

# ADHD Management Companion: A Personalized Tool for Symptom Management

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**Abstract**—The "ADHD Management Companion" application allows people to track ADHD symptoms with a customized dashboard, manage tasks, and monitor behavior. It has learning modules that interactively provide information on ADHD by including tests and self-evaluation for better knowledge. The app contains a goal-setting system with rewards, custom alerts, and reminders to manage medications, tasks, and motivational messages. Users can improve focus and adapt their routines through tracking daily activities and mood changes. Time management and emotional regulation through education modules assist not only the individual but also the student. The app continues to update itself based on user feedback. Regular updates ensure support that eventually becomes effective in managing ADHD.

**Index Terms**—ADHD, Task Management, Behaviour Tracking, Interactive Learning, Goal Setting, Motivation, Rewards System, Reminders, Personalized Tools, Mental Health.

## I. INTRODUCTION

Attention deficit hyperactivity disorder adhd is a developmental disorder that causes extreme impairment in focus impulsiveness and ability to complete work properly it therefore affects both school-related activities and relationships with people while at home or in most aspects of everyday life the adhd management companion is an innovative new platform created for people to effectively manage the impact of adhd by recognizing that no two people with adhd are alike the app provides a completely personalized experience specific to inattentive hyperactive-impulsive and combined types of adhd the clean user-friendly dashboard provides an effective way to manage goals monitor progress and keep track of daily tasks one of the apps defining features is its task management functionality which helps users structure their routines more effectively it allows tasks to be prioritized broken into smaller actionable steps and tracked for completion furthermore the app serves as an educational tool offering essential information about adhdits characteristics underlying causes and evidence-based strategies for self-management the app has a goal-setting module that inspires and motivates the user toward achieving short-term as well as long-term goals there are milestones for badges or points which gives one a sense of accomplishment

and the discipline to have better habits this app also allows users to reflect on their emotions identify what may be distracting them and develop better routines as their way of counterbalancing the regular struggles of daily life with adhd dedicated to continuous improvement the adhd management companion evolves with user feedback and advancements in adhd research rather than overloading users with unnecessary features updates focus on enhancing core functionalities to maximize the apps effectiveness this ensures that the tool remains a reliable and supportive resource for improving focus productivity and quality of life for those living with adhd

## II. MOTIVATION

The adhd management companion app helps people with adhd take control of their daily lives by providing them with tools that can help keep them organized motivated and focused goal-setting reminders and educational content help build productive routines for users to get tasks done properly which eventually improves their focus ,well-being and confidence in dealing with daily life challenges.

## III. PROBLEM STATEMENT

People suffering from ADHD cannot perform simple activities and repetitive tasks because they easily get distracted, cannot focus properly, and cannot achieve the self-set goals. The available current treatments do not provide clear definition and description of what people with ADHD need, which makes it a challenge for them to adjust their symptoms correctly. There is a heavy need for an all-inclusive, personal tool that integrates all of these functions into one system: task management, tracking behaviors, educational resources on AD/HD, goal setting, and support. This would help people with ADHD to organize their lives better, keep their minds focused, and especially, feel good about themselves. Without such special resources, people with ADHD are liable to continue to struggle with productivity and quality-of-life issues.

#### IV. CONTRIBUTIONS

- **Personalized ADHD Management:** This platform offers an intuitive and customizable dashboard designed to help users effectively manage their tasks observe behavioral patterns and track progress effortlessly by catering to individual preferences it helps users organize their schedules prioritize objectives and maintain consistent focus on daily goals the platforms personalized features enhance usability making it a powerful tool for boosting productivity improving organization and fostering self-awareness.
- **Educational Modules:** It includes stories designed to teach essential skills, such as task prioritization and emotional balance.
- **Goal Setting and Rewards System:** Helps users set the right goals for themselves, keeps track of progress towards them, and rewards users with motivation at milestones reached.
- **Custom Reminders and Alerts:** Timely reminders about any task, medicines, or motivational messages are received by the user to help organize and focus.
- **Continuous Feedback Integration:** Continuously updates by integrating user feedback to improve features and provide a better overall experience.

