Smart Calendar

Design Project
ITIS 3130-091

Smart Calendar

15:52

Get Started

Design Team 15:

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Needfinding

Target Users:

Characteristics of Intended Users:

The intended population will consist of individuals who find that stress from poor time management is negatively affecting their lives. Specifically, those that find difficulty in scheduling personal care time to help manage stress. This may consist of people that hold multiple jobs, juggle school and work, have long daily commutes, or feel that there are simply not enough hours in the day to get everything done. Many people feel guilty or unproductive by taking breaks, not realizing the benefits of temporarily stepping away from certain responsibilities to come back with a fresh set of eyes. Intended users are not limited to a specific population, but targeted users will primarily consist of college students.

Reasons users would choose Smart Calendar:

Individuals would choose our app to help find relief from stress caused by the situations mentioned above. It will be cheap and available to anyone with a computer or smartphone. As a result, it will appeal to people on a tight budget. Portability is also incredibly important for people that are always on the go or commuting. Students who feel like they cannot take a break from studying will love this app. It will allow them to see gaps in their busy class schedule where they can they can take a step back, and suggest relaxing activities to do during this time. It helps take away the added stress of managing your schedule, assisting in managing time without much user effort.

Source Problem:

The main problem before using the app the user may or may not have a schedule but do not necessarily know how to manage the time. This can be due to a perceived stress from attempting to manage their hectic schedule, having such a busy schedule the user does not perceive any free time, or other related causes. We found in our needfinding that while many participants believe they manage their time well, a similar percentage experience high levels of stress from deadlines and time management. This app aims to remove the stress of time management from the user, allowing them to focus only on deadlines and personal care.

Once in the app the user will need to plug in different events or tasks that need to be accomplished, and then will be able select from multiple schedules that work for them. Then they will be able to get notifications or text alerts to help them follow their new schedule.

Persona 1: Simon Lee

Profile:

Simon a 24 year old senior at the University of North Carolina at Charlotte. He lives out of town and commutes every day. He also works as a software developer intern and a teaching assistant. Since he commutes and has out of school responsibilities, time management is very important to him. However, he does a poor job with time management, and this causes unnecessary stress. His primary form of digital time management involves utilizing the built-in tools on canvas. He does not find any problems with these time management tools, but has not attempted to utilize alternative digital methods.

Responsibilities:

This semester, Simon has four classes, one of which has an accompanying lab session. As a result, he needs to be on campus every day. A long commute makes this even more stressful. He has to account for an hour drive to and from campus, sometimes more depending on traffic. When he is in Charlotte, he is either working at his internship or focusing on schoolwork. At home, he has very little time to relax, as he gets home late and has to catch up on assignments, study, and find time to spend with his family.

Pain Points:

Simon tends to start on assignments at the last minute or two to three days before the due date at the earliest. Many assignments share the same due date, making time management even more important. Since Simon only utilizes Canvas to keep track of assignments, waiting until the last minute can cause a large number of assignments to appear as one block on his calendar, increasing anxiety and stress.

Simon has not attempted to utilize any third party time management applications, and therefore is restricted by the limitations of the Canvas modules and its calendar system. He does used sticky notes sometimes as quick reminders.

Key Drivers / Motivation:

Simon is a second degree seeking student. He started college four years ago and ended up going the wrong career route. After graduating and wondering what to do with his life, he was introduced to programming and got hooked. He decided to return to school and make it his top priority. It is a huge investment which will have a great return, allowing him to support himself and his family in the near future.

Persona 2: Kimberly Lippington

Profile:

Kimberly is a junior in college living on campus and is a Visual Art major with a concentration in painting at the University of North Carolina at Charlotte. She is currently working on padding out his resume with high grades, side projects and certifications. She is very close with her family, of which she will be the first to graduate from college. She believes that she manages her time fairly well, rarely missing homework or assignment deadlines. However, because of her busy schedule, she gets very little sleep.

Responsibilities:

Kimberly is taking fifteen credit hours worth of junior level art courses. She is constantly busy, even on the weekends. For school, she has to find time to go to the art studio on campus when it is open and pay for her own supplies. She also has to go to exhibitions for class credit. She is also part of an art group that hosts their own exhibitions. On top of this, she works part time for a local fast food restaurant.

Pain Points:

Kimberly does not know when to take a break from working. She is constantly fatigued from overworking himself, either from serving burgers and fries or from a long cram session for an important exam. This causes her extreme stress at times and the occasional mental breakdown. This can affect her performance both at school and at work.

Kimberly uses Google Calendar as her primary source for maintaining her busy schedule, but feels that she uses it inefficiently. She isn't extremely tech-savvy and wishes that it was a little less feature-packed.

Key Drivers / Motivation:

Kimberly goes to class everyday because she wants his degree and a good job, but most importantly, she wants to make her family proud. She would also love to be financially stable enough to start a family of her own some day, not without some traveling first. Also, working at a fast food restaurant is definitely not her dream job, and she knows she is meant for bigger and better things.

Needfinding Survey:

The needfinding survey consisted of an online survey containing ten questions. These questions were a mix of multiple choice and free response. Survey responses were sourced from the target demographic, namely college students.

Question Summary:

Our questions all relate and are aligned with the needs of our applications. This survey allowed for us to gain a general knowledge of the intended users and their levels of anxiety, stress, or relaxation of assignments, deadlines, and time-management. We used this information for the basis and prototype of our application and we can further develop this application in the future in regards to the information in this survey.

