

UI/UX DESIGN FOR A WEB-BASED DONOR ATTENDANCE SCHEDULING APPLICATION AT GRIYA YATIM AND DHUAFAL-FALAH RANCAEKEK ORPHANAGE

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Received : 01 April 2026

Accepted : 05 May 2026

Revised : 10 April 2026

Published : 02 June 2026

Abstract

Griya Yatim and Dhuafa Al-Falah Rancaekek Orphanage is a social institution engaged in the care, education, and mentoring of orphans and underprivileged children. In supporting the sustainability of these activities, the role of donors is very important, both in the form of financial contributions and direct participation in orphanage activities. However, the process of scheduling donor visits is still carried out manually, which often leads to problems such as irregular schedules, time conflicts, and suboptimal recording of attendance data. Therefore, a solution is needed in the form of designing a User Interface and User Experience (UI/UX) for a web-based donor visit scheduling application that is easy to use and aligned with user needs. The purpose of this study is to design the UI/UX of a donor visit scheduling application to improve usability and efficiency in data management. The method used is Human Centered Design (HCD), which focuses on user needs and experiences, with stages consisting of inspiration, ideation, and implementation. Data collection methods include observation, interviews, and literature studies to understand user needs and the existing system workflow. The result of this study is a UI/UX design of a web-based donor visit scheduling application that includes interface design and user interaction flows, such as donor data management, visit scheduling, schedule notifications, and attendance reports. This design is expected to provide a better user experience and assist orphanage administrators in managing donor attendance more effectively, systematically, and efficiently.

Keywords: UI/UX, Donor Scheduling, Web-Based Application, Human Centered Design, Orphanage.

INTRODUCTION

Orphanages are social institutions that play a role in fulfilling basic needs, providing protection, and supporting education for children who have lost or do not have family support (Gunawan et al., 2025). The sustainability of orphanages depends on donor support, whether in the form of funds, goods, or participation. Therefore, managing donor relationships and attendance becomes an important aspect. However, donor attendance scheduling is still often carried out manually, which has the potential to cause schedule conflicts, lack of coordination, and difficulties in documentation. Therefore, a more effective and integrated technology-based solution is needed. The development of information technology, especially web-based applications, opens opportunities to improve the efficiency of data management and services in social institutions. Therefore, application design must consider UI and UX aspects to ensure ease of use and provide a good user experience. UI plays a role in the visual appearance and user interaction with the system, while UX encompasses the overall user experience when using the application (Oprasto, 2023).

In addition, the implementation of design methods such as User-Centered Design (UCD) or Human-Centered Design (HCD) is important to ensure that the system developed truly meets user needs. Previous studies have shown that applications designed with a user-centered approach can improve usability, efficiency, and user satisfaction (Wahyuni et al., 2025). In the context of orphanages, good UI/UX design can also help users access information, perform scheduling, and increase trust in the system being used (Rizkina, 2023). Related studies also indicate that scheduling systems designed with a UI/UX approach can address various problems found in manual systems, such as data inconsistencies and inefficiencies in attendance management (Gautama et al., 2023). Therefore, an appropriate UI/UX design is needed to support the development of a donor attendance scheduling application that is effective, efficient, and easy to use.

Based on these problems, a UI/UX design for a web-based donor attendance scheduling application is required that aligns with user needs at the Griya Yatim and Dhuafa Al-Falah Rancaekek Orphanage. This UI/UX design aims to produce an interface and user experience that are easy to understand, efficient, and comfortable to use.

METHOD

Data Collection Techniques

This study employs a case study approach in designing the UI/UX of a web-based donor scheduling application, using data collection methods such as observation, interviews, and literature review to understand the system and user needs. Observation and interviews are considered effective in directly exploring user needs and obtaining more in-depth information regarding existing problems (Siregar et al., n.d.). The collected data are then analyzed into functional and non-functional requirements as the basis for the design. Subsequently, the UI/UX design process is carried out, which includes navigation, interface layout, and user interaction flow (Indah et al., 2019). The final stage is evaluation to ensure that the design is user-friendly, meets user needs, and improves system efficiency.

Software Development Method

The UI/UX design stages for the web-based donor attendance scheduling application at Griya Yatim and Dhuafa Al-Falah Rancaekek Orphanage use the Human-Centered Design (HCD) approach. The HCD method is an approach whose process is based on general human natural characteristics (Humanika, 2020).

