

Original Research

UI/UX Design of Simpan Kunci Password Manager: A User Centered Design Approach for Improved Usability

Ammar Arrayan ^{a*}, Nofiandri Setyasmara ^b, Prily Fitria Aziz ^c

^{a,b,c} Multimedia Engineering Technology, Politeknik Media Kreatif Jakarta, Jakarta, Indonesia

*Corresponding Author: arrayanammar@gmail.com

ABSTRACT

The increasing number of digital accounts forces users to manage multiple passwords, yet many still rely on insecure storage methods, such as reusing the same password across various platforms or manually taking notes. Furthermore, several available password manager applications continue to face usability and user experience issues, making them less appealing and difficult for new users to navigate. This study aims to design the UI/UX for a Password Manager application named “Simpan Kunci” using the User-Centered Design (UCD) approach to ensure alignment with user requirements. The UCD framework was applied through four structured phases: Understand Context of Use, Specify User Requirements, Produce Design Solutions, and Evaluate Design Against Requirements. Evaluation was conducted using the System Usability Scale (SUS) involving 20 respondents. The research yielded a high-fidelity UI/UX design comprising password management, master password authentication, search functionality, and account categorization features within a clean, intuitive interface. Based on the SUS evaluation, an average score of 80.62 was achieved, falling into Grade B, Good adjective rating, and Acceptable category. These results demonstrate that the proposed UI/UX design for the Simpan Kunci application exhibits strong usability, is easy to understand, and effectively meets user needs in managing digital account passwords.

Copyright © 2026 by Author(s). This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CC BY 4.0).

How to Cite:

A. Arrayan, N. Setyasmara, and P. F. Aziz, “UI/UX Design of Simpan Kunci Password Manager: A User Centered Design Approach for Improved Usability,” *J. Kecerdasan Buatan dan Teknol. Inf.*, vol. 5, no. 3, pp. 664–676, 2026.

Doi: <https://doi.org/10.69916/jkbt.v5i3.581>

KEYWORDS

Password Manager
System Usability Scale (SUS)
User Experience (UX)
User Interface (UI)
User-Centered Design (UCD)

ARTICLE INFO

Received: July 10, 2026

Accepted: August 21, 2026

Available Online: September 5, 2026

1 INTRODUCTION

In the rapidly evolving digital era, online services requiring exclusive passwords have multiplied, obligating users to maintain stronger credential security. However, insecure password management remains a primary vulnerability in information security. Many individuals and organizations still utilize risky practices, such as creating weak passwords or reusing identical passwords across multiple platforms. This behavior stems from the cognitive burden of memorizing complex, unique credentials, prompting users to default to simplistic passwords to avoid recall fatigue [1]. Over ten billion leaked passwords were recently exposed on hacker forums, marking what is considered one of the largest data breaches in history uploaded by a threat actor under the moniker ObamaCare [2]. Furthermore, up to 2023, Indonesia experienced massive data breach incidents across various critical sectors, including government administration (665 thousand records), financial services (165 thousand records), and information-communication technologies (161 thousand records), revealing severe systemic weaknesses in public information protection [3].

This threat is amplified by a widespread lack of public awareness regarding secure credential hygiene. Research conducted by YouGov and Google revealed that Indonesian internet users exhibit vulnerable password habits:

40% admitted fear or reluctance in generating new passwords, while 30% confessed to reusing identical credentials purely for convenience [4]. A reliable solution to mitigate these vulnerabilities is the adoption of password management platforms. A password manager acts as a secure digital vault storing user credentials (usernames and passwords), reducing the cognitive overhead associated with remembering unique, complex strings [5]. Previous literature confirms that password managers effectively address public credential security needs. However, an observation of top-tier password manager applications on the Google Play Store (e.g., Bitwarden, Keeper, and LastPass) reveals that they frequently receive ratings below 4 stars on review platforms such as Trustpilot. User complaints consistently highlight usability and user experience (UX) hurdles, specifically complex user interfaces (UI) that intimidate non-technical users. These findings demonstrate that robust technical security is not automatically paired with a simple, accessible user experience.

This friction was reinforced by preliminary observations conducted with prospective users of the "Simpan Kunci" application. Initial survey results showed that 100% of respondents desired a password manager featuring a clean, easily understandable interface, and agreed that managing credentials should occur within a user-friendly environment. As noted in *About Face: The Essentials of Interaction Design*, a major cause of digital product failure is a failure to align system mechanics with user needs and mental models [6]. Therefore, the UI/UX design of the Simpan Kunci application adopts the User-Centered Design (UCD) methodology to create an interface tailored strictly to user expectations.

