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Design of a Web-Based Divorce Process Information System at the Banyuwangi Religious Court

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Abstract

The Religious Court is a government agency that handles and resolves Islamic legal matters, including divorce. The divorce process at the Banyuwangi Regency Religious Court still relies on manual services, particularly for case registration, court schedule management, and divorce certificate status monitoring. Therefore, a web-based divorce process information system is needed at the Banyuwangi Regency Religious Court. The design methods included observation, interviews, and literature review to identify system requirements. The design process involved system analysis, flowchart creation, DFD (Data Flow Diagram), ERD (Elementary Directorate Level Diagram), database design, and interface design using Figma. The results of this study are an information system design that supports structured case data management, increases information transparency for the public, and assists officers in expediting the divorce administration process. This design is expected to improve services at the Banyuwangi Religious Court and make them more accessible to the public.

Keywords: *Information System, Divorce, Religious Court, Database, Web.*

1. Introduction

Divorce is one of the most dealt with in the Religious Court, including the Banyuwangi Religious Court [1] . The data on cases that continue to increase every year, both divorce and contested divorce [2] , show that the community's need for fast, clear and transparent divorce services is getting higher. In Islam, divorce is permitted but must be done in a good and responsible manner as stated by Allah SWT in Surah At-Talaq verses 2-3 which means: "When they have reached the end of their waiting period, then take them back in a good manner or release them in a good manner and call to witness two just witnesses from among you, and establish the testimony for Allah. Thus is a lesson given to those who believe in Allah and the Last Day. Whoever fears Allah, He will make for him a way out. And provide for him from where he does not expect. And whoever puts his trust in Allah, He will provide for him. Indeed, Allah carries out His (desired) affairs. Indeed, Allah has set a measure for everything" [3] .

In the Banyuwangi Religious Court itself, many people still experience difficulties in understanding the process of resolving divorce cases [4] . From registering the case, setting the trial schedule, to the final stage of issuing and collecting the divorce certificate, it is not uncommon for the parties to feel confused and lack complete information [4] . This can lead to delays in resolving cases and even increase complaints about the quality of service provided.

Given these conditions, a web-based information system design is needed that can provide a clear, structured, and responsive overview of the divorce process [5] . This design focuses on flow modeling using flowcharts, database design using Entity Relationship Diagrams (ERDs), and user-friendly interface (UI/UX) design. With this design, it is hoped that the public can easily track the status of their case without having to constantly ask officers.

The design used the waterfall method [5] , so that each stage of development can be carried out systematically, starting from needs analysis, design, to system design. The final result of this research is not an application that can be used directly, but rather a conceptual design that can be used as a reference by the Banyuwangi Religious Court for future system development. Thus, divorce services can be improved to be more effective, transparent and in accordance with the needs of the Banyuwangi community.

2. Literature Review

Previous research has discussed the development of web-based information systems used to support decisions effectively, efficiently, and easily accessible in the context of public services. Such as the following research entitled "Application of the Waterfall Method in Monitoring Divorce Cases with Lawyer Assistance at the Toli-Toli Religious Court" (2024), this research aims to design and build a divorce case monitoring application to assist lawyers in conveying information to clients [6] . This research uses the Waterfall method which includes the stages of analysis, design, coding, testing, and maintenance. The problem faced in this research is the absence of official information media between the religious court and lawyers, so that trial schedule information is difficult to convey to clients in a timely

manner. Therefore, a web-based system was created that can facilitate the service process. The results obtained from this research can make it easier for lawyers to obtain information on case status and trial schedules, while increasing the effectiveness of information services at the Toli-Toli Religious Court.

A study conducted by Kadek Intan Janeta Pratiwi et al. focused on transaction recording and data security issues in trading businesses. The results of this study, through *guerilla testing,* showed that the designed system was able to increase the speed and accuracy of sales recording, reduce input errors, and improve data security. User responses also indicated that the system was easy to understand, had simple navigation, and the features offered met business needs [7] .

