

Myfinancial Controller: A First Usability Review

Nurul Syahina binti Mohamed¹, Akeem Olowolayemo^{2*}, Fatimoh Damola Saliu-Olaajo³, Ibrahim Muhammad⁴

^{1,2}Department of Computer Science, KICT, International Islamic University Malaysia, Kuala Lumpur, Malaysia.

²Department of Computer Science, Faculty of Natural Science, First Technical University, Ibadan, Nigeria.

³Computer Engineering Department, School of Science and engineering, Alhikma Polytechnic Karu, Nasarawa State, Nigeria.

*Corresponding author: akeem@iium.edu.my

(Received: 16th January 2025; Accepted: 3rd May, 2025; Published on-line: 30th July, 2025)

Abstract—MyFinancial Controller is a mobile application designed to transform the flow of personal finance management and savings in Malaysia. This app helps users to take control of their financial well-being by providing a thorough and user-centric approach to managing and growing personal finances by seamlessly integrating various financial tools and features into a single, intuitive platform. This app offers digital payment solutions, expense analysis, goal-oriented savings and focusing on financial education. MyFinancial Controller caters to diverse and evolving financial needs of users. Notably, MyFinancial Controller includes an advanced Scam Tracker function, which serves as a critical component of the app. This feature provides information about scams and fraudulent activities in the financial sphere, enhancing the security and trustworthiness of the platform. This app equips users with the tools they need to make secure and efficient digital payments, manage expenses, and track their spending. It fosters financial discipline by automating savings, enabling users to establish and customize savings goals, whether for emergencies, dream vacations, or debt management. Moreover, MyFinancial Controller places strong emphasis on financial literacy, providing resources such as articles, tutorials, and interactive tools that enhance users' financial understanding. By serving as a holistic, secure, and innovative personal finance management solution, MyFinancial Controller is at the forefront of reshaping how individuals manage and grow their finances in the dynamic financial landscape of Malaysia.

Keywords— MyFinancial Controller, Scam Tracker, Goal Saving, B40

I. INTRODUCTION

In today's digital age, personal finance management and savings have become increasingly rely on mobile applications. MyFinancial Controller is an innovative application developed to address the evolving financial needs of individuals in Malaysia. This report provides a comprehensive technical overview of the application, outlining its key features and functionalities, security measures, and the integration of a Scam Tracker function.

The primary objective of MyFinancial Controller is to help users by offering an all-in-one solution for managing their financial well-being. The application is designed to provide users with a secure, user-friendly platform for digital payments, goal-based savings, spending analysis, and scam tracker. By offering these features, the app aims to promote better financial discipline, enhance financial literacy, and safeguard users against potential scams and fraudulent activities.

MyFinancial Controller is a convenient application for user since it offers a seamless and user-friendly experience that encourages disciplined financial habits, enhances financial literacy, and safeguards against potential financial scams and fraud. As a transformative force in the digital financial ecosystem of Malaysia, this introduction sets the stage for a comprehensive exploration of the application, delving into its key features, security measures, and the broader significance it holds in the context of personal finance management and financial technology in Malaysia.

II. RELATED WORK

A. Current Financial Trend

The management of finances and financial transactions by consumers has undergone a significant transformation due to technological advancements. In the current technological landscape, a variation of personal finance applications has emerged, offering consumers capabilities to pay bills, track budgets, handle cash flow, and save money . All of services in these personal finance apps grants users the flexibility to efficiently oversee their financial matters [1]. For instance, a savings app helps consumers to establish rules dictating when and how much they want to save. These rules can automate regular savings over specific periods, such as monthly or with each payday. Alternatively, users may set rules involving frequent small savings, like putting away RM5 after every gym session or rounding up each purchase to the nearest ringgit.

Security measures have also reached new heights, with biometric authentication such as fingerprint and facial recognition becoming integral to mobile banking apps. These advancements gives confidence in users by giving protections against unauthorized access and fraudulent activities [2]. Despite the widespread adoption of automation technology, often work as an effective means to facilitate savings, there exists limited empirical evidence on how automation impacts consumers' savings habits and overall financial well-being. Additionally, the comparative effectiveness of distinct saving rules remains an underexplored area.

B. Related Work

This report presents insights into the dynamic between automated saving rules and their impact on savings outcomes. The analysis focuses on consumers' utilization of various automated saving rules, namely guaranteed, contingent spending, and contingent nonfinancial rules, and their correlation with the saved amounts. Leveraging data from the Qapital mobile savings app, which empowers users to customize savings goals and rules, the study reveals that contingent spending rules, such as rounding up purchases and saving the rounded amount, are the most prevalent (81 percent usage) [3]. In contrast, guaranteed rules, supporting traditional strategies like saving on payday, are employed by 41 percent of users, while contingent nonfinancial rules are less common (2 percent) [3].