The UCD framework provides techniques, tools, and iterative procedures specifically tailored to engineering user-centric interactive systems [7]. UCD has been successfully applied across diverse mobile application domains. For instance, Luthfi and Arfiani implemented UCD for the Sampahocity waste management application, achieving an "Excellent" usability rating via System Usability Scale (SUS) testing [8]. Similarly, Mubiarto et al. applied UCD to redesign the BCA Mobile banking application, yielding an 80% SUS satisfaction score [9]. Building upon these foundations, this study aims to design the UI/UX of the "Simpan Kunci" password manager using UCD and evaluate its usability performance using the SUS framework.

The novelty of this research lies in tailoring a password manager UI/UX specifically for Indonesian users who exhibit lower digital security awareness and a reliance on high-risk credential habits. Unlike prior studies that primarily focused on technical cryptography or functional feature expansion, this study emphasizes interface radical simplification to reduce adoption barriers among non-technical populations. Furthermore, it bridges a literature gap regarding UCD application in security software within Indonesia, where UCD studies remain heavily concentrated on e-commerce and public services. Aiming for an SUS score well above the industry benchmark of 68, this research proves that security applications can achieve high usability without compromising safety, offering an accessible solution against escalating data breach threats.

2 RESEARCH METHODS

This study combines qualitative and quantitative methods within the User-Centered Design (UCD) framework to ensure a comprehensive development cycle [10]. Qualitative inquiries were conducted during early exploratory phases, whereas quantitative measurements dominated the final usability evaluation phase. The systematic workflow of the research design is illustrated in Figure 1.

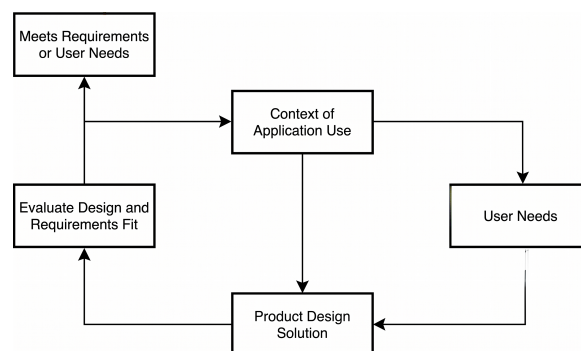


Figure 1. User-Centered Design (UCD) research workflow

2.1 Understand Context of Use

In this initial stage, the context of use was analyzed to uncover how prospective users interact with credential management tools, identifying pain points, behavioral patterns, and interface expectations [11–14]. There are

several points in this stage, including:

a. Defining Target Users

The initial step of the research identified the characteristics of prospective Simpan Kunci application users based on behavioral literature regarding credential management and security vulnerabilities. The targeted demographic parameters are presented in Table 1.

Table 1. Target User Eligibility Criteria

No.	Criteria Parameter
1	Male/Female aged ≥ 17 years old.
2	Possesses and manages multiple personal digital accounts.
3	Experienced difficulties in remembering or recovering lost account passwords.
4	Has prior experience or awareness regarding password manager applications.
5	Currently manages credentials manually (physical notepad, unencrypted phone notes, or memory).

b. Initial Diagnostic Survey

The questionnaire is an essential stage to identify user requirements that form the basis of the Simpan Kunci application's UI/UX design. During this phase, a 12-question preliminary survey was administered to six target users fitting the eligibility criteria. The number of questions was optimized to extract relevant information effectively without overburdening respondents. The structured diagnostic instrument is detailed in Table 2.

Table 2. Preliminary Diagnostic Survey Questionnaire

No.	Diagnostic Question
1	Do you maintain and operate a high volume of digital accounts?
2	Do you use unique passwords for every account, and are you confident in their strength?
3	How do you currently store and organize all your digital account passwords?
4	What is your primary reason for choosing your current password storage method?
5	Have you ever encountered issues or failures when trying to remember your passwords?
6	What is the most frequent obstacle you face regarding password usage?
7	Do you feel you require a dedicated password manager application?
8	Under what circumstances or conditions would you actively use a password manager?
9	Would you agree if password management was designed via a user-friendly "Simpan Kunci" app?
10	What specific features do you consider essential in the Simpan Kunci application?
11	Do you prefer a simple, clean interface or a complex, feature-packed layout? Explain why.
12	Do you have additional experiences, requirements, or suggestions regarding password management?