The same system is also found in a journal entitled "Redesigning the Ogan Ilir Kesbangpol Website Interface Based on Heuristic Evaluation and UI/UX Principles" [8] , this research was conducted to improve the quality of the appearance of the Ilir Organ Kesbangpol Agency website which was considered less than optimal in terms of user comfort. The problem found was that there were many violations of usability principles on almost all of the website's main pages, so that users had difficulty in obtaining information. This research used the Heuristic Evaluation method based on Nielsen's 10 principles, by assessing aspects of consistency, visibility and ease of navigation. The evaluation results showed that the majority of website pages did not comply with the basic principles of UI/UX design. Therefore, the researcher redesigned the interface using Figma with a clarity, consistency and minimalism approach. The new design results in a clearer, more consistent and simpler interface and can be used as a reference for developing a more user-friendly government agency information system.

3. Research Methodology

The research method was used as a systematic step to design the divorce process flow and data structure in the web-based information system at the Banyuwangi Religious Court. The methods used are as follows:

3.1. Types of Research

The type of research used in this fieldwork practice is action research. This study aims to develop and refine a structured information system related to the divorce process at the Banyuwangi Religious Court. The research approach was carried out through planning, design, and evaluation stages, resulting in a more orderly process flow, data structure, and system design that meets user needs.

3.2. Data Collection Technique

3.2.1. Interview

Interviews were conducted with Banyuwangi Religious Court employees who directly handle divorce cases, from registration to issuance of divorce certificates, discussing the various challenges that arise, and the needs of the public and officials in accessing and monitoring the case process. The findings from these interviews serve as a reference for developing a more structured, informative, and user-friendly web-based information system, making it easier for the public to monitor case status while simultaneously increasing the effectiveness of officer work.

3.2.2. Observation

Observations were conducted directly at the Banyuwangi Religious Court to observe the actual flow of the divorce process. The observations aimed to understand how officials carry out the divorce process and how information is communicated to the public. The information obtained served as the basis for designing a more structured, clear, and easily accessible web-based information system, making it easier for the public to track case status and assist officials in processing data.

3.2.3. Literature Review

A literature review was conducted by reviewing journals, articles, and literature on information systems, system design, and UI/UX, including the concepts of flowcharts, ERDs, and DFDs. The results of this study serve as the basis for designing a web-based divorce process information system at the Banuwangi Religious Court to be more structured, informative, and user-friendly.

The Research Methodology section should be presented systematically and in detail to describe how the research was conducted from start to finish. This section includes the research type and approach (e.g., quantitative, qualitative, mixed-method, case study, experimental, survey, SLR, R&D, etc.), data collection techniques (e.g., interviews, observation, questionnaires, documentation), and data analysis methods used. The explanation should also include the main stages in the research process, the tools or software used (e.g., SPSS, SmartPLS, ATLAS.ti, Python, etc.), and data validation or testing techniques. The methodology section may use subheadings.

Authors are encouraged to include a flowchart or research flow diagram as a visual illustration to help readers understand the overall research process or stages. Flowchart images should be numbered and titled (e.g., Figure 1. Research Flow) and placed in a relevant section of the text. Each element in the flowchart should be clearly described and referenced in the methodology narrative.

If using instruments, include information about their validity and reliability. For quantitative research, also include the population, sampling technique, and number of respondents. For experimental research or systems development, describe the framework, system architecture, or implementation stages. All methods used should be described in detail so they can be replicated and validated by other researchers. If methods are adapted from previous research, provide appropriate citations. If the research involves human participants, include a statement regarding research ethics and informed consent.

3.3. System Development Methods

The method used in this activity is the Waterfall method, which is a gradual and sequential approach [8] in the system design process. In the context of this research, the term "development" is focused on the stages of needs analysis, flow design, and interface design, without proceeding to direct implementation. Each stage is carried out systematically and sequentially to produce a system design that is structured, clear, and in accordance with user needs.