This approach emphasizes a deep understanding of users in order to obtain insights relevant to their needs and context (Setiadi, n.d.). Human-Centered Design consists of three main stages (Tahun et al., n.d.), namely:

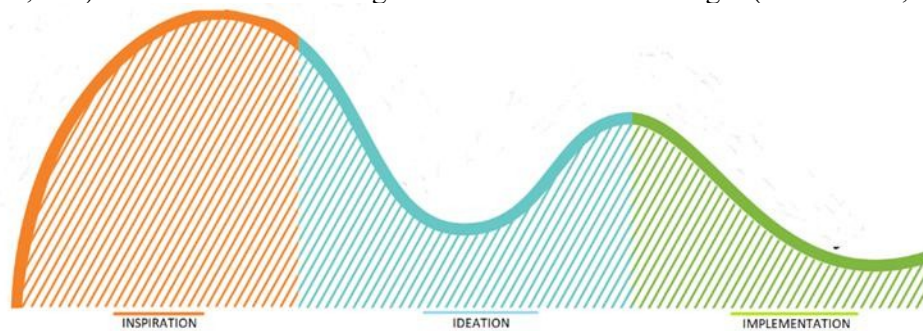


Figure 1. Stages of the Human Centered Design Method

1. Inspiration

In the inspiration stage, researchers attempt to understand the user's perspective by putting themselves in their shoes, thus identifying needs based on real problems experienced by users (Kurniawan & Rani, 2022). The inspiration stage is crucial because it requires a deep understanding of user needs as the basis for generating appropriate, effective, and innovative solutions (Idris, n.d.). This allows researchers to understand the situation from the perspective of orphanage managers and donors, thus providing the basis for design.

This stage utilizes interview and planning techniques to understand user needs. The analysis process in designing the UI/UX of a web-based donor scheduling application includes:

a. User Analysis

In this stage, researchers identify user needs, goals, and constraints through interviews with orphanage managers and donors. Interviews focus on manual scheduling constraints and desired features in the application.

b. User Analysis (Interviews)

Interviews are conducted to explore user needs in depth, involving orphanage managers and donors. Questions focused on scheduling experiences, challenges encountered, and feature requirements for a web-based system.

Table 1. List of Questions

No	Question	Stakeholders
1	Have you ever scheduled a visit to an orphanage? How did you do it?	Administrators & Donors
2	What challenges do you often face in the process of scheduling donor attendance?	
3	How often do you make visits or receive visits from donors?	
4	What features do you expect from a donor attendance scheduling application?	
5	Do you have any preferences regarding the interface design or ease of use of the application?	

2. Ideation

Ideation is the stage of creatively generating various solution ideas to solve problems identified in the inspiration stage (Lichas et al., 2023). These ideas are realized in initial designs and prototypes. Analysis is conducted on the business process and prototype designs to visually understand the system flow. Next, the ideas and concepts from the inspiration stage are applied in the design. At this stage, the most optimal solution is identified, followed by the creation of a prototype as an initial representation of the designed system (Azziqra, 2024). Some of the analyses conducted at this stage include:

a. Business Process Analysis

At this stage, the developer analyzes the current donor attendance scheduling flow to identify any problems. The results of the analysis are used as the basis for designing a more effective system that meets user needs.

b. Prototype Design Analysis

A prototype is created to display a visual and interactive representation of the system, including the structure, main features, and interface. User testing is then conducted to obtain feedback as a basis for evaluating and improving the design.

3. Implementation

In the implementation stage, researchers conduct final validation with users to ensure the design is accurate and ready for real-world use (Engineering et al., 2023). This stage aims to ensure that the resulting design meets user needs and can be used effectively. Furthermore, this activity plays a crucial role as it aims to determine the user experience in using the developed application (Kurniawan & Rani, 2022).

RESULTS AND DISCUSSION

Based on the discussions conducted in designing the UI/UX for the web-based donor attendance scheduling application using the Human-Centered Design (HCD) method, the following results were obtained:

1. Inspiration

In the inspiration stage, user interviews were conducted to identify issues in donor scheduling. Observations revealed needs and input related to the system and the web-based application interface, as follows:

Table 2. User Observation Results

No	User Observation Results
1	Users need an easy-to-use and well-structured donor data management feature to simplify data recording and retrieval.
2	Users want a clear and well-organized donor attendance scheduling system to avoid schedule conflicts.
3	Users need a notification or reminder feature for schedules to prevent missed or overlapping appointments, delays or negligence in donor attendance.
4	Users need donor attendance reports that are neatly organized and easy to access for monitoring and evaluation purposes.
5	Users expect a simple, easy-to-understand interface with clear navigation to make it easier to use the application.

Based on observations, users require an application that facilitates the management of donor data and scheduling, includes notifications and reports, and has a simple and easy-to-understand interface.

2. Ideation

In the ideation stage, ideas from the previous stage are developed into a more structured concept. The Business Model Canvas (BMC) approach is used to visualize system elements, facilitating understanding and ensuring alignment with user needs.

a. Business Process Analysis (Business Model Canvas)

1) Customer Segments:

1. Orphanage management: the party responsible for organizing and managing donor attendance schedules.
2. Donors: individuals or parties participating in visiting and providing assistance activities.

