solution, hence the development of a PvP feature. It was designed in such a way that the “map” feature must be used first to initiate a challenge, which may seem indirect and unintuitive. However, while not in the prototype, the team wanted the “map” feature to be able to host a range of information and functionalities, such as a visual indicator of currently nearby gym occupancies (e.g. through the visualization of “crowded” other users).

- Advantages
 - The map provides an intuitive interface to discover nearby players willing to participate in challenges, instead of a list of players.
 - The “creature training with you” concept applies to the challenges, where the two battling creatures face each other in a battle stance with attack animations (not implemented in the prototype), which then provides motivation during the challenge, not just after completion.
- Disadvantages
 - Currently, there is no option to customize the challenge settings such as duration, criteria, and exercise type.
 - There is no way to prevent cheating when measuring activity. Modified hardware or software “hacks” can be used to gain more points, etc.
 - The label “map” in the main screen does not effectively imply that challenges can be done in it.

3. Creating Exercise Schedule

- Rationale: The second main design requirement from A1 was the ability to assist the user in finding optimal exercise times throughout the week based on their schedule. While a comprehensive solution such as a timetable builder incorporates course lecture times and any other time-consuming factors for a typical university student, the team

concluded that such a solution would be beyond the scope of a fitness-focused application. Therefore, the team decided to provide only relevant information regarding fitness, while assuming the user is already aware of their available times. One of such relevant information was average gym occupancy statistics, which is provided to the user whenever they are deciding a time to exercise at a specific time and place.

- Advantages
 - Provides unique, exercise-specific utility which other “student timetable builders” or “academic schedulers” do not.
 - The app “knowing” its user’s expected exercise times means time-specific features such as scheduled challenges, friend schedule viewing, etc. can be integrated seamlessly within the app.
- Disadvantages:
 - Currently does not allow for any method of retrieving gym occupancy statistics.
 - Is an “outlier” feature among the three main features, whereas the other two are motivators and not “planners”. A typical user will not expect this functionality unless it is more prominently displayed on the main screen, or more integration with existing features is made.

Low-Fidelity Prototype Evaluation

To evaluate the app's usability and design intuitiveness, the team conducted two rounds of user testing: a think-aloud study and a cognitive walkthrough evaluation. These studies aimed to gather feedback on user experience, identify bright spots, and reveal any pain points within the app's current design. The think-aloud method provided direct insights into participants' thoughts and navigation patterns as they engaged with key features, while the cognitive walkthrough allowed the team to assess usability through guided expert evaluations. The data collected allowed the team to understand user needs, uncover specific areas for improvement, and gauge emotional responses to various app features.

Think Aloud Evaluation

In the think-aloud evaluation, participants were first briefed on the study's purpose, and signed the provided consent form. They were then asked to complete specific tasks within the app, such as setting a workout schedule, while verbalizing their thought process and emotional responses. As users navigated each step, team members noted moments of ease or confusion, questions asked by participants, and any visible reactions. The data gathered primarily focused on the intuitiveness of the app's workflows. Overall, users found most features straightforward to use, though there was mild confusion about certain aspects such as how to check progress, a desire for more creature customization, and some concerns about the workout tracking methods.

These observations offered valuable insights into areas that could enhance user engagement and usability.

Cognitive Walkthrough Evaluation

For the cognitive walkthroughs, the team designated a facilitator and computer, while other members acted as notetakers. Experts from other groups were led through key workflows while asked to share their thoughts on each feature step-by-step. Additional questions were posed to gather feedback on potential areas for improvement. Similar to the think-aloud study, this method yielded qualitative data consistent with previous findings: participants appreciated the gamified aspect of the solution, but also expressed a desire for additional customization to deepen emotional attachment to their creatures. Experts also recommended a camera recording feature during PvP battles to maintain the integrity of the competition. A notable finding from this method was that less experienced exercisers expressed confusion regarding exercise measurement units, highlighting the need for user-friendly interfaces tailored to varying levels of fitness experience.

Key Findings

Based on the above results, the team outlined four key findings:

- 1) Effectiveness of Gamification
 - The gamified approach of the app strongly resonates with the primary stakeholder group, university students, offering an engaging and unique

alternative to conventional workout and habit trackers. The game-like structure aligns well with this demographic, who are accustomed to mobile gaming experiences. This familiarity makes the app's game element both approachable and motivating, leveraging students' comfort with digital gaming as a means to enhance long-term engagement in fitness activities.