2.2 Specify User Requirements

The second stage in the UCD method focuses on designing solutions to answer the user needs and problems identified previously. The generated solutions are then translated into features and functionalities to be implemented in the system. The activities conducted in this stage include:

a. User Needs Analysis

User needs represent a collection of user expectations acting as the foundation for the application's features. These needs were derived through the analysis of the collected survey data. Information obtained from respondents was processed to identify specific user needs suitable for the Simpan Kunci application. The synthesized core user needs are summarized in Table 3.

Table 3. Synthesized Core User Needs

No.	Core User Need
1	A simple, clean user interface that is intuitive, understandable, and easy to use for all users.
2	A reliable digital storage vault for organizing account credentials.
3	A highly secure password manager environment to prevent unauthorized access.
4	Fast, convenient retrieval mechanisms for finding specific account credentials on demand.

b. Design Requirements

Design requirements denote the specifications that must be fulfilled during the UI/UX design process to ensure the solution adequately addresses identified user needs according to UCD principles. Design requirements are mapped directly from core user needs, as outlined in Table 4.

Table 4. Mapping User Needs to Design Requirements

User Need	Design Requirement Specification
A simple, clean user interface that is intuitive for all users.	UI/UX must prioritize high usability and accessible aspects.
A reliable digital storage vault for organizing credentials.	Must provide CRUD (Create, Read, Update, Delete) credential management capabilities.
A highly secure password manager environment.	Must implement a Master Password authentication gateway prior to granting data access.
Fast, convenient retrieval mechanisms for stored credentials.	Must include real-time search indexing and category filter tags to group accounts.

2.3 Produce Design Solutions

The third stage in the UCD method is producing design solutions. This phase focuses on designing the Simpan Kunci application, starting with the creation of a sitemap, which is subsequently developed by adding visual details and interface elements to produce the final high-fidelity design.

2.4 Evaluate Design Against Requirements

The fourth stage in the UCD method is evaluating the design against user requirements. In this phase, the created design is tested to assess its ease of use and suitability with user needs. The evaluation was conducted using the System Usability Scale (SUS) method, focusing on the system interaction flow, page structure, and interface elements [15–21].

3 RESULTS AND DISCUSSION

In this stage, the outcomes of applying the User-Centered Design (UCD) method to the UI/UX design of the Simpan Kunci application are discussed.

3.1 Context of Use Analysis Results

The "Understand Context of Use" stage is the initial phase in implementing the UCD method. In this phase, the identification of user characteristics, password management habits, and user pain points was conducted as a foundation for designing the application. These characteristics were selected as they represent users who genuinely need a password manager. Subsequently, questionnaires were distributed to six respondents matching these criteria. Based on the survey results, the problems experienced by users were identified and used as a baseline to determine user requirements in the next stage.

3.2 User Requirements Results

The "Specify User Requirements" stage aims to translate the identified problems into system requirements that will be implemented in the Simpan Kunci application. Through questionnaire analysis, four primary user needs were identified, as referenced in Table 3. Based on these needs, the design requirements were formulated (Table 4) to act as the foundational guidelines for the UI/UX design. Through this process, several requirements emerged, including the necessity for a password storage medium equipped with CRUD features, search and categorization features, master password authentication, and an interface that is simple and easy to understand for various users.

3.3 Design Solution Implementation

The "Produce Design Solutions" stage is the implementation of the user needs acquired previously. During this phase, the sitemap and UI/UX interface of the Simpan Kunci application were designed as a high-fidelity prototype using Figma.

a. Sitemap

The sitemap acts as a tool to illustrate the structural flow of menus and features within the Simpan Kunci application. After analyzing user needs, a sitemap was designed. The structure of the menus and features is presented in Figure 2.