Despite their popularity, contingent spending rules are linked to lower savings accumulation compared to guaranteed saving rules. Guaranteed rules exhibit a 1.5 to 3.5 times larger increase in the maximum amount saved and the likelihood of achieving specific milestones (e.g., \$500, \$1,000) [3]. Although contingent spending rules are frequently triggered, the individual transaction amounts are small, resulting in comparatively lower savings than more traditional approaches.

The report also highlights the common of behaviour-based saving strategies across financial institutions and apps, linking saving to users' spending behaviour. While these strategies may help individuals initiate or complement existing saving practices by associating savings with routine behaviours, there is a lack of comprehensive understanding regarding their efficacy. The study refrains from establishing causal relationships between saving rules and saved amounts, emphasizing the need for further research, such as field experiments, to explore the causal effects of automation and behaviour-based strategies on consumers' financial behaviour.

In another study, the Budget Tracker application appears as a solution aimed at reducing the complexities individuals face in managing their personal finances. The author meticulously outlines the constraints come across during the development phase and proposes effective solutions to address these challenges. By creating a mobile application that streamlines expense tracking, income management, and payment records, the author attempts to eliminate the hassle of conventional methods such as sticky notes or spreadsheets [4]. Despite its current applicability limited to students and working individuals in its initial version, the application sets its sights on enhancing user experience and interface while collecting valuable expense data for analysis.

Drawing inspiration from existing budget-tracking applications, the Budget Tracker app aims to simplify financial management, though certain issues such as the absence of a PDF feature have been identified [4]. However, the application's resilient storage mechanism and planned future improvements signal a promising tool for effective expense tracking, providing users with adaptable report viewing options and a foundation for further enhancements in subsequent iterations. Sections addressing current limitations and proposing future

enhancements illustrate the dedication to refining this application for enhanced user benefit and financial management efficiency.

Next, Expense tracker app is an application that will help its users to manage the cost of their daily expenditure. It will guide them and aware them about their daily expenses. It will prove to be helpful for the people who are frustrated with their daily budget management, irritated because of amount of expenses and wishes to manage money and to preserve the record of their daily cost which may be useful to change their way of spending money. In short, this application will help its users to overcome the wastage of money [5].

In conclusion, both reports shed light on distinct aspects of personal finance management. The study on automated saving rules from the Qapital app reveals the effectiveness of different strategies, highlighting the dominance of contingent spending rules but emphasizing the superior outcomes associated with guaranteed saving rules. Meanwhile, the Budget Tracker and Expense Tracker application offers a practical solution for simplifying expense tracking and financial management. Despite some limitations, such as the absence of a PDF feature, the app shows promise in streamlining personal finance management, offering adaptability in report viewing, and laying the groundwork for future enhancements. Together, these reports underscore the ongoing evolution of tools and strategies aimed at empowering individuals to better navigate their financial lives.

III. METHODOLOGY

Financial well-being is one of the most critical issues in financial management in society. A study indicates that those who practice positive financial habits tend to be extra relaxed with their financial well-being. The financial well-being of an individual can be improved through favourable financial behaviour, sound financial literacy and managing financial stress [6]. MyFinancial Controller platform offers transformative advantages customized specifically to benefit the B40 demographic, empowering them with enhanced financial management capabilities and opportunities for growth. This innovative tool presents a lot of benefits that align with the unique financial needs and challenges faced by the B40 segment, promoting financial literacy, stability, and upward mobility.

The platform promotes financial education and awareness among the B40 demographic. Through its various features, such as expense tracking, personalized saving goals, scam tracker, donation and scam news. This will educate users on wise financial practices. This educational aspect is crucial for empowering B40 individuals to make informed decisions, manage their resources effectively, and cultivate long-term financial flexibility [7].

Moreover, the MyFinancial Controller contributes to encourage a culture of savings within the B40 community. By offering customizable saving mechanisms and goal-setting features, it encourages disciplined savings habits. This is particularly impactful for a demographic often grappling with limited resources, as it empowers them to

set achievable financial targets and work towards them systematically.

In essence, the MyFinancial Controller stands as an essential tool tailored to address the specific financial needs of the B40 community. Through its accessibility, educational focus, emphasis on savings, and facilitation of financial transactions, it serves as a crucial instrument in empowering this demographic towards a more secure and prosperous financial future.

A. Proposed Financial Application

After reviewing and contrasting financial management systems in the previous section, an innovative financial controller, "MyFinancial Controller," is proposed. This controller combines advantageous functionalities from diverse financial systems, enhancing them to ensure maximum effectiveness in managing personal finances.

Initially, new users engage with the MyFinancial Controller platform by setting up an account within the application. The registration process necessitates the provision of an active mobile number and email for identity verification. A verification code is dispatched to the provided contact information to authenticate the user's identity. Once the account is established, users access the platform using their designated username and password. Within the app's interface, users navigate through various financial management features and tools tailored to their needs. They can monitor account balance, view goal-saving progress, and set up personalized financial goals. Additionally, the platform offers analysis into spending patterns and budget management. The application also has a scam tracker and scam news section

to educate and bring awareness to users about scam and fraud activities.