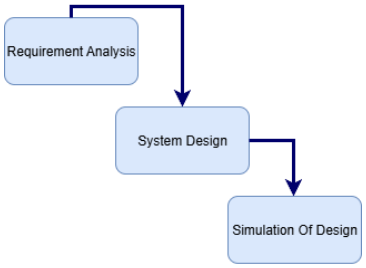

Fig. 1: System

3.3.1. Requirements Analysis

This phase was conducted through direct observation and interviews with the Banyuwangi Religious Court. The goal was to understand user needs regarding the divorce process, understand the current workflow, and identify challenges in managing divorce data and information. The results of this analysis were used as the basis for designing a web-based information system that would facilitate public tracking of the divorce process, assist officers in data management, and present information in a clearer and more structured manner.

3.3.2. System Design (System Design)

At this stage, the system flow is designed using flowcharts, DFDs, and ERDs to illustrate the processes and relationships between system components. Furthermore, the user interface (UI/UX) is designed using Figma, with a modern, user-friendly, and responsive interface for web devices.

3.3.3. Simulation of Design

This stage is carried out to visualize the system design before implementation. The simulation includes the user interface (UI/UX) and process flow, which has been designed using flowcharts, DFDs, and ERDs. The simulation allows the author to review the design's suitability to user needs and ensure that the system flow is logical and easy to understand.

4. Results and Discussion

4.1. System Design

After analysis need finished, stage design system conducted. The results of the analysis This changed become design structured that will functioning as an outline for the manufacturing process application System Divorce Process Information. Output design, process design, architecture applications , and modeling system using Context Diagram and Data Flow Diagram (DFD) is all part from design this . Every design done For ensure system Work with good and easy understood by the user. They are also designed For fulfil need operation Religious courts.

4.1.1. Output Design

Stage design information generated by the system called output design. The focus is ensure information displayed accurate, easy understood, and helpful users and administrators create decision.

a. Court Schedule

The system displays the court schedule, which displays the case number, parties, trial date, courtroom, and panel of judges. By providing a search bar based on case number and party name, the public can obtain schedule information without having to go to court in person. This improves service and increases the transparency of the judicial process.

b. Divorce Case Data

The names of the plaintiff and defendant, case number, case type, registration date, and status are displayed in this output. A search bar helps the public find out the status of filed cases. Administrative inquiries and court queues are reduced by the concise and organized presentation of information.

c. Divorce Certificate Issuance Status

Information on the case number, divorce certificate number, names of the parties, the decision date, and the status of the divorce certificate are presented in this section. The search feature allows users to track the divorce certificate issuance process without having to go to court. This increases service transparency and speeds up access to official documents.

d. Case Data Report

Admins use the reporting feature to monitor the overall progress of a case. The case number, party name, case type, registration date, case status, and divorce certificate status are displayed. By clicking the "Details" menu, managers can quickly view further information. This feature makes administrative data processing more organized and efficient.

4.1.2. Input Design

Stage what data design only one must entered to in system For enable business processes walk in accordance need called input design. Input is created For help users fill in the data complete, gradual , and structured . This also ensures that the admin can manage data with accurate and efficient. For make it easier navigation users, every input form is compiled in accordance order channel registration matter.

a. Applicant Data

System provide a registration form things that can accessible online by the public . Registrants must fill in basic data like Name complete , address , place residence , email, and cell phone number , as well as role they as applicant (Person , Posbakum , or Legal Counsel). In addition there it is option For submit liberation cost case as well as information disability . With this input design , the applicant can start the registration process without must go to court , improve accessibility and efficiency of processes and reduce queue at the counter registration.

b. Plaintiff Data Input

For fill in the plaintiff's data in a way more detailed , use form special This . Full name , father's name , place and date birth , religion, email, cellphone number , NIK, occupation , education last , and address domicile is all columns that can accessible . There is also an option For choose information disability and citizenship status (Indonesian citizen or foreign citizen). With Back and Next buttons , features navigation make things easier users fill in the data step by step . This design ensure that the data required for the inspection and verification process administration accurate.

c. Defendant Data Input

Plaintiff data own the same form structure in the section This . Complete data columns , including father's name , NIK, occupation , education last , and information contact and address , provided by the system . This design ensure the second data split party recorded with right , make information more clear for admin, and reduce possibility input error at stage next.

