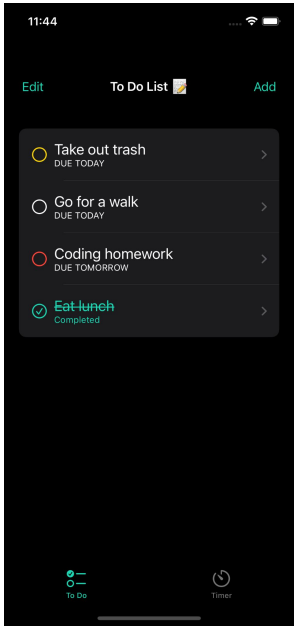
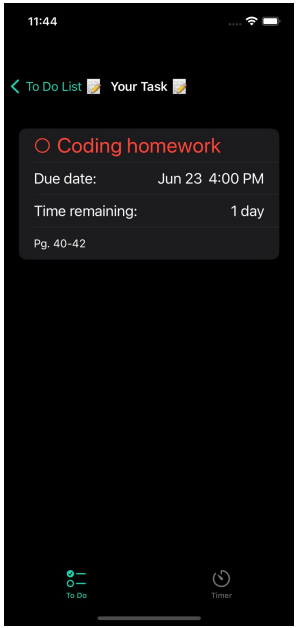
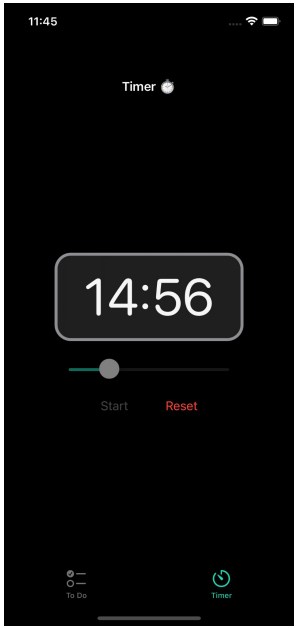






FocusBuddy

Simple Task Managing App for ADHD Users

Riku Mito
Coding 4: Collaborative App Development Studio

Abstract

This abstract introduces, FocusBuddy, an iOS task managing app specifically designed to assist individuals with ADHD in organizing and completing their tasks effectively. The app features a user-friendly interface with two primary components: a to-do list maker and a timer.

The to-do list maker allows users to input tasks with varying priorities, categorized as high, medium, low, or no priority. Additionally, users can specify the due date and time for each task, enabling them to track the remaining days until completion. The main page of the app displays a simple list of tasks, accompanied by colored buttons indicating task urgency. Red signifies high priority, orange represents medium priority, yellow denotes low priority, and black indicates no priority. Once a task is completed, users can mark it as done, resulting in a strikethrough effect on the task text, while the text and button color change to green.

Tapping on a task in the list allows users to access task details, including a simple description field for additional notes or reminders. Returning to the main task list, an "add" button facilitates easy inclusion of new tasks, requiring title, priority, and date fields, while the description field remains optional.

The app also includes a timer section featuring a prominent timer that can be set from 1 to 60 minutes in 1-minute intervals. The in-app timer provides a convenient tool for users to time themselves during their tasks without the need to switch applications. Upon completion of the set time, the app generates an alert to notify users that the timer has finished.

This task management app prioritizes simplicity and avoids overwhelming users with unnecessary functions or complex interfaces. Based on the experiences of the developer, who has used various task management apps, the goal is to minimize stress associated with task planning by maintaining a focused and streamlined user experience.

Research on the Challenges of ADHD

ADHD, or Attention Deficit Hyperactivity Disorder, is a neurodevelopmental disorder characterized by persistent patterns of inattention, hyperactivity, and impulsivity. These symptoms often lead to difficulties in various aspects of life, including organisation and time management, following instructions, focusing and completing tasks. coping with stress, feeling restless or impatient, and impulsiveness and risk taking (NHS, 2021).

