Journal of Informatics and Web Engineering

Vol. 4 No. 1 (February 2025) eISSN: 2821-370X

Path To a Healthy Work-Life Balance: Mobile Application for Work and Personal Life Mastery

Erfan Rahmani[1], Zarina Che Embi[2*]

[1,2] Faculty of Computing and Informatics, Multimedia University, Persiaran Multimedia, 63100 Cyberjaya, Malaysia.
**corresponding author: (zarina.embi@mmu.edu.my, ORCiD: 0000-0001-9378-7380)*

Abstract - Drawing insights from diverse organizational methods, this study endeavors to facilitate effective self-development and organization in the face of contemporary demands as solutions for integrating goal tracking, event coordination, and task management within a unified calendar framework in a mobile application. There are three primary objectives of this study: firstly, to explore essential functionalities crucial for addressing the multifaceted challenges of modern life; secondly, to design and develop a mobile application that seamlessly integrates these functionalities; and finally, to evaluate the usability of the application through rigorous testing and feedback mechanisms. Envisaged deliverables include a fully functional mobile application designed to operate on the Android platform. Guided by the principles of agile software development, this study emphasizes continuous improvement and responsiveness to user needs throughout the development process. By adopting an iterative approach, the study aims to ensure the highest quality outcome, thereby enhancing the user experience and maximizing the application's efficacy in promoting work-life balance. Through this comprehensive approach, this study seeks to contribute to the ongoing discourse on work-life balance and offer practical solutions to individuals grappling with the complexities of modern living. By bridging the gap between organizational tools and personal development strategies, this study aspires to empower users in their pursuit of a harmonious and fulfilling lifestyle with a mobile application.

Keywords—Productivity Tool, Software Management, Mobile Application, Health, Work-Life Balance, Agile Software Development

Received: 15 November 2024; Accepted: 4 January 2025; Published: 16 February 2025

1. INTRODUCTION

Life obligations have proliferated within the past few hundred years when humanity's main goals consisted of surviving the day and having food and shelter for the coming days. A few reasons for increased obligations are industrialization, globalization and technological advancements. Contemporary obligations are far more complex and intricate in contrast to obligations generations ago. As most necessities are far more accessible nowadays, we tend to worry about other problems, one being how we can maintain both a healthy work and personal lifestyle.

It was clarified by [1] that one definition of work-life balance can be encapsulated as follows: allocation of time and psychological energy in a balanced way in work and nonwork life while deriving much satisfaction from both work and non-work life. Balancing the demands of work and personal life can greatly benefit an individual. Having multiple roles can provide us with (1) role privileges, (2) overall status security, (3) resources for status

enhancement, and (4) enrichment of the personality and ego gratification, as discussed by [1], [2] not only can these characteristics help improve an individual's life satisfaction, but they can also enhance their productivity and performance at work, as noted by [3], [4]. On the other hand, if an individual is not able to maintain a work-life balance, it can negatively affect them, as work-life imbalance is predictive of both work and personal-related absenteeism, tardiness, and poor role performance, as noted by [3],[5].

Within productivity apps, effective organization stands as a cornerstone for efficiency. Yet, this study transcends mere organization. It aims to restore balance in the whirlwind of modern life. This study offers a unique proposition by seamlessly merging goal tracking, enabling users to cultivate meaningful habits, with organizational tools. Existing solutions often excel in either organization or goal setting but fail to unify them into a cohesive platform. Notably absent are applications that integrate goal tracking with task and event management, utilizing a calendar for a comprehensive view of one's schedule—a fundamental aspect of any organizational tool. Our vision is to provide a unified hub where users effortlessly manage tasks, track goals, and schedule events, all in one place, promoting a holistic approach to work-life balance.

Events can be defined as activities that have a specific time frame in which they occur, like meetings or appointments. As for tasks, they can be defined as an activity that does not require a time frame, and may also include sub-tasks, for example making a phone call, or studying sometime this week. Personal goals can vary from person to person, but they largely focus on the individual and repeat to build that goal as a habit. For example, reading a book every week, or month. Furthermore, different organizational methods for goals, events and tasks will be analysed to implement these different aspects of self-development and organization.