#### V. LITERATURE REVIEW

- In 2024 Emily Johnson and her team introduced an advanced digital platform aimed at supporting ADHD management the platform employed artificial intelligence to offer personalized task recommendations and track user progress it also provided motivational insights to encourage user engagement however due to the high costs of development and the complexity involved in its implementation the platform faced challenges in reaching smaller organizations and individual users.
- In 2023, Ling Wei et al. introduced an educational module on ADHD awareness and skill-building. This module utilized interactive games and quizzes to engage users effectively. However, it had limitations, including a lack of flexibility in content modification to accommodate diverse age groups and cognitive capabilities.
- In 2022 Muhammad Faizan and his team developed a mobile application focused on helping individuals with ADHD by introducing a goal-setting feature combined with a rewards system the app aimed to encourage users by providing incentives for task completion while it gained popularity the app faced limitations in adapting to user feedback making it less effective in allowing for real-time adjustments to personalized goals.
- In 2021 Hiroshi Tanaka and his team proposed a reminder application designed specifically for managing ADHD the

app concentrated on helping users schedule tasks and set reminders enhancing their ability to prioritize activities however it lacked additional features like behavior tracking and progress monitoring which restricted its scope and functionality.

#### VI. SOFTWARE REQUIREMENTS

##### *Dashboard*

- **Direct Access:** The application will take the users to the dashboard when they launch it.
- **Overview:** The dashboard will have all the essential features:
  - **Today's Tasks:** A list of tasks scheduled for the day.
  - **Progress Overview:** A snapshot of goal and task progress.
  - **Symptom Log:** Quick access to the symptom logging section.
  - **Reminder Alerts:** Notifications or reminders for tasks and goals.

##### *Games Section*

- **Game List:** A section where the users can access various ADHD-friendly games.
- **Progress in Games:** Track progress for each game (level reached, points earned).
- **Reward System:** For every completed game or milestone reached, users are awarded points and badges.

##### *Progress Tracking*

- **Visual Progress Indicators:** Users can view charts/graphs showing progress on tasks or goals.
- **Tracking of Task Completion:** Users can mark tasks as completed, and progress will be updated in real-time.

##### *Goal Setting & Tracking*

- **Set Goals:** Users can set short-term and long-term goals with customizable names, deadlines, and categories.
- **Track Goal Progress:** A progress bar will show the percentage of completion for each goal.
- **Break Down into Tasks:** Goals can be broken down into smaller tasks, and progress will be tracked for each task.
- **Goal Reminders:** Users will receive reminders for important goal deadlines or milestones.

##### *Reminders*

- **Task & Goal Reminders:** Users can set reminders for tasks, goals, and symptom logs.
- **Customizable Alerts:** Users can customize the time, frequency, and type of reminders they would like to receive.
- **Daily To-Do List:** A to-do list on the dashboard lists tasks and goals to be completed for the day.

### Profile Settings & Customization

- **Personalization:** The dashboard's appearance and suggested content (games, tasks, goals) should be based on the users' interaction, offering more relevant choices.
- **Notification Preferences:** Users can set preferences for receiving notifications related to tasks, goals, or symptom logs.

### Educational Resources

- **ADHD Resources:** Stories about managing ADHD should be presented to educate the users.
- **Goal Setting Tips:** Provide resources and advice on setting attainable goals and handling tasks effectively.

## VII. PROPOSED WORK

### A. System Methodology

- 1) **User Interface Design:** The design focuses on simplicity, clarity, and ease, targeting in the first place a person with ADHD. The user interface shows a well-arranged manner to let users move easily between games, goals and their checklist, without interference because of minimal distractions. The UI uses a clean layout and large buttons, which allows users to focus on completing tasks without getting exhausted. Color coding and icons provide visual guides that are efficient in guiding the user through each step.



Fig. 1: DashBoard

- 2) **Mind Focus Games:** As the app users play along both the challenge presented in the games and tasks can be adjusted in relation to their performance this means that if users are making headway the more they are challenged conversely should they not be successful the challenge can be dialed back to avoid frustration in this

way the user is always given tasks they are challenging with but within their current ability

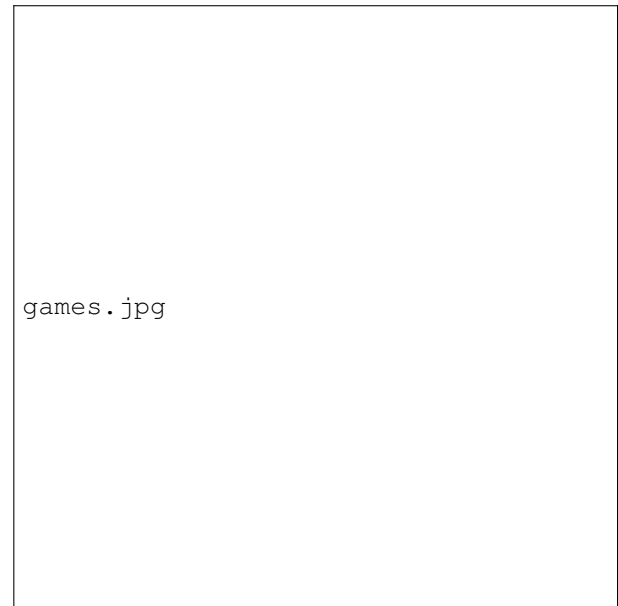


Fig. 2: Mind Focus Games

- 3) **Goal Setting:** The application features setting up personal goals and then subsequently breaking them down to smaller, actionable tasks that are managed in an easy to navigate to-do list, assisting the user to stay on track and manage their time effectively. Users can prioritize tasks, assign due dates, and mark them off when completed, allowing the user to feel a strong sense of accomplishment.