Working memory, the cognitive system responsible for temporarily storing and manipulating information, is frequently impaired in individuals with ADHD. “Organization is a multifaceted construct, and children with ADHD frequently show organizational impairments related to planning tasks, tracking assignments, recalling due dates, and managing supplies” (Abikoff & Gallagher, 2009; Langberg, Epstein et al., 2011). “Organizational problems begin in elementary school for many children with ADHD, and increase in severity as they progress in school (Booster et al., 2012; Langberg, Molina et al., 2011), experience higher workloads (Evans et al., 2005), and experience increased expectations for personal responsibility from teachers and parents (Meyer et al., 2004).”

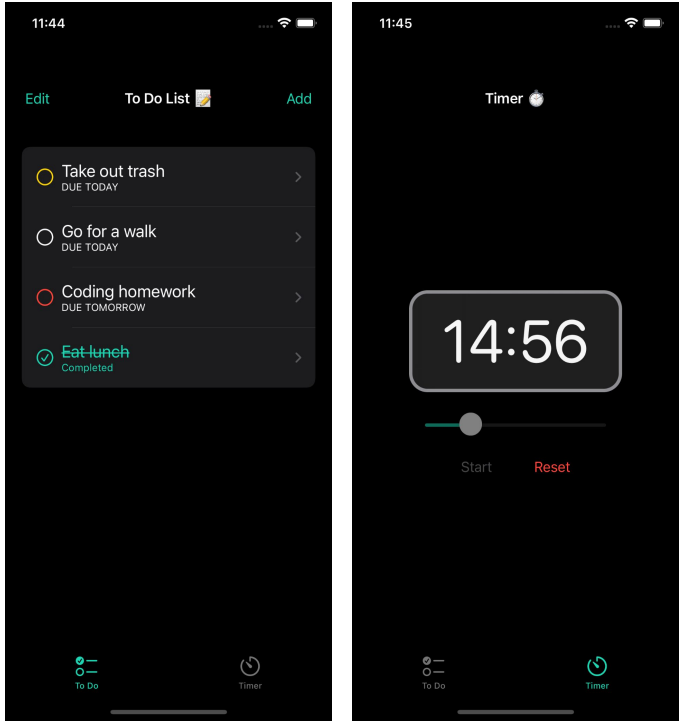
Individuals with ADHD can often feel overwhelmed as they struggle with emotional dysregulation and sensitivity issues, which occurs when someone has too many tasks to do. This results in sensory overload and creates feelings of being unable to cope or do anything. (Centre, 2023)

Research and Design for FocusBuddy

To address these challenges, FocusBuddy provides a user-friendly interface specifically tailored to accommodate the needs of individuals with ADHD. The app's features include a to-do list maker and a timer, designed to enhance working memory and facilitate effective time management.

The to-do list maker component allows users to input tasks, categorize them by priority, and specify completion deadlines. By providing a visual representation of tasks and their respective urgency, the app supports individuals in organizing their responsibilities and prioritizing accordingly. The ability to mark completed tasks and view remaining days until task completion enhances motivation and self-monitoring. The app's timer function serves as a valuable tool for time management. Users can easily set customizable timers, enabling them to allocate specific time intervals to tasks. This feature promotes a structured approach to work and aids in maintaining focus and productivity. Furthermore, the in-app timer eliminates the need for users to switch between applications, reducing potential distractions and cognitive load.

By focusing on simplicity and minimizing unnecessary features, the app aims to reduce stress commonly associated with task planning. Its user-friendly interface and intuitive design mitigate cognitive overload, providing individuals with a supportive tool for improved working memory and enhanced time management.



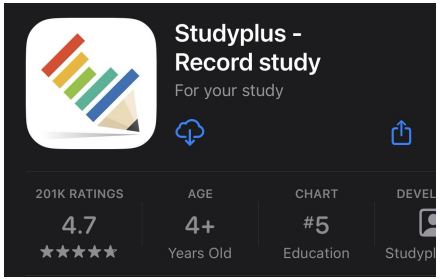
Design (Brainstorming)

During the brainstorming process, I initially focused on designing an app for students to help maintain their work and keep on track with their studies.

I tested two different study apps that have both won the “Good Design Award” from Japan: “StudyCast” and “Studyplus” (Image 1 and 2). Upon download, I was immediately required to create an online social account, which felt unnecessary as the main focus is to track data on what you study for. The notes (Image 3) were features that I found useful from the two apps.