d. Input Identity Data Marriage and File Upload Data

Data such as history marriage and circumstances House ladder can collected through this form. KUA data, number marriage certificate , date marriage , and narrative short about condition House ladder entered to in colon in this form . Users are also requested For send document supporters such as KTP, KK, Marriage Certificate , and Lawsuit Letter . For make filling form more easy , design form made in a way gradual and easy navigated . Purpose from stage This is For ensure that file complete before case processed more continue and for help admin check file with more accurate.

e. Input Cost Data Deposit

For count estimate cost deposit in a way automatic , form This used . Only information that must be entered by the applicant is place stay plaintiff and defendant , and sub-districts and villages of each party . Estimates cost deposit will displayed in a way direct after the data is entered . This feature make cost transparent since early , facilitates the planning process , and reduces people's confusion about cost small matters .

f. Management Input Things

Number case , type case , name plaintiff and defendant , date registration , and case status can accessed by the administrator via the management form matter . Admin can update and save data through this form For ensure that all over development problem recorded with good . Designed to be easy used , form This help officer manage lots of data every day .

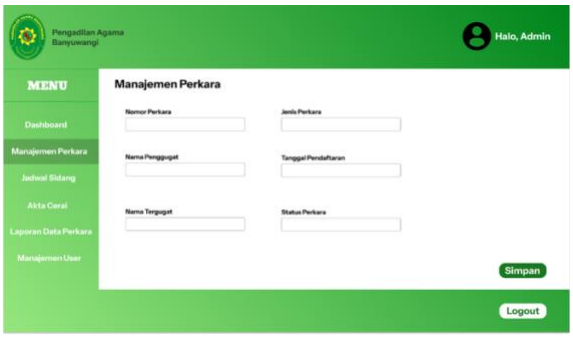

Fig. 2: Management Input Things

g. Schedule Input Hearing

Administration use form This For schedule trial . Number case , name party , date courtroom trial , and the panel of judges can found in colon . Schedule page that can accessible public will automatic displays the entered data. This feature increase transparency and ease party litigation monitor timetable hearing.

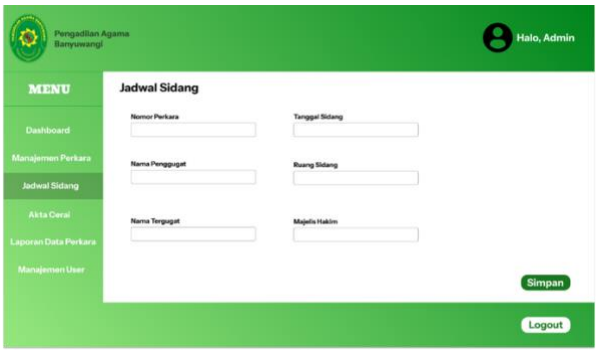

Fig. 3: Schedule Input Hearing

h. Deed Data Input Divorced

For publishing deed divorce , this format used . Entered data including number case number deed divorce, name plaintiff and defendant, date decision , date issue , and deed status . System This make divorce proceedings more fast, more clear, and society can see it online without must come direct to court .

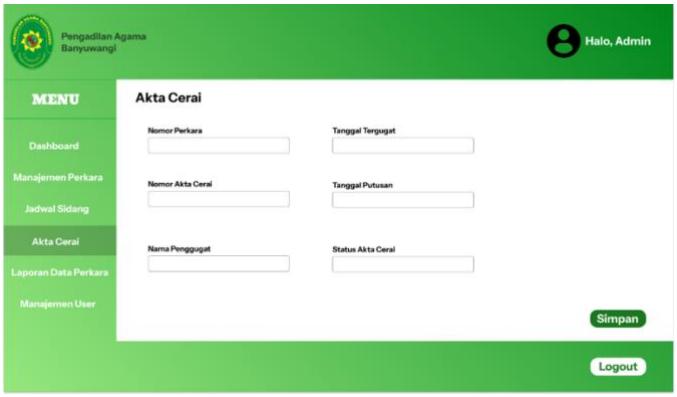

Fig. 4: Deed Data Input Divorced

i. User Management Input

With help part this , the administrator can arrange account users in the system . Information like Name complete , email, username, password, and role or access users , such as admin or officer , can entered to in forms that can be accessed . Control access users based role This aim For ensure case data security and limiting access in accordance with duties and responsibilities answer users system .