2) Customization Options

- The app currently lacks sufficient customization options, which nearly all participants noted as an area for improvement. Increasing customization could enhance the "game" aspect of the app and could lead to an increase in user motivation due to their attachment to their creatures, thus making the app more engaging.

3) Accommodation for New Exercisers

- The app does not adequately support users who are new to exercise. New exercisers often struggled with understanding units like "bpm" and "kcal" and risked overexerting themselves in battles against more experienced users.

4) Schedule Feature Issues

- Participants questioned the uniqueness and functionality of the scheduling feature, viewing it as similar to generic calendar applications. Thus a need to redesign the feature is clear in order to make it both more distinct from competitors and enhance the user experience.

Lessons Learned and Design Implications

In evaluating the low-fidelity paper prototype, feedback was collected to gauge a variety of metrics such as the app's ease of navigation, clarity of features, and overall engagement with its core features. The evaluations provided insight into what aspects of the prototype were effective and enjoyable for users, as well as areas that led to confusion or required further development. This section aims to summarize these findings and propose refinements to further improve the app's usability.

Effective Elements

Participants responded positively to the app's gamified approach, especially the creature evolution feature, which was seen as motivating. The user interface was described as "minimalistic and intuitive", and many users appreciated the simplicity of navigating through the app's main functionality. The idea of incorporating penalties for missed workouts, such as losing experience points was well-received as a unique and engaging way to incentivize adhering to their workout schedule and build healthy habits. Additionally, participants expressed interest in more personalization options for their creature avatars, citing that "...have an emotional attachment to the little guy, so I wanna be able to customize it - maybe with like outfits or something". Overall, users found the concept to be novel and appealing, with the potential to encourage regular physical activity as outlined by the design requirements originally set by the team.

Areas for Improvement

Despite the positive feedback on core features, participants encountered some areas of confusion. Many users found the scheduling function unclear, especially around selecting multiple workout times and whether these times would be public. Additionally, there was a lack of clarity about the “map” feature and whether it would display gym activity or user progress. Users also noted that some fitness metrics, such as “bpm” and “kcal”, were unfamiliar as they were entirely new to or had no interest in physical activity, which could hinder engagement. Finally, concerns were raised about potential competition-induced pressure on beginners in PvP challenges and the lack of an accessible progress overview, which lessened the motivational impact of performance improvement tracking.