The escalating demands of modern life, driven by factors such as industrialization, globalization, and technological advancements, have led to a pervasive problem of work-life imbalance. Research indicates that reorganizing time allocation between work and personal demands is a crucial personal initiative for promoting work-life balance. However, existing solutions often lack comprehensive integration of organizational tools, goal tracking, and event coordination, hindering individuals' ability to effectively manage their responsibilities. To address this gap, this study aims to develop a mobile application that facilitates self-development and organization by enabling users to set and track goals, tasks, and events. By providing users with a unified platform to manage both professional and personal commitments, we seek to alleviate the challenges associated with achieving and maintaining work-life balance in the modern era.

Amidst the abundance of applications focused on self-development, goal tracking, task management, and event coordination, there exists a notable absence of a unified platform integrating these essential features. The scope encompasses an in-depth analysis of various organizational and task management tools tailored for goals, events, and tasks. Leveraging insights from the research, it aims to meticulously evaluate and select the most effective organizational methods to be implemented within the mobile application. Specifically designed for the Android platform, the application will provide users with a seamless experience in managing their professional and personal commitments. Additionally, this study endeavours to identify and implement the most suitable application interface, ensuring optimal usability and user experience for a diverse audience and range of use cases. It is hoped that it will bridge the gap in existing solutions and offer users a holistic platform for enhancing productivity and promoting work-life balance.

2. LITERATURE REVIEW

2.1 Work-Life Balance

As previously mentioned, the work-life balance is extremely crucial in an individual's life. If neglected, both personal and work lives can be affected, as discussed by [5], [6] Life satisfaction also greatly depends on work-life balance. By integrating these two aspects, benefits may be drawn for an individual, as suggested by [2], [3], [4].

There are numerous task management methods for organization. One might even get lost at which method would be the best for a particular task. There is no single answer to that question, because the best method for organization is by using a collection of different organizational methods, as described by. [7]. By utilizing different organizational methods, a system can be made to organize almost any task, whether work or personal related.

Moreover, recent research by [8] also underscores the significance of work-life balance in educational settings, particularly among vocational educators. The study employed the TVET Work-life Balance Questionnaire (TVET WLBQ) to assess various aspects of work-life balance, such as Work Interference with Personal Life and Personal Life Interference with Work.

2.2 Calendars

The most effective way of being organized is by utilizing a calendar. The calendar's time slot management "is a unique feature of modern life: the schedule made the modern art of time management possible, as noted by [9]. Having a calendar provides the ability to oversee an overview of all events and tasks, which helps stay under control and not be overwhelmed by the number of events. Furthermore, the ability to visualize an overview of all tasks also provides the ability to plan more effectively without any clashing, as explained by [10].

2.3 To-Do Lists

Another effective way of keeping organized and remembering your tasks is by using a to-do list. They are especially useful because of how easily they can be prioritized, as discussed by [7]. They can be used for any type of task and are very easy to use. By utilizing the use of a to-do list for both habits and tasks while also utilizing a calendar for events, a very reliable and effective system for organization and self-development could be implemented.

To encourage a personalized relationship to efficiency, time management techniques within mobile applications could be used. Mobile phones are the most convenient electronic devices. Because of their small size, ability to communicate, access the internet and much more, having a mobile application that implements organizational techniques would be the most suitable.

2.4 User Usage Patterns Using Activity Trackers

The design and execution of these tools warrant careful consideration to encourage users towards greater self-organization and consistent goal attainment. A study conducted by [11] on activity tracking applications, which analyzed the data of 104 individuals over 14,413 usage days, spanning more than 2.5 years, revealed that users exhibit a 'natural' pattern of using activity trackers, with everyone demonstrating a unique usage pattern. The study further highlighted that while it is possible to coerce individuals into adopting a different pattern, it is not recommended as it could lead to the application being abandoned. The study also identified a common usage phase, characterized by a series of streaks followed by short breaks and ending in a long break. These findings could be leveraged to customize a system that promotes increased user adherence and minimizes application abandonment. The study also mentions how the use of streaks, which is basically how many days in a row a user has completed a certain task within the application, would encourage the user to come back and continue their streak.

2.5 Behavior Economics

Despite the widespread adoption of gamification, a notable gap was identified in the incorporation of behavioral economic principles into the design of rewards or point systems. None of the evaluated applications leveraged specific behavioral economic principles, loss aversion, variable reinforcement, and probability inflation—in their gamification strategies. This represents a missed opportunity to harness the power of behavioral economics, as described by [12] which has demonstrated potential in addressing predictable barriers to behavior change. For instance, the application of loss aversion could involve allocating points upfront and deducting them if goals are not met, while variable reinforcement could maintain user engagement by varying the frequency of rewards.