However, the main features of both apps was a social platform where users can connect with others on what they are currently studying, and live talk rooms where people can join in and talk to other students and teachers.

There were too many tabs and buttons on both apps that it was frustrating and confusing to work around when trying to find the necessary functions I needed for my app. As someone diagnosed with ADHD, both apps were not very user friendly and I easily got overwhelmed from the amount of information there was.



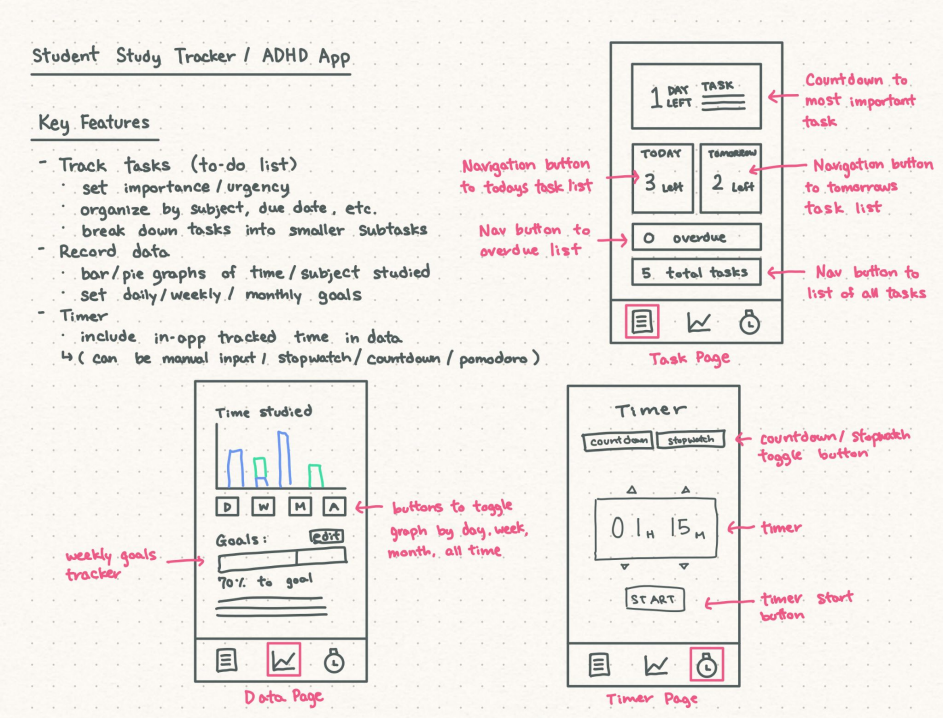
(Image 1 left: StudyCast, Image 2 right: Studyplus)

(Image 3: Note taking during research on other study apps)

Design (Storyboarding)

I began mapping out the key functions that the app should have. From the previous apps I have looked at, I noticed that the buttons were very small or not clear on what the functions were. I focused on designing an app with bigger and bolder features that are hard to miss.

On my app storyboard (image 4), the task page has 5 buttons, each directing to a page with a list of tasks for the corresponding due date. The most important tasks or ones with closer deadlines will show up on the biggest screen at the top with the days remaining until the due date. The two buttons underneath are tasks that must be completed “today” and “tomorrow”. The final two buttons are “overdue” work and “total tasks” that the user has. The issue with this design was that there were many nested pages, which makes it difficult to navigate through the app. Another issue was that the user may not have any tasks that are due “today” or “tomorrow” but are equally as important, which would not show up bold on the page.