Proposed Changes

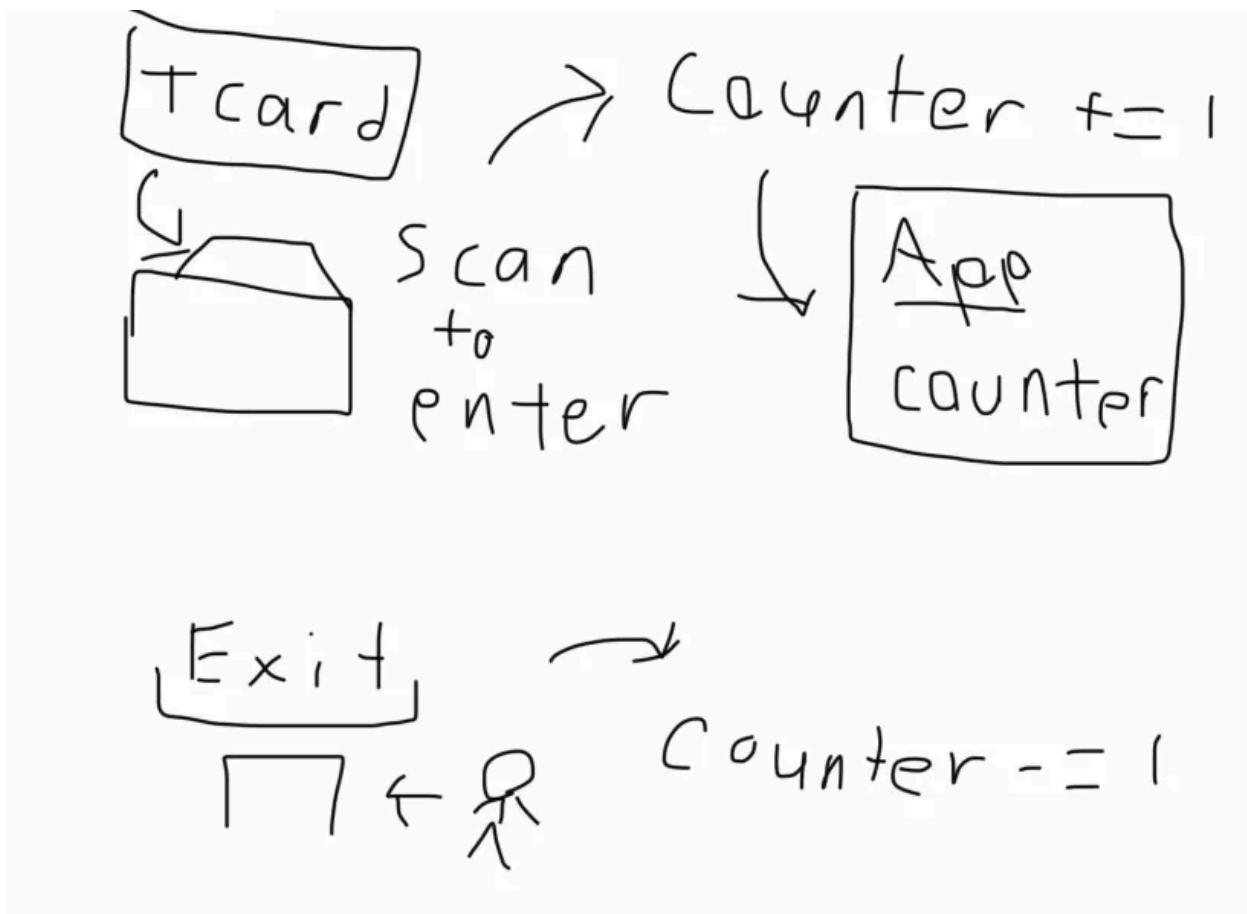
Based on the lessons above, the team created a list of proposed changes:

- **Clarify Metrics and Terms:** Add tooltips or explanations for fitness metrics (e.g., bpm, kcal) to support users who are unfamiliar with these terms, reducing potential confusion for new gym-goers.
- **Revamped Scheduling Feature:** Visually redesign the scheduling process so that it becomes more obvious to users that they may select multiple time slots and make it clear whether times are shared publicly or privately.

- **Shop and In-Game Currency:** The “Shop” tab will store a variety of customization options as well as new creature eggs so that users have greater personalization options and can start their journey with a new creature once their current one is fully leveled and evolved. Users will gain in-game currency for completing workouts and then be able to spend that currency on their desired customization option in the store.
- **Beginner Protections in PvP Battles:** Restrict exercise newcomers from battles until they complete a predetermined number of workouts so that they are prevented from over-exerting themselves during battles. This feature will require a survey when the app is first installed to gauge how experienced the user is with exercising.
- **Clarify Wearable Dependency:** Clearly indicate that using a wearable device is necessary for the app’s tracking capabilities, thereby addressing the question of how workout statistics are monitored for accuracy.
- **Revamped “Map” Page:** Convert the “Map” tab into a “Community” tab, where users can then access the map, view community challenges and challenge leaderboards, create “clans”, for themselves and friends, etc. This feature will bring the social aspect of the app more in-line with the team’s vision and at the same time answer concerns of other users regarding the “competitiveness” of the app, making it entirely optional.

Appendices

Ideation Process



NEIL'S DESIGN CONCEPT (MK I)

→ Smartphone based application similar to "idle" games (shameless steal from Joshua)

→ Each workout translates into building and expanding your own virtual world

↳ User exercises → gain resources that help customize + grow unique world

↳ Animal Crossing, but with exercise

↳ Eg. 30 min run earns points to plant a forest, then they have to run 30 mins 4 more times to have the forest mature

↳ Greater consistency = more elaborate universe

→ Track history by tapping on a landmark/resource to bring up how it was earned



→ Users can visit each other's worlds and/or trade resources for social aspect

↳ Add friends, manage friends list, create communities/groups (ie. "clans")

↳ Virtual community events (stealing from Joshua again)

↳ Individual and group-based (ie compete vs your own group and

your group vs another group à la "clan wars", and also everyone

vs a stupid hard challenge we give "monopoly raid/boss event")



↳ Fosters both competition and collaboration

→ Include "smart scheduling": users input their day-to-day schedule and the app generates workouts + times they can be completed.