The absence of these behavioural economic principles in gamification design suggests that there is significant room for improvement and innovation in the current landscape of self-improvement mobile applications. By integrating insights from behavioural economics, developers and designers could potentially enhance the effectiveness and sustainability of gamification strategies. For example, adopting a variable reinforcement schedule could mitigate motivation fatigue by avoiding constant reinforcement, thus sustaining user engagement over time. Moreover, the

incorporation of lottery or drawing-based reward systems could further enrich the gamification experience by offering unpredictable yet enticing incentives.

2.6 Motivational Factors of Using a Mobile Application

Simplicity encourages young users to engage more with smartphones and apps. The average time spent on a single app is one to two minutes, and young college students often use fewer apps or delete them over time. Time spent varies by category, with gaming, social networking, lifestyle, entertainment, and education apps being the most time intensive. Apps with multimedia and entertainment content attract more attention than productivity or communication apps.

Complexity & Simplicity**:** The simplicity or complexity of an app influences young consumers' intentions to use it. Simple, intuitive apps that meet personal needs are more likely to be adopted. Complexity can hinder adoption by negatively affecting the perceived ease of use among young college students.

Observability: Observability, or the visibility of app usage within peer groups, was once key to app adoption. However, young consumers now primarily use app stores like iOS and Google Play to find new apps, reducing the influence of social circles on their decisions.

2.7 Literature Review Summary

The literature review provides crucial insights guiding the development of a proposed mobile application, with a focus on organizational tools, motivational factors, and user behaviour. Emphasizing the pivotal role of work-life balance in overall well-being, studies such as [6] and [5] underscore the necessity for app features that harmonize work and personal tasks.

Effective task management stands as a cornerstone of organizational efficiency. Research, such as that by [7] highlights the significance of integrating diverse strategies like calendars and to-do lists to manage both professional obligations and personal responsibilities. This integration not only boosts productivity but also enhances time management within the app.

Insights gleaned from studies on activity tracking applications, such as those by. [11], reveal unique user patterns, emphasizing the importance of features that promote consistent usage without imposing coercion. Incorporating these findings, the app will implement features such as streak tracking to encourage regular engagement and reduce user abandonment.

Furthermore, literature underscores the criticality of simplicity in app design, particularly for younger users, as noted by [13]. Apps that offer intuitive interfaces and straightforward functionalities are more likely to be adopted and used consistently. Accordingly, the proposed mobile app prioritizes an intuitive design to align with user preferences.

Moreover, the literature highlights the indispensable role of calendars in facilitating effective time management and task coordination, as discussed by [9] & 10] By integrating a robust calendar feature, the proposed system enables users to visualize and manage events and tasks efficiently, minimizing conflicts and optimizing time allocation. This feature not only enhances organizational efficiency but also empowers users to plan and prioritize their activities effectively.

Additionally, the effectiveness of to-do lists in task prioritization and management is well-documented, as demonstrated by [7]. Recognizing their importance, the proposed system incorporates a user-friendly to-do list feature. This feature allows users to easily prioritize tasks, providing a comprehensive organizational solution for managing both habits and tasks effectively.

Overall, the literature review offers valuable insights that inform the development of the proposed mobile application. By integrating features that promote work-life balance, enhance organizational efficiency, and facilitate effective task management, the proposed system aims to empower users to achieve holistic well-being and productivity in their daily lives.

2.8 Comparison of Applications

When comparing HabitNow [14], To-Do List [15], Habit Tracker [16], and the proposed system, each application offers unique features catering to diverse organizational needs, as shown in Table 1.

Table 1. Comparison of Existing Applications

Features/Apps	HabitNow	To-Do List	Habit Tracker	Proposed System
Reminders	Yes	Yes	Yes	Yes
Event Tracker	Yes	Yes	No	Yes
Task Tracker	Yes	Yes	No	Yes
Notification	Yes	Yes	Yes	Yes
Habit Tracking	Yes	No	Yes	Yes
Habit Statistics	Yes	No	Yes	Yes
Habit Streaks	No	No	No	Yes
Event Calendar Feature	No	Yes	No	Yes

HabitNow, To-Do List, and the proposed system all include reminders, event tracking, task tracking, notifications, habit tracking, and habit statistics, providing users with tools to manage tasks and habits efficiently. To-Do List distinguishes itself with an event calendar feature, offering users a consolidated view of their scheduled events and tasks. However, Habit Tracker offers habit statistics but lacks event or task-tracking capabilities. Neither HabitNow nor To-Do List incorporate habit streaks, a feature appreciated by users aiming for consistent habit maintenance. In contrast, the proposed system amalgamates the strengths of these applications by integrating reminders, event tracking, task tracking, notifications, habit tracking, habit statistics, habit streaks, and an event calendar feature. This comprehensive approach ensures users access a multifaceted organizational tool that fulfils all their requirements without necessitating the use of multiple applications.