2) Value Proposition:

1. Ease of schedule management: provides a structured and easy-to-use scheduling system.
2. Efficient data recording: assists in the organized management of donor and attendance data.
3. Schedule notifications: provide reminders to users regarding scheduled appointments.
4. Attendance reports: present donor attendance data in a neat and easily accessible manner.

3) Channels:

1. Application website: as the primary medium for accessing the scheduling system.
2. Internet: as a means of distribution and user access to the application.

4) Customer Relationship:

1. Provision of notification and schedule reminder features.
2. Gathering user feedback for system development.

5) Revenue Streams:

This system is non-commercial and is used to support the orphanage's operational activities.

6) Key Resources:

1. Development team (programmer and UI/UX designer).
2. System and database for managing donor and schedule data.
3. Server infrastructure to support the web-based application.

b. Prototype Design Analysis

The UI/UX prototype is designed based on user needs and constraints. The analysis results are implemented in a prototype that displays the system's flow and interface, then tested to obtain feedback. The evaluation results are used to refine the design to make it more effective and meet user needs.

The prototype design was conducted using Figma to interactively visualize the interface and user interaction flow.

The prototype design process for the Donor Attendance Scheduling Application at the Orphanage resulted in the initial display of the Donor Login page, as shown in Figure 2.



Figure 2. Donor Login Page Design

Figure 2 shows a prototype of the donor login page, the initial system access point. It contains the application title, email and password form, login button, and the "Register Now" option. The design is simple and centralized for ease of use.

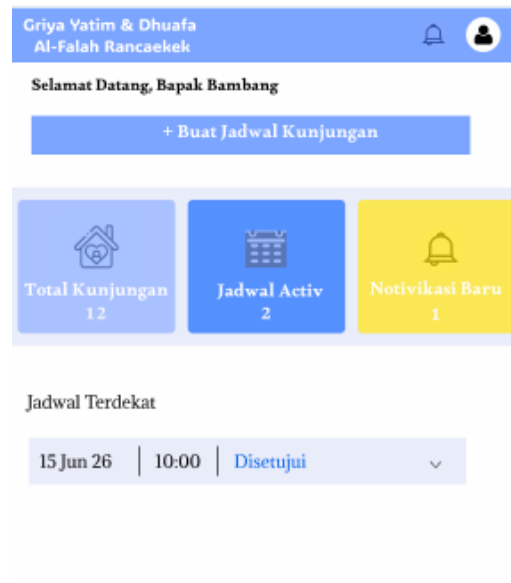


Figure 3. Dashboard Page Design

Figure 3 shows a prototype donor dashboard that includes a visit summary, schedule, and notifications, as well as a schedule creation feature and upcoming information for easier management.

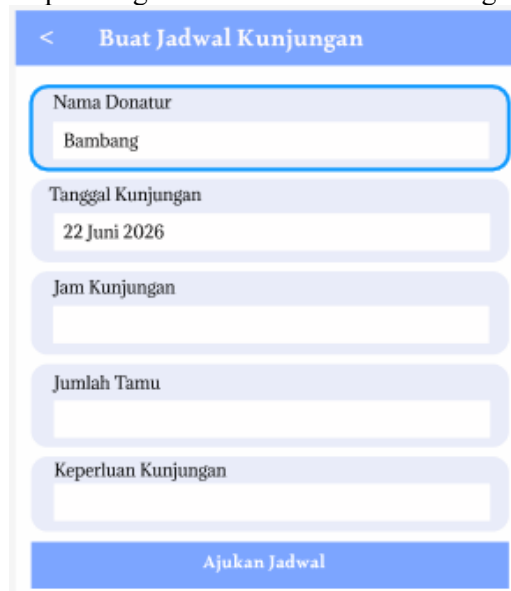


Figure 4. Visit Schedule Page Design

Figure 4 shows the visit schedule input interface for donors. This form includes complete data, from name to purpose of visit, to ensure the entire agenda is well-organized.

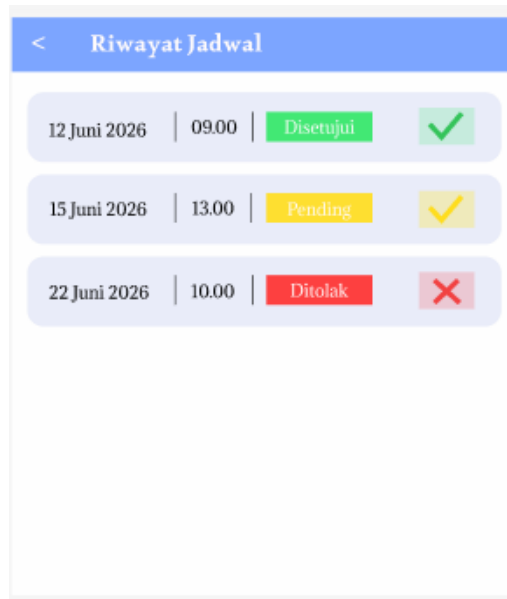


Figure 5. Schedule History Page Design

Figure 5 shows a prototype of the visit history page. This interface makes it easy for users to monitor their to-do list and approval status, including pending, accepted, and rejected appointments.