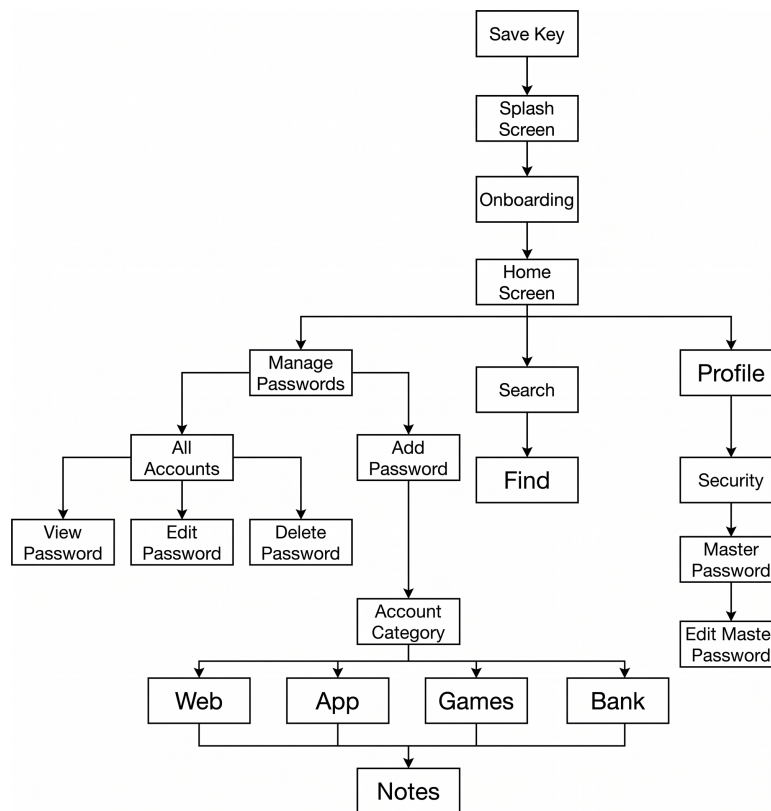


Figure 2. Simpan Kunci application sitemap architecture

b. High-Fidelity Prototype

The design results consist of several main pages, accompanied by the following detailed explanations for each corresponding interface:

1. Onboarding Page

The onboarding page is the first screen that appears when the application is launched. This page serves to introduce the Simpan Kunci application. Users can interact by pressing the arrow button, after which they receive information about what a master password is. Users are also required to proceed with the Login or Sign Up process if they do not yet have a master password.



Figure 3. Onboarding screens interface

2. Registration Page

The registration page is used to create a new account on the Simpan Kunci application. Users are asked to fill in basic information, such as their phone number, and create a master password that will be used as the primary authentication to access all stored password data.



Figure 4. Registration screen interface

3. Login Page

The login page functions as the user authentication process before accessing the application. Users simply need to enter their registered master password. This page is designed to be simple so that the application entry process can be done quickly and easily.

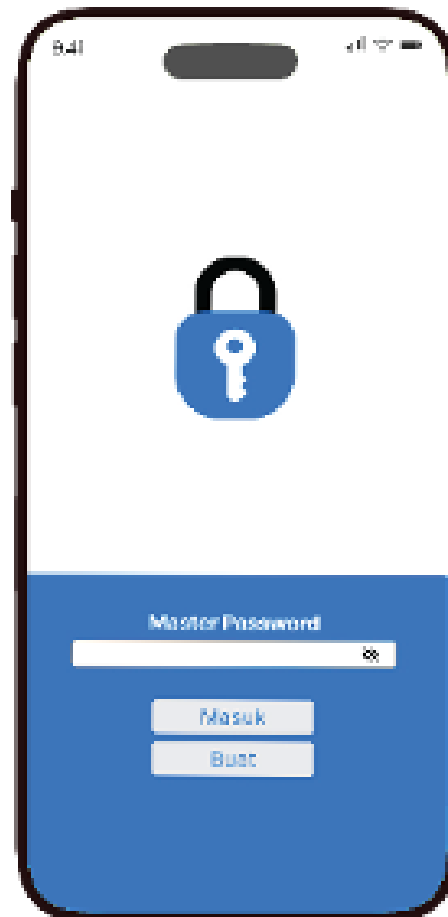


Figure 5. Login screen interface

4. Menu Page

The menu page is the central navigation hub of the application. This page displays a list of pinned and recently added saved passwords, along with buttons to manage all stored passwords, view available passwords on the menu page, add a new password, perform a search, filter by category, and access the profile page. The page design is kept simple so users can access all features easily.



Figure 6. Main dashboard screen interface

5. Manage Password Page

The manage password page displays all account data that the user has saved. This page provides features to view, edit, delete, pin, and add new passwords. This page acts as the main implementation of the user’s need for a password management feature.

