IJSS: International Journal of Social Science
Vol. 2 No. 1, February 2026, pp: 70-81
ISSN: 3090-0646
DOI: https://doi.org/10.51805/ijss.v2i1.431

DESIGN OF AN INFORMATION SYSTEM FOR RECOMMENDATIONS AND PROMOTION OF TOURIST ATTRACTIONS IN EAST JAVA

[1*]Chalif Fidianata R, [2]Riska Amelia A , [3]Ilfatul Khairani
Sistem Infromasi Fakultas Ilmu Komputer Universitas Pamulang, Indonesia
E-mail:sajahalif@gmail.com, pasirianriska@gmail.com ,ilvatulkhairani@gmail.com

Abstract

East Java is a province with a wide variety of tourist attractions, including natural, cultural, and man-made attractions spread across various regions. However, information about these attractions is still not well-centralized, so tourists often experience difficulties in finding recommendations for tourist attractions that suit their desires. Based on these problems, this study aims to design a website-based information system for recommendations and promotions of tourist attractions in East Java using the User-Centered Design (UCD) method. The UCD method is used because it emphasizes user involvement in the system design process. The research stages include gathering user needs, designing the system according to user needs, and evaluating the design, which is carried out conceptually without an implementation stage. The result of this study is an information system design that is expected to facilitate tourists in obtaining information and recommendations for tourist attractions, while also helping the process of promoting tourist destinations in East Java more effectively.

Keywords: User Centered Design, information systems, tourism recommendations, tourism promotions, websites, East Java.

INTRODUCTION

Tourism is a sector that plays a vital role in supporting the regional economy. East Java Province boasts diverse tourism potential spread across various regions, ranging from natural attractions and cultural attractions to cultural tourism.

Artificial. The wide selection of tourist attractions is a major draw for both local and international tourists. However, this situation is not fully supported by the provision of easily accessible and well-structured information.

In reality, information about tourist attractions in East Java is still scattered across various media outlets, such as social media, personal blogs, and specific websites, but they aren't yet integrated. This often makes it difficult for tourists to find comprehensive information and determine which destinations best suit their needs, interests, and circumstances. Furthermore, not all tourist attractions receive optimal promotional media, resulting in some destinations being less well-known to the wider public.

Advances in information technology, particularly websites, can be leveraged as a centralized and easily accessible medium for presenting tourism information. Through website-based information systems, tourists can obtain information and recommendations for tourist destinations more conveniently. However, designing a

tourism information system should not only focus on feature completeness but also consider user needs and convenience to ensure the system is truly usable.

Based on these issues, a user-oriented information system for recommendations and promotion of tourist attractions in East Java is needed. The User-Centered Design (UCD) method was chosen in this study because it places the user at the center of the system design process. By involving user needs and experiences from the initial stage, it is hoped that the resulting system design will be more in line with expectations and easy to use.

This research focuses on the system design stage without implementation. The stages involved include user needs analysis, system flow design, database design, and interface design. The results of this study are expected to serve as a reference in the development of website-based tourism information systems, particularly those related to recommendations and promotion of tourist attractions in East Java.

METHOD

This research uses a qualitative approach using the User-Centered Design (UCD) method. This qualitative approach was used because the research focuses on the information system design process, understanding user needs, and design analysis without involving quantitative system testing. This research does not involve system implementation or development, but rather produces a draft information system design.

The User-Centered Design (UCD) method is an interactive system design approach that places the user at the center of the entire design process. This method emphasizes user involvement in every design stage so that the designed system is in accordance with the needs, characteristics, and context of use of the end user. This approach is widely used in UI/UX design research and website-based information systems because it has been proven to produce designs that are easier to use and user-oriented.

UCD was chosen because this method not only focuses on the technical aspects of the system but also considers user needs, user experience, and comfort in using the system. By implementing UCD, the system design is expected to provide a good and easy-to-understand user experience even before the system implementation stage.

In the methodology phase of this research, the information system design process is also supported by system modeling using Unified Modeling Language (UML) diagrams. This modeling is used to describe the functional requirements and user activity flow within the tourist attraction promotion and recommendation information system. The diagrams used in this research include use case diagrams and activity diagrams as conceptual representations of the designed system.

