
The Team:



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Introduction

Mission Statement/Value Proposition

Productivity's best friend

Problem/Solution Overview

People often have a difficulty completing tasks because of distractions, poor time management, and/or unhealthy work-life balance. We aim to increase productivity by effectively eliminating distractions and keeping people on track in a fun and engaging way.

Sketches

Overview Image

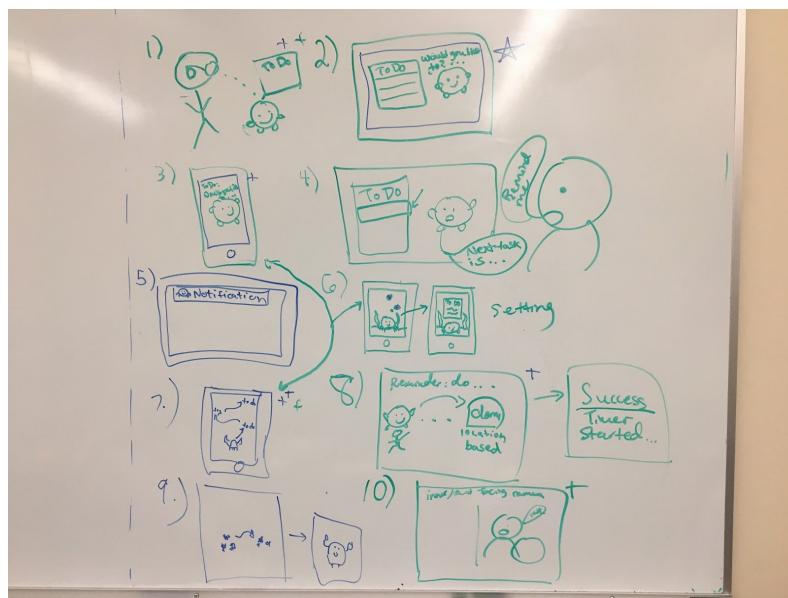


Figure 1.

10 designs: We condensed 3, 6, and 7 mobile applications into 1 design. We also condensed 2, 4, and 5 web applications. #8 was a location-based webapp. #9 was a game implementation (like World of Warcraft). #1 and #10 had VR/MR implementations.

Top Two Designs Storyboards

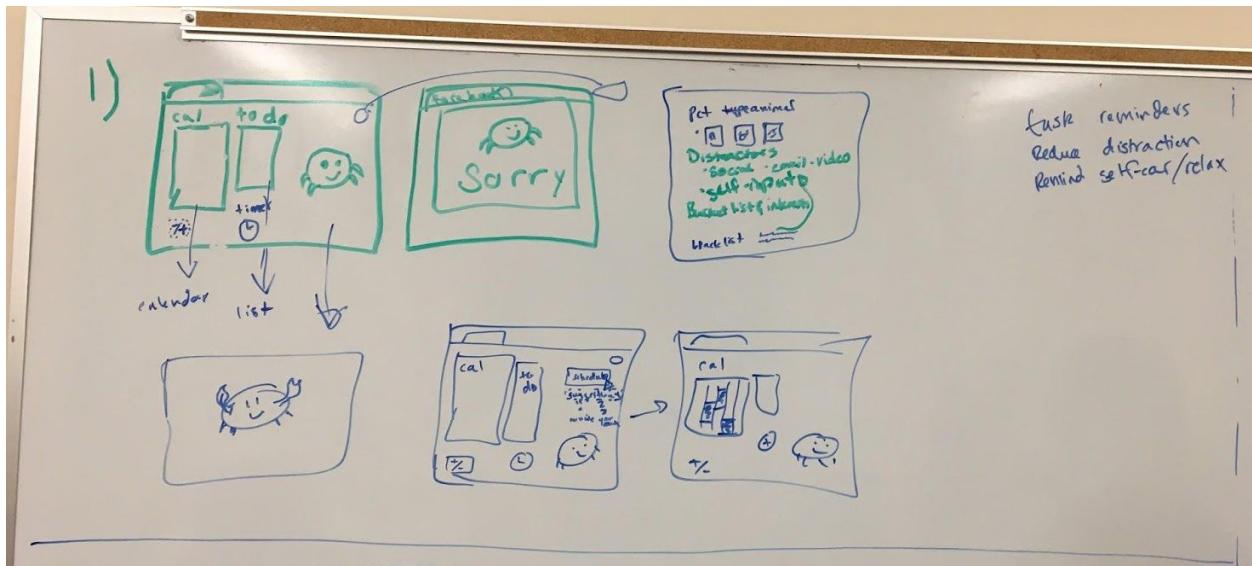


Figure 2.

This interface design depicts a webpage set as a homepage/new tab with a calendar, prioritized to-do list, and chosen pet. Click to navigate to different pages, such as to settings. This design was chosen since it's the most intuitive to navigate and many people primarily work on their computer.

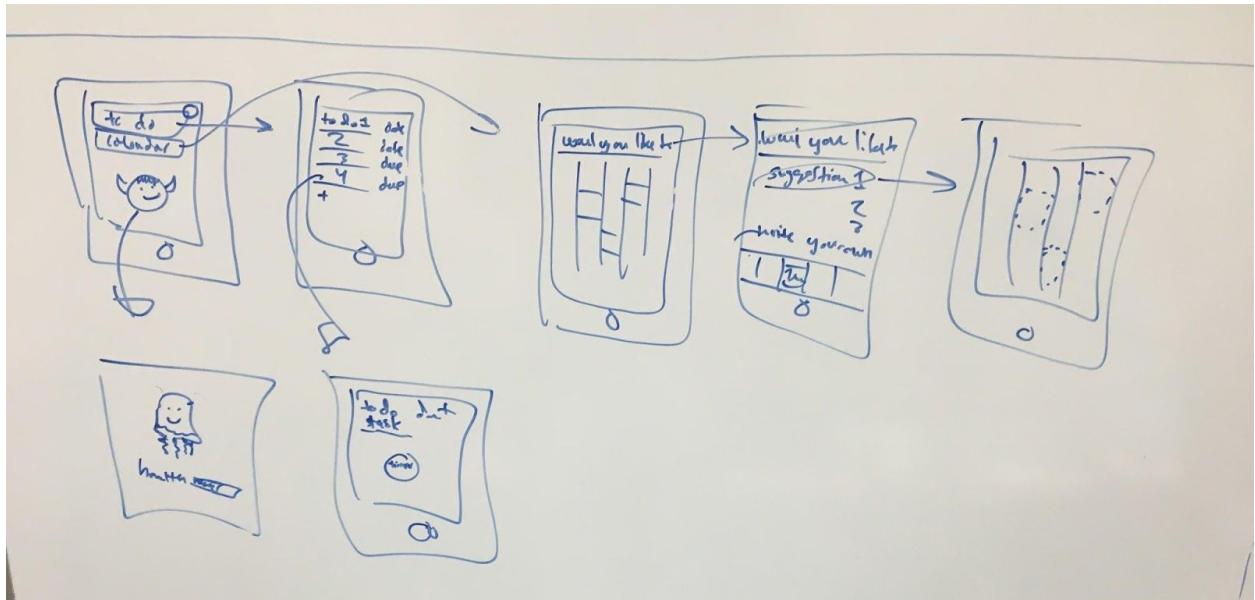


Figure 3.

