

Team B-2:

DROP TABLE 'teams';--

CPSC 4140, Spring 2018

Milestone 2 Report

Hannah Schilling, Alex Six, Thomas Randall, Lucas Wilson

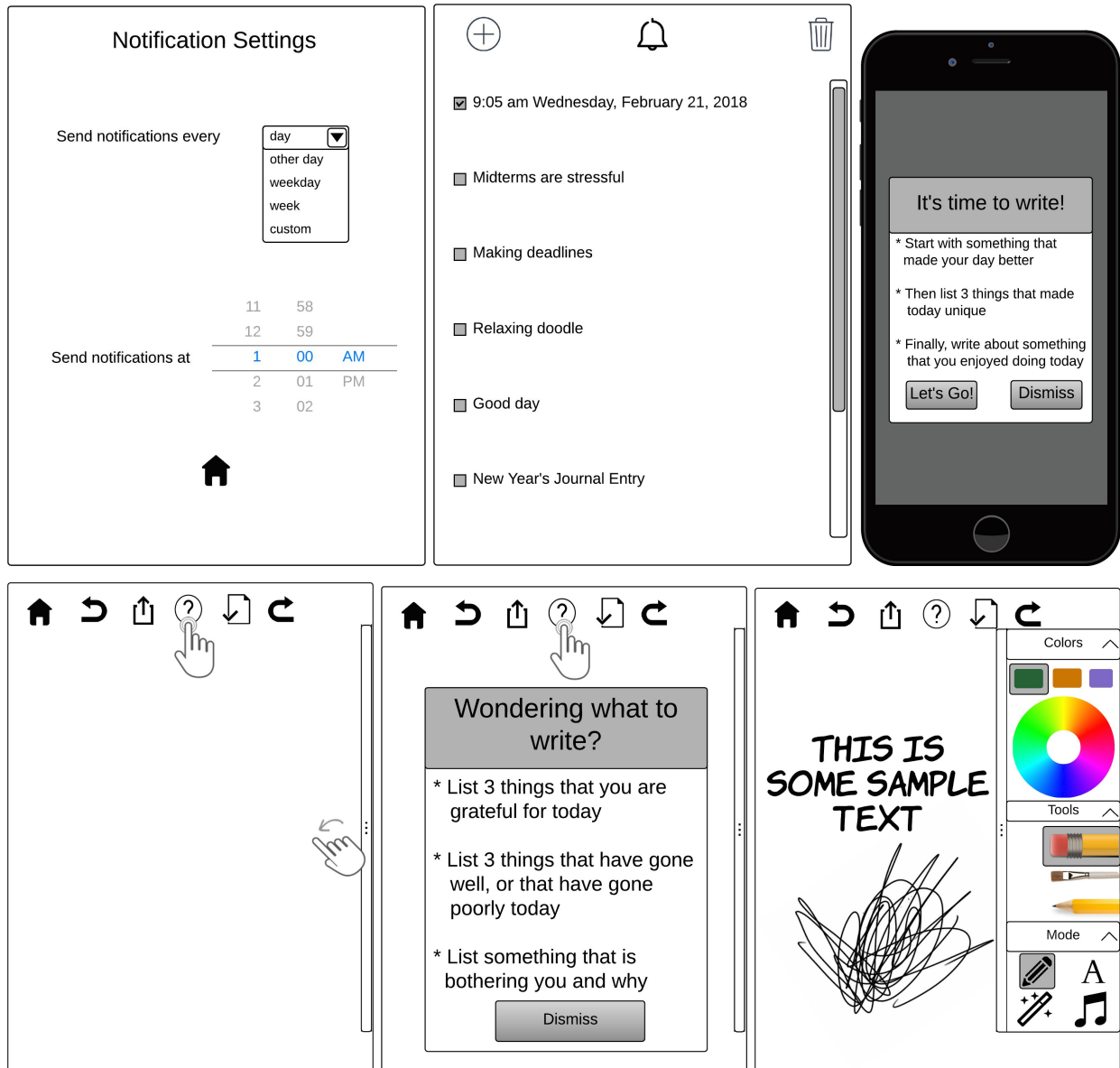
Introduction

Over the course of the last few weeks, our team has been working to create three “drastically different mockups” of software that will help to meet the needs of the problem space which we have explored. The following report is an illustration and explanation of the three designs which our team deemed to be the most likely to succeed based on design principles and understanding of the problem space.