3. RESEARCH METHODOLOGY

As shown in Figure 1, there only exists one actor within the system, which is the user. The user can add events, goals and tasks while also being able to edit, delete and view them. For goals, the user must add a start and end time, and goal type to specify the category of the goal. For example, whether the goal will be completed with a yes or no question or a numeric value.

3.1 Proposed Work

The proposed mobile application aims to enhance work-life balance by integrating task management, event organization, and goal tracking into a unified platform. The envisioned system will include a calendar for comprehensive event and habit management, alongside a task manager and goal manager. The calendar provides users with an overview of their commitments, integrating goals, events, and tasks in a single interface. The goal manager will enable users to set and track personal objectives, utilizing statistics and reminders to foster positive habits and eliminate negative ones. By consolidating these features, the application empowers users to cultivate personal growth and maintain a holistic view of their schedules, as explained by [10] and [1].

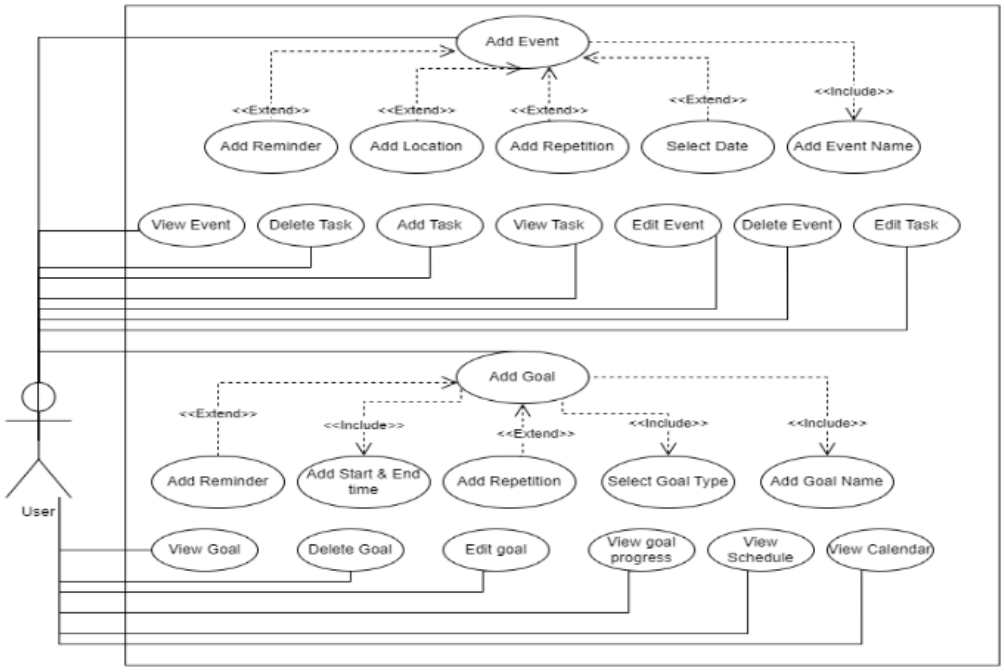

Figure 1. Use Case Diagram

In response to identified market needs, a comprehensive solution is developed to address event, task, and goal management, along with calendar functionality. The platform offers a schedule page for displaying events and tasks in a convenient to-do list format, a separate calendar page exclusively for event overview, and a dedicated goal section for tracking goal statistics and managing objectives. Market analysis underscores the demand for integrated solutions similar to this study, which can facilitate efficient time management and personal organization. By combining these essential features into one cohesive platform, the aim is to promote productivity and work-life balance while reducing the need for multiple applications.

3.2 Implementation

As shown in Figure 2, there are three main pages, the schedule page, calendar page and goal page. The schedule page contains events and tasks in a sorted list. The event page consists of a calendar view of the events and a list of all the events. The goal page consists of goals only.