Use Case Diagram

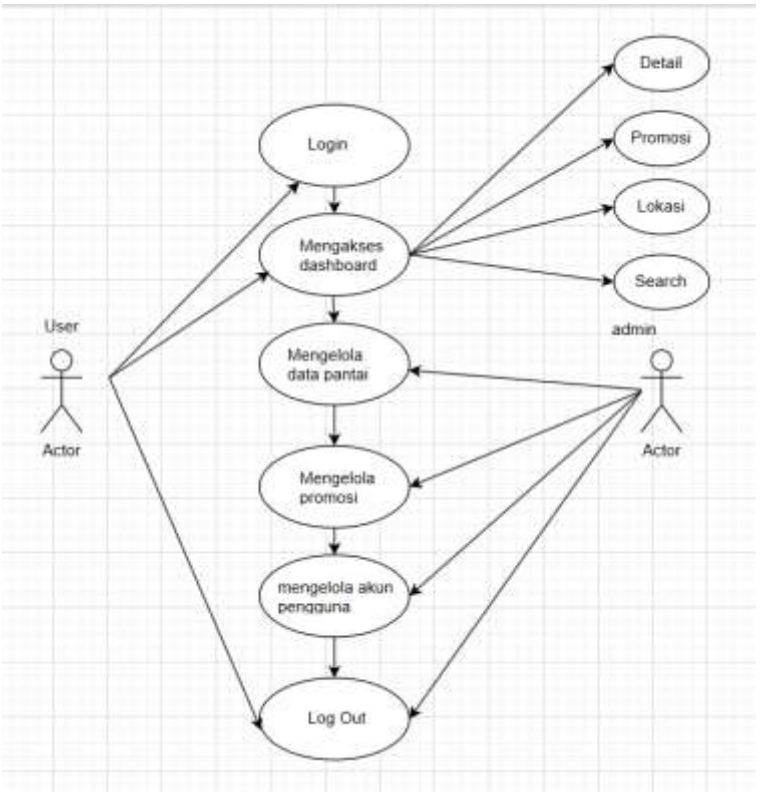


Figure 1.1Use Case Diagram

Use case diagrams are used to illustrate the interactions between users and administrators with a tourist attraction promotion and recommendation information system. From the user's perspective, this diagram shows the main functions such as accessing tourist attraction information, making reservations, and so on.destination searches, as well as accessing the registration and login pages. Meanwhile, from the admin's perspective,Use case diagrams illustrate system management activities, including managing tourist attraction data, updating information, and managing the content displayed on the system. Use case diagrams help explain the system's general functional requirements based on the roles of each actor.

Activity Diagram

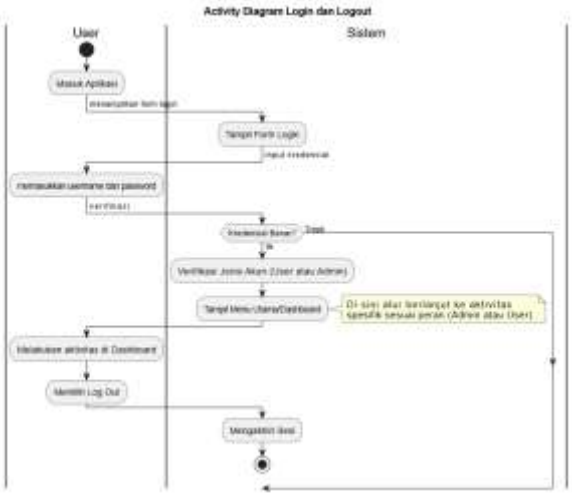


Figure 1.2User Activity Diagram

The login and logout activity diagram in this system illustrates the process flow carried out by users when logging in and logging out of the application. The process begins when the user opens the application, then the system displays a login form. Next, the user enters a username and password for verification by the system. If the entered data does not match, the system will reject the login and redirect to the data entry process. If the credentials are declared correct, the system checks the account type, whether as a user or admin, then displays the main menu or dashboard according to each role. After successfully logging in, the user can perform various activities on the dashboard. When the user selects the logout menu, the system will end the session and the login process is declared complete.