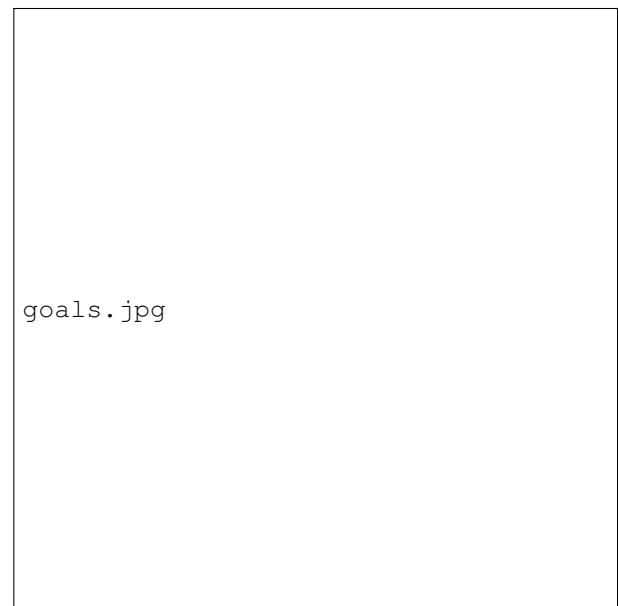


Fig. 3: Goal Setting

- 4) **Reminders and Alerts:** Notifications and reminders keep a person oriented toward his or her objectives. At the appropriate time, the app dispatches alerts reminding users of deadlines, incomplete tasks, or other personal goals to be accomplished. The duration between reminders and type content are changeable so that persons are provided with gentle nudging yet not overwhelmed.

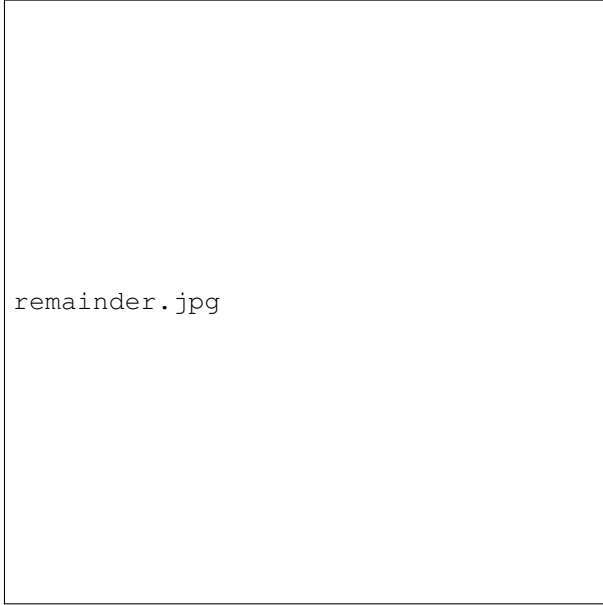


Fig. 4: Reminders

- 5) **Personalization and Educational Resources:** It includes stories which motivates the users to focus on their tasks. As the app users play along, both the challenge presented in the games and tasks can be adjusted in relation to their performance. This means that if users are making headway, the more they are challenged; conversely, should they not be so successful, the challenge can be dialed back to avoid frustration. In this way, the user is always given tasks that are challenging but within their current ability.