3.3 Mobile Application Development and Design

This project reflects a deliberate emphasis on simplicity and efficiency, inspired by the user interface design principles championed by leading tech companies such as Samsung, Microsoft, and Google. Drawing from Susanne [17], the design prioritizes intuitive interactions and streamlined workflows, ensuring that users can quickly and effortlessly complete tasks. Adhering to the principle of minimalism, the interface avoids clutter, presenting only essential information and controls, which enhances user focus and reduces cognitive load. The decision to develop a mobile application stem from its ubiquitous presence and the convenience it offers, aligning with the growing preference for mobile solutions in managing daily tasks and events. This strategic choice underscores the project's commitment to accessibility and user-centric design, ensuring that the application meets the contemporary demands of its users effectively.

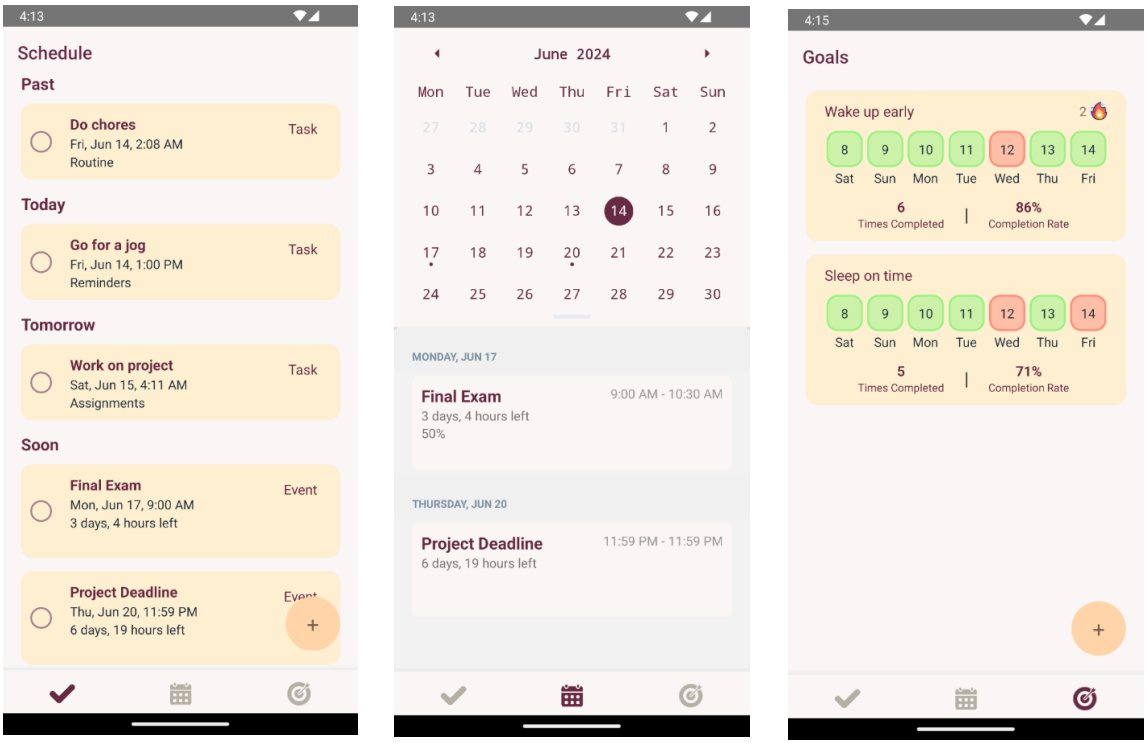

Figure 2. Application pages; (a) Schedule page, (b), Calendar page, and (c) Goal page

3.4 System Usability Scale

The System Usability Scale (SUS) is a widely used questionnaire designed to measure the usability level of a system or product, explained by [17]. It was developed by John Brooke in 1996 and consists of ten simple questions. The SUS uses a 5-point Likert scale ("Strongly Disagree" to "Strongly Agree") to assess user perceptions. Positive question scores are reduced by one point, and negative question scores are subtracted from 5. Scores are then scaled to 0-100, providing a standardized usability measure.

Usability, as defined by ISO 9241-11, measures how effectively users achieve goals with a product. Mobile applications must meet user expectations and ensure a positive user experience in a competitive market.

The evaluation centres on assessing the usability of the proposed system using the System Usability Scale (SUS), selected for its simplicity and broad acceptance in usability evaluations.

3.4.1 Calculating Average SUS Score and Adjective Rating Scales

Two key values, X0 and Y0, were used to calculate the SUS score. X0 is the sum of all odd-numbered item scores minus 5, and Y0 is the sum of all even-numbered item scores minus 25. These values were summed and multiplied by 2.5 to get the final SUS score, which averaged 90.25. According to the SUS scoring system, a score above 68 is above average, and scores from 85-100 are considered excellent, typically graded as 'A'. The score of 90.25 places the application in the highest usability category, signifying an 'A' grade.