1. **What is your gender?**
   84% - Male
   12% - Female
   4% - Prefer Not To Say
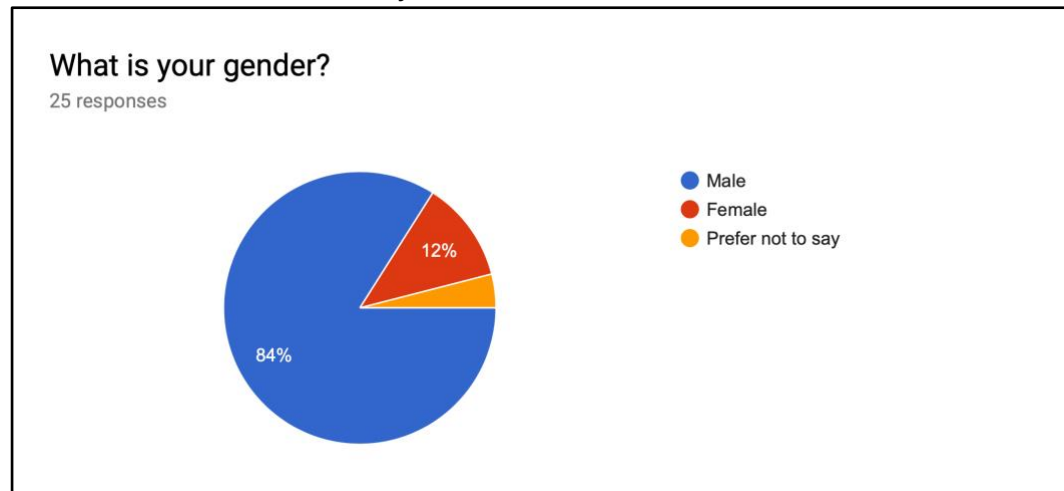
2. **How do you feel you manage your time?** *(On a scale of 1 - 10, lower number indicates lower ability to manage time, higher number indicates a better ability to manage time)*
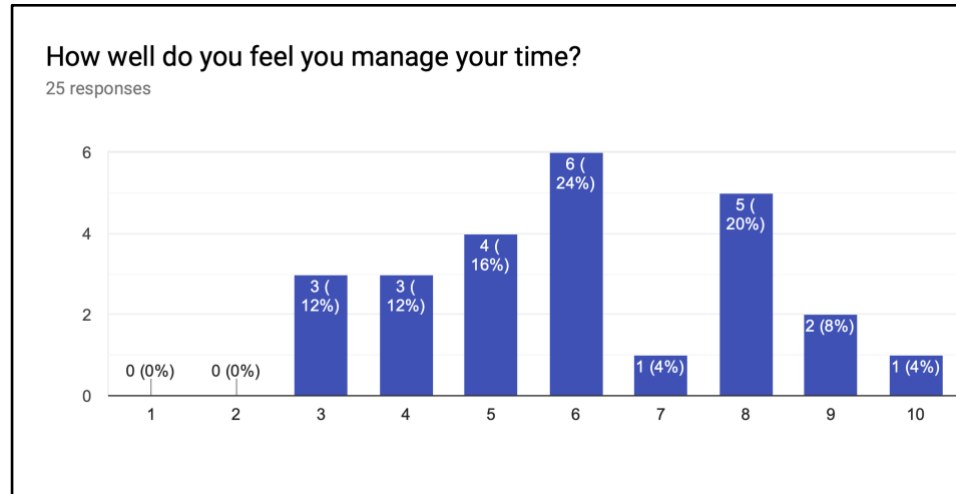
3. **On average, how stressed are you because of deadlines and time management?** *(On a scale of 1 - 10, lower number indicates the less lower amounts of stress due to deadlines and time management, the higher number indicates more amounts of stress due to deadlines and time management)*
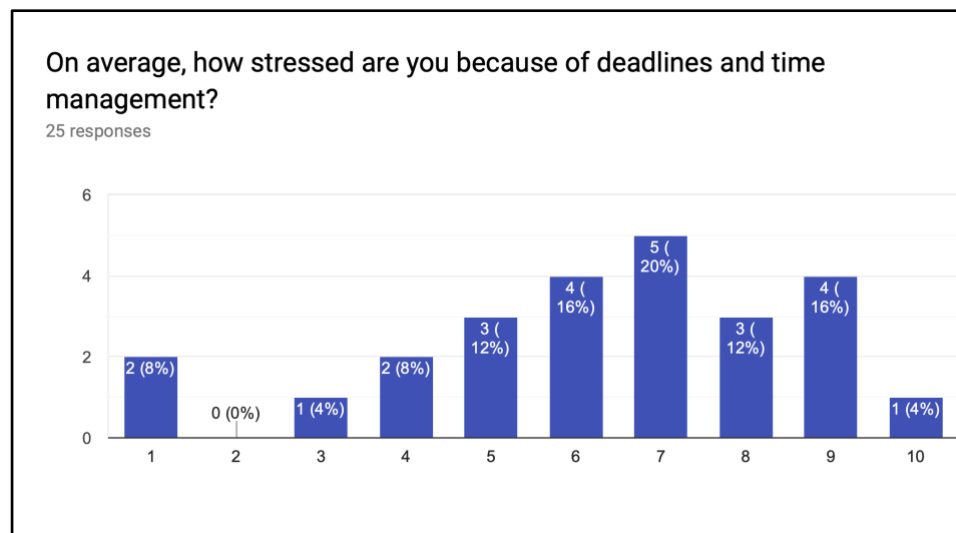
4. **Assume it should take about 5 hours to complete an assignment. The assignment is due in one week (7 days) at 9:00am. How would you HONESTLY end up managing your time? Pick the closest description of how you usually end up managing your time.**

Assume it should take about 5 hours to complete an assignment. The assignment is due in one week (7 days...u usually end up managing your time.

25 responses

- ● Work a little bit each day (~45 mins of work a day).
- ● Finish most of the work on Days 1-3 (~4.5hrs of work), final review on Day 7.
- ● Divide the work across 2-3 days before its due (2-3 hrs of work per day)
- ● Begin the work the day/night before (5 straight hours of work)

36%
44%
16%

5. **Do you utilize the Canvas calendar for time management?**
   36% - No
   64% - Yes

Do you utilize the Canvas calendar for time management?

25 responses

- ● Yes
- ● No

36%
64%
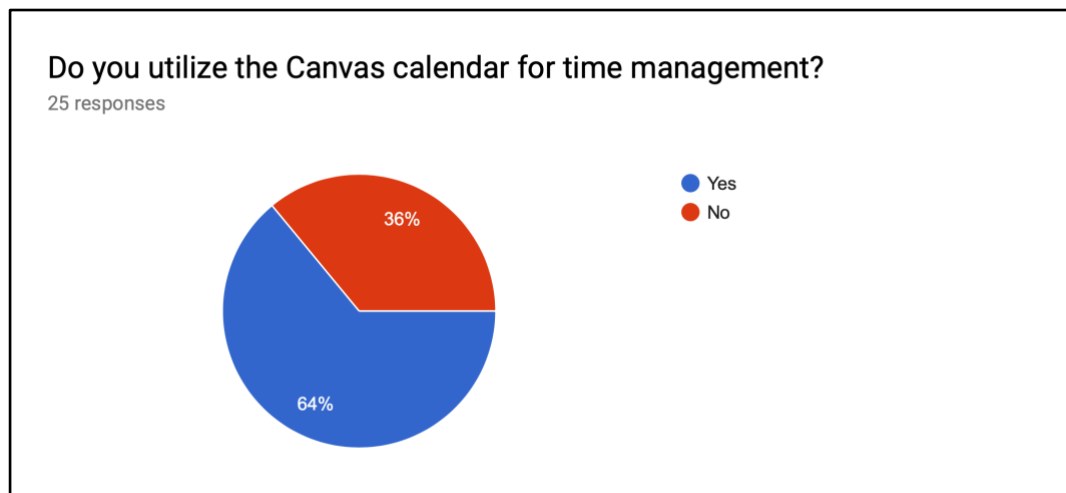
6. **What module do you most utilize for time management on Canvas?**
   48% - Upcoming Assignment View
   44% - Calendar
   4% - Course Assignment Pages
   4% - Google Calendar