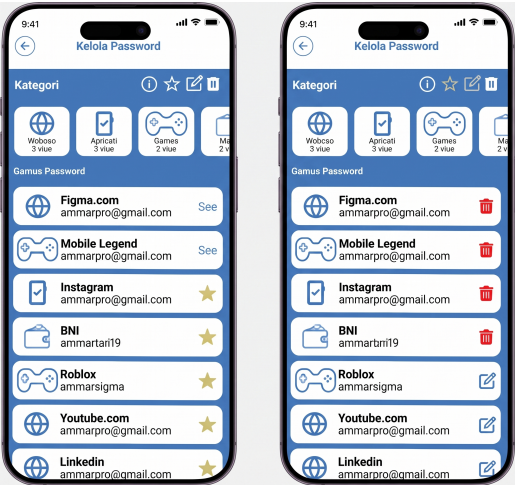


Figure 7. Manage credentials screen interface

6. Search Page

The search page makes it easy for users to find specific passwords based on the application name or account name. This feature is designed to speed up the search process as the number of stored passwords increases.



Figure 8. Search screen interface

7. Profile Page

The profile page displays user account information as well as several application settings menus. From this page, users can access security features.

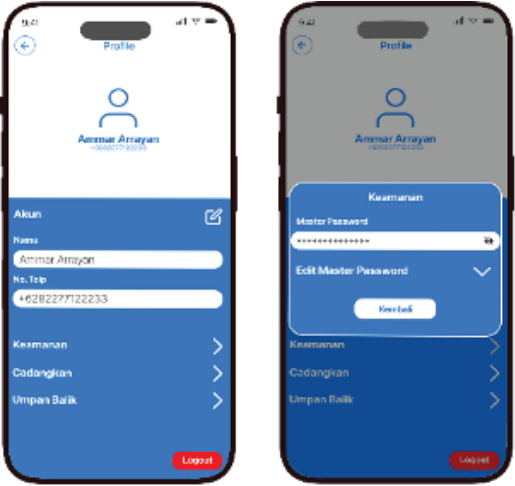


Figure 9. User profile screen interface

8. Security Page

The security page displays master password information and allows users to access the edit master password feature. When editing the master password, users are only asked to enter a new master password; this feature aims to improve security periodically.

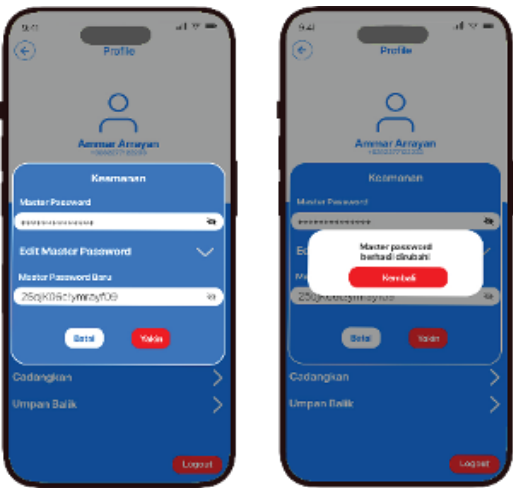


Figure 10. Security settings screen interface

3.4 Usability Evaluation Results (SUS)

The "Evaluate Design Against Requirements" stage is the final phase of the UCD method, aimed at evaluating whether the UI/UX design of the Simpan Kunci application successfully matches the user requirements. The evaluation assessed usability using the System Usability Scale (SUS) method involving 20 respondents. Respondents were first asked to interact with the prototype to provide an assessment based on direct usage experience. The raw SUS survey responses are presented in Table 5, and the computed usability scores are detailed in Table 6.

Table 5. Raw System Usability Scale (SUS) Response Data

Respondent	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
R1	5	1	4	1	5	2	5	2	5	2
R2	5	1	5	1	5	1	5	1	5	1
R3	5	2	5	1	5	2	5	1	4	3
R4	5	1	5	3	5	1	5	1	5	4
R5	4	2	5	2	5	2	4	1	5	1
R6	4	2	5	3	2	3	4	4	5	3
R7	4	2	4	2	4	2	3	4	4	3
R8	4	2	4	1	5	2	4	2	5	2
R9	4	4	4	1	4	2	4	2	4	2
R10	5	3	3	1	5	2	4	3	4	4
R11	4	1	5	2	5	2	3	4	5	3
R12	4	2	4	1	4	2	4	2	4	2
R13	4	2	4	2	3	2	4	2	4	2
R14	5	2	5	3	5	1	5	2	5	1
R15	3	3	5	2	4	4	5	2	4	1
R16	4	3	4	2	4	3	5	3	5	5
R17	5	1	5	1	5	1	5	1	5	1
R18	4	2	4	2	4	2	4	2	4	4
R19	4	1	5	1	5	1	5	2	5	1
R20	5	2	5	2	5	1	4	1	5	2