First; however, in order to understand the software and interfaces that we have designed, we need to glance back at the original problem space in Milestone 1, and recall the steps that brought us to the space that we are currently moving within. Originally, the team’s intent was to enter into the space of safety, asking the question “how can we improve a person’s safety?” However, upon further exploration of the space, not only is it already saturated with solutions, it is a problem space that does not really exist on Clemson’s campus--at least not to the extent which we first envisioned. From there, the team pivoted and began to look into mental safety, which, over time, morphed into the team asking the question “how can we improve people’s mental health?”

With that context established, here are three designs we created to serve this area.

Journaling for Stress Relief



- Users may set (or modify) notification preferences to remind them to journal at regular intervals. The system delivers notifications at specified intervals with prompts that inspire positive journaling.
- The application includes its own editor to create and save journals in the absence of other materials.

- The editor includes features such as: undo/redo, text writing, free drawing and erasing, color selection, writing prompts, relaxing music, saving and exporting journals.

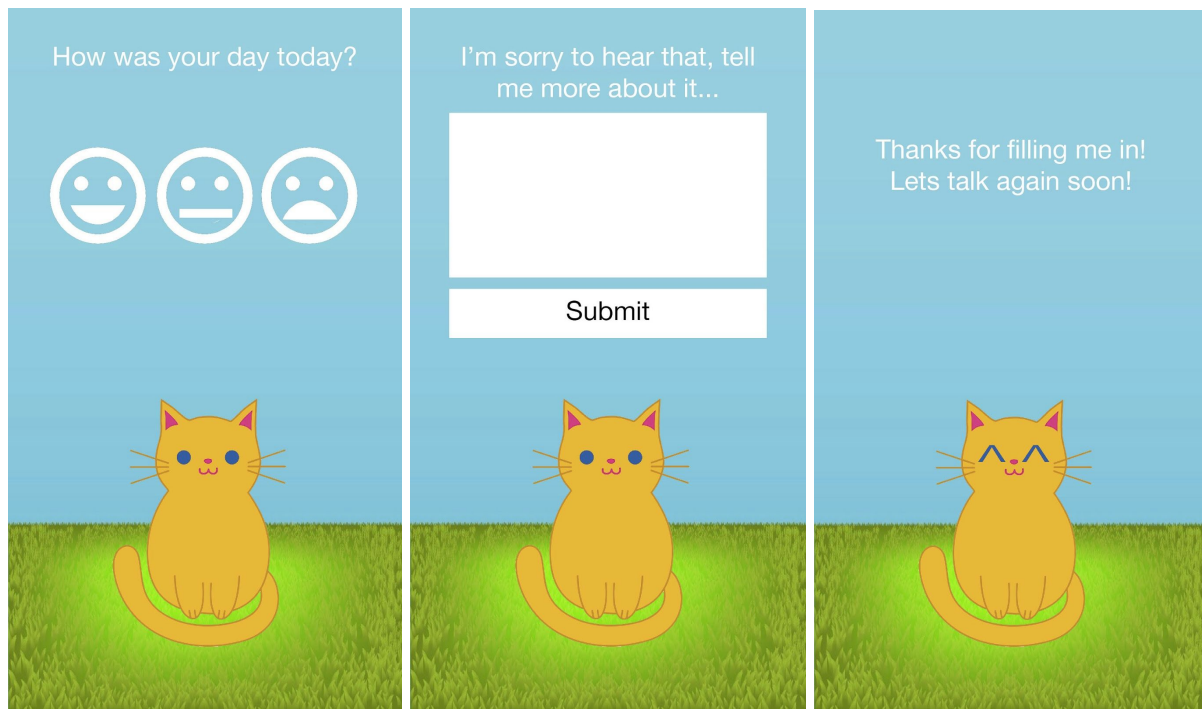
Stress is one of the most frequent mental health issues dealt with by all populations, along with anxiety and depression. Studies by Mercer University and Carol Flinchbaugh show that daily or weekly journaling in conjunction with stress-relieving exercises maximizes personal satisfaction with life ^[1] ^[2]. Most people have the means to create such journals, but lack motivation or inspiration to do so regularly. The stress relief journal encourages users to find a short amount of time to express how each day is going, with an emphasis on visualization and gratitude journaling. Based upon the Mercer research, the journal also recommends normal de-stressing activities for users, as these combined with regular journaling have shown the best results in terms of increased satisfaction with life. The journal is designed to be compatible with any mode of expression, but provides a small editor of its own in the event that the user lacks an acceptable alternative. Based on feedback from the studio presentation, we've decided to focus less on the native journaling features (which can be easily outcompeted by existing solutions) and deal more in terms of journal management and motivation. The core point of this design is no longer to offer a platform for expression, but rather to promote the improvement of the user's mental health by aiding the user in journaling idea generation and commitment to the practice of periodic journaling.