What module do you most utilize for time management on Canvas?
25 responses

- Calendar
- Upcoming Assignment View
- Course Assignment Pages
- google calender
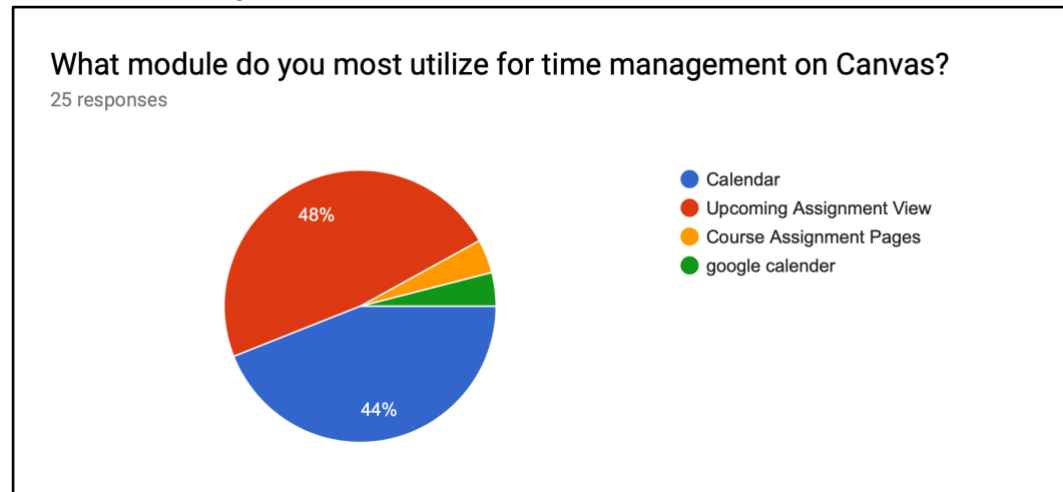
7. **What is your primary concern/issue with Canvas time management modules? Please be specific.**
   Most users did not have a specific issues with the Canvas time management modules but there were a few complaints.
   - *Non-mobile friendly interface*
   - *Does not offer alerts/notifications*
   - *Some professors do not use Canvas to its full extent*
   - *There is no auto-refresh option to use on Canvas*

8. Do you use any tools to manage your time?
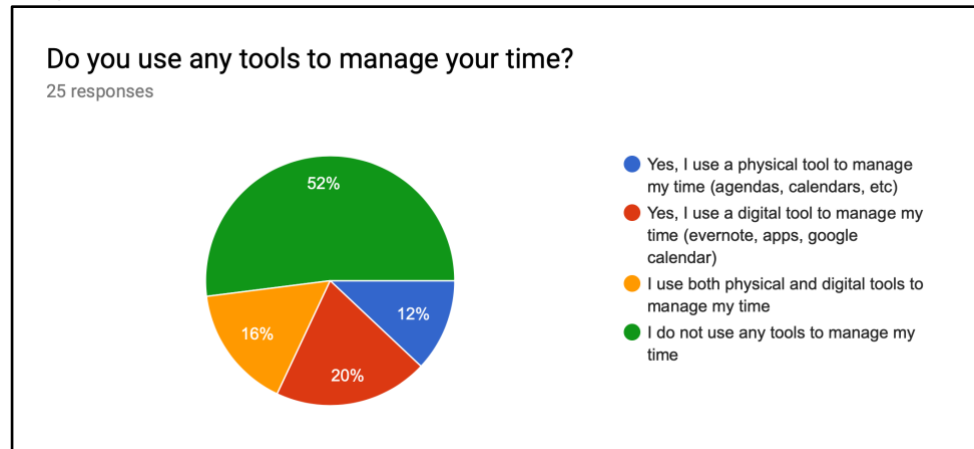
52% - I do not use any tools to manage my time

20% - Yes, I use a digital tool to manage my time (evernote, apps, google calendar)

16% - I use both physical and digital tools to manage my time

12% - Yes, I use a physical tool to manage my time (agendas, calendars, etc)

9. **If you use any digital tools to manage your time, please list the tools or apps used below.**

   68% - I do not use any digital tools to manage my time

   12% - Google Calendar/Google Applications

   8% - Apple Calendar

   4% - Planner App

   4% - Canvas, iPhone Reminder
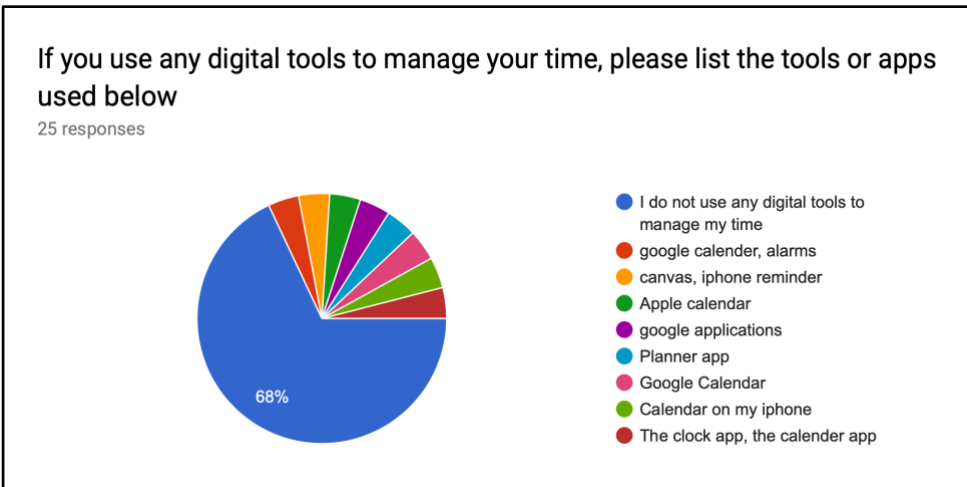
10. **If you have ever stopped using a time management tool, why?**

    36% - I have never used a time management tool

    24% - I no longer need to use it

    16% - I have never stopped using a time management tool

    12% - I lost my planner/data

    12% - I found a better time management tool

Analysis:

One of the primary takeaways from the survey results was not directly related to the statistical data gathered, but rather the types of responses received. We allowed free responses to questions considered important to assisting with the design of our prototype. However, given the free nature of the r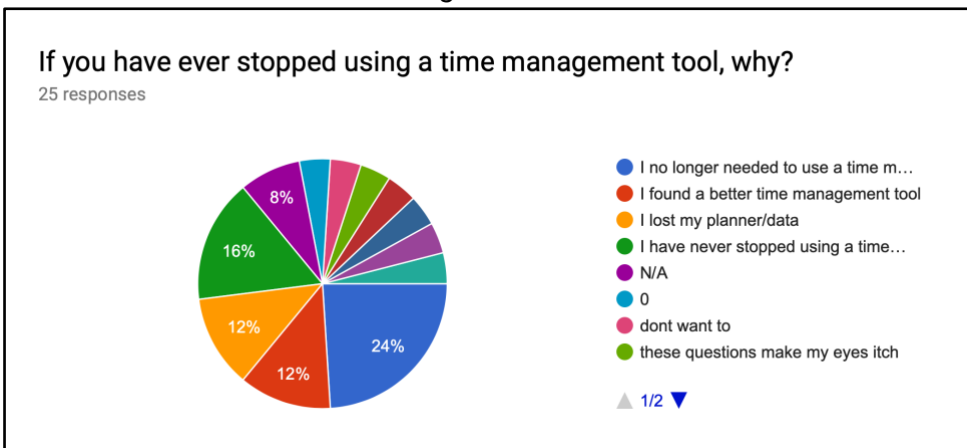esponses, we gathered approximately 25% useless responses. This prompted some of our interview questions, which helped fill in the gaps and allow us to craft proper design goals and prototype design. However, moving forward, we have learned to be more pointed in the questions we ask in this medium.

