

Motivate Your Project

To-do list and task management apps are nothing new, and there are thousands online; however, many apps are geared toward neurotypical people and do not have many built-in features for neurodiverse, specifically those with executive dysfunction. This is a pressing issue as one out of every five people or 15-20% of the world's population are neurodiverse in some way (Doyle and Colley 2022).

The app that our group is looking to create will take into consideration the different thinking processes that neurodiverse people have vs neurotypical people. Our project will fill the gap and make it easier to make decisions and manage tasks, and it could be integrated into existing task management software or stand on its own.

Describe Why Your Software

In order to find what might be best for a task management app, we looked at the pros and cons of two task managing apps: Todoist and Trello. Todoist is an app used by members of our group to make and track contents of a to-do list. Features of Todoist that are ideal for task managing app are the focus on today and the simplicity in making daily and recurring lists. When you load into the app, you are immediately brought into the tasks page for today. All other tasks are still stored in the app, but put into a 'upcoming' tasks page in the nav bar. Another great features is the ability to make recurring tasks. One can write "Do laundry every Friday at 5 PM" and it will create said task. A feature that is not ideal has to do with the completion of a task. Once you check off a task, it is permanently deleted from the system and cannot be reused later. So if this is a recurring task, you have to think ahead to schedule it that way or else you will have to rewrite every week it is needed. This process can be counteractive to the idea of the app itself, especially when it comes to people with neurodivergent tendencies or even just memory issues.

Another app we wanted to look at was Trello. Trello is a very popular task management software used by many businesses and companies in the field today. Features used in Trello that are ideal for task management is the ability to add notes and comments as time goes on, as well as the ability to see your completed tasks. In the past Trello has been used by some members to clock in hours for a project, which is easy to group and review with the comment systems. Trello also allows for you to view completed tasks once you are done and reuse them when needed. A feature that is not ideal for task management is it's column system. Although it is nice to see all of the columns on one page, it can often lead to clutter and confusion amongst workers if not organized properly. As well, it can also be overwhelming to see all tasks all at once, rather than the most important tasks of the project.

Potential features and integrations

1. Template for days “autofill reminders/preferences”
 - Since many people have similar schedules on the same days of the week, we want to allow the user to create a template and save it. They would then be able to apply it to a given day so they can have the same reminders and save time. It would also be less overwhelming to schedule, which could cause analysis/decision paralysis.
2. Confetti graphic
 - Creates a bit of Dopamine, which makes it easier to continue doing tasks.
 - “...help clients maintain arousal, modulate emotions, maintain motivation, sustain feelings of reward, and basically serve as the executive secretary of attention, while the client learns” (Murphy et al. 2010)
 - Makes it like a game.
 - "The games have the potential to increase attention stamina," says Rohn Kessler, Ph.D., of Boca Raton, Florida, who works with children with attention deficit. "They aren't a quick fix or a one-step solution, but I have seen distracted kids increase their ability to focus." (Hodges, n.d.)
3. Habit building
 - Send reminders, Track progress, takes 21 days to build habit
 - Open and immediately be able to create a task -> least amount of text
 - “Just how muscle building requires us to gradually lift heavier weights, learning requires us to gradually do more” (Kircher-Morris 2022)

Describe What You Will Build

We plan to make an app for sending frequent, but not annoying, notifications to a user. We plan on using a Progressive Web App for this because it is what we have the most experience with. However, PWAs cannot send notifications on iOS until sometime next year (“iOS 16 Preview - New Features”, n.d.), so we will use a container like REACT Native to make our PWA into a native app for iOS. We will also use the open source “react-native-notifications” (“react-native-notifications” 2022) tool for managing notifications. If we have time, we will make a system to sync reminders and notifications between multiple devices.

Timeline

Task	Status	Target Date	Note
Layout and structure	Not started ▾	Sept 14th	

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Pini, Rusch, Conrad, Kuehn

Task	Status	Target Date	Note
of app			
Basic skeleton of app (connect pages, etc)	Not started ▾	Sept 28	
Flesh out homepage	Not started ▾	Oct 4	
1-2 features working	Not started ▾	Oct 26	
Finalizing style and making sure it works	Not started ▾	Nov 9	
Slides due	Not started ▾	Nov 19th	
Presentation	Not started ▾	Dec 7	

References

n.d. React Native · Learn once, write anywhere. Accessed August 31, 2022.

<https://reactnative.dev/>.

Doyle, Nancy, and Mary Colley. 2022. "Neurodiversity - NCI." DCEG.

<https://dceg.cancer.gov/about/diversity-inclusion/inclusivity-minute/2022/neurodiversity>.

Hodges, Rick. n.d. "ADHD Webinar Materials." Connecticut Parent Advocacy Center.

<https://cpacinc.org/docs/ADHD-Webinar-Materials.pdf>.

"iOS 16 Preview - New Features." n.d. Apple. Accessed August 31, 2022.

<https://www.apple.com/ios/ios-16-preview/features/>.

Kircher-Morris, Emily. 2022. *Raising Twice-Exceptional Children: A Handbook for Parents of Neurodivergent Gifted Kids*. N.p.: Taylor & Francis.

Murphy, Kevin, Nancy Ratey, Sandy Maynard, Susan Sussman, and Sarah D. Wright. 2010.

"<http://online.sagepub.com> Coaching for ADHD." *Journal of Attention Disorders* 13, no. 5 (March): 546-552. 1087054709344186.

"react-native-notifications." 2022. npm.

<https://www.npmjs.com/package/react-native-notifications>.