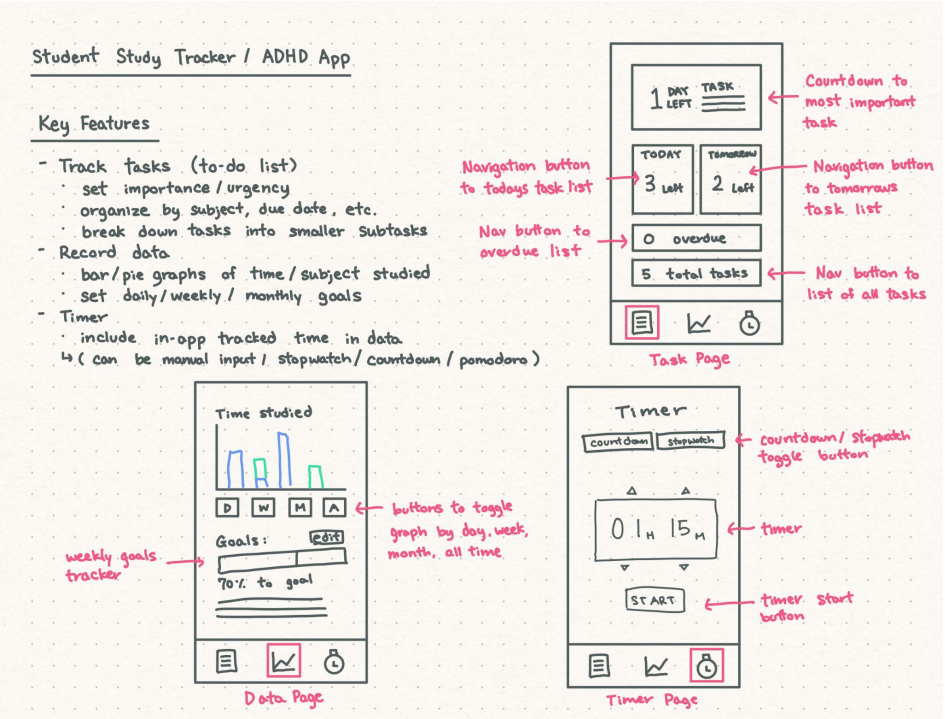


(Image 4: App design sketches)

Design (Storyboarding)

The data page on the storyboard (image 4) consists of bar graphs of how many hours the user has studied for per subject. The graph can be toggled by day, week, month, and all time to see the time spent respectively. The user can also set weekly goals that fills up over time when they input data. This was a feature in the Studyplus app which I found to be helpful, as it motivates the user to complete their goals.

The timer page is inspired by the popular “pomodoro technique”, a 25 minute interval focused study method. This page has a countdown timer and a stopwatch, where the inputted time be recorded into the data page.



(Image 4: App design sketches)

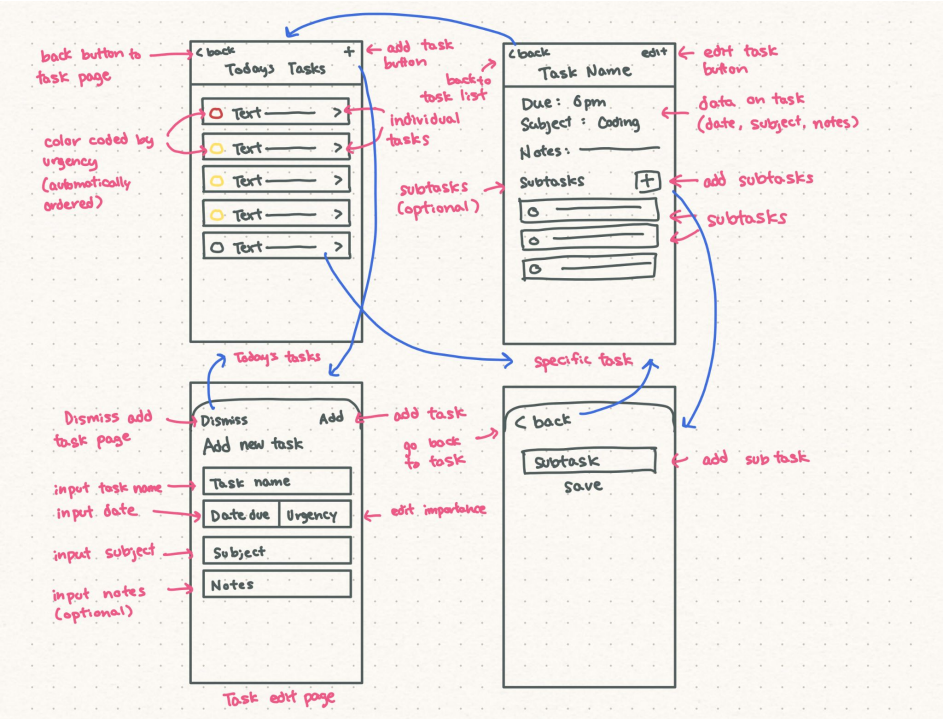
Design (Wireframing)

I wireframed the task page (image 5) to picture how the app would work. The task design is very different from the original storyboarding page as I decided to scrap the different navigation buttons.