An interesting statistical takeaway from the data is the unusual correlation between self-reported time management and self-reported stress levels from time management. One would expect that a population reporting a high skill level of time management would then report a lower amount of stress from deadlines and time management. However, our data showed the opposite. The population we interviewed reported both skill in time management and high levels of stress from deadlines and time management. We postulate that this comes from the additional stress managing your schedule causes, and one of our design goals it to help alleviate that additional stress. It is worthwhile to not that the form of the question could also be prompting this response. We asked about stress from deadlines and time management in the same question, which could have skewed the responses as participants reported stress from deadlines. In the future, a better practice would be to separate concerns into separate questions.

Some of the problems our survey did not address were surrounding *why* participants felt stress surrounding time management, and why they made certain choices surrounding their time management tools. To better explore these questions, we decided to perform in-person interviews for additional needfinding.

Needfinding Interviews:

(See Appendix for full interviews)

        The results from our survey provided great statistical and quantitative data, but there were some areas that still needed to be explored to better give us an idea of our intended users' needs. We conducted four semi-structured interviews, each consisting of four questions, to cover these areas and to better understand our users. Two of the interviewees were computer science majors, while two were a little less tech-savvy. One of the interviewees frequently used a time-management app, another few seldom used one, and the remaining were non-users. We made sure that everyone felt comfortable during the interview by letting them know that were no right or wrong answers, and that any feedback was greatly valued.

        The differences and similarities in their responses served as wonderful feedback and better prepared us for moving forward with our design. Below are the questions that were asked, accompanied by a summary of the responses and our evaluation. Some questions have follow-up questions that were asked depending on the interviewees' responses.

Question 1:

Could you briefly walk me through one of your busier days?

        Everyone woke up very early, between 6am and 8am. Some went to class almost immediately, and some had some time before their first class. Of the two who went directly to class, both were busy until the early afternoon, and had to work right after. Everyone mentioned having to complete homework at some point during the day, with the exception of the recent graduate, who stated he felt like he still had to be productive despite the lack of homework or a steady job.

Question 2:

What methods, if any, do you use to keep track of your schedule or responsibilities? Why or why not? If you do, do you find that it is beneficial? Why or why not?. What are aspects of (your chosen method) that you would improve upon?

        Three of the participants utilized Google Calendar for their time management. Of these three, two primarily used Google Calendar and one used a collection of apps, each for different schedules. One interviewee expressed how the notifications of Google Calendar helped keep him on track throughout the day, but wished it could automatically input events and tasks so he did not have to remember to schedule them. One interviewee used a ***simple physical calendar*** to keep track of everything. All interviewees expressed that they could do a better job or make improvements to their system, but lacked the ability or drive to make said improvements.

Question 3:

What time(s) during your busy days do you feel like you could possibly take a break, but you decide not to? How long are your breaks? What do you do on your breaks? Do breaks make you feel unproductive or guilty?

All four people said they took breaks, all at different times during the day, each break ranging from two to three hours. Only one said that breaks were not an option due to having such a demanding schedule. One of those that took breaks said that they did so to have time for homework. It is interesting to see that doing school is perceived as taking a break. All of those that took breaks said they felt guilty or unproductive to some extent, but even more so if they took a break during a time they believed they were supposed to be productive. One person expressed a desire to take breaks, but said it is hard to come back and be productive. Overall the responses seem to indicate that the interviewees desire to take breaks, but view breaks in a negative fashion based on what they believe they should be working on at the time.

Question 4:

Taking breaks to refresh yourself and recharge can decrease stress and anxiety, as well as increase focus. If you knew more about the mental and physical benefits, would you be more likely to take a breaks and feel better about doing so, especially if you were reminded every now and then?

All participants expressed knowledge of the benefits of taking breaks, but said they generally choose to ignore them because they are busy at the time. If they take breaks, they view themselves as unproductive or that they will be viewed negatively by others. Most expressed that being reminded of these benefits when prompted to take a break would be beneficial.

Summary:

Taking the data gathered from our two needfinding methods, we determined there were many pain points in participants' daily time management. Many felt overwhelmed and could find no reasonable amount of time to take a break during their busiest days. Some felt either guilty or unproductive if they decided to take a break, even if for a short period of time. Some did not know of the possible health benefits, both mental and physical, of taking breaks, but seemed more inclined to take them if more information was presented.

In regards to the survey, most participants claimed they use Canvas tools the most and also said they use their time wisely. Participants also said that they start assignments and projects two to three days before they are due, and this coincides with the fact that they are using Canvas because Canvas only displays the coming week's assignments that are due.

Design Goals

Our first design goal is to assist the user in scheduling time to work on assignments around existing obligations. This design goal was pulled from the results of our needfinding showing that a large percentage of our target population reported high time management skills, but at the same time reported high levels of stress stemming from time management. We believe this response is due partially to the additional stress caused by attempting to manage ones schedule, so our first design goal is aimed at alleviating this stress.

Our second goal is to relieve stress by allowing the user to have planned breaks in their day dedicated to relaxing and disconnecting. We pulled this from the responses to our third interview question. Most interviewees expressed difficulty in finding time to schedule breaks in their day, as they did not perceive any free time available for the purpose. We postulate that this is more of a perceived issue than an actual time availability issue, and therefore aim to address this in our app design.

The final goal is to alleviate and mitigate any guilt the user may have by taking breaks from obligations because these breaks will already be a part of their day. Responses to our third interview question indicated that some of our participants felt anxiety or other negative reactions to taking breaks. The responses to our fourth question also indicated that some of these negative responses could be reduced or negated with information pertaining to the benefits of taking such breaks. Our app design plans to incorporate these breaks into their day, addressing the feeling that they should be doing some other task during that time. We also incorporate encouraging messages and facts about stress relief and breaks into these notifications, addressing the responses to the fourth interview question.

Scenario:

Simon Dole was spending his afternoon working on his school-work like the very dedicated student he is. When working on his assignments he started to experience a wave of emotions such as, anxiety, frustration, and nervousness. Suddenly "Smart Calendar" on his phone alerted him through a notification that he should take a thirty minute break. Simon then took his break by watching one of his favorite television shows; upon returning to his work, he was more relaxed and focused than before. The break away from the work allowed for him to shift his state of mind from a negative, anxious one and resume working with a more peaceful and determined one.