Strengths of this design include its low barrier to entry, particularly for persons already owning smart devices, easy and un-intimidating commitment for initial and continued use, and the research from Mercer indicating that journaling increases benefits gained from other de-stressing exercises and activities. Weaknesses of the design include its asocial nature, as our own research showed that human to human interaction is almost universally the best source of stress relief. Other weaknesses include the self-motivated use and continued use of the journal, as well as the requirement to have and pay attention to the device serving the journaling application.

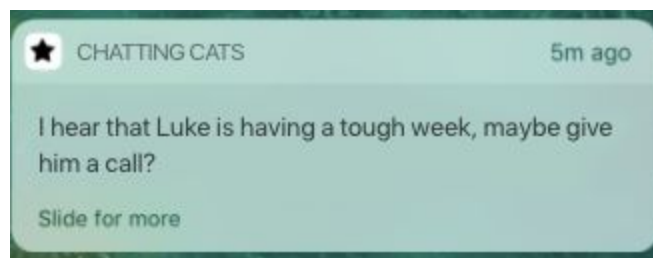
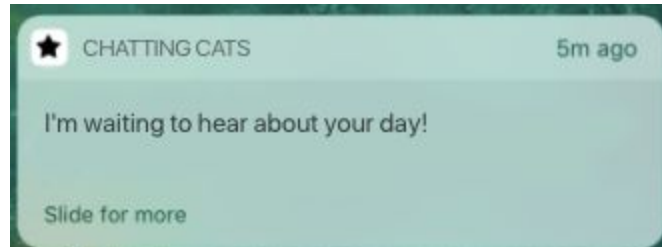
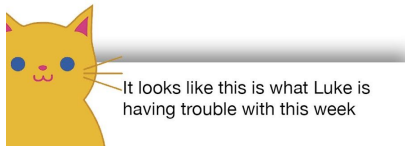
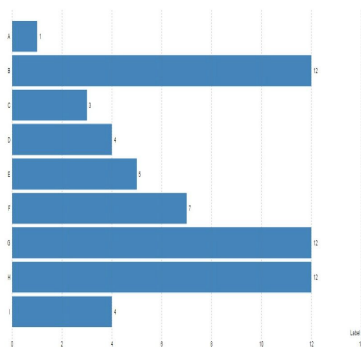
¹ Mercer, A. et al. 2010. Visual journaling: An intervention to influence stress, anxiety and affect levels in medical students. *The Arts in Psychotherapy*. 37, 2 (2010), 143-148.

² Flinchbaugh, C. et al. 2011. Student Well-Being Interventions. *Journal of Management Education*. 36, 2 (2011), 191-219.

Talking to a Cat



Lukes Word Map
Week of Februrary 22nd 2018



- Often times people may need help but be too nervous or embarrassed to ask their friends and family for it.

- When you talk to your cat the information is saved and your good and bad days/weeks/months are made visible to a friend or family member who has linked their app to yours.
- The cat acts as a proxy for communication between you and your friends so that it's easier to share when something is going wrong.