Table 6. Calculated SUS Scores and Individual Totals

Resp.	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Sum	Factor (x 2.5)	SUS Score
R1	4	4	3	4	4	3	4	3	4	3	36	2.5	90.0
R2	4	4	4	4	4	4	4	4	4	4	40	2.5	100.0
R3	4	3	4	4	4	3	4	4	3	2	35	2.5	87.5
R4	4	4	4	2	4	4	4	4	4	1	35	2.5	87.5
R5	3	3	4	3	4	3	3	4	4	4	35	2.5	87.5
R6	3	3	4	2	1	2	3	1	4	2	25	2.5	62.5
R7	3	3	3	3	3	3	2	1	3	2	26	2.5	65.0
R8	3	3	3	4	4	3	3	3	4	3	33	2.5	82.5
R9	3	1	3	4	3	3	3	3	3	3	29	2.5	72.5
R10	4	2	2	4	4	3	3	2	3	1	28	2.5	70.0
R11	3	4	4	3	4	3	2	1	4	2	30	2.5	75.0
R12	3	3	3	4	3	3	3	3	3	3	31	2.5	77.5
R13	3	3	3	3	2	3	3	3	3	3	29	2.5	72.5
R14	4	3	4	2	4	4	4	3	4	4	36	2.5	90.0
R15	2	2	4	3	3	1	4	3	3	4	29	2.5	72.5
R16	3	2	3	3	3	2	4	2	4	0	26	2.5	65.0
R17	4	4	4	4	4	4	4	4	4	4	40	2.5	100.0
R18	3	3	3	3	3	3	3	3	3	1	28	2.5	70.0
R19	3	4	4	4	4	4	4	3	4	4	38	2.5	95.0
R20	4	3	4	3	4	4	3	4	4	3	36	2.5	90.0
Cumulative Score Total													1612.5
Mean Overall Score (Final Result)													80.62

Based on the SUS calculations conducted with 20 respondents, an average score of 80.62 was obtained. This value is significantly above the standard SUS baseline of 68, indicating that the UI/UX design of the Simpan Kunci password manager has excellent usability and is well-accepted by users. Based on SUS score interpretations, a score of 80.62 falls into Grade B, receives a "Good" adjective rating, and rests safely within the "Acceptable" range. This implies that the majority of respondents found the application easy to learn, efficient to operate, and highly beneficial for resolving password management tasks.

3.5 Discussion

The mean SUS score of 80.62 (categorized as Good and Acceptable) confirms that applying the User-Centered Design (UCD) methodology successfully created an interface that is easily adopted by users. This finding directly answers the problems discovered during initial observations, where popular commercial password managers frequently drew criticism for complex, intimidating interfaces that overwhelmed new users. In contrast to traditional approaches that sacrifice ease of use for convoluted security features, the Simpan Kunci design proves that simplifying visual elements and navigation flows does not diminish the essence of data protection. This success aligns with previous studies applying UCD in mobile applications, but it offers a specific contribution by demonstrating that user-centric design principles are incredibly crucial when applied to the security application domain, which inherently carries a high level of complexity.

Practically, this high usability level carries significant implications for mitigating data breach risks in Indonesia, specifically in reshaping the behavior of users who currently exhibit low digital security awareness. By introducing features such as master password authentication and account categorization within a cognitively lightweight environment, this application has the potential to shift high-risk habits such as reusing a single password for all accounts toward a more structured and secure credential management practice. Although this research is limited to the high-fidelity prototype stage with a sample size of 20 respondents, the empirical results provide strong validation that the design is highly viable for full-scale software development. Moving forward, the technical implementation of this application should be accompanied by large-scale user testing and the integration of auxiliary security layers, such as biometric authentication and end-to-end encryption, to ensure the application's robust readiness against cyber threats in an authentic production environment.

4 CONCLUSION

This study successfully designed and evaluated the UI/UX for the "Simpan Kunci" password manager application using the User-Centered Design (UCD) approach, focusing on the genuine needs and problems of users in Indonesia. Through the four systematic UCD stages, this research produced a high-fidelity prototype integrating essential features such as password management, master password authentication, search functionality, and account categorization. This design effectively resolves user difficulties regarding credential retention and insecure storage habits by delivering a simple, intuitive, and cognitively lightweight interface.