The MyFinancial Controller contains established financial management methodologies while introducing innovative elements to enhance user experience and effectiveness. By analyzing user requirements and behaviors, the app aligns with diverse user preferences and needs, catering to a range of financial objectives and strategies.

Furthermore, the application meticulously identifies functional and non-functional requisites, ensuring optimal performance, security, and user accessibility. This comprehensive analysis informs the development of a robust and user-centric financial management solution, aligning with the evolving demands and expectations of modern users seeking efficient and secure financial control.

B. Identify User and Characteristic

Figure 1 shows the activity diagram for users' activity in MyFinancial Controller. First, users must register by signing up with an active mobile number and email address. Upon successful registration, they obtain a login ID comprising a username and password. With these credentials, users can access their accounts within the application. The user functionalities primarily include managing their financial activities, such as tracking expenses, setting financial goals, aware of scams, make donation and analyse their spendings. They have the freedom to execute various transactions like bill payments and fund transfers within the application.

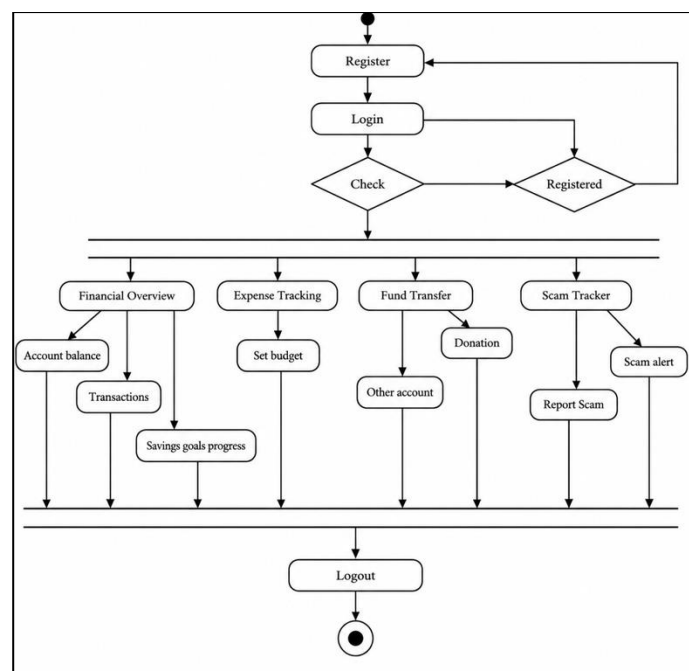


Fig. 1 Activity Diagram for Users' Activity in MyFinancial Controller

IV. DISCUSSION

The login page, shown in Fig. 2, is the first interface user interacts with after installing the application. It requires

registered users to enter their email and password. The validity of the email and password need to be verified. This is important to prevent unauthorized individuals from

accessing the system. Once the email and password are validated, users are redirected to the home page.

In the login page, new users are required to click on the “Sign Up” link to create an account. They are required to

provide username, email, and password to have an account. The system requirements are discussed in the following subsections.