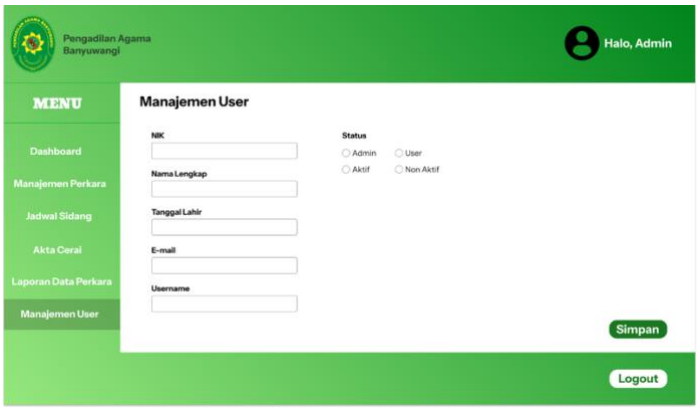

Fig. 5: User Management Input

4.1.3. Process Design

In the development process System Divorce Process Information Web -based , stage process design is very important . Modeling channel work produced by the stages This show interaction between entities , data movement , and mechanisms processing that occurs in system . Design results show that the whole process has been arranged in a way systematic For increase efficiency service , reducing possibility errors , and guarantee structured data management.

a. Registration Process

Design results show that the registration process use channel gradually , or form tiered . Moreover previously , users fill in Name complete , address , email, and cellphone number , as well as choose role applicant . Next , the plaintiff and defendant data entered with more details continue . Then followed with information about marriage and conditions House stairs , and uploads required documents , such as KTP, KK, marriage certificate , and letters lawsuit . Stage end is count cost down payment , which is calculated automatic in accordance with place second party stay . Data problem direct recorded and ready verified by admin after all processes are complete . This process intended For increase data accuracy , making it easier access to services , and guarantee that all data can tracked in a way systematic.

b. Management Process Case

According to administrative process design , officers court own access full to registration data user . Once the process is complete , the administrator can take notes publishing deed divorce , verify completeness of data, updating case status , and filling in timetable hearing complete with room and panel of judges. This process connect between registration , verification , scheduling trial , and output deed divorce . In overall , results design show that system can assisting the court process from stage beginning until settlement case.

4.1.4. Modeling System

a. Context Diagram

The results of the Context Diagram modeling show that system manage information between two entity main : community users and administration court . After the user provides registration data and documents supporters , they accept output that includes information about timetable trial and deed status divorce . Meanwhile that , the manager receive registration data For verified and produces output such as timetable trial , case data , and deeds divorce that has been processed . According to the context diagram this , system intended For bridging the internal administrative processes of the court with service public , so that channel Work can walk in a way integrated , effective , and transparent.

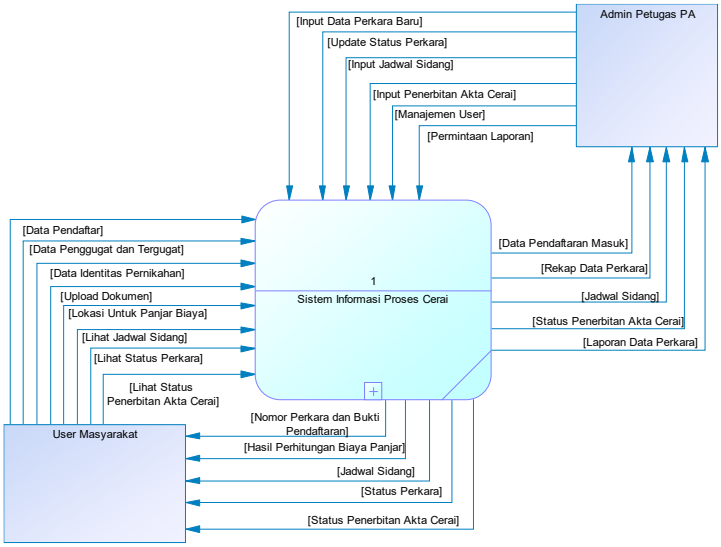

Fig. 6: Context Diagram

b. Data Flow Diagram (DFD)