Evaluation of the resulting design was conducted using the System Usability Scale (SUS) method involving 20 respondents. The testing results revealed a mean score of 80.62, comfortably surpassing the industry standard of 68 and classifying it under Grade B with a Good and Acceptable rating. This achievement indicates that the application possesses high usability, excellent learnability, and a significantly positive user experience. This proves that implementing stringent security mechanisms within a password manager does not necessarily require sacrificing user comfort or convenience.

Overall, this research provides a practical contribution to data breach mitigation efforts by offering an inclusive password manager alternative that is easily adopted by the general public, including users with limited digital literacy. For future development, it is recommended that this prototype be implemented into a fully functional application equipped with supplementary features like biometric authentication and cloud synchronization, alongside rigorous penetration testing to ensure all cybersecurity standards are comprehensively fulfilled.

ACKNOWLEDGMENTS

The authors express their gratitude to Politeknik Media Kreatif Jakarta for providing the necessary facilities and support during the execution of this research.

DECLARATIONS

Author Contributions:

Ammar Arrayan: Conceptualization, Methodology, Software (Prototyping), Investigation, Writing – Original Draft.

Nofiandri Setyasmara: Validation, Formal Analysis, Data Curation, Writing – Review & Editing.

Prily Fitria Aziz: Project Administration, Supervision, Resources, Writing – Review & Editing.

Funding:

The authors received no financial support for the research, authorship, and publication of this article.

Conflicts of Interest:

The authors declare that they have no competing financial or personal conflicts of interest regarding this publication.

Data Availability:

The data supporting the findings of this study (including raw survey responses and Figma prototypes) are available from the corresponding author upon reasonable request.

AI Use Statement:

During manuscript preparation, the authors utilized AI tools solely for language refinement and readability improvement. All scientific concepts, UI/UX designs, data analyses, and conclusions were originally developed and verified by the authors, who assume full responsibility for the published content.

Additional Information:

No additional information is available for this paper.

REFERENCES

- [1] S. K. Shinde and M. V. Deshpande, "A Study for an Ideal Password Management System," *Int. J. Res. Appl. Sci. Eng. Technol.*, vol. 10, no. 1, pp. 1201–1206, 2022, doi: 10.22214/ijraset.2022.39970.
- [2] D. Alicia and E. P. Inten, "10 Miliar Kata Sandi Bocor dan Diunggah di Forum Hacker, Jadi Kebocoran Data Terbesar Sepanjang Masa," *Kompas.com*, Jul. 2024. [Online]. Available: <https://www.kompas.com>