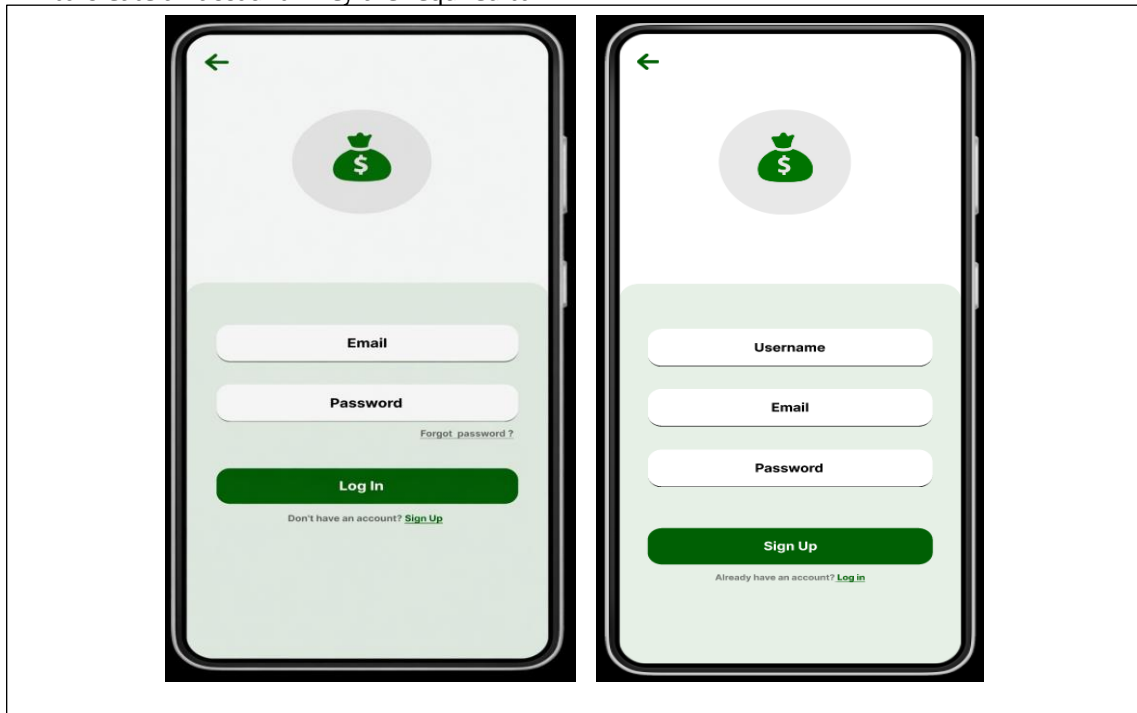


Fig. 2 Sign Up and Login Page

A. Functional Requirement

Fig. 3 shows the homepage and payment getaway of MyFinancial Controller. User can see their names, money

balance, goal savings progress, scam news and various activity button such as pay, goal saving, donation, and scam tracker.

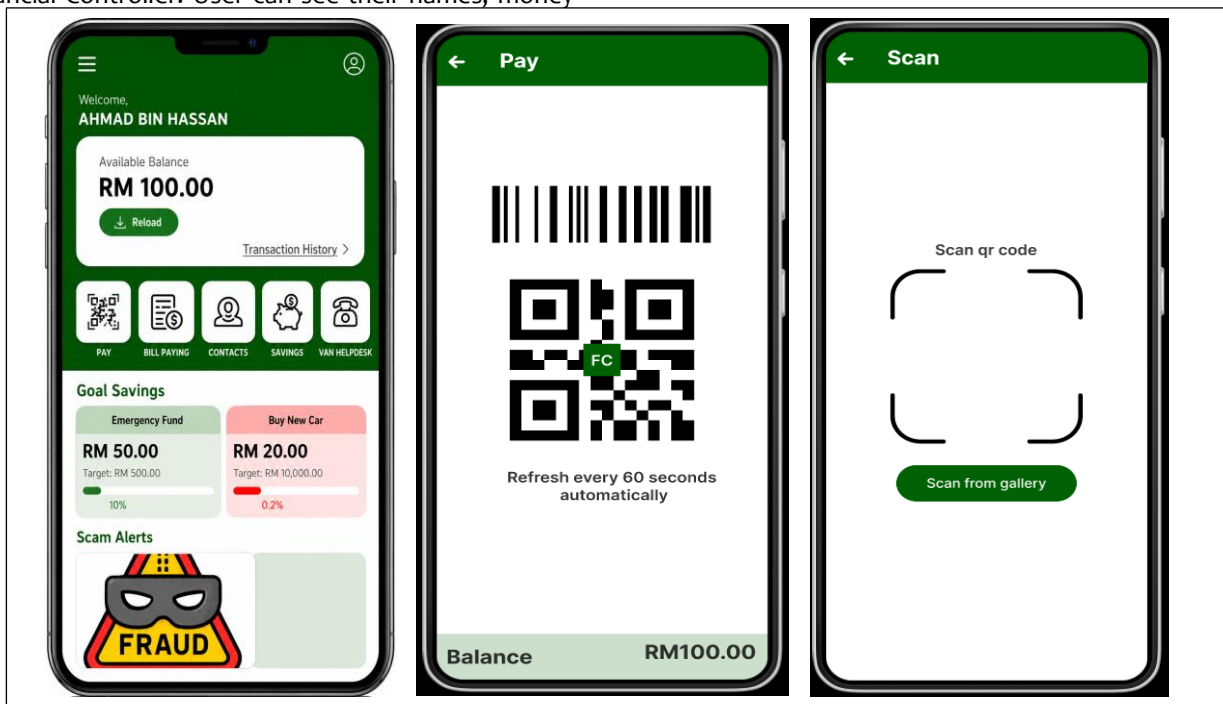


Fig. 3 Sign Up and Login Page

Myfinancial Controller enables users to set personalized savings goals. It allows for customization, letting users define specific objectives, whether it's saving for a vacation, a down payment, or an emergency fund. The system's flexibility permits users to allocate savings according to their preferences, fostering a sense of control over their financial aspirations.

One of Myfinancial Controller distinguishing features is its automated savings rules. These rules automate the savings process by triggering actions based on predefined conditions. For instance, users can opt for round-up rules where they can set how much they want to save in a specific duration and the difference is allocated towards savings as it shown in Fig. 4 below.