Storyboard:
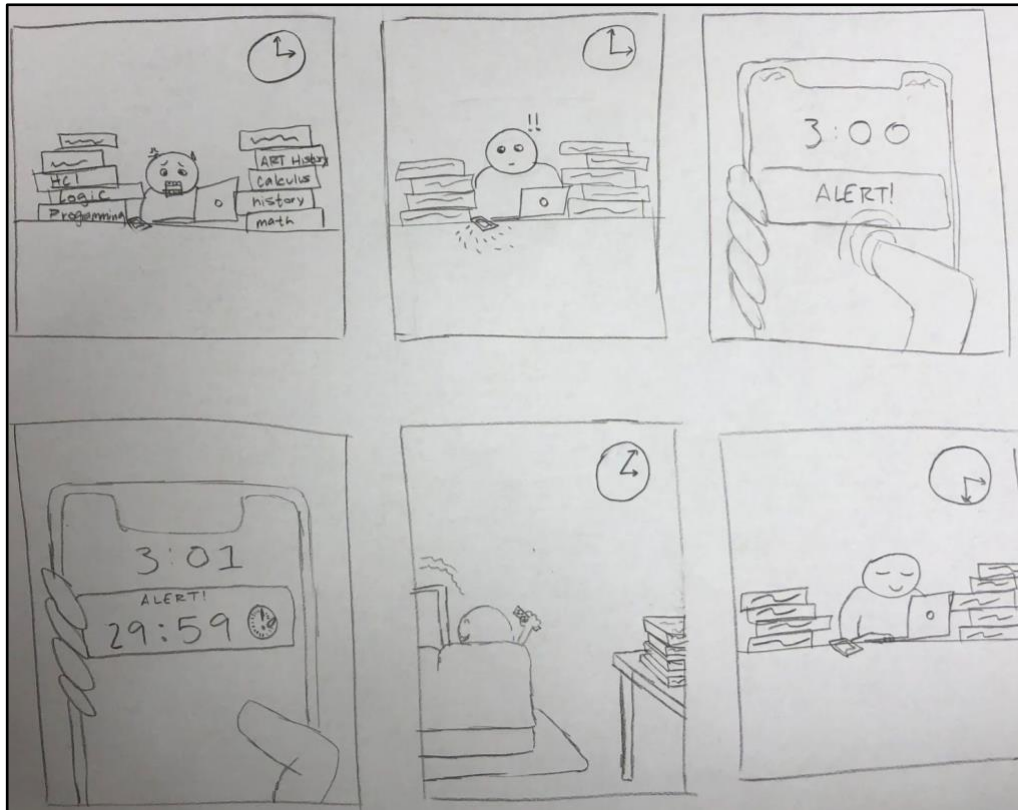
Design Description:

Design Concept:

Low Fidelity Prototypes (Paper Prototype Wireframes)

Explanation of Paper Prototype

Step 1: When the application is opened the user is greeted with the welcome page. Simply tap on "Get Started" to launch into the software.

Step 2: Next the user is given the "Info Page" where they can enter their information to create an account.

Step 3: The next step in the set-up is the ability to Link a school calendar or create a new calendar.

Step 4: Once that is completed, the user is taken to the applications home page. It's simply a monthly view of the calendar.

Step 5: The next thing to do is start adding events to the calendar. This page shows how the event will be made, the user will enter the time of the event, the duration of the event, the name of the event, and any additional details.

Step 6: When enough events are added, the application will notice times in the schedule to add a break time so the user feels less guilt taking a break when there are other events to do later.

User Journey
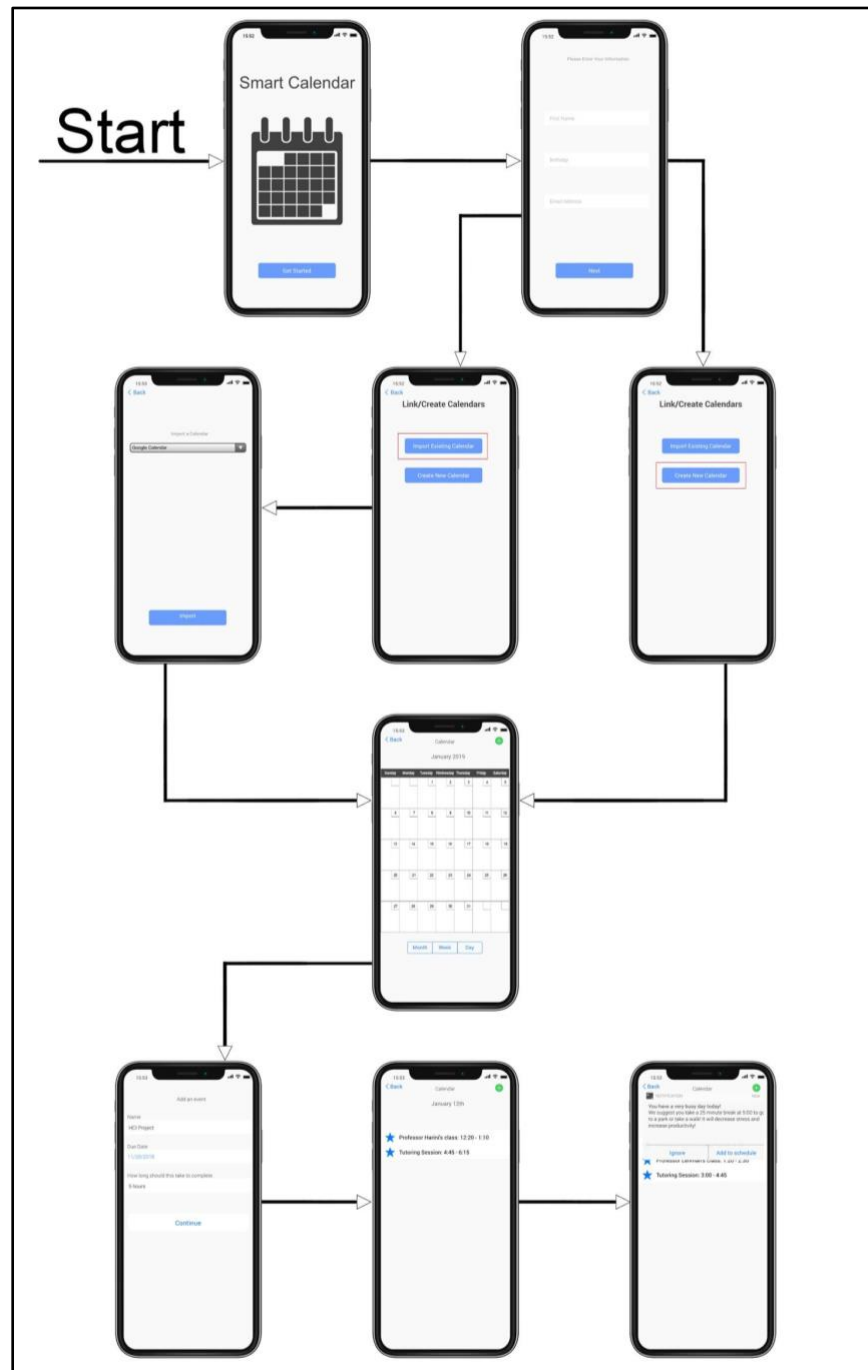
Design Prototype:

[View Prototype](#)

1. Starting the Application
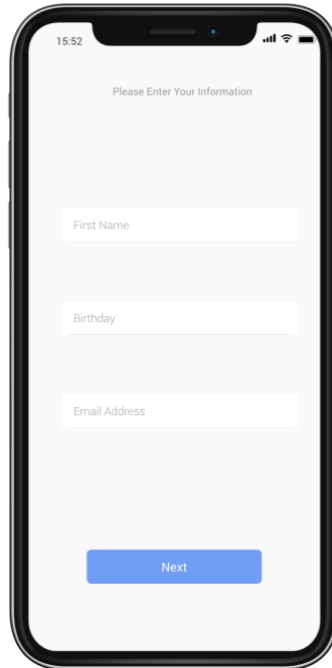
Interaction Modalities: Tap / Click

Techniques: Touch / WIMP

Affordances: The "Get Started" Button located at the bottom of the screen. Allows the user to start the sign up process and execute the programs functions.