In poor countries only 1 in 27 people with depression seek help, and in rich countries only 1 in 5 people seek help ^[3]. Why is it so hard for people to ask for help? Often time it comes from pride or feeling like we are burdensome to others, but it's important to make it easy to ask for help when you need it most. The idea that we are banking on with this design is that an individual would be more willing to open up to a cute mascot such as a cat than they would their friends. Even if they know that eventually this is just a message that they are writing so that their friend can help them we believe that they would be more likely to express what is truly on their mind.

Strengths of this design include accessibility, as anyone can use this app regardless of physical ability using voice controls. There is a low amount of effort required for the person talking to the cat, since you need to update the app every single day it is important that users do not view the updates as a hassle worth skipping. This design also facilitates a very personal connection when our users may need it the most, no one knows you better than those who personally see you all of the time.

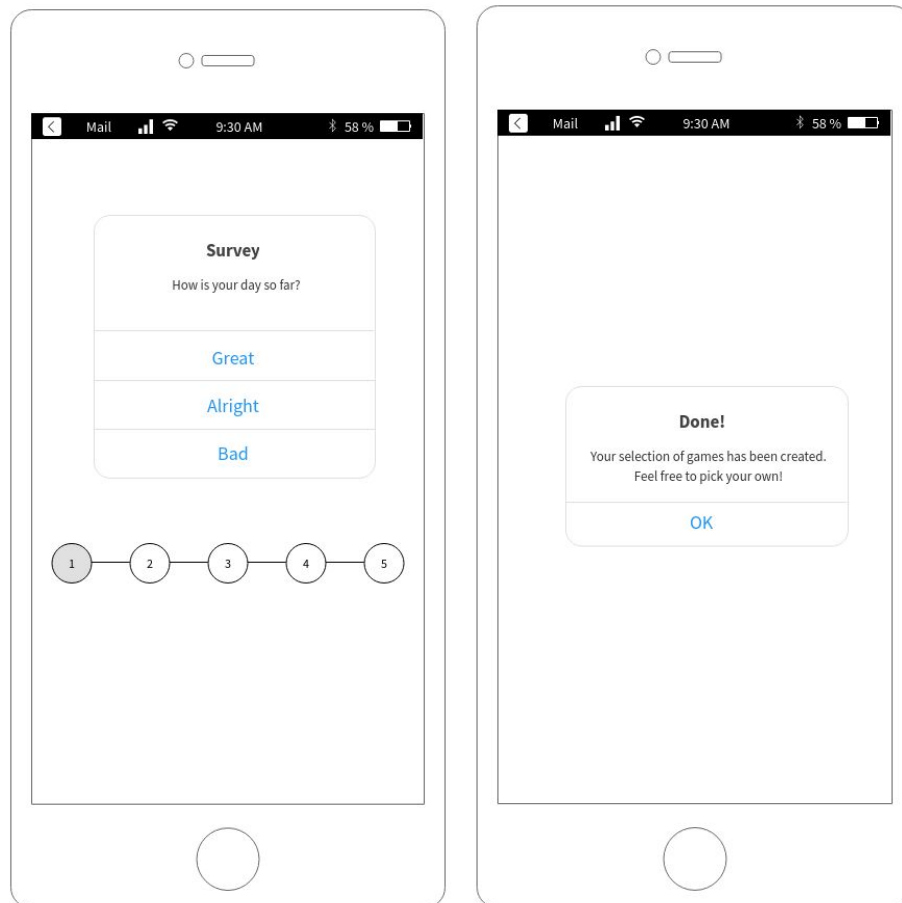
Weaknesses of this design include providing the user with a false sense of security in their approach to their mental health. This design does not provide the user with a professional counselor and sometimes that's the only option. The worst case scenario is convincing someone that they are receiving adequate help when they are not, or distress is placed on their partner who could be unqualified to provide adequate support. Privacy concerns are also an important point to consider. It is critical that we provide options for what kind of information the user would like to share with their partner and not share anything else. There has to be a certain level of confidence in our system for anyone to want to use it. Finally, we hope that users wouldn't result to the usual "I'm fine" response as they would in day to day relationships with the cat.³

When presented to our peers this design was met with a generally positive reception. One suggestion was to provide an option to talk to another animal or something completely different, the key idea is not what kind of pet you are talking to but providing an environment where people are comfortable being honest about how they feel. There were also some points raised