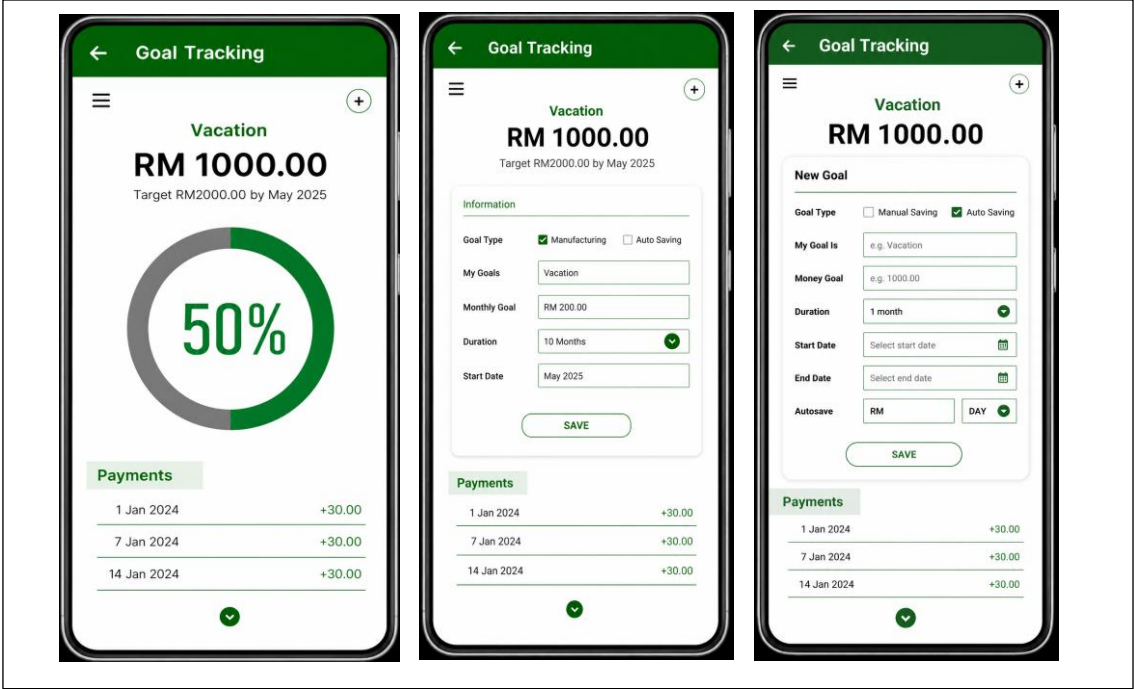


Fig. 4 Goal Tracking Page

Myfinancial Controller recognizes the significance of security and user trust. Therefore, in addition to its savings functionalities, the app integrates a robust scam tracker

feature. This functionality serves as a security measure, allowing users to report suspicious activities or potential scams within the application.

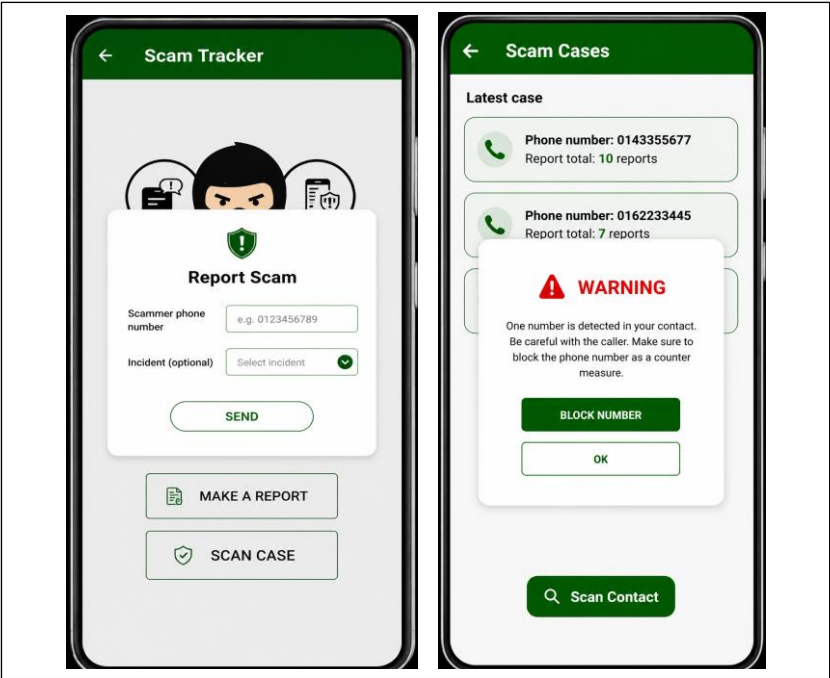


Fig. 5 Scam Tracker Page

Donation is also one of the main activities in MyFinancial Controller. Giving donation help people to strengthen their personal finance habits. This is because

giving charity can prompt people to reflect on their finance habits. It may encourage them to have a better financial management and make a smarter spending choice.