Four main processes system shown in DFD Level 1: registration matters by user, management matters by admin, scheduling trial , and publication deed divorce . This diagram show data flow from beginning registration , verification process , determination timetable trial , and issuance of deed data divorce . Modeling results show that system own structure channel clear work and data management , and that the database is centralized enable monitoring and management processes document electronics .

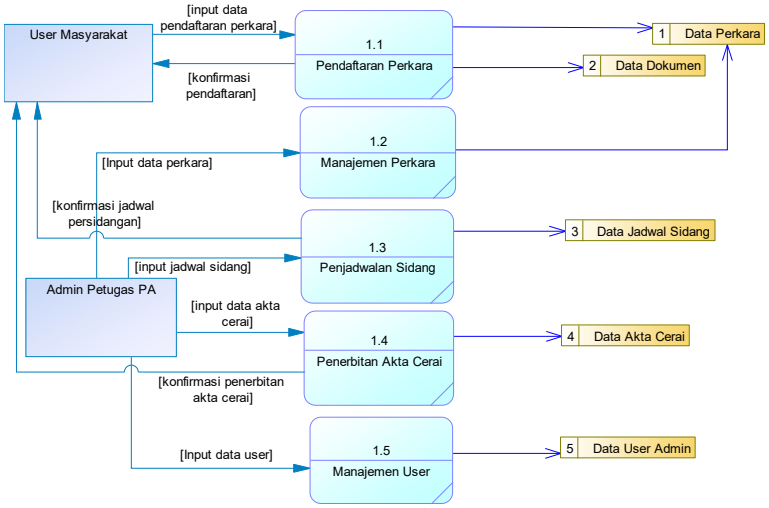

Fig. 7: DFD

4.1.5. Database Identification and Design

One of component main system information is a database, which is responsible for answer For keep all related data with the registration process case , management case , scheduling trial , publication deed divorce , and user data management . The database is designed For ensure that the data is stored in a way systematic , consistent , and easy accessed and managed . So that the system operate optimally , identify tables and database model compilation are step important.

a. Conceptual Data Model (CDM)

CDM is used For map entity main in the process of divorce and relationships they One each other. There are four entity main : User, which stores user data ; Case, which stores information about submission divorce ; Schedule The trial , which recorded timetable trial For every case ; and the Act of Divorce , which is kept as decision end . Next is example connection between entity : Because one users

can register more from One Cases , Matters and Schedules The trial also has one-to-many relationship , whereas Cases and Deeds Divorced only own one-to-one relationship because One case only produce One deed divorced .

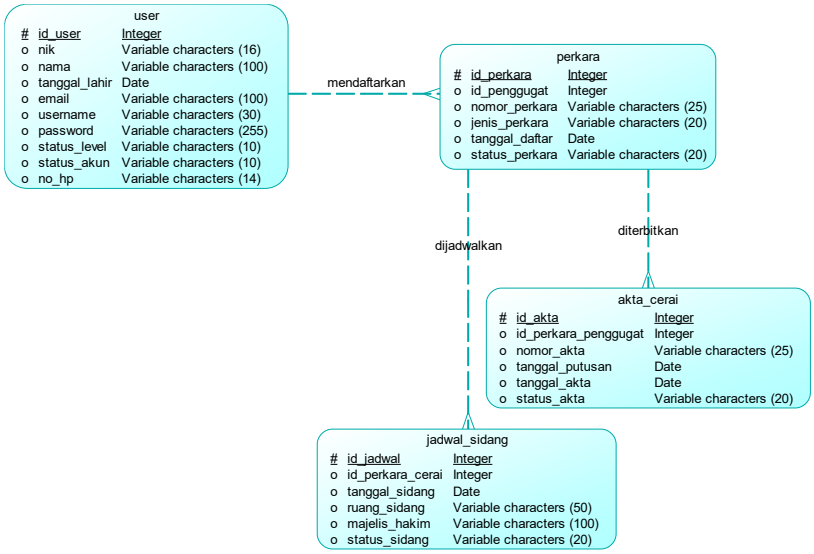

Fig. 8: CDM

b. Physical Data Model (PDM)

