- **ADHD**, nörogelişimsel bir bozukluktur. ADHD'nin temel belirtileri dikkat eksikliği, hiperaktivite ve dürtüselliktir. Kişi, dikkatini toplamakta zorlanabilir, unutkanlık yaşayabilir, görevleri tamamlarken zorlanabilir veya ani tepkiler verebilir.

- **ADHD** is more related to the brain's executive functions. (Problems with the brain's management system.)
    - **Executive Function**: A set of cognitive processes that help us self-regulate so we can effectively plan, prioritize and sustain effort toward our goals.
        - Response Inhibition → not being impulsive
        - Working Memory → memorizing or recalling information
        - Set Shifting → being able to redirect focus on different tasks
        - Delay Aversion → delayed gratification

- People who have ADHD don't perceive time linearly. Instead of perceiving time in a sequence, the ADHD brain collectively processes past, present and future as a scattered interconnected collection of events. They have problems with short-term memory.

- The cause of ADHD can be genetic and/or environmental. In order to be scientifically diagnosed, the symptoms of different types of ADHD have to be consistently observed for at least 6 months.

- People who have ADHD might focus on a very specific subject without any trouble just as long as they're invested in it. So in the development of the mobile app, we can ask users what they are into with utmost interest and appropriate the AI model to accommodate specific user interests.

- ADHD'ye sahip bireylerin kolayca anlayıp uygulayabilecekleri kesin ve tutarlı kurallara ihtiyaçları vardır. Kurallar koyduğunuz zaman bunların çok net olmasına dikkat edin. Sık sık geri bildirim verin, kullanıcıya onun ne yaptığının farkında olduğunuzu gösterin.

⭐*Geliştirilen projenin medikal bir düzeyde niteliği bulunmamalıdır. Sadece kullanıcıların hayatlarının kolaylaştırılması ve daha eğlenceli hale gelmesi, zor gelen sorumlulukların ve görevlerin üstesinden yapay zeka asistanı ile gelmesi sağlanmalıdır. ADHD, halen üzerinde çalışmalar ve araştırmalar yapılan, gelişmekte olan bir nörobiyolojik çalışma alanıdır ve bu uygulamanın tedavi niteliğinde bir uygulama olarak geliştirilmemesi gerekiyor.*

⭐*When developing the project, altering how the AI and code would behave based on different types of ADHD would not be the best idea because the functionality of the application should stay relatively the same at all times. Assumption should be that every ADHD user is a "Combined" type. This would significantly cut development hours.*

⭐*Uygulamada sesli girdi desteği kesinlikle olmalı çünkü ADHD'ye sahip bireylerin yazmada ve not almada sorun yaşadıkları bilinmektedir.*

ADHD Signs

1. **Inattentiveness** → not being able to pay attention

2. **Hyperfocus** → paying too much attention
    a. you should prioritize task accomplish them one by one
    b. regular notifications to keep them focus on specific tasks

3. **Impulsivity** → doing things as you wish, without patterns by impulse, haphazardly

4. **Disorganization** → not having a proper schedule ahead of time
    a. keeping track of tasks
    b. prioritizing task logically

5. **Mood Swings** → constant contrast of emotions
    a. sharing and keeping track of emotions, communicating
    b. setting up a routine to reduce stress and disorganization
    c. Based on emotional patterns, AI can appropriate the user for the next mood swing.

6. **Lack of Motivation** → insufficient drive to keep going
    a. breaking down chores into manageable tasks.
    b. sharing positive feelings throughout the day.

Types of ADHD (According to DSM-5)

Hyperactive / Impulsive	Inattentive	Combined

Inattentive *(Mental)*
- Difficulty with focusing on a task, sustained energy and concentration
- Difficulty with organizing tasks.
- Careless mistakes, not listening, easily distracted

Hyperactive / Impulsive *(Physical)*
- Unable to sit still or be in one place.
- Unable to control their social and physical actions properly.
- Fidgeting, getting up often, squirm around