↳ Reinforcement via notifications like "Your forest needs more trees!" etc.

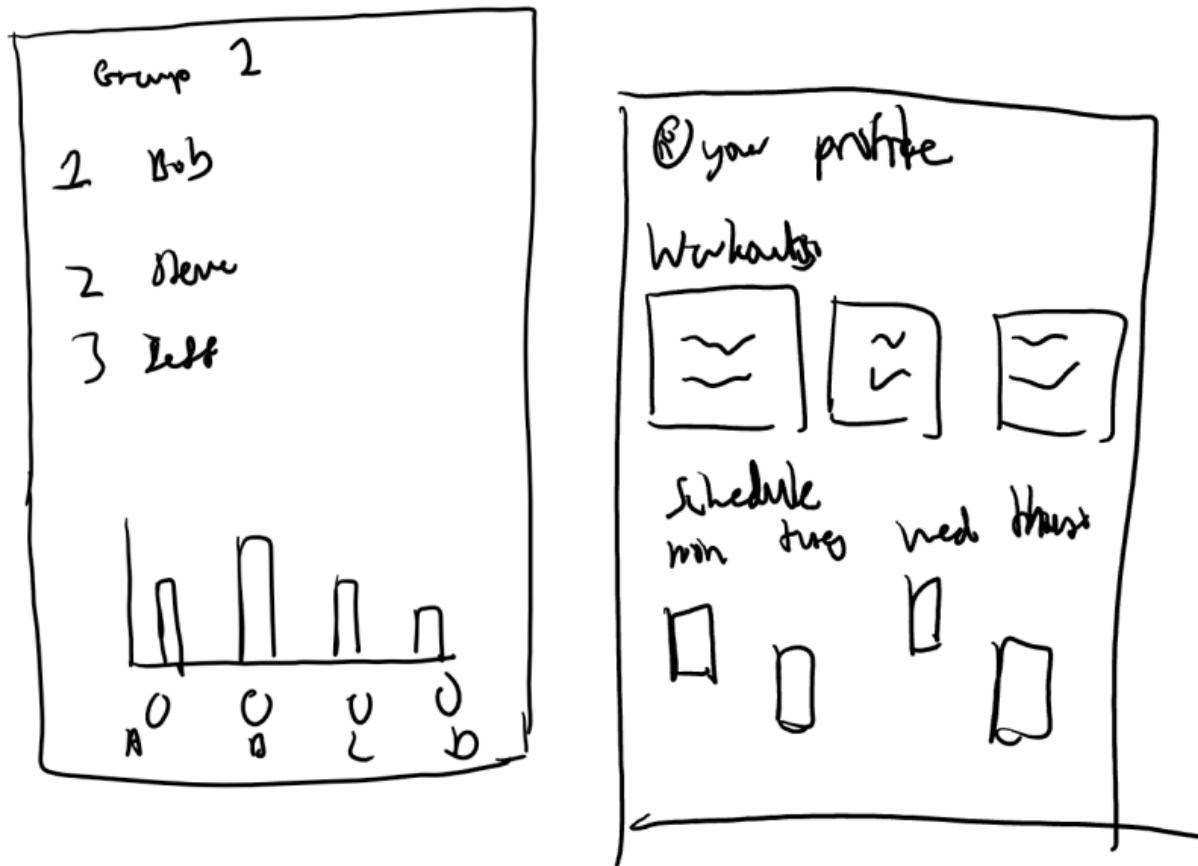
advantages:

- transform mundane, often time-consuming task of exercising into a creative, relaxing, open-world adventure
- social interaction has both competitive and collaborative elements, and is entirely optional as well for those who don't want to add friends