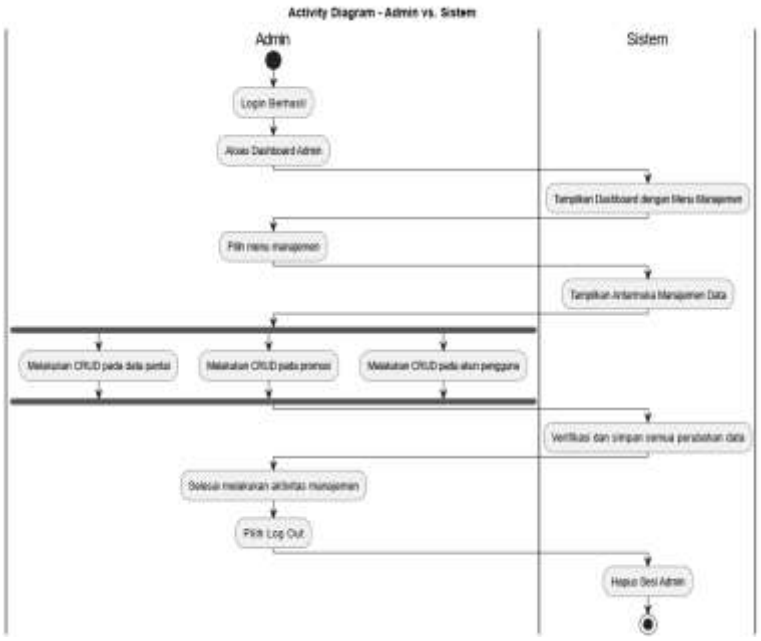


Figure 1.3Admin Activity Diagram

The admin activity diagram in this system illustrates the flow of activities carried out by the admin after successfully logging in. The process begins when the admin accesses the admin dashboard and the system displays the available management menus. Next, the admin selects the management menu as needed, such as managing beach data, promotional data, or user accounts. At this stage, the admin can add, modify, and delete data (CRUD). Every data change made by the admin is verified and saved by the system. After all management activities are complete, the admin selects the logout menu and the system ends the admin session..

STAGESSTUDY

The research stages in designing this website-based tourist attraction promotion and recommendation information system used a User-Centered Design (UCD) approach. The stages were structured in a gradual and systematic manner to ensure the design process was truly driven by user needs. This research only reached the design stage, without system implementation.

a. Identify the Context of Use

The initial stage of the research begins with identifying the context in which the system will be used. At this stage, researchers seek to understand who the potential

users of the system are, what their goals are, and the conditions under which the system will be used. The primary users in this study are tourists seeking information and recommendations for tourist attractions.

Identifying the context of use is crucial to ensure the system design remains aligned with the actual needs of users. By understanding user habits and needs from the outset, the resulting system design is expected to be more relevant and user-friendly.

b. Identify User Needs

Once the context of use is known, the next step is to identify user needs. At this stage, researchers analyze the information users require regarding tourism promotion and recommendations, such as location information, tourism types, brief descriptions, and destination recommendations.

User needs are identified through literature review and analysis of relevant previous research. The results of this stage are used as the basis for determining the features and information structure of the website. This stage aims to ensure that the designed system is not only visually appealing but also truly helpful for users in finding travel information.

c. Design Solution Planning

The next stage is designing the design solution. At this stage, researchers begin translating user needs into a system design. The design includes the system flow, menu structure, and website interface design. The result of this stage is a design or prototype.A website-based tourist attraction promotion and recommendation information system. The prototype serves as an initial overview of the system before further development. The design focuses on ease of use, clarity of information, and user convenience when accessing the website..

d. Design Evaluation

The final stage of this research is design evaluation. This evaluation is conducted to assess the suitability of the system design to the previously identified user needs. The assessment focuses on ease of use, clarity of information presentation, and the design's suitability to the system's objectives.

The evaluation was conducted conceptually without involving direct user testing, as the research only reached the design stage. However, the evaluation adhered to User-Centered Design principles so that the resulting system design could serve as a basis for subsequent system development.

The research framework is used to explain the researcher's thought process in designing a website-based information system for tourism promotion and recommendations. This framework begins with the identification of the problem: the lack of centralized information and recommendations for tourist destinations that are easily accessible to tourists.