³ J.a. Talbott. 2011. Public attitudes towards people with mental illness in England and Scotland, 1994–2003. *Yearbook of Psychiatry and Applied Mental Health* 2011 (2011), 223–224.
DOI:[http://dx.doi.org/10.1016/s0084-3970\(09\)79246-1](http://dx.doi.org/10.1016/s0084-3970(09)79246-1)

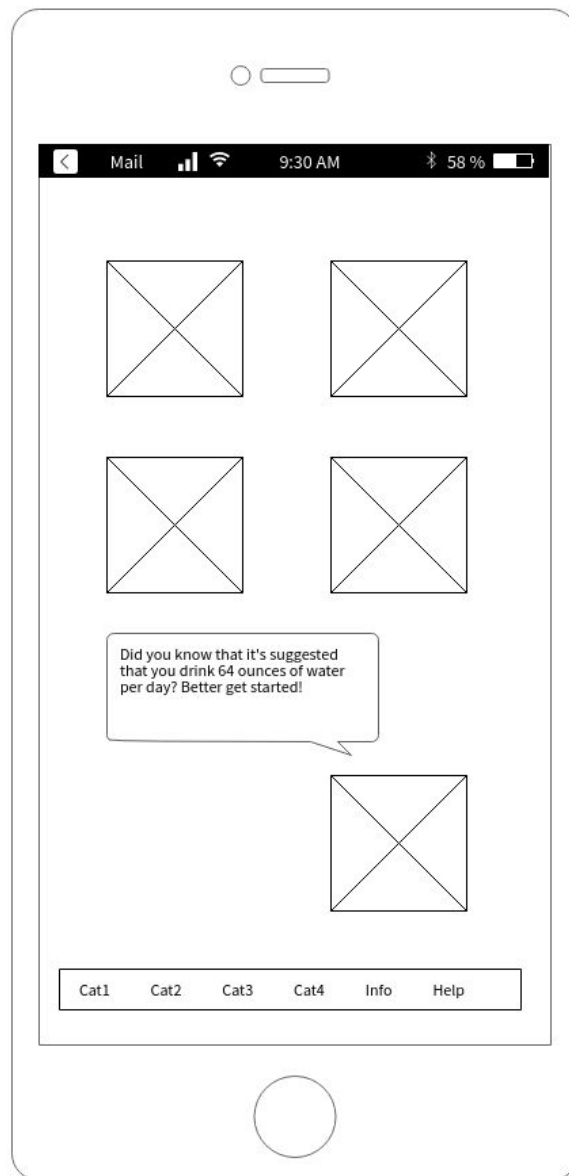
regarding the lack of feeling a human connection when using a system such as this one however this misses the point. The idea is to completely abstract that human connection that causes self censorship so that we can share what is truly burdening us. From the feedback that we received we believe that this is a design that we certainly have a lot of room to work with.

Mood Games



- User takes a short 5-question survey to determine the user's mood at the time of loading up the app
 - Answers are evaluated and a list of games chosen by the system is populated
- Users can also choose to select categories of games on their own and choose which games that they would rather play than the list generated by the app from the survey
 - Categories include: Breathing exercise, basic yoga poses, matching games, typing games, meditation
- The goal of the app is to provide mental relief through mindless games or little sessions of time devoted to breathing, moving, or just relaxation

- Connectivity between users reached through a leaderboard, showing users what their friends are playing and for how long



(“Did you know that it’s suggested that you drink 64 fluid ounces of water per day? Better get started!”)

Through research gained from milestone one of the project, we learned that communication is often hard for people that are struggling with their mental health. Through this app, the goal is to provide the user with relief without the worry of burdening someone they know with their troubles. The user is able to try and stabilize their mental health without the

reliance on another person being there, or the worry that they are oversharing or being annoying. This app is not intended to be a solution for any mental crises a user may suffer, but rather as a proactive way for the user to improve themselves or supplemental system for professional help.