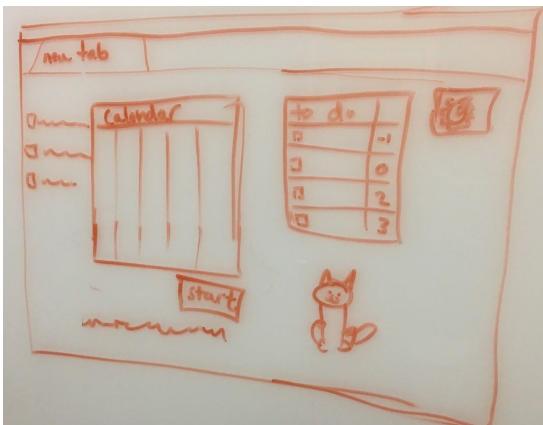
Our second interface design depicts a mobile application. Home screen displays pet in a unique environment. Buttons give quick access to task list and 3-click calendar scheduling. It's also easy to schedule things quickly with more interactive pet. We chose this design because most of our users complained that social media, especially Facebook, was a large part of their daily distractions, and most of Facebook's traffic is through mobile usage. Our mobile app would aim to discourage "distracting" app usage.

(Detailed design pros/cons in a later section)

Selected Interface Design

Storyboards for 3 tasks

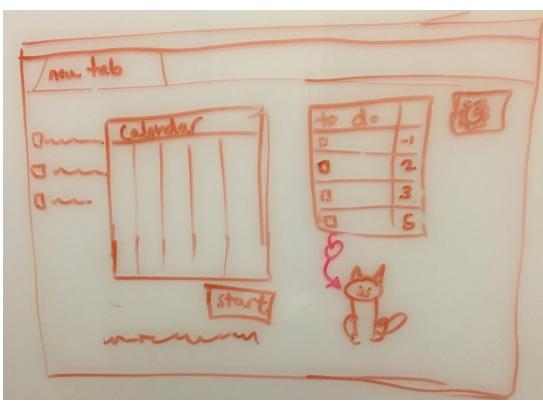
1. Be reminded/aware of oneself's tasks and schedule



Open new tab in browser and application's home screen is displayed.



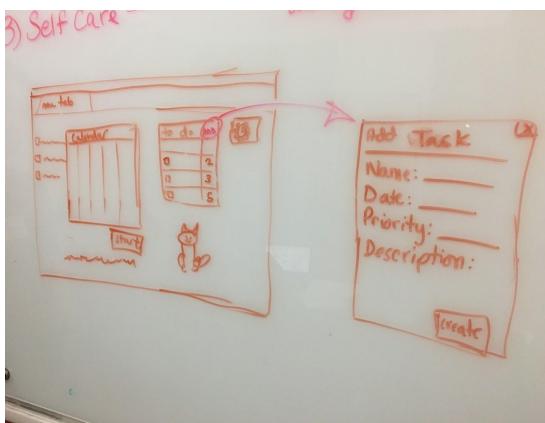
Clicking a checkbox in to-do list to complete a task.



Completing a task causes food to fall from list to feed the pet.



Adding a task to to-do list, user clicks on 'ADD' button or empty task slot



A popup box enables users to input new task information, including name, description, and due date.

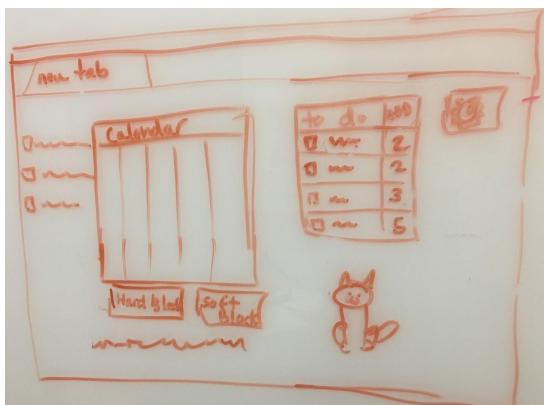


Confirming new input, task is entered in to-do list, organized by due date.

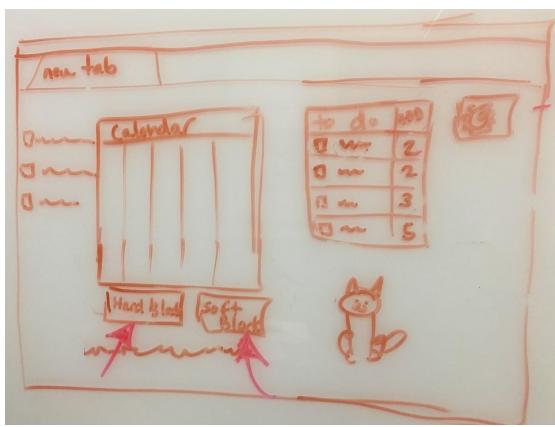
2. Block distractions



From home screen, user can navigate to settings to specify websites for blacklist (among other options).



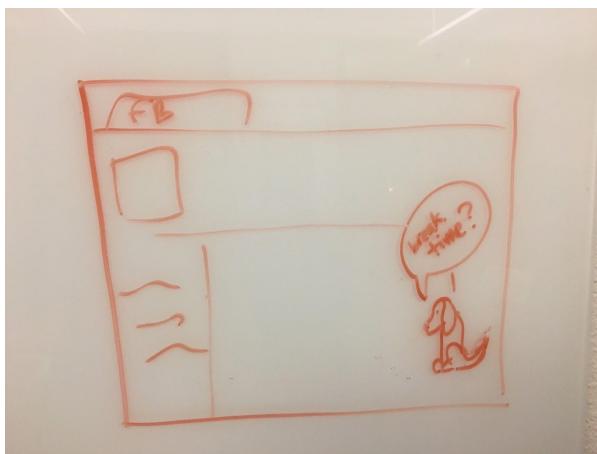
Return to home screen after.