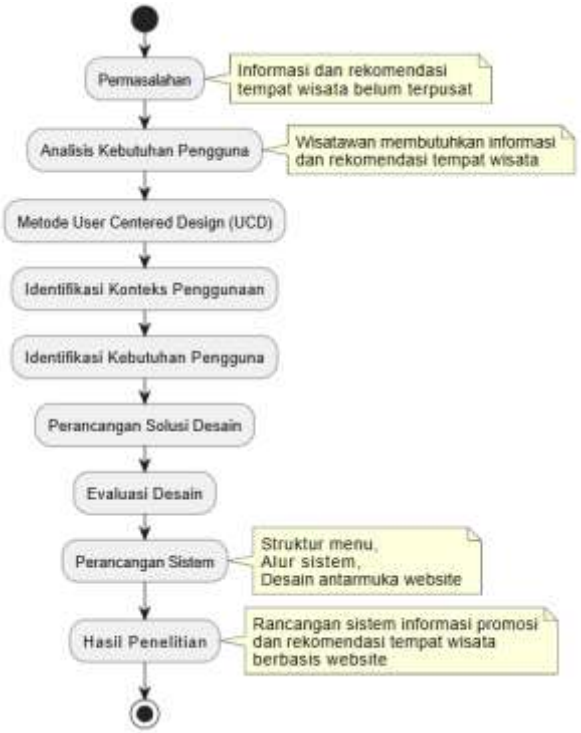


Figure 2.1Research Thinking Framework

Based on these problems, a user needs analysis was conducted to determine what information tourists require when searching for and selecting a destination. The User-Centered Design (UCD) approach was then used in the system design process. This method involves identifying the context of use, identifying user needs, developing design solutions, and evaluating the design.

The final result of this framework is a website-based design for a promotional information system and recommendations for tourist destinations. The proposed system focuses on identifying needs and designing a prototype dashboard. The methodology used is based on the previous framework.

Information System Interface Design Stages

The system and user interface design stages were carried out to produce a website-based tourist attraction promotion and recommendation information system that meets user needs. The design in this study not only focuses on the dashboard but also encompasses the entire system, from the user flow and menu structure to the interface design on each page, such as the homepage, registration (sign-up), login, and tourist attraction information pages.

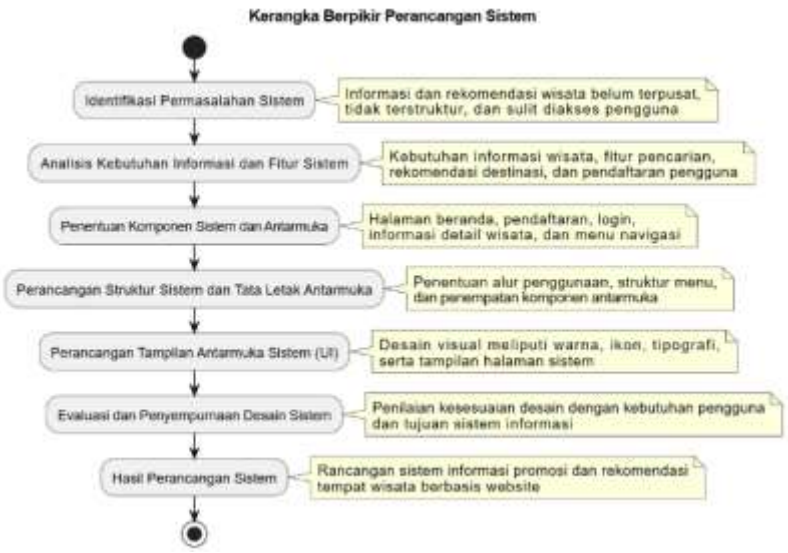


Figure 2.2Dashboard Design Stages

The system was designed using a User-Centered Design (UCD) approach, ensuring each step is structured based on user needs and characteristics. This approach aims to ensure the system presents tourism information in a structured, easy-to-understand, and user-friendly manner.

a. System Problem Identification

The initial design phase began with identifying issues within the tourism information system. The primary issue identified was the lack of centralized, structured, and easily accessible information and recommendations for tourist destinations. Tourism information remains scattered across various media, making it difficult for tourists to find resources and determine destinations that best suit their needs.

Furthermore, a poorly organized information display and access flow can potentially lead to user confusion. Therefore, an information system design is needed that can present tourism information concisely, clearly, and organized within a single website-based platform.