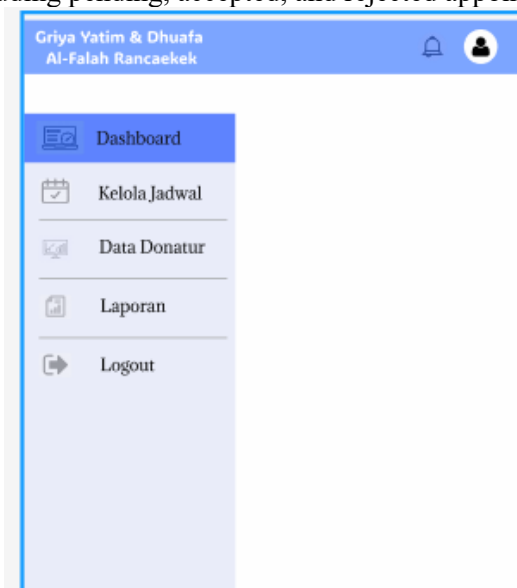


Figure 6. Menu Page Design

Figure 6 shows a prototype sidebar as the main navigation menu. This feature speeds up user access to various important modules, from the dashboard and schedule management to reports and system exit options.



Figure 7. Admin Dashboard Page Design

Figure 7 shows a prototype admin dashboard that summarizes operational data. This panel combines donor statistics, daily agendas, and visitation trend graphs to facilitate real-time monitoring of system activity.

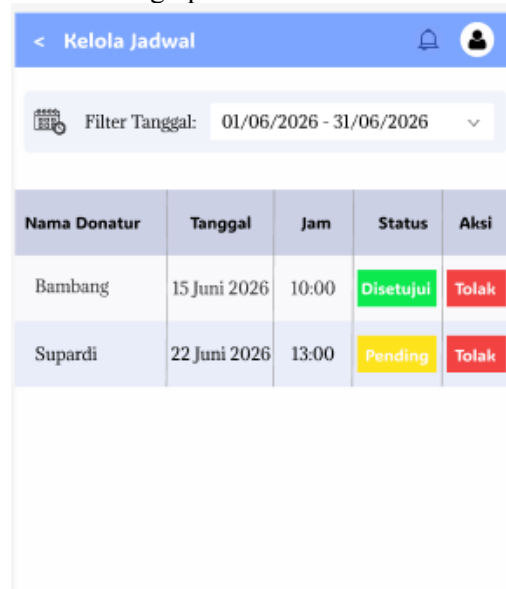


Figure 8. Schedule Page Design

Figure 8 shows a prototype of the schedule management page. Here, admins can monitor the entire visit list, use date filters for quick searches, and take immediate action by approving or rejecting schedules.

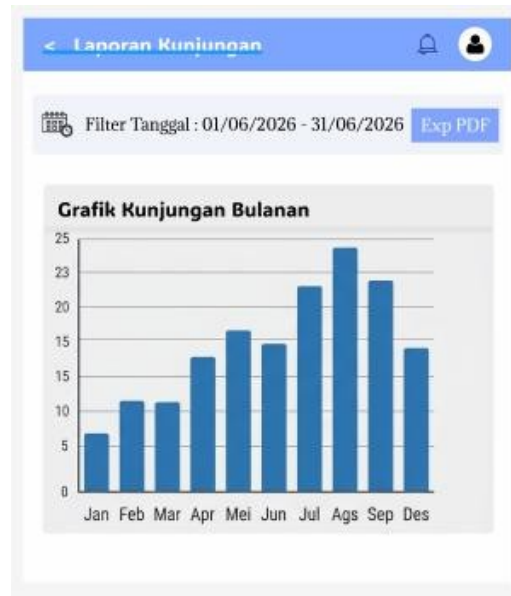


Figure 9. Visit Report Page

Figure 9 displays a prototype of a graph-based visit report page. This visualization makes it easier for users to analyze trends and fluctuations in donor numbers periodically to support decision-making.

CONCLUSION

This research successfully designed the UI/UX for a web-based donor scheduling application at the Al-Falah Orphanage using the Human-Centered Design (HCD) method. Through the inspiration, ideation, and implementation stages, administrative obstacles in the manual system were successfully overcome with integrated data management and notification features. The prototype design results demonstrate that a user-focused interface can significantly improve operational efficiency and data order. Therefore, this design provides a practical digital solution for orphanage managers and is highly relevant for development into a broadly functional system.

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