4. RESULTS AND DISCUSSIONS

As shown in Table 2, the application achieved an average SUS score of 90.25 indicating that the usability meets the highest standards. Users found the application to be highly intuitive, allowing them to navigate and utilize features with minimal effort. The overall user experience is positive, making users more likely to continue using the application. It is also efficient, enabling tasks to be completed effectively.

Table 2. SUS Results

Participant	X0	Y0	SUS Value
1	11	18	72.5
2	20	20	100
3	20	19	97.5
4	19	18	92.5
5	20	20	100
6	18	19	92.5
7	20	20	100
8	15	20	87.5
9	15	18	82.5
10	14	17	77.5

The SUS evaluation aligns with findings from prior research. [24] emphasize that the SUS provides a reliable and comparable measure of usability across systems, making it a suitable benchmark for evaluating the application's design. [25] further highlights the importance of user-centered design in achieving high SUS scores, particularly in mobile applications where usability significantly impacts user satisfaction and acceptance.

In addition, [24] and [25] advocate for iterative usability testing to refine interface designs, ensuring they meet diverse user needs. This iterative process was central to the development of this application, incorporating user feedback at multiple stages to enhance intuitiveness and functionality. [26] also underlines the importance of integrating features that align with users' perceived value, a principle reflected in the application's seamless integration of task management, goal tracking, and event scheduling features.

The application's efficiency further supports findings by [27], who argue that high SUS scores correlate with systems enabling tasks to be completed effectively and efficiently. By addressing the gap in existing solutions, as discussed in the literature, the application provides a comprehensive and user-friendly platform for managing professional and personal commitments, ultimately promoting work-life balance.

The positive user experience, evidenced by the high SUS score, suggests that the application successfully bridges the gap in existing solutions. Its intuitive design and functionality align with the goals of enhancing productivity and promoting work-life balance, as outlined in the study's objectives.

Furthermore, there are some certain features that could be added to the system for user improvement. For example, the system could be further refined and improved by incorporating features like those described by [29], where hybrid recommender systems were utilized to provide personalized suggestions to users based on their preferences and past interactions. Integrating such a recommender system within this application could enhance user engagement by suggesting tasks, events, or schedule optimizations tailored to individual needs, thereby making the system more adaptive and user centric.

Additionally, tools designed to address specific time-management challenges, as discussed by [30], highlight opportunities for improvement. Their development of a lab schedule reminder app showcased how targeted features like automated reminders and streamlined schedule management can significantly enhance user productivity and adherence to tasks. Incorporating similar functionalities, such as intelligent notifications and task prioritization, could make the proposed system more effective in managing complex schedules and improving overall user efficiency.

5. CONCLUSION

In conclusion, the objectives of this project have been met with the successful creation of a mobile application that centralizes goals, tasks, and events. The development journey, guided by agile methodology, facilitated adaptability and continuous improvement, resulting in a user-centric tool. Meticulous planning and thoughtful selection of development tools were crucial in delivering a high-quality application.

A documented usability report reveals promising results, indicating the application's effectiveness in enhancing personal organization and productivity. Collaboration with stakeholders played a pivotal role in refining the application, ensuring it meets the evolving needs of users seeking efficient organizational tools for personal development.

Additionally, the focus will be on refining the user interface to enhance usability and accessibility, as well as incorporating animations to improve visual appeal and provide smoother transitions. These updates aim to create a more engaging and enjoyable user experience, ultimately making the app a comprehensive tool for managing goals, tasks and events efficiently.

Potential limitations of the application include the necessity for continuous updates to ensure compatibility with new devices, as well as to address any emerging bugs or user feedback. Additionally, gaining visibility and a substantial user base in the highly competitive app market presents a significant challenge. Ensuring the app stands out among numerous similar applications will require effective marketing strategies and a consistent focus on user satisfaction and engagement.

ACKNOWLEDGEMENT

The authors would like to thank the two anonymous reviewers who have provided valuable suggestions to improve the article.

FUNDING STATEMENT

The authors received no funding from any party for the research and publication of this article.

AUTHOR CONTRIBUTIONS

Erfan Rahmani: Conceptualization, Data Curation, Methodology, Validation, Writing
Zarina Che Embi: Project Administration, Supervision, Review & Editing

CONFLICT OF INTERESTS

No conflict of interests were disclosed.