PDM determines technical and ready database structure used . Every attribute own customized data types For fulfil need storage . For example including key main one that uses auto increment integer, varchar with long certain For attribute text , date data that uses type date , and status columns or categories that use ENUM. This model make more database structure efficient , more easy set up , and compatible with DBMS like MySQL.

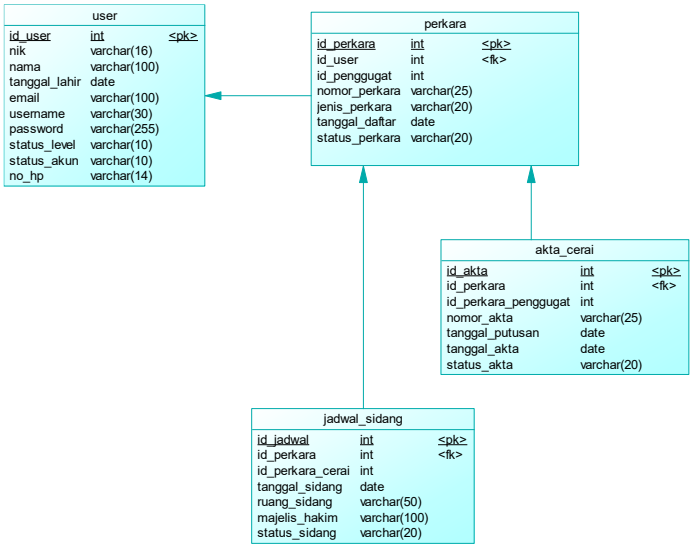

Fig. 9: PDM

4.1.6. User Interface Identification and Design

Interface tools user (UI) functions For connect users with system and consists of from visual elements , structure pages , and components interactions that allow users access feature system . Purpose identification and design interface users is For make easy view easy to use , informative , responsive , and easy used by various type users , okay administration and public .

a. Interface Identification

interface identification process is carried out For identify required display For system divorce process information web- based . Each interface is customized with its function and easy used . Some of the main interfaces that are known including login page , which is functional as a data entry form, with a logo, buttons , and input boxes where the user can enter Name appropriate username and password with role users . In addition that page main administrator consists of from the header, menu, and footer. This allows users For manage case data , deeds divorce , and schedule trial . Besides there it is page main user with similar appearance , where people can find information general like timetable trial , deed status divorce , and information other .

b. Interface Design

Design interface visual user created For support activity system explained here . Each interface design has description function and structure appearance .

1. Initial System Interface Design

Before users enter system , page beginning functioning as gate sign in . This page display text " Congratulations Coming to the System Divorce Process Information " and background behind building Banyuwangi Religious Court , together with with "Login" button to going to login page . View beginning This offer identity system and direct users to the authentication process.

Fig. 10: Initial System Interface Design

2. Login Interface Design

Registration page functioning as the main gateway for all user . Input form on the page This consists of from column Name user , password field , menu for choose to login as a user or administrator, and the button For processing authentication . Visual identity consists of from picture building Banyuwangi Religious Court on the side left page . Page design simple , clean , and responsive , so easy used by the public and staff .