The background to this dashboard design is the lack of a structured, centralized, and easily accessible display of tourist destination information and recommendations. Tourism information is often scattered across multiple sources, making it difficult for users to quickly find the information they need. Furthermore, the poorly organized system layout can also cause confusion for users when first accessing the website.

b. Information Needs Analysis and System Features

After identifying the system's problems, the next step is to analyze information needs and system features. At this stage, researchers analyze user needs for necessary tourism information, such as tourist attraction names, locations, types of tourism, brief descriptions, and destination recommendations.

In addition to information needs, users also require supporting features such as destination search, easy access to information, and account registration to provide more personalized services. The results of this needs analysis are used as the basis for determining the key features and structure of the information system to be designed.

c. Determining System Components and Interfaces

Based on the needs analysis, the system's main components and user interface were determined. The system components include a homepage as an information center, user registration and login pages, and detailed tourist attraction information pages. Each component was designed to have a clear function and be integrated with each other to support the system's objectives.

The selection of interface components also takes into account user-friendliness in interacting with the system. Interface elements such as navigation menus, input forms, action buttons, and supporting visual elements are designed to be easily recognized and used by users.

d. System Structure Design and Interface Layout

The system structure and interface layout design phase is carried out to determine the system's usage flow and the placement of each interface component. The system structure is designed to allow users to access tourism information and system features systematically and without hassle.

The interface layout is designed to be simple and consistent on every page, so users can easily understand the function of each part of the system. This design aims to improve user experience and reduce cognitive load when interacting with the information system.

e. System Interface Design

The system interface design focuses on the visual and aesthetic aspects of the information system. At this stage, colors, typography, icons, and other visual elements are selected to reflect the tourism theme. The system's appearance is designed to be attractive while still prioritizing readability and clarity of information.

Each page, such as the homepage, registration, login, and tourist information, is designed with a consistent appearance to provide a unified user experience. This design consistency is expected to improve usability and user experience.

f. System Design Evaluation and Refinement

The final stage in system design is evaluation and refinement of the design. The evaluation is conducted conceptually by reviewing the suitability of the system design to the previously identified user needs. Aspects evaluated include ease of use, clarity of system flow, and the design's suitability to the objectives of the promotional information system and tourist attraction recommendations. Although the evaluation is not conducted through direct user testing, the results are used to identify areas of the design that can still be improved. Thus, the resulting system design is expected to serve as a reference.

RESULTS

This chapter discusses the results of the design process for a website-based tourist attraction promotion and recommendation information system, along with a discussion. The results presented represent the output of the system and user interface design stages carried out in the previous chapter. The discussion focuses on the design of the system interface, page structure, and its suitability to user needs based on the User-Centered Design (UCD) approach, without discussing the system implementation stage.

The design results discussed in this chapter are conceptual and visual, in the form of an interface design (mockup) that illustrates how the information system is

designed to present information and recommendations for tourist attractions in a structured, easily accessible and comfortable manner for users to use.

Home Design Results

The resulting dashboard design represents a visualization of the website-based tourist attraction promotion and recommendation information system. The dashboard serves as the main page, providing users with central access to information and recommendations for tourist attractions. The design emphasizes structured information presentation, ease of navigation, and user convenience in interacting with the system.

The dashboard design presents tourism information in an organized manner, allowing users to easily understand the content displayed. The dashboard layout is divided into several main areas, such as the navigation menu and the content area. This division aims to help users quickly recognize the function of each section without requiring additional explanation.

In terms of user flow, the dashboard design allows users to directly access tourism information and available features. With its simple design and focus on user needs, the dashboard is expected to support the system's goal of promoting and recommending tourist destinations.