Pressing the block button activates blocking mode (either hard or soft).

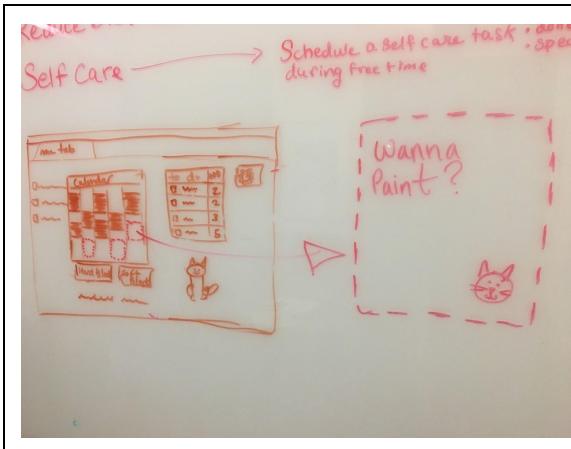


Hard block screen

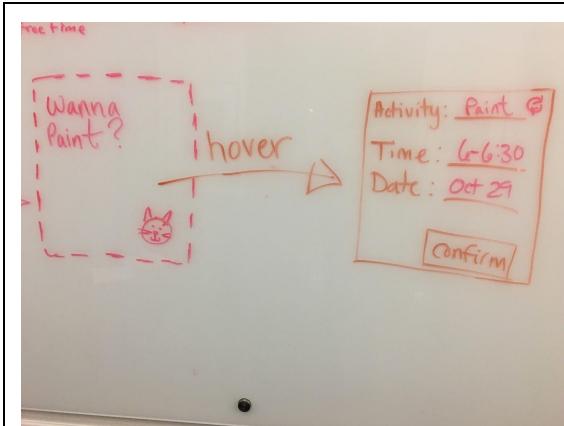


Soft block screen

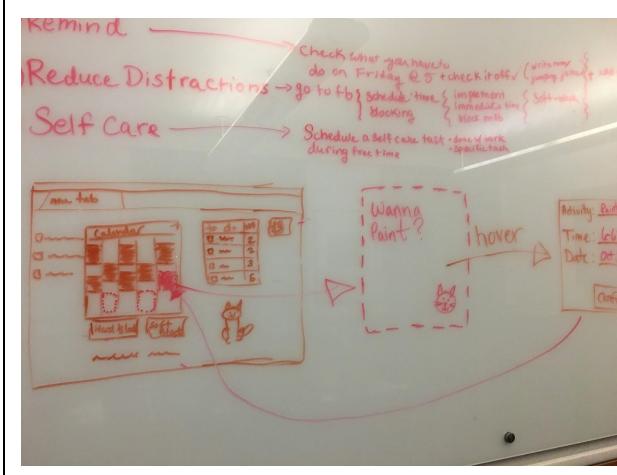
3. Remind oneself to pursue personal activities



Self-care suggestions automatically appear as dotted entries in calendar for user to press. Suggestions are based on user specified hobbies/activities.



Hovering over calendar suggestion, a popup box allows user to edit activity, time, and date. Refresh button changes activity to different one.



After confirmation, activity is entered into calendar.

Reasoning for selection

We ultimately selected the web application interface idea because from our earlier interviews, we learned that most people work on their computers and would like an effective way to stay focused while on them. They noted that they would like a fast, convenient method to manage their time. A web application can provide a more convenient interface to access functions, since there is more screen space than a phone. After creating a pros and cons chart, we ultimately decided that a web application would be most effective. Pros/Cons charts:

Design 1: Web Application

Pros

- Larger Screen
- Greater effectiveness in reminding user of upcoming tasks/deadlines, as it displays with your new tab in browser (likely in the middle of user working)
- Can completely block distracting websites
- Requires less effort to open, as the app automatically opens with new tabs in browser

Cons

- Isn't mobile, so it may only be effective on your computer
- Can't block mobile phone related distractions
- Can't receive reminders if not using computer

Design 2: Mobile Application

Pros

- Could use app to discourage use of other distracting apps
- Follows you everywhere, can receive reminders even when you're not actively using phone
- Be able to manage users' mobile usage (Perhaps similar to Fomo app)

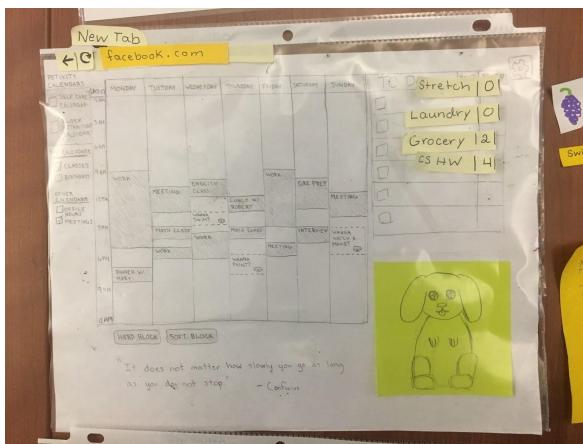
Cons

- Reminders of tasks/deadlines aren't as effective since you have to keep navigating to app to view them
- Would be difficult to fit a calendar, to do list, etc. on one screen, would be inconvenient to have them on separate screens

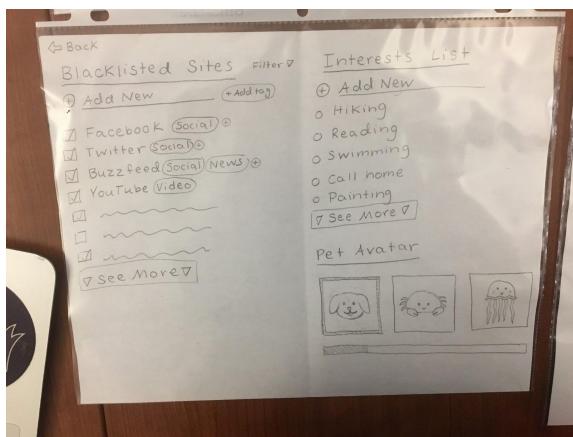
Prototype Description and Images

Prototype Description

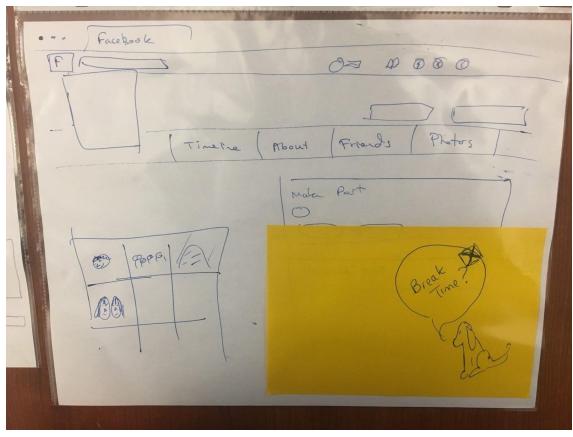
Our prototype is a web page application. The following charts show our tested interfaces:



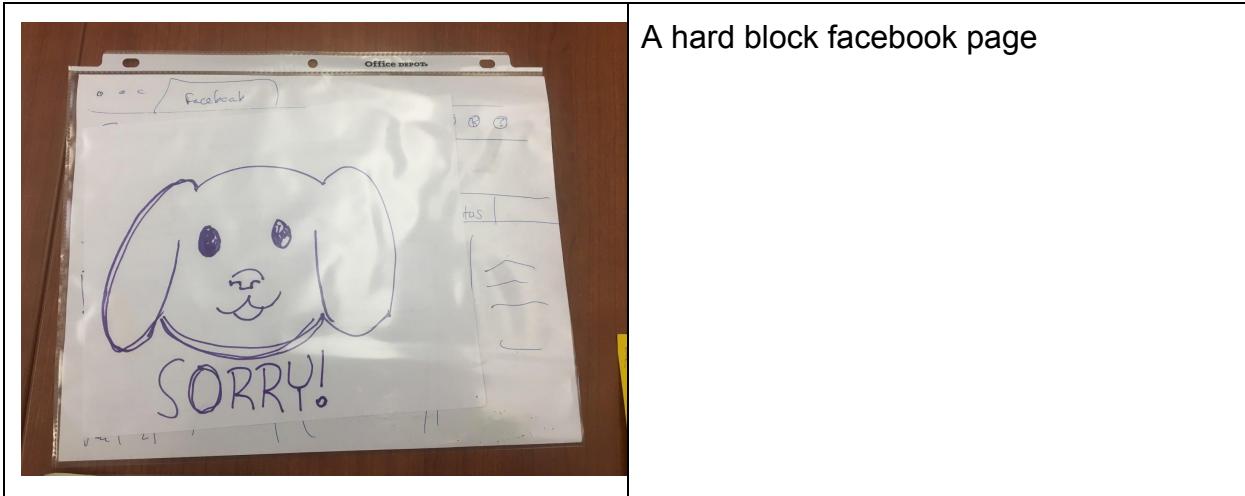
Home screen contains a calendar, to-do list, hard block and soft block buttons, an inspirational quote, a pet, and a settings button.



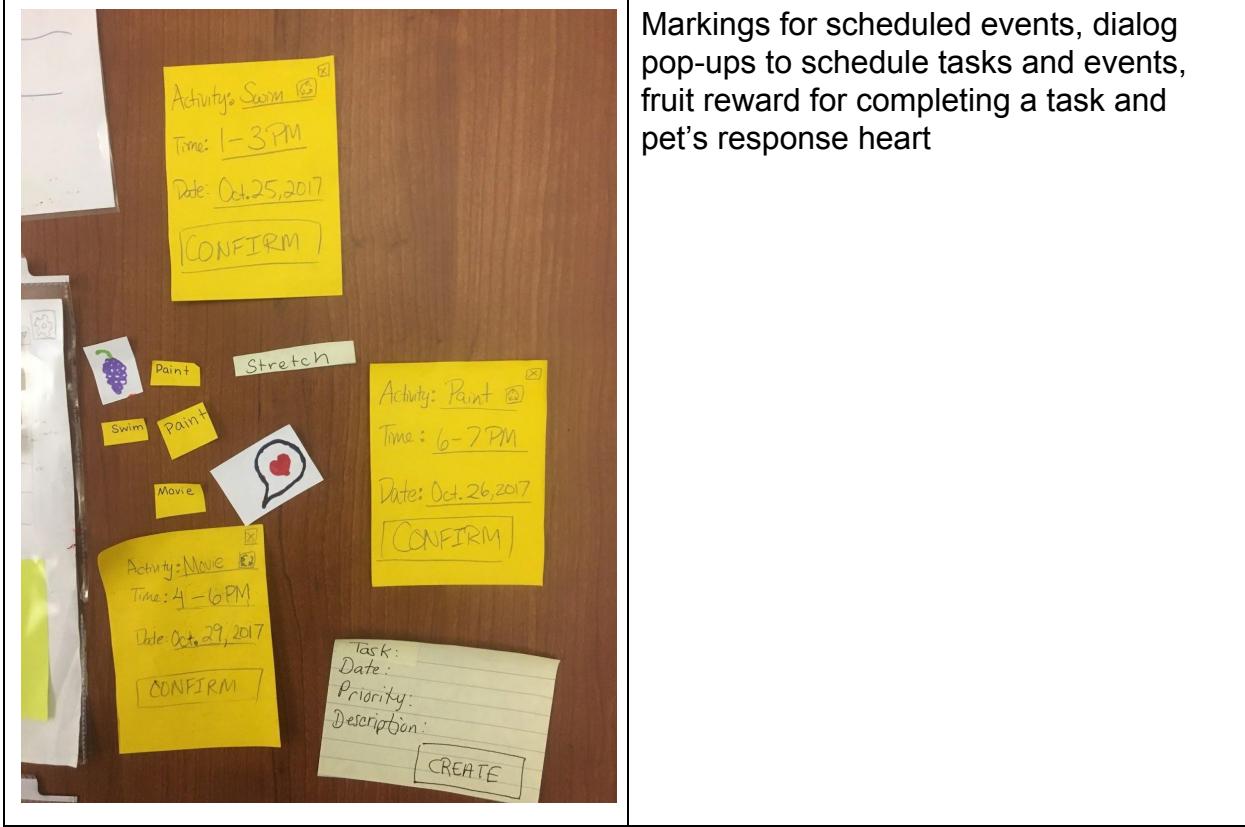
Settings includes a black list for websites where users can insert sites to block, an interests list where we may implement AI, and pet selection options