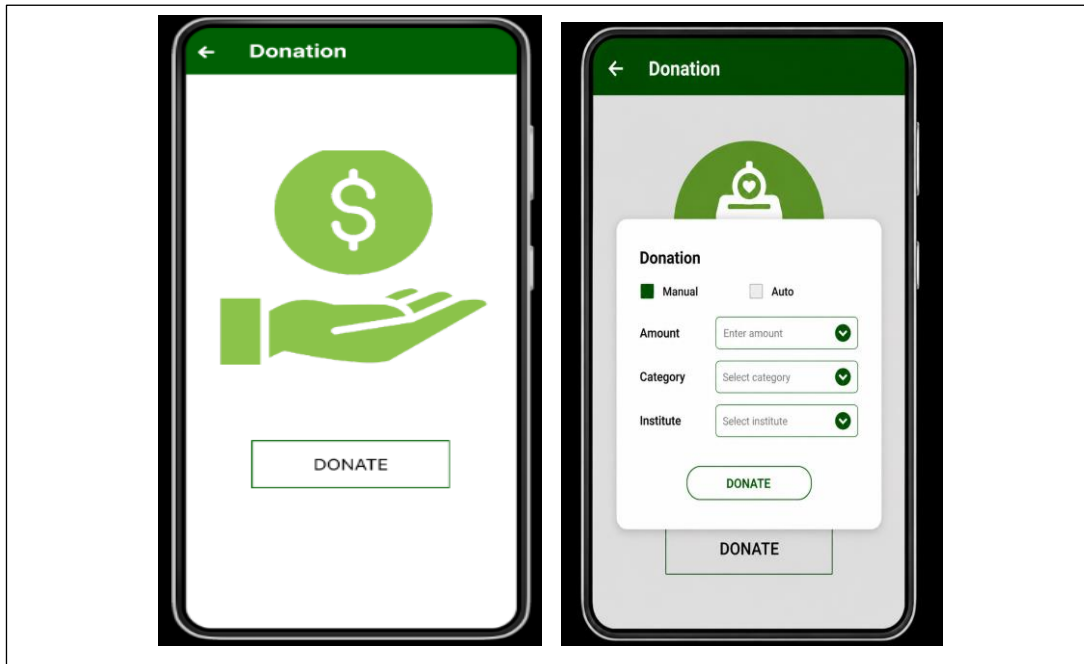


Fig. 6 Scam Tracker Page

B. Non-Functional Requirements

Non-functional requirements encompass aspects beyond specific functionalities, focusing on how a system should perform. For MyFinancial Controller, a personal finance app, these requirements span various areas, ensuring its reliability, security, usability, and performance. Additionally, considering the Scam Tracker feature, specific non-functional requirements emphasize security, responsiveness, and user trust.

a) Reliability:

MyFinancial Controller must guarantee a high level of reliability to ensure users' trust and confidence in its functionality. This requirement includes system uptime, where the app should be always available and accessible for users, minimizing downtime or disruptions in service. This involves robust server infrastructure, redundancy measures, and efficient error handling to prevent crashes or data loss.

b) Security:

Security remains paramount for financial apps like MyFinancial Controller. Non-functional requirements demand stringent security measures encompassing data encryption, secure user authentication (e.g., multi-factor authentication), protection against unauthorized access, and adherence to regulatory standards like GDPR or financial industry compliance [8].

c) Usability and User Experience:

User-friendliness is crucial for MyFinancial Controller's success. Non-functional requirements focus on offering an intuitive interface, easy navigation, and responsive design across various devices and operating systems [9]. This includes clear instructions, minimalistic

design principles, and personalized user experiences that adapt to individual financial goals.

d) Performance:

The app's performance must meet users' expectations, with fast response times and smooth functionality. Non-functional requirements encompass aspects such as load times, transaction processing speed, and efficient handling of large volumes of data. It also includes optimizing the app's performance across different network speeds and device capabilities.

e) Scam Tracker:

The Scam Tracker feature within MyFinancial Controller requires specific non-functional requirements due to its critical role in maintaining user trust and security. This includes real-time monitoring capabilities to swiftly identify and track potential scams or suspicious activities. The system should allow for immediate response, investigation, and resolution of reported scams while ensuring user data integrity and confidentiality [6].

In summary, these non-functional requirements define the overall performance, security, reliability, and user experience of MyFinancial Controller, ensuring it meets the high standards expected from a financial management application. The Scam Tracker feature adds an extra layer of security, demanding real-time responsiveness and robustness in identifying and mitigating potentially fraudulent activities to safeguard user finances and trust in the platform.

C. Usability Testing

Usability testing is carried out to test the user interfaces of the prototype. It is mainly to test the satisfaction of

users and whether it obeys the design principles [10]. Generally, each of the module in the prototype is tested according to the usability of its interfaces involved. Thus, no program code or internal structure of the system are involved. The usability testing is carried out on 20 users using the interview method. These users are chosen among university students who are in a B40 category. Each of the

user is given a task in every module to achieve a goal. At the end of the test, they are required to provide feedback and comments about the prototype. This feedback is essential to make improvements on the prototype to accommodate the needs of end users. The tasks and results for each module are summarized as follow.