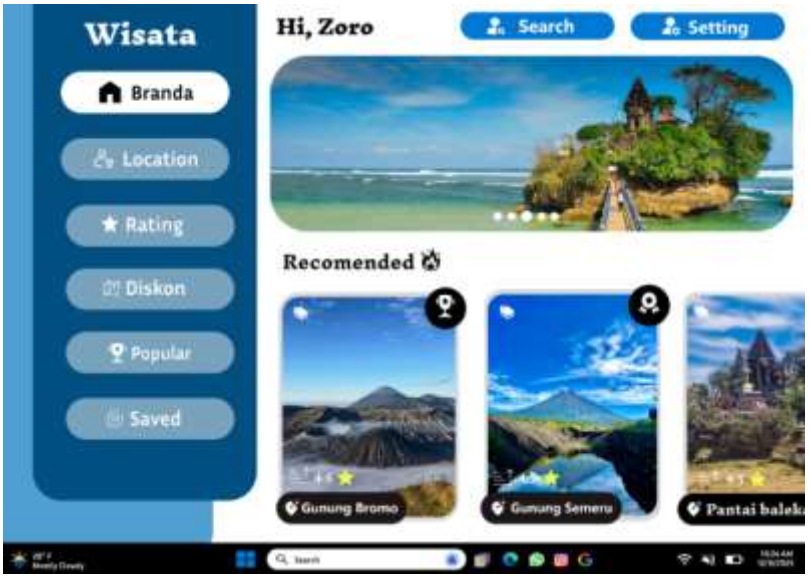


Figure 3.1Home Section View

Results of Designing the Sign Up Page Display

The design of the registration (sign-up) page aims to facilitate user registration for an account on the system. The page is designed with a simple interface and a focus on ease of use. The information requested on the registration page is tailored to the system's requirements and presented in an easy-to-understand input form.

The registration page layout is arranged vertically with clear labels and fields. This aims to reduce the possibility of user errors in entering data. The registration button is prominently displayed to allow users to easily proceed with the registration process.

Visually, the registration page design aligns with the overall dashboard appearance. Consistency in color, typography, and other visual elements is applied to create a comfortable and professional feel. This design is expected to provide a good user experience during the initial interaction with the system.

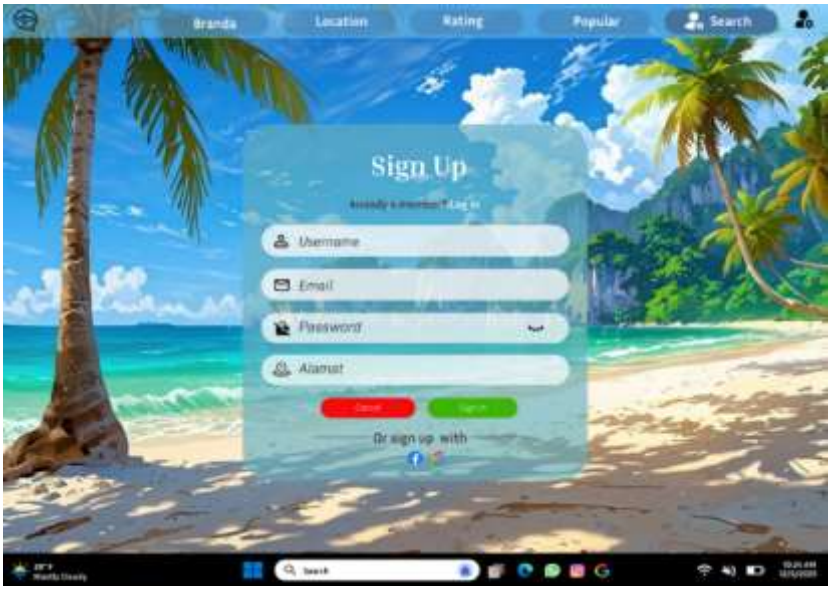


Figure 3.2Display in the Login Section

Results of Designing Information Displays for Tourist Attractions

The design results for the selected tourist destination information display illustrate how the system presents detailed information about the destination chosen by the user. This display is designed to help users obtain more comprehensive information before deciding to visit a tourist destination.

In this design, tourist destination information is presented in a structured format, including the name of the destination, a brief description, the tourist category, and other supporting information. The information is presented concisely and easily understood so users can quickly get an overview of their chosen destination.

The information display layout is designed with user comfort in mind when reading and understanding the content. Key information is placed in an easily visible area, while supporting information is neatly arranged to avoid clutter. The visual design is tailored to the tourism theme and remains consistent with the overall dashboard appearance.

This design for displaying information on selected tourist attractions is conceptual and only displays a visual interface, without discussing data processing or technical system mechanisms. It is hoped that this design will provide users with clearer and more targeted tourist information.



Figure 3.3Review Section View

Discussion of System Design Results

Based on the design results, a website-based tourist attraction promotion and recommendation information system was designed, addressing the user needs identified in the previous stage. The User-Centered Design (UCD) approach helped researchers ensure that each interface design and system structure were tailored to user characteristics and needs.