A soft blocked facebook page



A hard block facebook page



Task Images

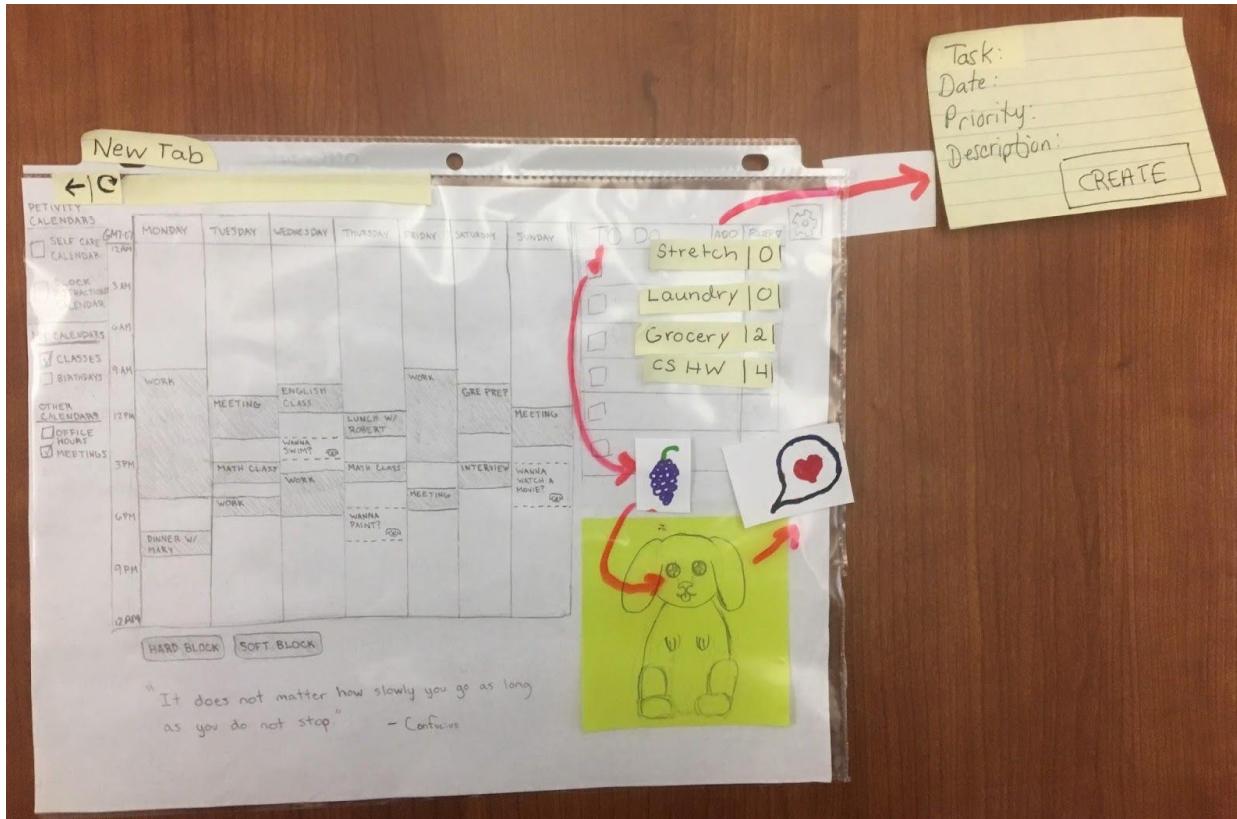


Figure 4. - Task 1

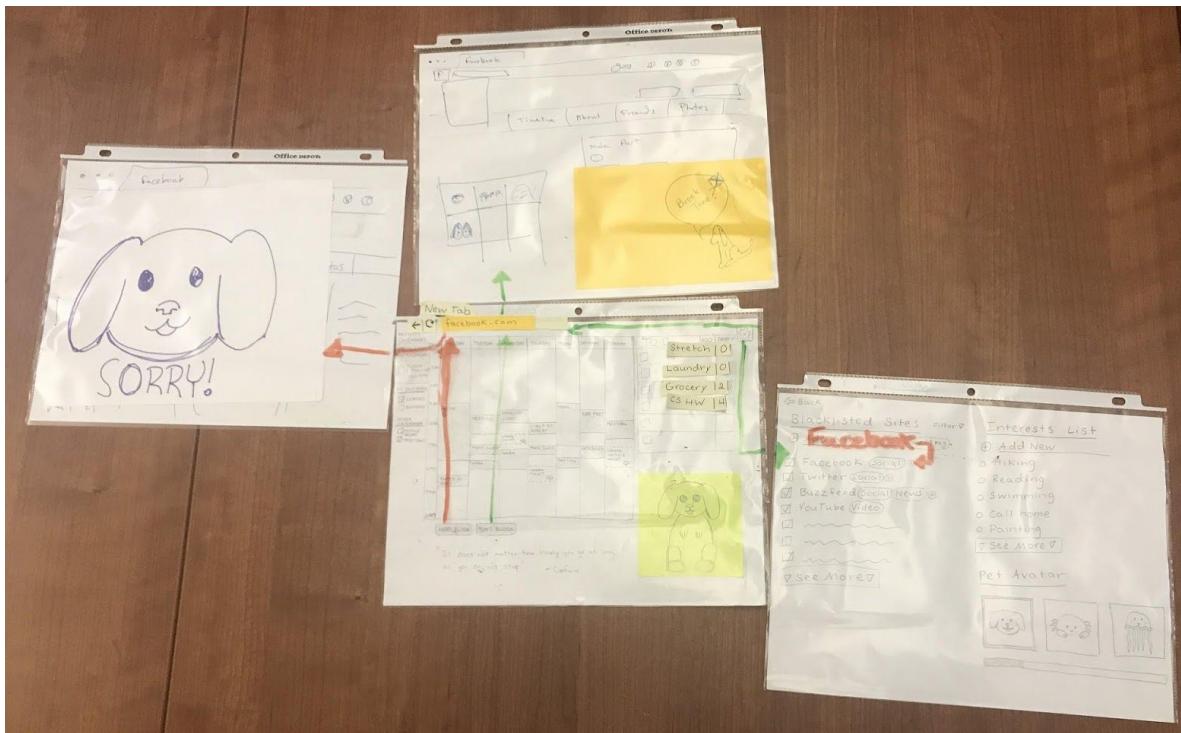


Figure 5. - Task 2

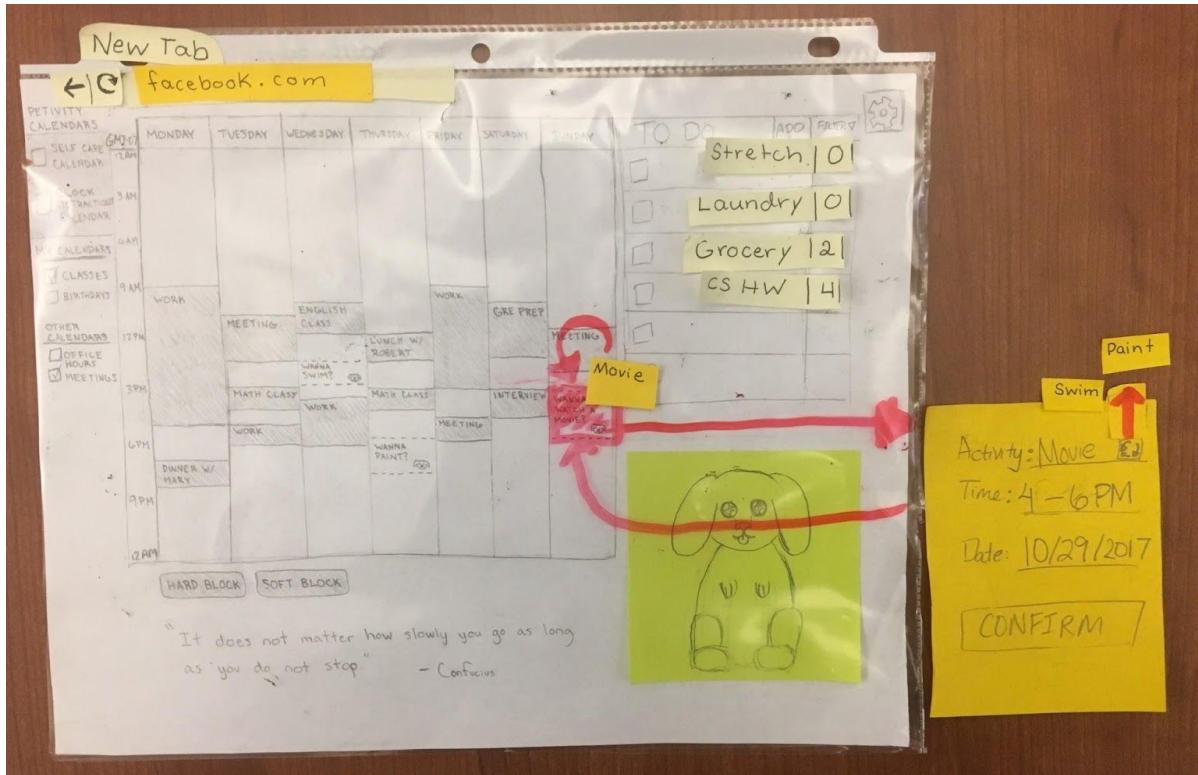


Figure 6. -Task 3



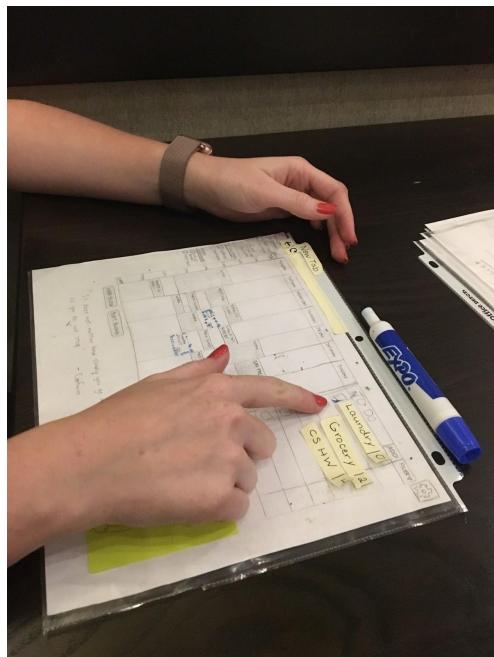
Figure 7. - Complete Prototype

Method

Participants:

P1:

Caucasian female; mid 20's; pre-school teacher and part-time college student



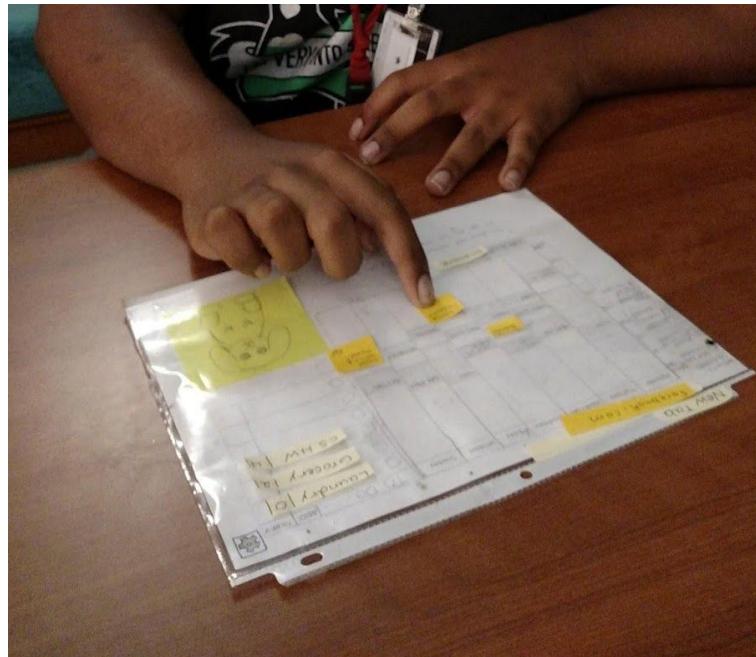
P2:

Hispanic Male; late teens to early 20's; psychology major at Foothill Community College.



P3:

African-American Male; early-20's; student at Stanford University.



*All participants agreed to test willingly without compensation

Environment

1. Off-campus Starbucks while she was waiting for coffee
2. Off-campus Starbucks while he was doing homework
3. Undergraduate residence while he was studying

Tasks

- 1: Participants have to complete a pre-existing task in their to-do list. Then, add task "Buy groceries" (due in 2 days) to their to-do list.
- 2: Participants have to add Facebook to their distracting websites list, initiate distraction-blocking, and visit facebook.com to see result.
- 3: Participants have to schedule a suggested self-care activity into their calendar.