I decided to design a single task page instead of having separate pages for “today’s tasks”, “tomorrow’s tasks”, or “total tasks”. Each tasks are a navigation button that will be ordered in a list. The tasks have a colored button on the side that indicates the priority of of the task. When the task is completed, the text will cross out, and change color to green, which is the app’s main accent color.

The tasks will navigate to a different page with more specific details on the task, such as the date it is due, the subject of the task, any subtasks it may have. The details page also has a button that navigates to a different page to add subtasks, which was scrapped due to navigating to another page. I could have created a TextField within the detail page without having to navigate to a different page to add the subtasks. However, the subtasks were scrapped entirely due to time restraints.

The task add page shows a new page where the user can input information on the task: the task name, due date, priority, subject, and extra details or notes on the task. Unfortunately I had removed the subject as I was unable to figure out how to create switch cases with premade subjects that can be added upon by the user.

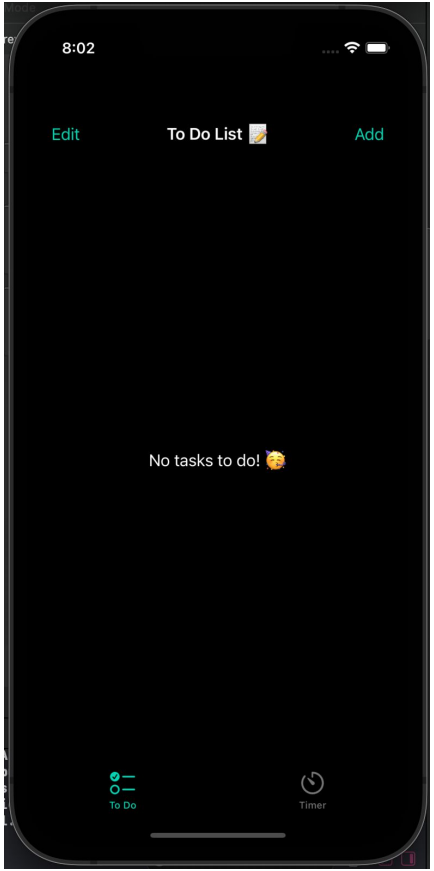


(Image 5: App wireframing)

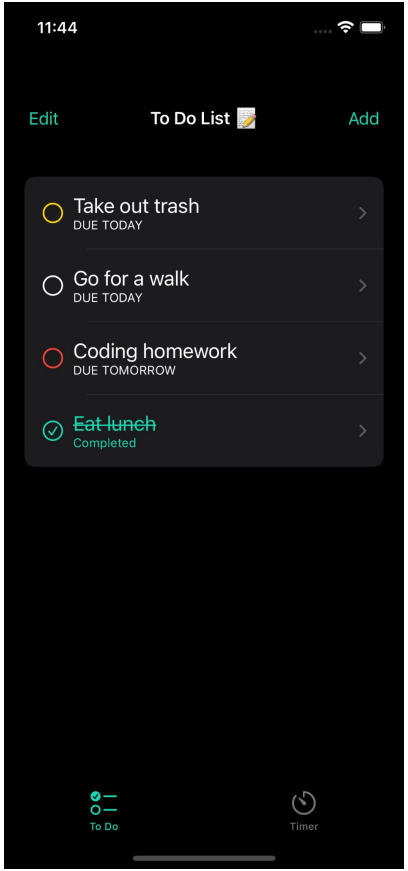
The In-App Design (part 1)

The tabview is on the To-Do page, where the user can input their tasks. Image 6 pictures an empty to do page with no tasks to complete, and shows a message “no tasks to do!”. Without this message, the screen will be blank and the user will be confused on where the tasks are.