Signifiers: The button is highlighted in blue and this is a standard button color and this allows for the user to recognize that it is a button rather than have to recall that it is.

2. Making An Account

Interaction Modalities: Tap / Click

Techniques: Touch / WIMP

Affordances: The text boxes are used for inputting information that will be recorded to make a profile of the user. The button will allow for the user to continue on with the setup process to make an account and get the calendar completed.

Signifiers: The text boxes are typical of a standard text box, it has a white background and the greyed out static text to let the user know what information to type into the textbox. Along with this there is also the button at the bottom which is similar to the one before.

3. Calendar Set Up (Import / Create New)
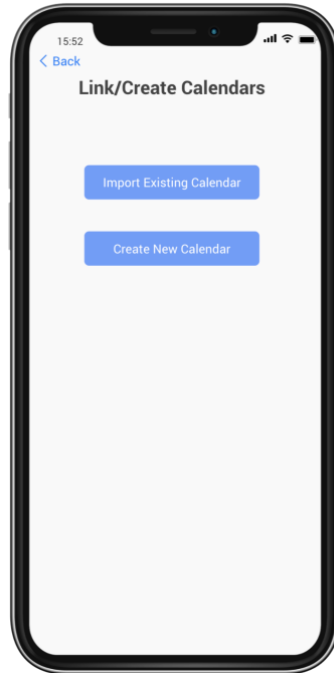
Interaction Modalities: Tap / Click

Techniques: Touch / WIMP

Affordances: The two buttons are all similar to the previous pages. The top button, "Import Existing Calendar" will then project the user into a separate window/page to import a calendar from their app of choosing. The bottom button, "Create New Calendar" will allow the user to instantly go to the Home Calendar page to begin creating their schedule.

Signifiers: The button is highlighted in blue and this is a standard button color and this allows for the user to recognize that it is a button rather than have to recall that it is.

4. Importing A Calendar

Interaction Modalities: Tap / Click

Techniques: Touch / WIMP

Affordances: There drop down menu allows for the user to pick a calendar app of their choosing to import a calendar from. There is also a final "Import" button that will import the calendar and format it to Smart Calendar's style while also taking the user to the monthly view calendar homepage.

Signifiers: The drop down bar is a similar color and has a standard look of a typical drop down menu. The button is similar to the previous buttons so the user would be familiar with these. The button is highlighted in blue and this is a standard button color and this allows for the user to recognize that it is a button rather than have to recall that it is.

5. Calendar Main Page

Interaction Modalities: Tap / Click

Techniques: Touch / Wimp

Affordances: The back button at the top left of the page lets the user return back to the previous page of importing a calendar, if they changed their mind. The "+" button at the top right is a button for a user to add an event, this page will have its own prompt for the user to enter to add it to their calendar. The tabs at the bottom of the page allow for the user to view their calendar in a monthly view, weekly view, or daily view.

Signifiers: The back button is blue and has the back arrow like a typical back button and is placed in a similar area in which back buttons are placed. It's also labeled with the action it does. The user would recognize its function. The "+" button at the top right is green (different from other buttons on the page) and is also in a typical area of an action for creating a new object. The tabs at the bottom are blue and are visually similar to that of the buttons so the user would also recognize that this is not just visual text.

6. Adding a New Event
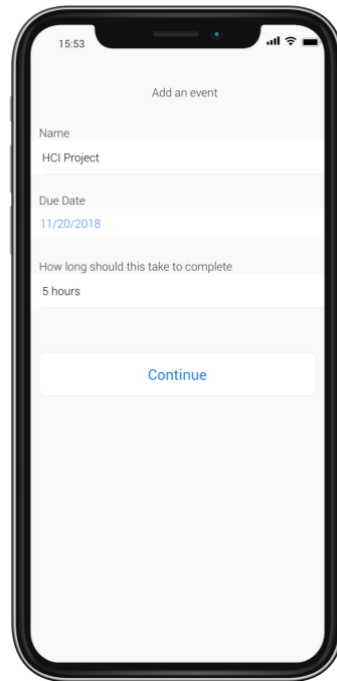
Interaction Modalities: Tap / Click

Techniques: Touch / Wimp

Affordances: There are text boxes here for the user to input the Name of the event, the Due Date, and how long the event should last. In the middle of the screen there is a button for continuing on with the creation of the event. This button will transport the user to the date of the created event.

Signifiers: The text boxes are typical of a standard text box, it has a white background and the greyed out static text above the box to let the user know what information to type into the textbox. This button is similar to the tabs on the calendar view, which the user will recognize that is something that can be interacted with, it also is the only button the page so the user will be restricted to just using this.

7. Notification for Break Times
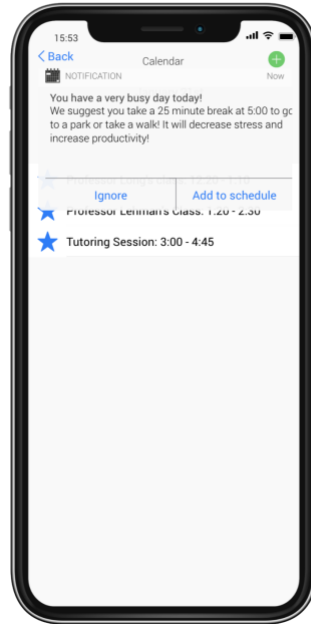
Interaction Modalities: Tap / Click

Techniques: Haptics / Touch

Affordances: The notification slides down onto the screen like a typical notification. There are two buttons on this notification, and this is to ignore the option to add a break to the day or to add the break to the schedule. Ignoring the notification will dismiss it, adding the break to the schedule will automatically make an event for a break and put it in the appropriate section for the user while keeping them on the daily view calendar of that day.

Signifiers: There are two buttons on the notification and that is to "Ignore" the notification or to "Add to Schedule" These are separated with lines that enclose the options, and are in the blue text, similar to the rest of the application, this will help the user recognize that these are interactable.

Usability and Evaluation:

Design Goals (Restated):

As stated previously, our first design goal is to assist the user in scheduling time to work on assignments around existing obligations. This is based on response about time management stress in our survey. Our second goal is to relieve stress by allowing the user to have planned breaks in their day dedicated to relaxing and disconnecting, based on responses to our third interview question. The final goal is to alleviate and mitigate any guilt the user may have by taking breaks from obligations because these breaks will already be a part of their day, based on responses to our third and fourth interview questions.

Goals of Usability Study:

The goal of the Usability Study is to gain knowledge on areas within our application to improve on, areas that need a redesign, as well as gain any additional information regarding levels of difficulty navigating or using our application as a whole from the participants we interacted with.

Experimental Usability Study:

(See Appendix for full experimental usability study)

Protocol:

- Facilitator: Virgil English
- Note Taker: Daniel Garwood

Training Sessions:

There is no prior training or knowledge to have before the participants use the application. A piece of prior tasks to complete in the app is on the launch screen "Get Started" and the following page to "sign up" both pages do not take any specific input that will be used in the future portions of the study, it is just to emulate a real application experience.