To use this app, the user would download it from their phone's respective application store. Once a user loads the app, a short survey would appear, with the user being able to rate how their day is going, if anything is troubling them, if they have space or time to move around, would they like to play games for distracting or for meditation. Once the user has completed this survey, the application would populate a list of games tailored to the user's needs based on their answers. Although the app creates this list of recommended games, the user always has the option to scroll through individual categories to pick games of their own choosing. Categories include yoga poses where the application would lead the user through how to perform them, for when the user has the time and space to devote to them, meditation where the application would optionally provide background music while giving the user a list of prompts to think about, and then distracting games, such as typing words, matching objects, identifying differences between two pictures, etc. Based on the feedback from the studio presentation, peers were concerned with the lack of user-to-user communication, as from the data pulled for use in the Milestone One document indicated that interaction with other people is a big factor in mental health. As such, we have shifted focus a little with this design to incorporate a scoreboard type section, which allows users to see how much time their friends have spent on which different games. This way, there is a little bit of user-to-user interaction that can stimulate the use of the app by encouraging users to see how much time their friends are putting into the apps, and on which specific portions.

A strength of this design is that it is portable. As a phone app, a user could carry it with them in almost all situations. Another strength is the flexibility and choice between games after the survey, allowing users to pick what is best for them and their current situation (be it yoga poses requiring space and time or the universally usable breathing exercises). This app has low commitment; the user will not be bothered by the app with notifications to encourage use. The user doesn't need to access the app every single day, it exists for when it is needed. A last strength of the design is that as a mobile app, updates can be pushed through for enhancing the user's experience, such as adding or improving games, accessibility options, and interface changes.

A weakness of this design is that there is restricted use for those with motor skills disabilities. While there would be options for breathing exercises, meditation, users might find that the games involving movement are not options for them. Another weakness of this design is that it relies on the user to reach out for the help that they need proactively. Research from our milestone one project also indicates that connecting to other people is a comfort for users; with

this application there is minimal user-to-user contact. A final weakness is that this is not suitable for replacement of professional medical care; this app is supplemental to care, or for a proactive user.

Milestone 1 Makeup Opportunity

New Task Analysis

Important Characteristics of Tasks:

- Tasks can be accomplished by individuals alone, with friends, or with the guidance and assistance of a professional
- Tasks are very personal and private
- People generally want to complete these tasks, but may struggle with actually achieving tasks
- Individuals may be easily frustrated when working to achieve these tasks
- Many resources to help individuals already exist, such as psychological counselors, antidepressants, and yoga

Important Characteristics of Task Environment:

- The task environment should be relatively stress-free, in order to facilitate the completion of tasks
- The location itself is not a predictable or easily defined element of the environment; users may be outside, inside, with or without people, but should be able to complete the task regardless

User goals:

- Have less stress in their lives
- Be happier in life
- Worry less about the future

User motivations:

- A desire for self-fulfillment
- Achieve personal goal
- A desire to fit in with society

User solutions:

- Antidepressants and other medical treatments
- Ignoring or suppressing negative thoughts
- Creative tasks and activities
- Planning

Hierarchical Task Analysis

GOAL: Be less stressed

- Think about what is stressing you
- Plan a course of action (exercise, visual organization, daily scheduling, etc)
- Execute the plan of action
- Reflect on the experience and its effectiveness at dealing with stress
- Repeat above as necessary

GOAL: Be less depressed

- Recognize depression
- Seek counsel with friends and family
 - Find an appropriate place and time for discussion
 - Set up a meeting
 - Talk about problems
- Seek counsel with a depression professional
 - Look up a mental health professional
 - Schedule an appointment with a professional
 - Attend the appointment
 - Speak freely and heed feedback
 - Set up future appointments as needed
- Take prescribed medications
 - Use as directed and no more or less often than directed
 - When running low on supplies, seek refill at pharmacy
 - Update prescription with professional guidance
- Repeat above as necessary

GOAL: Be less anxious about something

- Recognize excessive anxiety (that which prevents otherwise normal behavior)
- Seek help from professional
 - Identify cause of anxiety
 - Address reaction to or cause of anxiety
 - Plan to aid in avoiding or accommodating your source of anxiety
 - Gather support to overcome reaction to anxiety trigger
- Repeat above as necessary