ETHICS STATEMENTS

Relevant informed consent was obtained from those involved in the research.

REFERENCES

[1] K. Rashmi and A. Kataria, "Work-life balance: A systematic literature review and bibliometric analysis," Int. J. Sociol. Soc. Policy, vol. 42, no. 11/12, pp. 1028–1065, 2022, doi: 10.1108/IJSSP-06-2021-0145.

[2] F. Sarwar, S. A. Panatik, M. S. Mohamad Sukor, and N. Rusbadrol, "A job demand-resource model of satisfaction with work-family balance among academic faculty: Mediating roles of psychological capital, work-to-family conflict, and enrichment," Sage Open, vol. 11, no. 2, p. 21582440211006142, 2021, doi: 10.1177/21582440211006142.

[3] N. P. Rothbard, A. M. Beetz, and D. Harari, "Balancing the scales: A configurational approach to work-life balance," Annu. Rev. Organ. Psychol. Organ. Behav., vol. 8, pp. 73–103, 2021, doi: 10.1146/annurev-orgpsych-012420-061833.

[4] L. Bellmann and O. Hübler, "Working from home, job satisfaction and work-life balance—Robust or heterogeneous links?" Int. J. Manpower, vol. 42, no. 3, pp. 424–441, 2021, doi: 10.1108/IJM-10-2019-0458.

[5] A. Gragnano, S. Simbula, and M. Miglioretti, "Work-life balance: Weighing the importance of work-family and work-health balance," Int. J. Environ. Res. Public Health, vol. 17, no. 3, p. 907, 2020, doi: 10.3390/ijerph17030907.

[6] J. Leitao, D. Pereira, and A. Goncalves, "Quality of work life and organizational performance: Workers' feelings of contributing, or not, to the organization's productivity," Int. J. Environ. Res. Public Health, vol. 16, no. 20, p. 3803, 2019, doi: 10.3390/ijerph16203803.

[7] Y. Ahmetoglu, D. P. Brumby, and A. L. Cox, "To plan or not to plan? A mixed-methods diary study examining when, how and why knowledge work planning is inaccurate," Proc. ACM Hum.-Comput. Interact., vol. 4, no. CSCW3, p. 1–20, 2021, doi: 10.1145/3432921.

[8] N. I. Edeh, F. N. Ezebuiro, A. L. Okute, C. L. Nwadi, and E. P. Ugwunwoti, "Mediation roles of transformational leadership and psychological empowerment on work-life balance and in-role performance of vocational educators in Nigeria," J. Tech. Educ. Train., vol. 16, no. 1, pp. 112–130, 2024.

[9] J. Wajcman, "The digital architecture of time management," Sci. Technol. Human Values, vol. 44, no. 2, pp. 315–337, 2019, doi: 10.1177/0162243918795041.

[10] J. Wajcman, "How Silicon Valley sets time," New Media Soc., vol. 21, no. 6, pp. 1272–1289, 2018, doi: 10.1177/1461444818820073.

[11] K. Salehzadeh Niksirat, L. Velykoivanenko, N. Zufferey, M. Cherubini, K. Huguenin, and M. Humbert, "Wearable activity trackers: A survey on utility, privacy, and security," ACM Comput. Surv., vol. 56, no. 7, pp. 1–40, 2024, doi: 10.1145/3645091.

[12] S. Wendel, Designing for Behavior Change: Applying Psychology and Behavioral Economics. O'Reilly Media, 2020.

[13] A. Mehra, J. Paul, and R. P. S. Kaurav, "Determinants of mobile apps adoption among young adults: Theoretical extension and analysis," J. Mark. Commun., vol. 27, no. 5, pp. 481–509, 2021, doi: 10.1080/13527266.2020.1725780.

[14] "Google Play Store," Apr. 25, 2024. [Online]. Available: https://play.google.com/store/apps/details?id=com.habitnow.

[15] "To-Do List - Schedule Planner, Daily Planner & Reminders," Apr. 25, 2024. [Online]. Available: https://play.google.com/store/apps/details?id=todolist.scheduleplanner.dailyplanner.todo.reminders.

[16] "Habit Tracker - Habit Diary, Tickit Daily Planner," Apr. 25, 2024. [Online]. Available: https://play.google.com/store/apps/details?id=habittracker.todolist.tickit.daily.planner.

[17] S. Bodker, Through the Interface: A Human Activity Approach to User Interface Design. CRC Press, 2021, doi: 10.1201/9781003063971.