Set of Tasks:

Launch the application and make an account through the login screen and continue with the setup process by following the prompts on screen (Import a calendar, when prompted).
Check if you have time for a lunch date on January 21st.

        a. When the user checks their schedule for the 21st, a pop-up will say an encouraging message about having a busy day that day, and suggesting a walk around campus at a specific time. This will fulfill both the help the user schedule breaks goal, as well as make the user feel less guilty by providing encouraging prompts and messages surrounding the idea of a break.

Add an event for January 11th called "Math exam" scheduled for 4:30pm.

        b. Once the user adds the second event, will provide a pop-up saying the two events are close together, and suggest giving themselves some rest after a stressful exam. This will help fulfill design goals 2 and 3.

Add an upcoming assignment.

        c. After the user adds the assignment, with name, due date, and completion time being pre-filled out, the application will suggest 3 times during the next week that it can be completed. This will fulfill the first design goal, assist the user in scheduling their assignments around their current schedules.

Data to be Collected:

Determine whether or not our programs help users to feel good about taking breaks, rather than guilty. Determine if people find suggestions from a computer to be helpful in determining a schedule. Obtain feedback from the participants on any specific improvements that they offer to us that we did not or cannot think of.

Analysis on Data Collected:

The feedback that was received from the Experimental Usability Study was beyond helpful to us. As the designers and creators of the application there were some aspects that we assumed the user would know and understand; we found that this was incorrect. Our participant understood most of the intended function, but found that some aspects of the application were not emphasized enough. This was similar to the feedback we received from doing the usability study in one of our in-class activities. It also was noted that our back buttons were not taking the user to the screens they desired or expected, therefore disturbing the user experience.

Changes to be made/were made from the Experimental Usability Study:

Some changes that we did implement were the notification/alert that was going to show up when enough events were added to the calendric day. The notification was showing up roughly in the middle of the screen and the user did not understand this was a notification. Though this could have been a combination of errors of our design and the limits of JustInMind, we still decided to adjust our notification to swipe down from the top for a more organic simulation. We did not implement the correction of the back button, but it would most definitely be a change that would happen in the future if we pursued this application further.

Individual Interviews:

(See Appendix for full interviews)

Recruitment Process:

We used Nick's social skills to find two people to interview post-prototype creation. He chose a biology major to complete one interview and also a journalism major to complete the other. We decided to focus on a student population because that fits with our intended audience for the application.

Interview Questions:

1. What were your impressions of the application?
2. Would you use this application if it was available to you?
   a. Do you ever forget assignments?
3. Would you be more inclined to take breaks if they were scheduled in your day?
   a. If yes, do you believe your stress would depreciate because of scheduled breaks?
      i. Do you feel like that taking breaks keeps your stress manageable.
   b. If no, why?
      i. What would incentivize you to take breaks?
4. Do you believe you would use the application on your own or would you need an incentive to use the application regularly?
5. Would you use the application during times in the year when you are not busy?
   a. If you are a student, such as times like summer break or winter break.
6. Any additional comments?

Interview Process:

The interviews were conducted at two separate times in a reserved room in the library during the day (when the interviewee was most available). Nick showed the interviewees the app and its functionality and proceeded to ask the questions. If additional follow up questions based on the interviewee's responses were able to be answered, they were asked; this included items such as specifications, asking to elaborate, etc.

Interview Results:

        In general the response between the participants was mixed. One of the participants did not use calendar applications (this fortuitous coincidence coincides with one of our personas, Jim Richards) except for the Canvas built-in Assignment Due Date calendar. The other participant attempts to use calendar apps and written journals/papers to keep track of their responsibilities, but inevitably stops/loses these items. One participant exclaimed that if this application was actually working and did make a schedule for them it would be worth even purchasing because it would ease some stress off of their back. Both parties did agree that the visual aspect of the application was on the right track but some fonts were hard to read and they did not like the light grayscale design and would have prefered a darker version. Both parties also agreed that they would need incentives to use the application either due to forgetting to use the application or not being motivated enough to get back on track after taking a break. They also suggested that during times that were less stressful for students (winter/summer break) they would not use the application.

Changes that were/will be made as a Result of Interview:

        Some changes to the application that will be made in the future would be the visual redesign of the application. Making fonts bolder, slightly larger, and contrasting with the background image/color of the application. That would be an instant and basic aspect to correct/redesign. After that, an incentive opportunity could be theorized and built upon such as a point system, streak system, or social/sharing aspect. Hopefully those incentives or any others that are theorized will incentivize the users to use the application frequently/daily, and continuously even though times that are not stressful/busy.

Appendix:

A collection of works that are the raw detailed material for further investigation.

Needfinding Interview Responses:

1. **Briefly walk me through one of your busier days. You do not need to go through every small detail, just a brief overview is fine.**

   Participant #1: *I wake up at 7am, brush my teeth, take a shower, and walk to class. I don't get back to my dorm until around 2:30pm. Then I get ready to go to work. I do a six hour shift, then head back. I try to finish any homework I have due soon. If I'm not too tired, I normally just watch Netflix or something until I fall asleep.*

   Participant #2: *My busiest day, by far, is Tuesday. I get up at 5:45am and get ready for school. I live China Grove and commute every day, so it takes me about 45 minutes or so to get there, park, and walk to my 8am. I like to get there a bit early, though. I have class until 11:30am, then I drive to my internship, which is like 20 minutes from campus. I leave at 5:30pm for my night class and then head back home at 8:30pm. I usually fall asleep as soon as I get home. Commuting makes everything so much worse.*

   Participant #3: *I wouldn't really say any of my days are super busy this semester. I don't have any class before 11:30am, which is nice, but two of them are online. This semester is definitely more laid back than last one class-wise, but I work part time four days a week, so those days are pretty busy because I don't get home until late. I still wake up early though just to not be in bed the whole morning.*

   Participant #4: *I graduated recently and have been having trouble finding a job, so my days are not super busy. I still feel like I need to be doing something though, so normally I try to still wake up early and run errands or do chores until about 5pm.*

2. **What methods, if any, do you use to keep track of your schedule or responsibilities? If you do not, why not? (If you do), do you find that it is beneficial? Why or why not. What are aspects of (your chosen method) that you would improve upon?**

Participant #1: *My phone rules my life. It is helpful that it displays notifications so I don't forget about tasks I have to do. If I could improve it, I would have it automatically put events in so I don't have to remember to.*

Participant #2: *I use Canvas, Google Calendar, and the sticky notes on my desktop which is kind of scattered using them all together. I basically use Google Calendar for my internship stuff, Canvas for my assignments, and sticky notes for anything else or quick reminders. The combination works for the most part, but I'd like to have everything in one place, but I haven't found any app or anything that combines everything I need.*

Participant #3: *I write down my due dates and what is due. I normally just use a blank piece of computer paper and keep it taped on my desk. I find it beneficial, it helps me have all my due dates for all my classes in one place. When it is on my desk, I am forced to look at it every day when I wake up. To improve, it would probably be nicer if I bought an actual calendar, but I'm honestly okay with using what I currently have.*