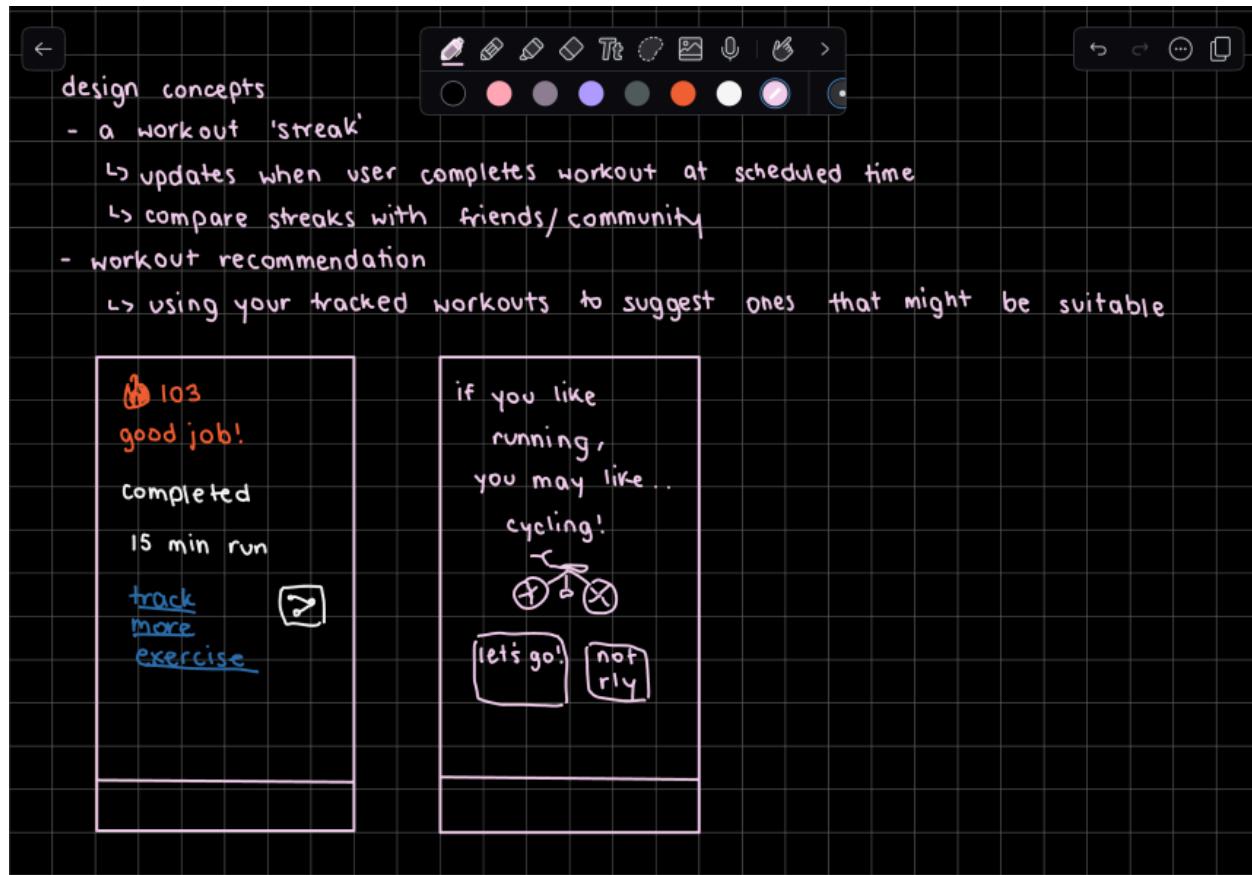
disadvantages:

- requires ongoing user engagement with the virtual world which may detract from the principle problem of fitness

- if history is tracked as mentioned, we would need a way to theoretically infinitely evolve and develop graphical elements (ie forest seed -> saplings -> small trees -> young forest -> established forest ->? we can't just stop if the user keeps doing this workout)



The idea is to turn it into a game, you can either like compete for points yourself to gain points or join a community group where you have have a leaderboard. The idea here is to help give motivation for people to workout to get points in the app. Also wanted to help include a scheduler in the app to select different workouts that you can choose from to add to your schedule. Pros: Turning this into a competition could help with engagement and help keep users coming back to it. Having a calendar included could help with users not having to swap back and forth to a different calendar app and keep everything in one location. Cons: required constant usage of the app for it to be effective. Including calendar could also potentially make the entire thing too cluttered.