Image 7 pictures a filled to do list with tasks with different levels of priority, “Coding homework” being the most important task. “Eat lunch” has been cleared and striked out. Even if the task is completed, the task does not automatically clear because some users including myself can be forgetful and need to be reminded what has already completed. I wanted to add a button where the user can clear tasks that are already completed or remove all tasks entirely, but I was unsure on how to implement this feature. At this stage, the task must be manually cleared by using the edit button.



(Image 6: Empty to-do list)

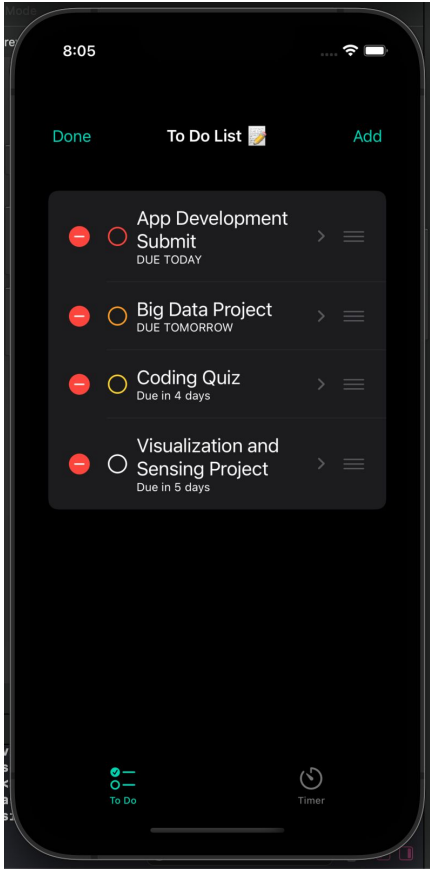


(Image 7: Filled to-do list)

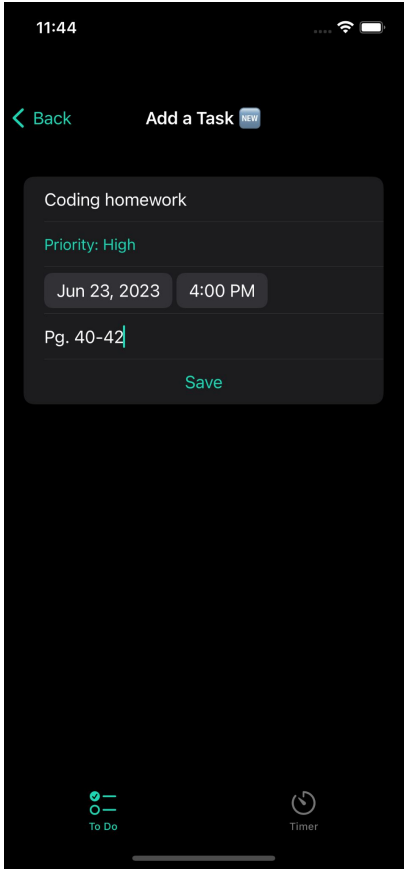
The In-App Design (part 2)

Image 8 pictures the to-do list in its edit mode. The tasks can be deleted or rearranged by dragging the slider on the side. The app does not automatically reorder the tasks based on the priority of the task. Although I have tried to implement the feature, new tasks kept getting lost or not saved. I may have needed to account for reordering the tasks when there are no tasks in the list.

Image 9 pictures the task adding function. This page includes several text fields and buttons to adjust the priority and due date of the task. I initially struggled with the date function as I was inexperienced with the Date type variable, however, I managed to get an understanding on how to handle these values. All inputs besides the description/notes are required values. The save button does not show up until the required fields are filled in.