## VIII. CONFIGURATION

### A. Frontend

The user interface (UI) is designed using **Flutter** and **Dart**, which provides an intuitive and interactive dashboard. This dashboard allows access to various functionalities of the app, such as:

- Tracking symptoms
- Monitoring progress
- Playing games
- Setting reminders

### B. Backend

Since the app does not use an external database or user authentication, all data is processed and stored locally on

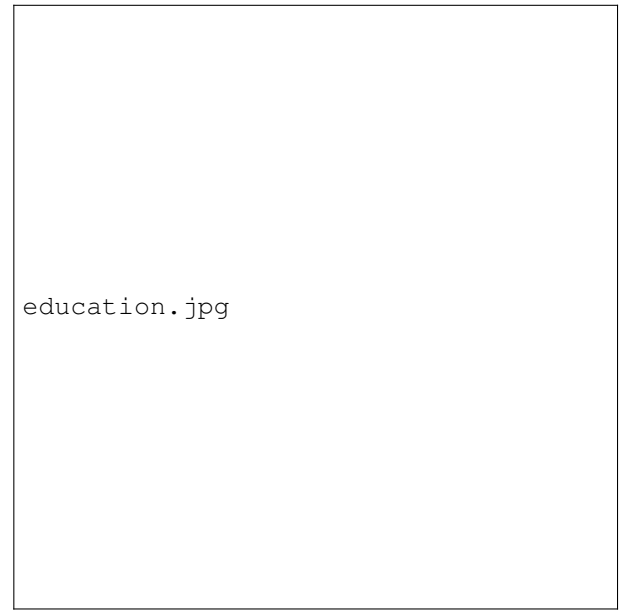


Fig. 5: Educating users

the user's device. The backend operations include the core functionality of the app, which involves:

- Tracking symptoms
- Managing tasks

### C. Algorithm Layer

This layer contains algorithms that:

- Track symptoms
- Manage tasks
- Set goals
- Gamify experiences

### D. Proposed System Architecture

- 1) **Personalized Tracking of Symptoms:** Our application tracks ADHD symptoms in real-time by taking mood logs, completing tasks, and behavioral data input. The application processes these input values to generate customized symptom profiles, providing detailed insights into the user's condition. This personalized tracking results in better control and understanding of ADHD symptoms on a daily basis.
- 2) **Mind Focus Game:** The system includes a *Mind Focus Game* designed to help users improve their attention span and cognitive skills. The game presents tasks that require sustained focus and concentration, offering a fun and engaging way to practice and enhance mental focus. As the user progresses, the difficulty level adjusts based on their performance, providing a dynamic way to train attention and manage ADHD symptoms.
- 3) **Real-time Feedback and Alerts:** The system provides real-time feedback based on the symptoms tracked.

It sends reminders for tasks, motivational alerts, and guidance for managing symptoms. Alerts are automatically tailored and self-directed in response to the user's progress, behavior, and goals, enabling timely interventions and offering personalized support.

- 4) **Personalized Goal Setting and Tracking:** The app allows users to set and modify personal goals related to productivity, emotional regulation, focus, and behavior management. Users can track their progress at regular intervals. The system dynamically adjusts reminders, recommendations, and goals as users advance, ensuring that the app remains aligned with their changing needs.

#### E. Testing and Evaluation

The ADHD Management Companion focused on assessing the features, functionality, and user experience of the application to ascertain whether it would serve the purpose of its intended users. During this phase, the application was tested by real users with ADHD in real-life scenarios. Participants interacted with the app by using its core functionalities such as goal-setting, reminders, task organization, and symptom tracking.

The main objective was to evaluate how well the app could engage users and make their daily activities easier, helping them concentrate and better manage their symptoms. For a specified period of testing, participants used the app and provided feedback on their experience. Data was collected through interviews, questionnaires, and user logs, which provided insights into the effectiveness of the app and areas for improvement.

### IX. OUTPUT

The ADHD Management Companion is exclusively an Android version application and, hence, got the most exemplary reviews based on how much of an improvement users experience with its effects in managing their work effectively. Its basic functionalities of the application, task management, setting of objectives, and reminding allow people to take daily schedules easily, manage to prioritize, and make concrete objectives in daily planning activities. This will be in such a manner that its notice mechanism would further facilitate keeping consistent and building improved habits on handling time. Specifically designed for Android, the app provides a quick and responsive interface with no delay. The intuitive and minimalist design makes it accessible to people of all ages, and therefore, it is a reliable tool for making task management easier and enhancing efficiency in general.

### X. CONCLUSION

We developed an effective method of handling ADHD symptoms through a personalized mobile application designed to help users stay focused, organize tasks, and enhance daily productivity. The type of tools it integrates-in terms of goal-setting, reminders, and tracking progress-make the application an incredibly helpful tool for individuals with ADHD. A

burgeoning recognition of the need for superior solutions to manage ADHD is a testament to the importance of this system. The future of this system goes into the expansion of features that include AI recommendations about symptom management, compatibility with wearable devices for tracking user behavior, and the use of real-time analytics that improve user feedback. While technology improves, user-centric design will be core in updates, ease of integration with other platforms, and the continuous improvement of the effects of the app on successfully managing ADHD symptoms in a supportive user experience.

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