TABLE 1
USABILITY AND USER EXPERIENCE EVALUATION

Module User	Module 1: Login	Module 2: Sign Up	Module 3: Homepage	Module 4: Pay	Module 5: Goal Tracking	Module 6: Scam Tracker	Module 7: Donation
1	5	5	5	5	5	5	5
2	5	5	5	5	5	4	5
3	5	5	3	5	5	5	5
4	5	5	5	5	5	4	5
5	5	5	3	5	5	5	5
6	5	5	5	5	5	4	5
7	5	5	5	5	5	5	5
8	5	5	4	5	5	5	5
9	5	5	5	5	5	5	5
10	5	5	5	5	5	4	5
11	5	5	5	5	5	5	5
12	5	5	5	5	5	5	5
13	5	5	3	5	5	4	5
14	5	5	5	5	5	5	5
15	5	5	3	5	5	4	5
16	5	5	5	5	5	5	5
17	5	5	5	5	5	5	5
18	5	5	5	5	5	5	5
19	5	5	5	5	5	5	5
20	5	5	5	5	5	5	5

Table 1 shows five steps of achievement. Number 1 stands for not understand the given task, number 2 stands for unsuccessful in completing task, number 3 stands for takes a long time with high difficulty in completing task, number 4 stands for takes a short time with slight difficulty in

completing task and number 5 stands for succeed without difficulty in completing task.

In Module 3 which is the Homepage, the user found it hard to find the reload button for the balance and the button for add money at goal saving tracking box. Fig. 7 shows the changes between before and after.

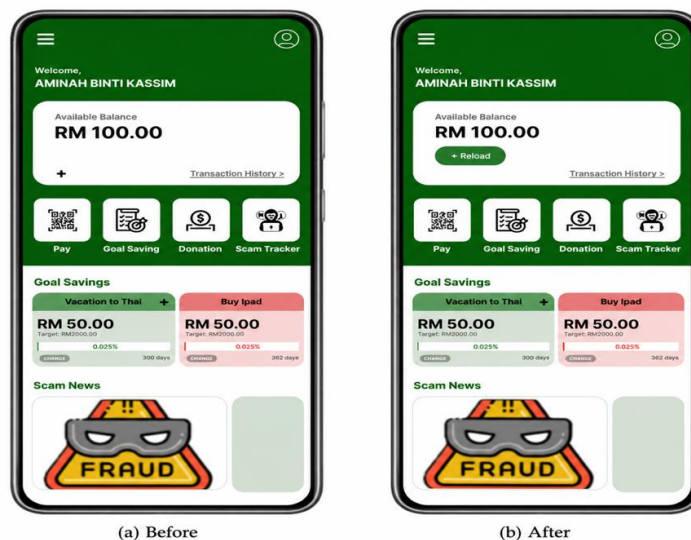


Fig. 7 Homepage Before and After

In Module 6, five users take a short time with slight difficulty in completing task because of inconsistency of

button position. Fig. 8 shows the changes before and after of the Scam Tracker page.

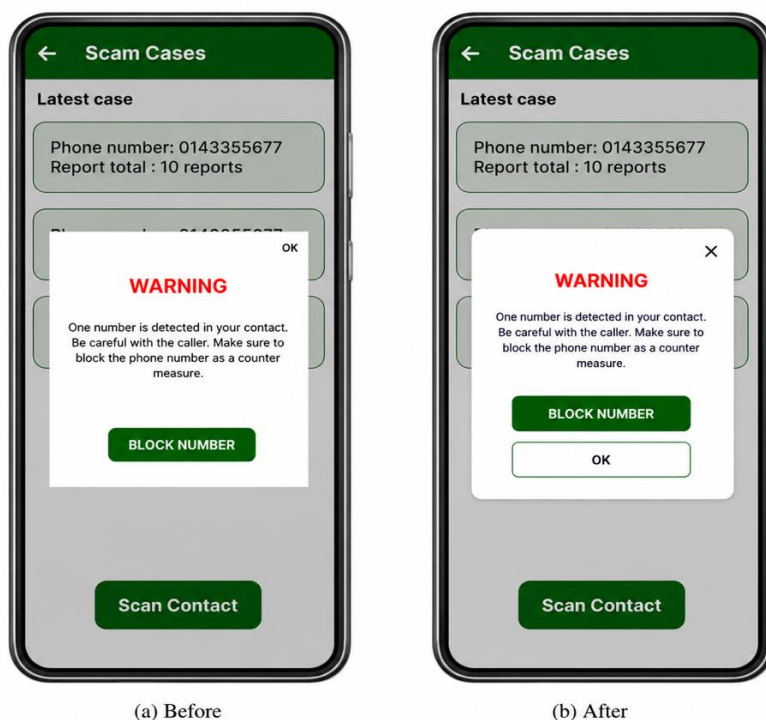


Fig. 8 Homepage Before and After

V. CONCLUSION

MyFinancial Controller, an innovative mobile savings app, can revolutionize how users manage their finances, offering a spectrum of automated saving rules that empower individuals to cultivate better saving habits. Its impact spans across various saving methodologies, including guaranteed, contingent spending, and contingent nonfinancial rules, providing users with a range of options to match their saving preferences. The analysis of MyFinancial Controller's data underscores the prevalence of contingent spending rules, particularly rounding up purchases, yet reveals their correlation with lower savings accumulation compared to traditional guaranteed saving rules. Despite their popularity, these rules often result in smaller individual transaction amounts, leading to comparatively diminished savings outcomes.