- [3] B. A. Iswenda, "Jumlah Kebocoran Data di Indonesia Capai 1 Juta di 2023," *GoodStats*, Jan. 2024. [Online]. Available: <https://goodstats.id>
- [4] R. F. Artika, "Data Orang Indonesia Mudah Dibobol, Ini Ciri-Ciri Password Lemah," *Kompas.com*, Nov. 2021. [Online]. Available: <https://www.kompas.com>
- [5] H. Padalia, H. Patel, A. Deshmukh, M. Patil, A. Kumar, and N. K. Nrip, "A Study on Password Manager: Users' Perspective," in *2023 International Conference on Computational Intelligence for Information, Security and Communication Applications (CIISCA)*, 2023, pp. 72–75, doi: 10.1109/ciisca59740.2023.00024.
- [6] R. Reimann, A. Cooper, D. Cronin, and C. Noessel, *About Face: The Essentials of Interaction Design*, 4th ed. Indianapolis, IN, USA: John Wiley & Sons, 2014.
- [7] H. Hariansyah, "Implementasi Metode User Centered Design Dalam Perancangan Ui/Ux Purwarupa Aplikasi Lacakin," *J. Inform. Dan Tek. Elektro Terap.*, vol. 12, no. 3, 2024, doi: 10.23960/jitet.v12i3.4602.
- [8] A. H. Luthfi and I. Arfiani, "Perancangan UI/UX Aplikasi Sampahocity Menggunakan Pendekatan UCD (User Centered Design)," *J. Ilmu Komput. Dan Sist. Inf. (JIKOMSI)*, vol. 7, no. 1, pp. 24–36, 2024, doi: 10.55338/jikoms.v7i1.2175.
- [9] D. S. Mubiarto, R. R. Isnanto, and I. P. Windasari, "Perancangan User Interface dan User Experience (UI/UX) pada Aplikasi 'BCA Mobile' Menggunakan Metode User Centered Design (UCD)," *J. Tek. Komput.*, vol. 1, no. 4, pp. 209–216, 2023, doi: 10.14710/jtk.v1i4.37686.
- [10] A. S. Bagaskoro, R. Fauzi, and N. Ambarsari, "Perancangan User Interface Berdasarkan User Experience Aplikasi E-learning Dengan Menggunakan Metode User-centered Design Untuk Mendukung Proses Pembelajaran Studi Kasus: SMA Santa Maria 3 Cimahi," *eProceedings Eng.*, vol. 7, no. 2, 2020.
- [11] K. G. Sugosha, R. Andreswari, and M. Hardiyanti, "Design and Implementation of User Interface and User Experience in Online Sales Applications At Sugosha Pharmacy With User Centered Design Method," in *2021 International Conference on Advanced Computer Science and Information Systems (ICACSIS)*, 2021, pp. 1–5, doi: 10.1109/ICACSIS53237.2021.9631344.
- [12] S. H. Nova, A. P. Widodo, and B. Warsito, "Analisis Metode Agile pada Pengembangan Sistem Informasi Berbasis Website: Systematic Literature Review," *Techno.COM*, vol. 21, no. 1, pp. 139–148, 2022.
- [13] D. Febrian et al., "IMPLEMENTATION OF BCrypt ALGORITHM ON WEBSITE-BASED HASHING GENERATOR USING LARAVEL FRAMEWORK," *JISICOM (Journal Inf. Syst. Informatics Comput.)*, vol. 7, no. 2, pp. 199–212, 2023, doi: 10.52362/jisicom.v7i2.1130.
- [14] M. Raschintasofi and H. Yani, "UI UX Design for Mobile and Website-Based Learning Management System Applications Using the Design Thinking Method," *J. Technol. Manag. Inf. Syst. (JMS)*, vol. 3, pp. 343–353, 2023.
- [15] D. Desyanti, M. Suhaidi, and F. Sari, "System Usability Scale (SUS) Pada Bank Sampah Digital Sebagai Solusi Penanganan Sampah," *J. Inf. Syst. Res. (JOSH)*, vol. 4, no. 1, pp. 292–299, 2022, doi: 10.47065/josh.v4i1.2263.
- [16] G. W. Intyanto, N. A. Ranggianto, and V. Octaviani, "Pengukuran Usability pada Website Kampus Akademi Komunitas Negeri Pacitan Menggunakan System Usability Scale (SUS)," *Walisono J. Inf. Technol.*, vol. 3, no. 2, pp. 59–68, 2021, doi: 10.21580/wjit.2021.3.2.9549.
- [17] K. T. Nugroho, B. Julianto, and D. F. Nur MS, "Usability Testing pada Sistem Informasi Manajemen AKN Pacitan Menggunakan Metode System Usability Scale," *J. Nas. Educ. Teknol. Inform. (JANAPATI)*, vol. 11, no. 1, p. 74, 2022, doi: 10.23887/janapati.v11i1.43209.
- [18] F. Utami, A. W. R. Emanuel, and Y. D. Handarkho, "Perancangan User Interface dan User Experience dengan Metode System Usability Scale dan Goal Directed Design," *J. Inform. Atma Jogja*, vol. 4, no. 2, pp. 155–162, 2023.

- [19] S. Susilowati and T. Hidayat, “Rancang Bangun Sistem Informasi Ujian Online (Studi Kasus Pada SMAN 58 Jakarta),” *J. Tek. Komput.*, vol. 4, no. 1, pp. 30–36, 2022.
- [20] S. A. Sinaga, “Implementasi Metode Arima (Autoregressive Moving Average) Untuk Prediksi Penjualan Mobil,” *J. Glob. Technol. Comput.*, vol. 2, no. 3, pp. 102–109, 2023.
- [21] Z. Mutaqin, B. Imran, and S. Rosida, “SISTEM INFORMASI PENJUALAN ONLINE (E-COMMERCE) BERBASIS WEB PADA TOKO MATAHARI PRAYA,” *J. Comput. Technol.*, vol. 1, no. 2, pp. 29–36, 2023, doi: 10.69916/comtechno.v1i2.46.