Procedure

All members of the group were present and played the same roles for all user tests. Ivan greeted and introduced the premise for each tester. Participants were also asked to sign the consent form and were asked questions about themselves and their productivity methods. Ivan described the product, established that participants should tap to click, and stated that users should speak their thoughts out loud. Ivan then dictated each task, Crystal and Sidra simulated screen changes, and Jonathan took notes. Once the tester finished all three tasks, Ivan asked them for their feedback including anything they wished to improve (*See appendix for script*).

Test Measures

We noted:

- Relative amount of time spent on each task
- Number of errors
- Points of confusion and frustration

Team Member Roles

Computer: Sidra and Crystal

Note-Taker: Jonathan

Facilitator: Ivan

7. Results

Timewise, Participant #3 (P3) was the fastest, taking around 10 minutes to complete all tasks. Participant #1 (P1) took around 14 minutes and Participant #2 (P2) took around 22 minutes.

With errors defined as user clicks that don't advance users toward the task's goal, P1 made 3 errors, P2 made 8 errors, and P3 made 2 errors. The most errors, 8, were made on task 2.

For task 1, P2 and P3 were confused about how to interact with task dialog box's priority slot. Furthermore, P3 didn't understand the purpose of to-do list's right column's numbers. All participants enjoyed the pet and liked how completing task would feed the pet.

For task 2, all participants were confused by "block distractions calendar." P2 said he thought words "block" and "calendar" together seemed paradoxical. All were confused by "soft" and "hard" block wording. P2 was unsure why "Disable" appeared after pressing soft/hard block buttons. All participants struggled to navigate to settings to complete task 2. P1 was amused when she saw soft and hard block pages.

For task 3, P1 had no issue completing the task, quickly finding the suggestion in calendar. The others had more trouble looking for self-care suggestions in the interface. P2 didn't like the calendar's small font size and thought there needed to be further distinction between self-care events and normal events.

8. Discussion

Regarding task 1, we learned that it was relatively intuitive for users to complete and add to-dos to their to-do list. We didn't anticipate that users may interpret scheduled calendar items as to-dos, as shown by P2, because the to-do list wasn't visible enough to him. To address this, in future prototypes we'll make sure to use color/shape to make calendar and to-do list more distinct from each other. We also learned that setting task

priority can be superfluous. As a fix, we will remove task priorities and organize tasks by number of days left until deadline.

Regarding task 2, we learned that people's first thoughts were to look for related keywords, like "block" and "distraction," on their current screen instead of settings page. As a result, this was the most difficult and time-consuming task for every participant. To prevent future frustration, we'll either make the settings button more noticeable or include an input field for quickly adding distracting websites on the main screen. We also learned that "hard block" and "soft block" are terms users have trouble understanding, and "block distractions calendar" may not be intuitive to use. Thus, a change in word choice or a quick tutorial for users may be beneficial. Alternatively, block buttons could be integrated into a single button and blocking type would be changed in settings.

Regarding task 3, we realized users had trouble distinguishing suggested self-care items from scheduled items in calendar. With future prototypes, we'll use color, shape, and/or animation to further distinguish them.

Some things the experiment didn't reveal is if positive reinforcement of the pet would remain effective in long-term, and if users would find "block distractions calendar" (where one can schedule automatic distraction blocking at specific times) useful.

Overall, we found that all our participants appreciated the product and commented that they would use it. All users visibly showed enthusiasm for the pet reward system for Task 1, some mentioning that it made the application "unique."

Total Word Count: 1472

Appendices (as many pages as necessary - link from text into the appendices)

Script:

Introduction: Thank you for helping us test our product, Petivity. Our paper prototype is an early draft of what our product will look like. Ultimately, Petivity will become a web application which aims to improve organization and productivity in a fun and engaging way. Before getting started, please sign this consent form.

Background Information: We would like to gather some information about you. What is your occupation? What does your work consist of? What do you use to keep track of your schedule/to-dos, or to improve your productivity, if anything?

Directions: In this demo, we will ask you to complete three tasks. We want you to interact with these papers the same way you would if they were on a computer screen.

To simulate a mouse click, press on the screen with your finger and we will simulate the screen's behavior. We'd like to have good communication throughout this process in order to better gauge how to improve our design, so please be as open as you can through the execution. This means we ask that you think out loud; if you click a button because you think it will lead you to another screen, say that. If something happens that you didn't expect or don't understand, we want to hear that too. As the user, all of your actions are correct and helpful. One of us will be acting like a computer as you work through our prototype.

Demo:

Task 1: One of the main goals of our product is to remind people of their to-dos. Please look through the to-do list and simulate completing one of the tasks. Now that you've completed a task, please show us how you would add the task "Buy groceries" (which should be completed within 2 days) to your to-do list.

Task 2: Our product also aims to eliminate distractions. Please show us how you would add Facebook to your list of distracting websites. Now, activate the blocking feature that completely blocks access to Facebook. Then visit Facebook to see the result of the blocking feature.

Task 3: We also hope to remind users to take time for self-care. Please show us how you would schedule one of Petivity's self-care activity suggestions on the calendar.

Consent forms:

Consent Form

The Petivity application is being produced as part of the coursework for Computer Science course CS 147 at Stanford University. Participants in experimental evaluation of the application provide data that is used to evaluate and modify the interface of Petivity. Data will be collected by interview, observation and questionnaire.

Participation in this experiment is voluntary. Participants may withdraw themselves and their data at any time without fear of consequences. Concerns about the experiment may be discussed with the researchers Crystal Zheng, Jonathan Mao, Sidra Ijaz, Ivan Salinas, or with Professor James Landay, the instructor of CS 147:

James A. Landay
CS Department
Stanford University
650-498-8215
landay at cs.stanford.edu

Participant anonymity will be provided by the separate storage of names from data. Data will only be identified by participant number. No identifying information about the participants will be available to anyone except the student researchers and their supervisors/teaching staff.