[18] T. Kaya, R. Ozturk, and C. A. Gumussoy, "Usability measurement of mobile applications with system usability scale (SUS)," in Ind. Eng. Big Data Era, 2018, pp. 389–400, doi: 10.1007/978-3-030-03317-0_32.

[19] V. Cotton and M. S. Patel, “Gamification use and design in popular health and fitness mobile applications,” Am. J. Health Promot., vol. 33, no. 3, pp. 448–451, 2019, doi: 10.1177/0890117118790394.

[20] P. Bitrian, I. Buil, and S. Catalan, “Enhancing user engagement: The role of gamification in mobile apps,” J. Bus. Res., vol. 132, pp. 170–185, 2021, doi: 10.1016/j.jbusres.2021.04.028.

[21] E. V. Eikey, “Effects of diet and fitness apps on eating disorder behaviours: Qualitative study,” BJPsych Open, vol. 7, no. 5, p. e176, 2021, doi: 10.1192/bjo.2021.1011.

[22] V. Hema et al., “Scrum: An effective software development agile tool,” IOP Conf. Ser.: Mater. Sci. Eng., vol. 981, no. 2, p. 022060, 2020, doi: 10.1088/1757-899X/981/2/022060.

[23] “How to interpret a system usability scale (SUS) score,” MeasuringU, Apr. 25, 2024. [Online]. Available: https://measuringu.com/interpret-sus-score.

[24] P. B. Toolaroud, E. Nabovati, M. Mobayen, H. Akbari, A. Feizkhah, R. Farrahi, and F. R. Jeddi, “Design and usability evaluation of a mobile-based self-management application for caregivers of children with severe burns,” Int. Wound J., vol. 20, no. 7, pp. 2571–2581, 2023, doi: 10.1111/iwj.14127.

[25] G. D. Rembulan, "Evaluation and improvement of e-grocery mobile application user interface design using usability testing and human-centered design approach," J. Sist. Inform. Teknol., pp. 41–45, 2023.

[26] Y. Xu, J. Wang, Z. Li, and W. Chen, “Design and application of experience management tools from the perspective of customer perceived value: A study on the electric vehicle market,” World Electr. Veh. J., vol. 15, no. 8, p. 378, 2024, doi: 10.3390/wevj15080378.

[27] M. Schrepp, J. Kollmorgen, and J. Thomaschewski, “A comparison of SUS, UMUX-LITE, and UEQ-S,” *J. User Exp.*, vol. 18, no. 2, 2023.

[28] W.-H. Cheah, P. K. Tan, and M. A. Ali, “Mobile technology in medicine: Development and validation of an adapted system usability scale (SUS) questionnaire and modified technology acceptance model (TAM) to evaluate user experience and acceptability of a mobile application in MRI safety screening,” Indian J. Radiol. Imaging, vol. 33, no. 1, pp. 36–45, 2023, doi: 10.4103/ijri.IJRI_900_22.

[29] Y. F. Lim, S. C. Haw, K. W. Ng, and E. A. Anaam, “Hybrid-based recommender system for online shopping: A review,” J. Emerg. Technol. Adv. Pract., vol. 5, no. 1, pp. 1–10, Mar. 2023, doi: 10.33093/jetap.2023.5.1.3.

[30] K. V. Perumal and S. P. Thiagarajah, “Enhancement of undergraduate time management through the use of a lab schedule reminder app,” J. Emerg. Technol. Adv. Pract., vol. 1, no. 1, pp. 30–37, Jun. 2019, doi: 10.33093/jetap.2019.1.1.30.

BIOGRAPHIES OF AUTHORS

	**Erfan Rahmani** is in the final year of Bachelor of Computer Science (Software Engineering) at Multimedia University, Malaysia. His expertise includes Back-End Development, FastAPI and NestJS. His research interests include personalised content recommendation system and mobile application. He can be contacted at erfan.rahmani6236@gmail.com.

	**Zarina** is an Assistant Professor at Faculty of Computing and Informatics, Multimedia University, Cyberjaya. She obtained Bachelor of Computer Science (Hons) from University of Malaya and Master of Science (Creative Multimedia) from Multimedia University. She also obtained PhD from Multimedia University in the area of blended learning and evaluation. Her research interests include technology in teaching and learning, requirements engineering and visual computing. She is ISTQB Certified and IREB Certified (CTFL and CPRE-FL). She can be contacted at zarina.embi@mmu.edu.my.