The resulting system design demonstrates that a centralized and structured presentation of tourism information can help users access information more easily. The system's simple user interface and consistent interface design are expected to enhance user experience when interacting with the system.

Although this research did not reach the implementation and testing stage of the system, the design results can be used as a starting point for developing a tourism information system in future research. This design is expected to support the process of promoting and recommending tourist destinations more effectively through websites.

CONCLUSION

Based on the design results and discussions, it can be concluded that this research has successfully designed a website-based tourist attraction promotion and recommendation information system using a User-Centered Design (UCD) approach. The system design was carried out by placing user needs as the primary focus, so that the resulting design is expected to present tourist information in a centralized, structured, and easily accessible manner.

The design results show that the information system is designed with a simple page structure and user flow, including a homepage, user registration and login, and detailed tourist attraction information pages. The system interface design is consistent and easy to understand, thus increasing user convenience in accessing information and recommendations for tourist attractions.

This research is limited to the system and user interface design phase, without implementation and testing. Nevertheless, the resulting design can serve as an initial reference for the development and implementation of a website-based tourist attraction promotion and recommendation information system in future research.

Based on the research findings, several recommendations can be used as considerations for further research. First, the design of the tourist attraction promotion and recommendation information system that has been created is expected to be continued to the implementation stage, so that the system can be used directly by users. Second, further research is recommended to conduct user testing, such as usability or user experience testing, to determine the level of ease of use and user satisfaction with the developed system. Third, the system can still be developed by adding other supporting features, such as tourist attraction reviews and ratings, location map integration, and destination recommendations based on user preferences, to make the information presented more comprehensive and interactive.

REFERENCES

Abdullah, S., Fauzi, R., & Setiawan, I. (2025). Perancangan media periklanan untuk promosi penerimaan siswa baru di SMK Bintang Nusantara. *Attamkiim: Jurnal*

Pengabdian Masyarakat, 2(1), 79–84.

Afrianti, N., & Komalasari, D. (2024). Perancangan UI/UX sistem informasi PPDB berbasis website pada SD IT Mufidatul Ilmi. *JUPITER: Jurnal Penelitian Ilmu dan Teknologi Komputer*, 16(1), 253–265.

Dewi, C., & Christanto, H. J. (2024). Pengembangan sistem informasi pariwisata Kabupaten Toraja Utara menggunakan User Centered Design dan WebQual 4.0. *INOVTEK Polbeng – Seri Informatika*, 9(1).

Firdaus, H., & Hidayatullah, D. (2022). Pengembangan sistem informasi pariwisata Geopark Ciletuh menerapkan metode User Centered Design. *Jurnal Media Informatika Budidarma*, 6(1), 81.

Kabnani, Y. M., Kelen, Y. P., & Seran, K. J. T. (2025). Rancang bangun sistem informasi obyek wisata berbasis web di Timor Tengah Selatan (TTS) menggunakan metode User Centered Design (UCD). *Jurnal Inovasi Ilmu Komputer*, 3(2), 55–75.

Lestari, D. A., Utomo, H. W., & Septiadi, A. D. (2023). Redesign website pariwisata berbasis User Centered Design (UCD). *JURIKOM (Jurnal Riset Komputer)*, 10(2), 615.

Mirnawati, N., & Qoiriah, A. (2024). Rancang bangun website obyek wisata Kabupaten Tuban "Tuban Explore" menggunakan metode User Centered Design (UCD). *Journal of Informatics and Computer Science (JINACS)*, 6(1), 105–118.

Rawulunubun, D., Faizah, N. M., & Koryanto, L. (2024). Rancang bangun aplikasi sistem informasi pariwisata di Kabupaten Maluku Tenggara berbasis web dengan metode User Centered Design (UCD). *Journal Innovations Computer Science*, 3(1), 47–58.

Sulistiyono, M. (2019). Implementasi sistem informasi layanan perjalanan wisata menggunakan metode User Centered Design dan WebUse.

Savitri, N. R., & Nerisafitra, P. (2025). Sistem informasi geografis pemetaan wisata alam di Kabupaten Lumajang berbasis web. *Journal of Informatics and Computer Science (JINACS)*, 7(1), 21–28.