Side Notes

1. Executive Functions Directive:

- **Tasks:**
    - **Micro-Tasks:** Help users break down large tasks into the small, actionable steps.
        - For example, "Clean Kitchen" becomes "Clear Counter," "Wipe Counter," "Load Dishwasher," "Sweep Floor."
        - Each step should be checked off, providing a sense of accomplishment. (XP point system.)
- **Prioritization:**
    - **Clarity:** The app should clearly highlight the *most important next step* for the user, thus reducing decision fatigue.
    - **Simple Systems:** Allow users to flag tasks as High/Medium/Low priority.
- **Time Management and Estimation:**
    - **Visual Timers & Time Boxing:** Integrate visual timers (a progress bar, a shrinking circle) for tasks to help with time blindness. Allow users to "time box" tasks (allocate a specific amount of time).
    - **"Just 5 Minutes" Mode:** Encourage starting tasks with a short, manageable burst ("work on this for 5 minutes").
- **Working Memory Aids:**
    - **Attachment/Notes:** Allow users to attach notes, photos, or even voice recordings to tasks for context.
    - **Brain Dump Feature:** A quick-capture area for ideas or tasks that pop into their head, to be organized later.

2. App Design:

- **Immediate Positive Feedback:**
    - **Gamification:** Points, badges, streaks, leveling up for completing tasks. Make it visually engaging.
    - **Micro-Wins:** Celebrate the completion of even tiny steps.
    - **Visual Progress:** Clear, satisfying progress bars or visual representations of completed tasks/habits.
- **Novelty & Customization:**
    - **Flexible Interface:** Allow users to pick and choose different chatbot mascots, themes and visual elements to keep the app feeling fresh and engaging.
- **Big Goals:** Allow users to link tasks to their broader goals or values.

3. Reduce Friction & Overwhelm:

- **Minimalist & Intuitive UI:** Focus on clean design and navigation.
- **Easy Input:**
    - **Voice Input:** For quick task creation.
    - **Templates:** Pre-built templates for common routines (morning, evening, work, study).
    - **Reschedule:** Don't just offer "snooze." Offer "snooze for 15 mins," "remind me when I get home," "reschedule to tomorrow."
- **"Do Not Disturb" Zones:** Allow users to set specific times for reminders or to mute them during highly focused work periods. Avoid constant pings and notifications.
- **Limited Choices:** When presenting options (e.g., how to prioritize), keep the number of choices no more than 5.

4. Accommodate Variability & Forgiveness:

- **Flexibility:** The app needs to be forgiving. If a habit is missed, don't just reset the streak to zero. Offer options like "skipped today," "partial completion," or a grace period.
- **"Catch Up" Mechanisms:** If a user falls behind, help them identify the most crucial tasks to catch up on.
- **Careful Manner:** The app's tone should always be encouraging and supportive.

5. Integration & Externalization:

- **Calendar Integration:** Sync tasks and habits with external calendars (Google Calendar, Outlook).
- **Widget Support:** Allow key tasks or a daily overview to be visible on the home screen without opening the app.
- **Cross-Device Sync:** Ensure consistency across phone, tablet, and potentially a web interface.
- **Smart Reminders:**
    - **Location-Based:** "Remind me to get groceries when I leave work."
    - **Time-Based:** "Remind me to take medication at 8 AM."
    - **Contextual:** "Remind me to check my mail after I finish breakfast."

6. Data & Insights (Presented Carefully):

- **"Strengths-Based" Analytics:** Focus on what the user *did* accomplish. Show trends of successful habits, improved time estimation, or increased task completion over time.
- **Pattern Recognition:** Help users identify their most productive times, common distractions, or tasks they consistently struggle with. Present this visually (e.g., heatmaps of productivity).
- **Actionable Insights:** Don't just show data; suggest *what to do with it*. "You consistently struggle with initiating this task on Mondays. Try breaking it down further or scheduling it for later in the week."
- **Privacy & Security:** Be transparent about data usage and ensure robust privacy measures.

7. Accessibility & Inclusivity:

- **Customizable Notification Sounds:** Allow users to choose sounds that are not jarring or overwhelming.
- **Text-to-Speech/Speech-to-Text:** Support for different input/output preferences.
- **Color Contrast & Font Size Options:** Standard accessibility features are even more critical for neurodiverse users.

8. User Testing with the Target Audience:

- **Crucially, involve people with ADHD in your testing process from early stages.** Their lived experience will provide invaluable insights that no amount of academic research alone can fully capture.
- **Observe how they interact with the app.** Where do they get stuck? What features do they ignore? What genuinely helps them?