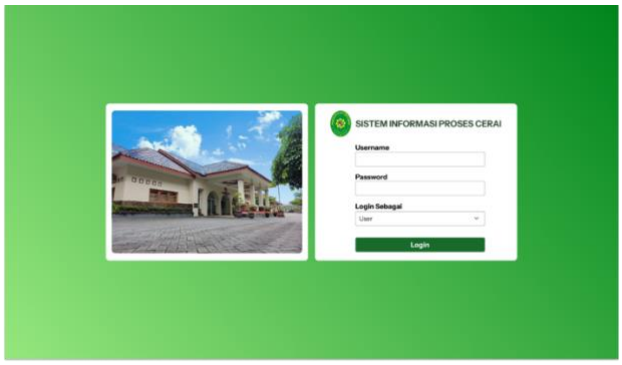

Fig. 11: Login Interface Design

3. Admin Home Page

Home page administration functioning as system data center . On page Here , there is a navigation menu on the side left that can used For manage case data , schedules trial , and deed divorce ; content area in the section middle can display content in accordance with the menu that has been selected ; and the header in the section on displays admin account details and a logout button . Due to the design simple and simple page , admin can more easy monitor and manage case data .

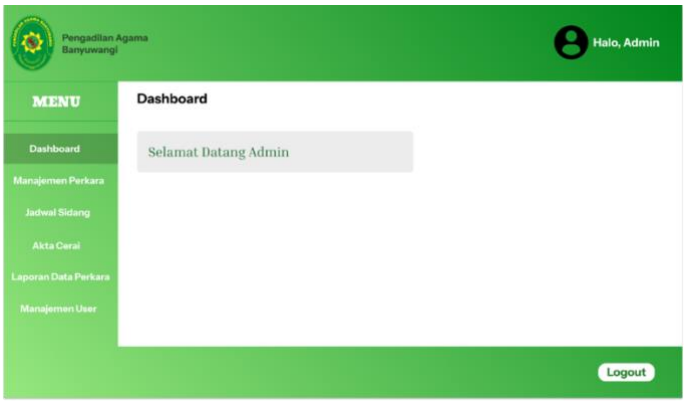

Fig. 12: Admin Home Page

4. User Home Page

main user page is working as center service society where you can find all information you need to know about the divorce process . On the other hand left appearance page there is a navigation menu , which contains option such as Dashboard, Deed Status Divorce , Schedule Trial , Case Data , and Registration Matter . The header section contains account details user and logout button , while the content area main display information about the menu that has been selected . This page , which is designed with easy and responsive , making it easy for people to register case online , see timetable trial , monitoring development case , and know the status of publication deed divorced without must go to court .

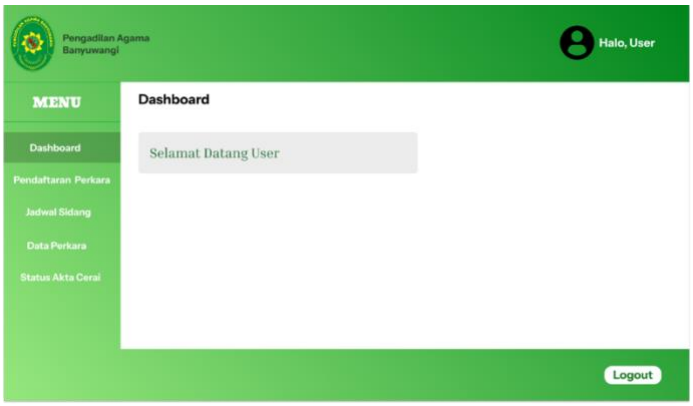

Fig. 13: User Home Page

5. Conclusion and Suggestions

5.1. Conclusion

The development of a web-based divorce process information system at the Banyuwangi Religious Court is designed to address manual service issues such as in-person case registration, lack of information about court schedules, and uncertainty about the status of divorce certificates. The system design includes flowcharts, DFDs, ERDs, and PDMs, as well as a responsive user interface. Key system features include online case registration, court scheduling, case data management, and divorce certificate status tracking. This plan is expected to make services at the Banyuwangi Religious Court more efficient, effective, and transparent. Furthermore, it will make it easier for the public to understand and navigate the divorce process without having to go to court every time.

5.2. Suggestion

In terms of the writing and design of the divorce process information system, this research still needs refinement. Future researchers are expected to continue this research through to the actual implementation stage. They are also expected to test the system directly in the Religious Court. To ensure the system meets user needs and improves court services, development can focus on enhancing the interface, optimizing the database structure, and adding more detailed case data reporting features.

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