secondary idea: Mobile application designed to build mindfulness and habit formation. Leverages the idea that consistent fitness requires mental alignment and building small, sustainable habits over time. Instead of pushing users to treat fitness like a game, it emphasizes self-improvement, mindfulness during workouts, and optimizing physical and mental well-being. Integrate small "fitness rituals" into their daily routines. These are micro-workouts, stretches, or meditative sessions that users can fit in throughout their day, no matter how busy they are. It could be as short as 5 minutes, but the emphasis is on consistency rather than length. Users can schedule these small rituals around key moments (like waking up, during breaks between study sessions, or before bed) to gradually form long-lasting habits. Disadvantages:

- Not goal-oriented for all users: Some people might prefer a more aggressive or results-oriented approach, which FlowFit's calmer, slower-paced design might not fulfill.
- Requires commitment to mindfulness: Users unfamiliar with or resistant to mindfulness may not fully appreciate this approach.

Think-Aloud Protocol and Instruments

RESEARCH PROTOCOL

- 1. Project Title:** Think-aloud observations of university students with a desire to exercise regularly
- 2. Investigators:** Joshua Jang (hyunjo.jang@mail.utoronto.ca), Ryan Oakley (ryan.oakley@mail.utoronto.ca)
- 3. Purpose:** We have designed a low-fidelity prototype of an app/digital solution that assists students in exercising more regularly by providing scheduling tools as well as a motivator in terms of a gamified "pet" system.
The purpose of our research is to understand any difficulties when navigating and using our prototype, which helps us derive requirements for the final design that are intended to be useful to university students. A brief description of our overall design problem is: **University students encounter various obstacles in maintaining consistent physical activity, including time constraints, lack of external motivation, mental and physical fatigue, and limited access to exercise resources. These challenges contribute to an overall decline in physical well-being among this demographic.**
- 4. Process to be followed:** We will brief the participants about the purpose of the study, explain the consent form to them, and ensure that they sign the consent form. We will then engage the participants in a think-aloud evaluation of our low-fidelity prototype of a solution. We will also, with their permission, make observations as follows: video recording of the participants handling the prototype, and their verbalized thoughts.
- 5. Participant selection:** Participants will be chosen a set of university students. They will be identified via in-person recruitment and selected according to our persona specifications. In general, they will be characterized by a student in their 20s with a desire to exercise regularly.
- 6. Relationships:** Our relationship to the participants may be described as follows: classmates and friends.
- 7. Risk and benefit:** There will be minimal risk to the participants, for example that they feel that they have wasted their time. The only benefit will be to contribute to the education of the investigators. Participants are free to withdraw before or at any time during the study without the need to give any explanation.

8. Consent details: We will brief the participants about the purpose of the study, and explain the **attached consent form** to them, and ensure that they consent to participate and sign the consent form.

9. Compensation: Participants will receive no compensation.

10. Information sought: The information to be sought is described in the attached think-aloud script.

11. Confidentiality: Information will be kept confidential by the investigators. Names or other identifying or identified information will not be kept with the data. The only other use will be to include excerpts or copies in the assignment submitted, but names and other identifying or identified information will not be submitted.

Think-aloud Evaluation Script

Part 0: Intro

What is a think-aloud evaluation? We have made a small game/utility app prototype that will help you find a good time to exercise in your busy schedules, as well as provide motivation through the means of a pet-leveling-up mechanic. There are 3 main features that we want to test out, specifically in terms of intuitiveness: i.e. "Does it make sense to use the app the way it is designed currently". I will be giving you a task to perform, and from the main screen you will be navigating through the app and performing that task. I will not be giving you detailed instructions, so you will have to figure out the layout, etc. yourself. In the process, I want you to articulate what you are thinking at every moment such as: "since I want to schedule for Thursday, I want to click the button next to the text Thursday". Any challenges should be pointed out as well, such as "I want to proceed to the next screen, but I don't know how". Don't think too much about the quality of your articulations, I will be summarizing them later.

Part 1: Scheduling

Imagine that you want to find a time that aligns with your classes, work, and study commitments while avoiding peak gym hours. You will use the app to view gym occupancy and select a time slot. This app is designed to help you schedule and adjust gym visits seamlessly.

Now, I would like you to show me how you would use the app to find a non-busy time to work out today (Thursday) and create a timetable in the app. You identify that, according

to your schedule, you are free between 11AM-12 AM and 1 PM-2PM. Please think aloud about your thought processes.