(Image 8: Editing to-do list)

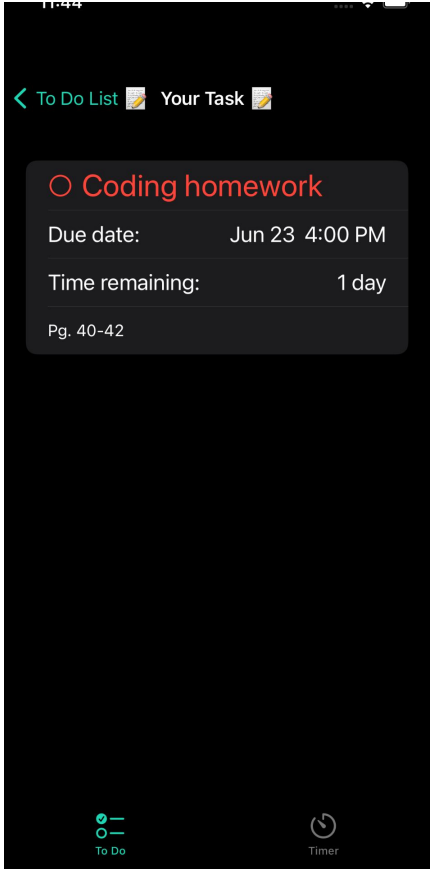


(Image 9: Adding a new task)

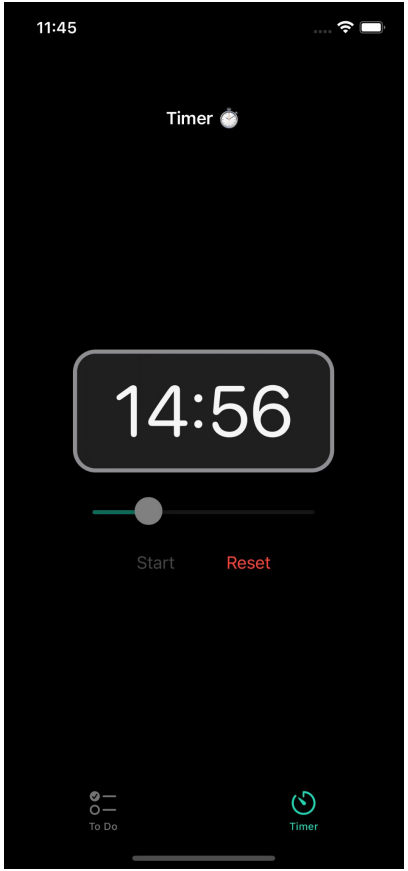
The In-App Design (part 3)

Image 10 pictures the details of the selected task. This lists the details of the task that was not listed on the list view, such as the specific due date and the description. (The list view has the time remaining, not the due date) On this page, I intended to include the subtasks, but I was unable to figure out how to add tasks without having to create a new page. With some more research and practice on SwiftUI, I should be able to add subtasks.

Image 11 pictures the timer under the timer page on the tabview. The current page only has a countdown timer and does not have the stopwatch unlike the design in the wireframe. To improve my app, I should add a Picker to toggle between the countdown timer and the stopwatch to easily switch between the two.



(Image 10: Detailed task page)



(Image 11: Timer page)

What went well, future improvements, conclusion

I experienced several positive aspects during the course of my FocusBuddy project. Through practice and perseverance, I gained a solid understanding of the Swift language and SwiftUI without encountering significant difficulties. It was satisfying to implement a design for the app that accommodates both light and dark mode, allowing me to gain valuable experience working with Color type variables and grasping design principles in SwiftUI. The app itself is straightforward yet highly functional, minimizing potential issues.

Moving forward, there are areas where I can focus on improvement. I need to address my time management skills, particularly in light of my ADHD challenges. Due to limited time, I had to modify my original ambitious plan for the project. To overcome this, I should explore strategies to enhance my time management abilities, allowing me to tackle more comprehensive project plans in the future. Additionally, I encountered difficulties while incorporating the tab view function and navigation bar, resulting in an unwanted gap at the top of the screen where the navigation title should be. Although I made progress in reducing the space, I still need to find a solution to completely eliminate it. Lastly, as the app's functionality expanded, it became challenging to navigate through different files and understand their connections. To overcome this, I should focus on simplifying the structure and improving the organization of my code, making it easier to manage and comprehend.

In conclusion, FocusBuddy, my task management app offers practical solutions for individuals with ADHD, addressing their unique challenges with working memory and time management. By leveraging the app's functionalities, individuals can streamline task organization, improve focus, and develop effective time management strategies, ultimately enhancing productivity and overall well-being.

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