Participant #4: *A color coded google calendar that syncs with my cell phone. I find it beneficial because it is a roadmap for what I need to accomplish that day. I could be better at planning tasks and deadlines. I can keep track of events but managing tasks is a little more difficult.*

3. **What time(s) during your busy days do you feel like you could possibly take a break, but you decide not to? Why do you decide not to? Do breaks make you feel unproductive or guilty?**

Participant #1: *When I am home getting work done, I usually decide not to take a break because I do not want to stop being productive. Sometimes taking breaks in these situations make me feel unproductive and guilty, unless I am able to come back and be productive afterwards.*

Participant #2: *Honestly, I really can't really find a time to take a break on Tuesdays until I get home from Charlotte, but it's not really a break because I basically just fall asleep. I feel really limited because I can't just walk to a dorm between classes and take a nap because of my living situation. I do take breaks on my less busy days, but I always feel unproductive so I end up working on personal projects.*

Participant #3: *I have a 45 minute break usually every day between class and work. I would like to take a nap, but I usually just go into work early. I feel like I can't nap for just 45 minutes. When I am at work I feel guilty taking a break, because I feel like I am supposed to be productive all the time.*

Participant #4: *I think breaks during meal times works best for me. I do not usually take breaks from 9am to 12pm and 2pm to 5pm. I do feel guilty taking breaks during that time because I am usually trying to be productive and I believe there is an expectation to be busy during those times.*

4. **Taking breaks to refresh yourself and recharge can decrease stress and anxiety, as well as increase focus. If you knew more about the mental and physical benefits, would you be more likely to take a breaks, especially if you were reminded every now and then?**

Participant #1: *Yes. I would like to take more breaks, and knowing the benefits seems to make it more worthwhile.*

Participant #2: *I guess so. I know it's not healthy to work non-stop, but I really do get anxious when I'm not doing anything, so it's like a double-edged sword. I try to get some sort of exercise in if possible. At least then I don't feel unproductive for taking a break from school or work.*

Participant #3: *I already know the benefits, and choose to ignore them. It would be beneficial to be reminded of them sometimes though.*

Participant #4: *I believe that providing concrete evidence that there is more productivity if people takes breaks but also provide data on length of breaks would help. I think my guilt comes more from perception of how a boss would take it rather than internal guilt. If a boss was educated and encouraged breaks I would be much more apt to take one.*

Usability and Evaluation - Experimental Usability Study:

Participant #1:

1. Launch the application and make an account through the login screen and continue with the setup process by following the prompts on screen (Import a calendar, when prompted).

The participant was able to launch the application and set up process with no errors completed. They quickly went through the pages with ease and set up an account and imported the calendar as expected.

2. Check if you have time for a lunch date on January 21st.
   a. When the user checks their schedule for the 21st, a pop-up will say an encouraging message about having a busy day that day, and suggesting a walk around campus at a specific time. This will fulfill both the help the user schedule breaks goal, as well as make the user feel less guilty by providing encouraging prompts and messages surrounding the idea of a break.

The participant in a slightly unfamiliar application now was moving a little slowly when performing actions. The user found the 21st easily and clicked on it a few times before the button was activated. When the day opened the participant received the notification for adding the break, the user added to the schedule.

3. Add an event for January 11th called "Math exam" scheduled for 4:30pm.
   a. Once the user adds the second event, will provide a pop-up saying the two events are close together, and suggest giving themselves some rest after a stressful exam. This will help fulfill design goals 2 and 3.

The participant navigated back to the main calendric page easily, using the back button in the top left of the screen. They then clicked a few times on the 11th, when it opened, they had to be reminded of the task at hand. They tapped on the green button in the top right on the screen to add the "Math Exam," The participant referred back to the instructions a few times just to correctly input the information. They did not understand how to have the keyboard collapse when they were finished with the text boxes. They looked around the screen for a "done" or an "x" for the keyboard, but then later realized it collapses by just clicking anywhere on the screen that is not a text box. Following that, they added the event to the day. This prompted the second popup in the application to add a break in between the activities.

Usability and Evaluation Interviews:

Participant #1:

1. **What were your impressions of the application?**

   I don't like calendar apps, but it does look clean and sleek. I wish it had a dark mode and I would want it to integrate with the Apple ecosystem like iCloud functionality and siri. I wish the text was either larger or bolder because it was difficult to read.

2. **Would you use this application if it was available to you?**

   No, as I said, I don't like calendar apps; I keep all my information in my head.

   a. **Do you ever forget assignments?**

   No, I used calendar apps such as Canvas that do it for me so I don't have to input anything on my own cause i'm lazy and unmotivated to go out of my way to keep track.

3. **Would you be more inclined to take breaks if they were scheduled in your day?**
   a. **If yes, do you believe your stress would depreciate because of scheduled breaks?**

   I already take breaks, when I feel like it.

      i. **Do you feel like that taking breaks keeps your stress manageable.**

      No I get more stressed because I feel like I'm wasting time, but I can't stop. The pressure usually makes me motivated to get the assignment done, but then I have a mental break down.

4. **Do you believe you would use the application on your own or would you need an incentive to use the application regularly?**

   I would need the incentive but then I would probably ignore the notification for the incentive or turn it off. I did the same thing with Duolingo because I was tired of it bothering me every single day.

5. **Would you use the application during times in the year when you are not busy?**
   a. **If you are a student, such as times like summer break or winter break.**

      No, I would not use it at all.

6. **Any additional comments?**

   The application should provide links to playlists of Lo-Fi Hip Hop beats to study/relax/chill to or import a media player with it inside the app like Waze, they implemented a spotify/music player feature.

Participant #2:

1. **What were your impressions of the application?**

   I feel less stressed already to be honest… I thought that the screen was easy to maneuver and use. I feel like that it really could make my life a lot less stressful. I would like for it to know where I am so it would know how far away from where i was working so it would recommend when to start going back to my work area so I don't stay off topic for too long.

2. **Would you use this application if it was available to you?**

   I would use this application if it were free and actually working. If it were real and less glitchy I may spend $0.99 on it. If it had the cloud so my phone and laptop had it together, I would probably pay $5 for it too.

   a. **Do you ever forget assignments?**

      All the time! I remember assignments at the last minute and sometimes when it's too late. I've tried writing it down but I'm just lazy or I lose the paper I write it down on and I'm too broke to buy a journal.

3. **Would you be more inclined to take breaks if they were scheduled in your day?**
   a. **If yes, do you believe your stress would depreciate because of scheduled breaks?**

      I would feel that without a doubt my stress would go away because it's like scheduling my procrastination time.

      i. **Do you feel like that taking breaks keeps your stress manageable.**

         Yes because I forget that I have assignments due and it's like forgetting I have stuff to do so I get to take a step away from school and focus on fun things.

4. **Do you believe you would use the application on your own or would you need an incentive to use the application regularly?**

   I would need an incentive because I would probably forget I have the application maybe like a notification or something, I don't know.

5. **Would you use the application during times in the year when you are not busy?**
   a. **If you are a student, such as times like summer break or winter break.**
      No, there would be no need, my work sends me my schedule through email.

6. **Any additional comments?**

   No.