Some observations from our session in class:

- confused on how to select the times - 'is it a range'. thought it was confusing or unclear whether or not multiple times can be selected
- incorporating own schedule (ie timetable) would be nice
- extend gym search to different gyms, not just utm gym

Part 2: Logging Exercise + EXP reward + Monster evolution

Imagine you are a student trying to find the motivation to workout; you're bored, you have time, but you're too lazy to find the energy to workout. You want to get rewarded for working out in some way. Here is a fun monster-leveling-up mechanic that integrates exercise sessions into its gameplay.

I would like you to show me how you would log a workout session in the app and be rewarded with points and a virtual character level-up. Assume you have a smartwatch that tracks various metrics already paired up. Assume you are a beginner wanting to use a list of exercises your friend Neil had curated. How would you explore the interface to accomplish these and is it intuitive to you?

- confused about clicking exercise options - why do they exist if i can't see the actual exercise contents?
- What do you do after leveling up the creature? Seems demotivating if there is a level cap

Part 3: PvP Challenge

Imagine that the motivation from the self-levelling up feature is just not enough for you and you seek some peer pressure and competition to fuel your desire for exercising.

Now, I would like you to explore nearby online players/users on a map and challenge them to a 30-minute exercise competition of who burns the most calories. From the main menu, please try to explore and achieve this goal.

- How do you prevent cheating?
- Other metrics apart from calories burnt will be nice
- If a beginner finds people to challenge, will the competition cause the beginner to overdo exercise

Video Recordings

Recordings of the think-aloud evaluations can be found in the following folder, along with the signed consent forms and interview script:

https://drive.google.com/drive/folders/1_aXEqMSjMFvuYEGafWaGQcU8MS3GALpT?usp=sharing

Consent Forms

CONSENT FORM

Consent Form: Think-aloud observations of university students with a desire to exercise regularly

I hereby consent to participate in a research study conducted by Joshua Jang and Ryan Oakley for an assignment in University of Toronto Computer Science 318, *Design of Interactive Computational Media*.

I agree to participate in this study, the purpose of which is understand any difficulties when navigating and using the low-fidelity prototype.

I understand that

- The procedure to be used is a think-aloud evaluation session.
- I will receive no compensation for my participation.
- I am free to withdraw before or any time during the study without the need to give any explanation.
- All materials and results will be kept confidential, and, in particular, that my name and any identifying or identified information will not be associated with the data.

PARTICIPANT

Name (please print) _____

Signature _____

Date _____

INVESTIGATOR(s)

Name _____ Signature _____

Expert Evaluation Instruments

Think-aloud Evaluation

Part 1: Scheduling

Imagine you are a student trying to fit a workout session into your busy schedule. You want to find a time that aligns with your classes, work, and study commitments while

avoiding peak gym hours. You will be using this gym scheduling app to view gym occupancy, select available time slots, and set reminders for your workout sessions. This app is designed to help you schedule and adjust gym visits seamlessly.

Now, I would like you to show me how you would use the app to find a non-busy time to work out today (Thursday) and create a timetable in the app. Feel free to think aloud as you familiarize yourself with the app's features.

Notetaker notes

Notes for the evaluations can be found here:

<https://docs.google.com/document/d/1Xr7Es0zf0sFkR8C0Bg8qskqDiJ9FodKDivQGu4gdUPQ/edit?usp=sharing>

Prototype Evaluation: Our Team

Student	Group Evaluated	Preparedness Rating
Joshua Jang	Coldfusion	2
Aaron Liu	Dream Painter	2
Neil Mehta	The CSC318 Group	2
Sophia Naveed	Silly Circuits	2
Ryan Oakley	Coldfusion	2
Olivia Zhou	Dream Painter	2

Prototype Evaluation: Other Students

Student	Group	Helpfulness Rating
Daniel Makarov	Coldfusion	2
Stefan Ateljevic	Silly Circuits	2
Bohao Zhao	The CSC318 Group	2
Yilin Liu	The CSC318 Group	1
Catherine Ma	Coldfusion	2
Shilin Cheng	Dream Painter	2

Group Meeting Notes

N/A; Most work and communication was done asynchronously through Discord