In parallel, the landscape of financial technology has integrated features like scam trackers into platforms like MyFinancial Controller. This addition serves as a protective shield, allowing users to identify and report suspicious financial activities, thereby fortifying the security and reliability of the application. The scam tracker acts as a safeguard, aligning with MyFinancial Controller's commitment to ensuring the financial safety of its users in an increasingly digitized world. When considering the implications for B40, MyFinancial Controller and its scam tracking feature hold immense potential. For individuals in this socioeconomic group, the ability to save and protect their finances is crucial. MyFinancial Controller's diverse saving rules provide flexibility, allowing B40 users to tailor

their savings strategies based on their financial circumstances. Moreover, the inclusion of a scam tracker within the application assures a heightened level of security, vital for individuals who may be more susceptible to financial vulnerabilities.

The app's emphasis on user-friendly interfaces and personalized saving goals aligns well with the needs of the B40 demographic. The simplicity of the application's design coupled with its security features can empower users to build and protect their financial reserves more effectively. Additionally, by leveraging behavioral insights to nudge users towards better saving practices, MyFinancial Controller has the potential to bridge the gap in financial literacy often prevalent in underserved communities.

In conclusion, MyFinancial Controller's multifaceted approach to savings, reinforced by its scam tracker, offers a comprehensive solution for not only enhancing financial management but also ensuring security. For the B40 community, these features present an opportunity to cultivate healthier financial habits and shield against potential financial threats, ultimately contributing to improved financial well-being and resilience.

ACKNOWLEDGMENT

The authors hereby acknowledge the review support offered by the IJPCC reviewers who took their time to study the manuscript and find it acceptable for publishing.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest

REFERENCES

- [1] W. C. Kiat and M. N. M. Salleh, "Personal finance and budgeting mobile application, 'CashSave'," *Applied Information Technology and Computer Science*, vol. 4, no. 1, pp. 1372–1387, 2023, doi: 10.30880/aitcs.2023.04.01.080.
- [2] P. Enyi, "Running head : Relational Trend Analysis : A Simple And Effective Way To Detect Financial Statements Fraud Relational Trend Analysis : A simple and effective way to detect financial statements fraud," pp. 1–17.
- [3] C. Ratcliffe, J. Burke, P. Heck, M. Bolton, and E. Saunders, "Consumer savings app strategies and savings outcomes," *Consumer Financial Protection Bureau, Office of Research Reports Series No. 22-9*, Dec. 2022. [Online]. Available: https://files.consumerfinance.gov/f/documents/cfpb_qapital-savings-app-outcomes_report_2022.pdf
- [4] M. Hezretov, "Budget Tracker: Highly customizable budgeting mobile application," M.S. thesis, Univ. of Colombo School of Computing, Sri Lanka, 2018.
- [5] H. Gupta, A. P. Singh, N. Kumar, and J. A. Blessy, "Expense tracker: A smart approach to track everyday expense," 2020.
- [6] M. Rahman, C. R. Isa, M. M. Masud, M. Sarker, and N. T. Chowdhury, "The role of financial behaviour, financial literacy, and financial stress in explaining the financial well-being of B40 group in Malaysia," *Future Business Journal*, vol. 7, no. 1, pp. 1–18, 2021, doi: 10.1186/s43093-021-00099-0.
- [7] A. S. Magli, M. F. Sabri, H. Abdul Rahim, and M. A. Othman, "Influence of financial behavior, financial stress and locus of control on financial well-being among B40 households in Selangor during the pandemic," *International Journal of Academic Research in Business and Social Sciences*, vol. 11, no. 12, pp. 468–486, 2021, doi: 10.6007/ijarbss/v11-i12/11792.
- [8] M. B. Garcia and J. P. Claour, "Mobile Bookkeeper: Personal Financial Management Application with Receipt Scanner Using Optical Character Recognition," *2021 1st Conf. Online Teach. Mob. Educ. OT4ME* 2021, pp. 15–20, 2021, doi: 10.1109/OT4ME53559.2021.9638794.
- [9] H. Petrie and N. Bevan, "The evaluation of accessibility, usability, and user experience," in *The Universal Access Handbook*. Boca Raton, FL, USA: CRC Press, 2009, pp. 20-1–20-16, doi: 10.1201/9781420064995-c20.
- [10] A. Olowolayemo, A. A. Alarood, S. N. Yap, and T. Mantoro, "SPOT: A low cost intelligent parking system for urban malls," in *Proc. 3rd Int. Conf. Informatics and Computing (ICIC)*, 2018, pp. 1–5, doi: 10.1109/IAC.2018.8780413.