I hereby acknowledge that I have been given an opportunity to ask questions about the nature of the experiment and my participation in it. I give my consent to have data collected on my behavior and opinions in relation to the Petivity experiment. I also give permission for images/video of me using the application to be used in presentations or publications as long as I am not personally identifiable in the images/video. I understand I may withdraw my permission at any time

Name Katlin

Participant Number 1

Date 10/24/17

Signature Katlin

Witness name Jonathan Mao

Witness signature Jonathan Mao

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Name Jose Gutierrez

Participant Number 2

Date 10-24-17

Signature José Ijaz

Witness name Sidra

Witness signature Sidra

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Name Jeramiah Winston

Participant Number 3

Date 10/25/17

Signature [Signature]

Witness name Ivan Salinas

Witness signature [Signature]

Include raw data (cleaned up and readable) - no names, use participant #s

	Critical Incident	Task	Participants	Severity	Possible Fix
1	didn't understand what block calendar did	2	1, 2 ,3	3	Have a quick walkthrough tutorial to explain the jargon
2	Confused about the Soft/Hard Block Buttons	2	1, 2, 3	1	Name the buttons with "Start Blocking"; Define soft or hard block or have explanations somewhere
3	Took a while to navigate to settings page	2	1, 2, 3	3	Make settings button larger and more pronounced
4	didn't know where to look for suggestions for self-care	3	2, 3	1	Make self-care suggestions a different color/design and more pronounced
5	Confused about priority slot in create task dialog box	1	2, 3	1	Allow user to select priority in a drop down
6	Font size was a bit small on calendar	3	2	1	Display only 5 days on calendar
7	Didn't know what the numbers next to each to-do were	1	3	1	Label the column with number Days Away or Countdown
8	couldn't tell the difference between self-care suggestion and normal events	3	2	1	Make a more noticeable difference between self-care suggested events and normal events (different color, more noticeable pet graphic)
9	Confused by "Soft	2	2	1	Change color of

	block” button showing “Disable” after clicking it				button when clicked or have a different wording like “Turn off”
10	Enjoyed the feeding pet animation/reward after completing a task	1	1, 2, 3	0	
11	Found blocking feature to be amusing	2	1	0	

Notes:

Participant #1

Background Info:

- Occupation: Preschool teacher
- Things she does: Does dishes, washes laundry, cooks dinner, facilitates activities at preschool, supervises kids, hands out snacks
- Productivity tools: Uses a little book for schedule/to-dos

Testing Info

Task 1:

- Found to-do list quickly, intuitively realized that checkbox should be clicked when task is completed
- Enjoyed the feeding pet animation after completing task
- Quickly found the button to add a task
- Clicked confirm without issues to successfully add task

Task 2:

- Scanned entire interface looking for something that would allow her to add things to distracting websites list
- Unable to find anything that she was completely sure about, so pressed anything having to do with blocking, though was hesitant and didn't believe it was the right thing but did it anyways
- Method of adding website to distracting websites list wasn't intuitive
- After pressing every button relating to blocking/distractions, found settings button
- Was able to easily add Facebook to distracting websites list from settings page
- Blocking feature was already activated from earlier button-pressing, so she then visited Facebook and laughed at block screen

Task 3:

- Found and clicked on “Wanna watch a movie?” without any trouble and scheduled task successfully

Feedback Info:

- Settings button was not very obvious
- Says she would use it
- Acknowledged some features are similar to other things she uses, but she enjoys the pet

Participant #2

Background Info:

- Occupation: Currently a student majoring in Psychology at Foothill College
- Things he does: Works on schoolwork
- Productivity tools: Outlook (uses calendar to keep organized)

Testing Info

Task 1:

- Looked at calendar first and zoned in on only the calendar -- didn't seem to scan rest of interface
- Interpreted the calendar as a to-do list (perhaps this is how he currently uses his calendar on Outlook)
- Saw “Meeting” was the first scheduled item of the day on Tuesday (the current day at time of testing) and assumed it to be a task we were asking him to complete
- Clicked on “Meeting” and saw a pop up for editing the event -- was confused and realized that isn't what he wants to do so clicked the “X”
- After returning to the main screen, was still focused on the “Meeting” event on calendar
- Found to-do list after scanning whole calendar interface
- Tapped on “Laundry” to complete task
- Was easily able to add an item to to-do list with “Add” button
- Decided to add a description to to-do list item and found priority to not be important for “Groceries” task so didn't add a priority

Task 2:

- Scanned interface for anything mentioning “distractions” or “blocking”
- Unsure of whether clicking “Block distractions calendar” will give him what he needs because of the word “calendar”
- Decides to click on “Block distractions calendar” anyway
- Realizes it's not what he wants so clicks on back button
- Sees hard/soft block buttons, but unsure of what “Hard block” and “Soft block” means
- Considered “Hard block” to be for something more serious like viruses, so decides to click “Soft block” instead

- When “Soft block” button switched to “Disable,” initially interpreted the feature as being disabled
- Has very difficult time locating settings button (had to be guided to reach settings page)
- Was able to add Facebook to distracting websites list easily
- Visited Facebook with soft block and was able to understand intended meaning of “Hard block” and “Soft block”
- Decides to test hard block as well

Task 3:

- Doesn’t see suggestions on calendar
- Clicks settings, adds painting to interests (though it is already there)
- Clicked self-care calendar to show self-care items
- Clicked on “Wanna paint?” to accept suggestion

Feedback Info:

- Wants to more intuitively know what exactly is in settings
- Wants to schedule self-care tasks on his own rather than taking suggestions
- Events on calendar were rather small for him so he didn’t bother to read through every event
- Liked the reward system in place when completing tasks and found it “engaging”. Thought it would be boring without it.
- Confused by “Block distractions calendar” -- doesn’t think of scheduling periods of time for blocking distractions as intuitive
- Unsure of what “Hard block” and “Soft block” means
- Would want a manual defining what self-care is since it can mean different things to different people

Participant #3

Background Info:

- Occupation: Stanford student majoring in art practice
- Things he does: draw, paint, digitally manipulate artwork
- Productivity tools: Recently started using Google calendar

Testing Info

Task 1:

- Found to-do list quickly, clicked laundry checkbox
- Unsure of whether to add a to-do to the to-do list or to calendar
- Successfully adds “Groceries” to-do in little time

Task 2:

- Unfamiliar with interface, not sure where to go to add a website to distracting websites list
- Decided to click on “Soft block” to see what it does. Sees that it switched to “Disable” button and realizes he still needs to add Facebook to distracting websites list
- Then clicked on block distractions calendar and realizes it's not what he wants so he unchecks the box for it
- Then clicks on settings button, but finds “Blacklisted websites” to be unclear, as it may not necessarily be the list of distracting websites he's looking for
- Adds Facebook to distracting websites list easily from settings page

Task 3:

- Unsure of what suggestions look like
- Clicks on “Self-care calendar”
- Clicks on swimming, quickly confirms

Feedback Info:

- Unsure of what “Block distractions calendar” meant
- Wanted to click on dog to see what it would do (didn't click on it when we asked him to complete tasks, but did after demo)
- Overall enjoyed the product