

Web-Based Design and Construction of HMI Member Registration for Prabumulih City

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Abstract

The Islamic Students Association (HMI) Prabumulih Branch still carries out its member registration process conventionally, such as using physical forms and manual data collection, which can lead to delays and disorganized data management. This study aims to design and develop a web-based member registration system that simplifies administrative processes and improves committee work efficiency. The system development methodology used in this study is the Waterfall method, which includes requirement analysis, system design, implementation, testing, and maintenance. The result of this research is a web-based registration system that can be accessed online by prospective members and the organizing committee, featuring digital form filling, document uploads, and member data management. This system is expected to support a more structured, efficient, and modern registration process within the HMI Prabumulih Branch organization.

Keywords: Information System, Member Registration, HMI, Web-Based, Digitization

1. Introduction

Registration of new members is a routine activity carried out by HMI every 3-5 months. [1] Registration is defined as an effort to collect operational data organized in an integrated manner, with the aim of supporting more efficient decision-making or administrative activities. This registration process is very important to ensure that members who join have a vision and mission that align with the organization's goals. However, in its implementation, the registration process for members of the HMI Prabumulih City Organization is still carried out conventionally. For example, the registration process still uses a physical form so that applicants must collect the form from the organizing committee. In addition, the registration committee usually opens registration stands at various points on campus, but because there are courses, the committee at the stand must rotate. Based on the existing problems, this research aims to design and build a web-based member registration system for the Prabumulih City HMI that can simplify administrative processes, increase efficiency, and ensure more structured and organized data processing. The designed system is expected to provide long-term benefits for the management of the Prabumulih City HMI organization. Based on the background description above, the researcher chose the title "Design and Construction of a Web-Based Member Registration System for the Prabumulih City HMI Organization."

2. Theoretical Review

2.1. Understanding Design and Construction

Design and construction is a description of the planning and creation of sketches or arrangements of several separate elements into a complete and functional unit [2]. Design and construction is a series of procedures for translating the results of a system analysis into a programming language, which then creates a new system or improves an existing system [3].

2.2. Understanding Registration

In general, registration refers to the recording of identity data such as name, address, or other data into a specific system. Registration is often used to simplify data management, making it more organized and efficient. Registration is the process of recording identity on a storage medium used in the registration process [4].

2.3. Definition of Member

Members refer more to individuals who are members of a group or organization and have rights and obligations according to the rules that apply within it [5]. Members are individuals who participate in a larger social system, such as an organization or group, and contribute to the achievement of common goals [6].

2.4. Understanding Organization

An organization is a group of individuals who work together to achieve predetermined goals [7]. An organization is a forum formed with the aim of achieving predetermined goals through the division of tasks, authority, and responsibilities among its members [8].

2.5. Definition of the Islamic Students Association

The Islamic Students Association (HMI) is a student organization that continues to exist and continues to grow in various Indonesian universities [9]. The Islamic Students Association (HMI) is an Islamic student organization founded on February 5, 1947, based on Islamic principles. HMI aims to develop students who are faithful, pious, and intellectual, and contribute to realizing a just and prosperous society. This organization focuses on strengthening Islamic values and playing an active role in national development.

2.6. Understanding Websites

A website is a series of web pages containing text, images, sound, and other types of information. It is displayed as hypertext and can be accessed through software known as a browser. Websites contain HTML, which is used to write information on web pages, and JPG, GIF, PNG, and MIDI, Shockwave, Quicktime Movie, and 3D World, as multimedia objects, used to present information [10].

2.7. Understanding PHP

PHP (Hypertext Preprocessor) is a server-side scripting language that combines HTML to create dynamic web pages. The goal is to allow commands and syntax to be executed entirely on the server but included within the HTML document [11]. It can be implemented in a relatively short time [12].

2.8. Understanding MYSQL

MySQL is a database engine or database server that supports the SQL database language as an interactive language for managing data. MySQL is a multithreaded, multi-user SQL database management system (DBMS) software [13].

3. Research Methods

According to [14], research methods are the science that explains how research should and should be conducted. Research methods will come later after researchers properly understand the science of research itself, namely how research should be conducted to meet scientific principles. In this study, the research method used is a qualitative descriptive method, where data is collected in the form of verbal sentences, not symbols, numbers, or figures. Qualitative data is obtained through a process using in-depth analysis techniques. The descriptive method is one of the research methods chosen when conducting research. Descriptive research is a research method that seeks to describe the object or subject being studied in depth, broadly, and in detail [15].

3.1. Data source

The following are some data sources the author obtained:

1. Primary Data
The data obtained was obtained directly from the sources, namely Rizky Fadjhri, one of the founding figures of HMI Prabumulih City, and Arivaldo, the current chairman of HMI Prabumulih City.
2. Secondary Data
Secondary data is data that supports the primary information and can be obtained from books, documents, the internet, observations, and other sources.

3.2. Data Collection Techniques

The techniques used in data collection were as follows:

1. Interviews
Interviews were conducted to collect data directly through question-and-answer dialogues with informants. The researcher interviewed Rizky Fadjhri and Arivaldo regarding issues within HMI, particularly regarding new member registration.
2. Observation
In this stage, the researcher visited the location of the research, namely the HMI Prabumulih City Secretariat, to collect the data for the study.
3. Documentation
In this stage, the researcher collected various types of concrete data related to the problem being studied. During the documentation stage, the researcher used documents, photographs, videos, written texts, and other materials to obtain the desired data.

4. Proposed Use Case diagram

Below is a description of the proposed Use Case diagram for the HMI Organization of Prabumulih City:

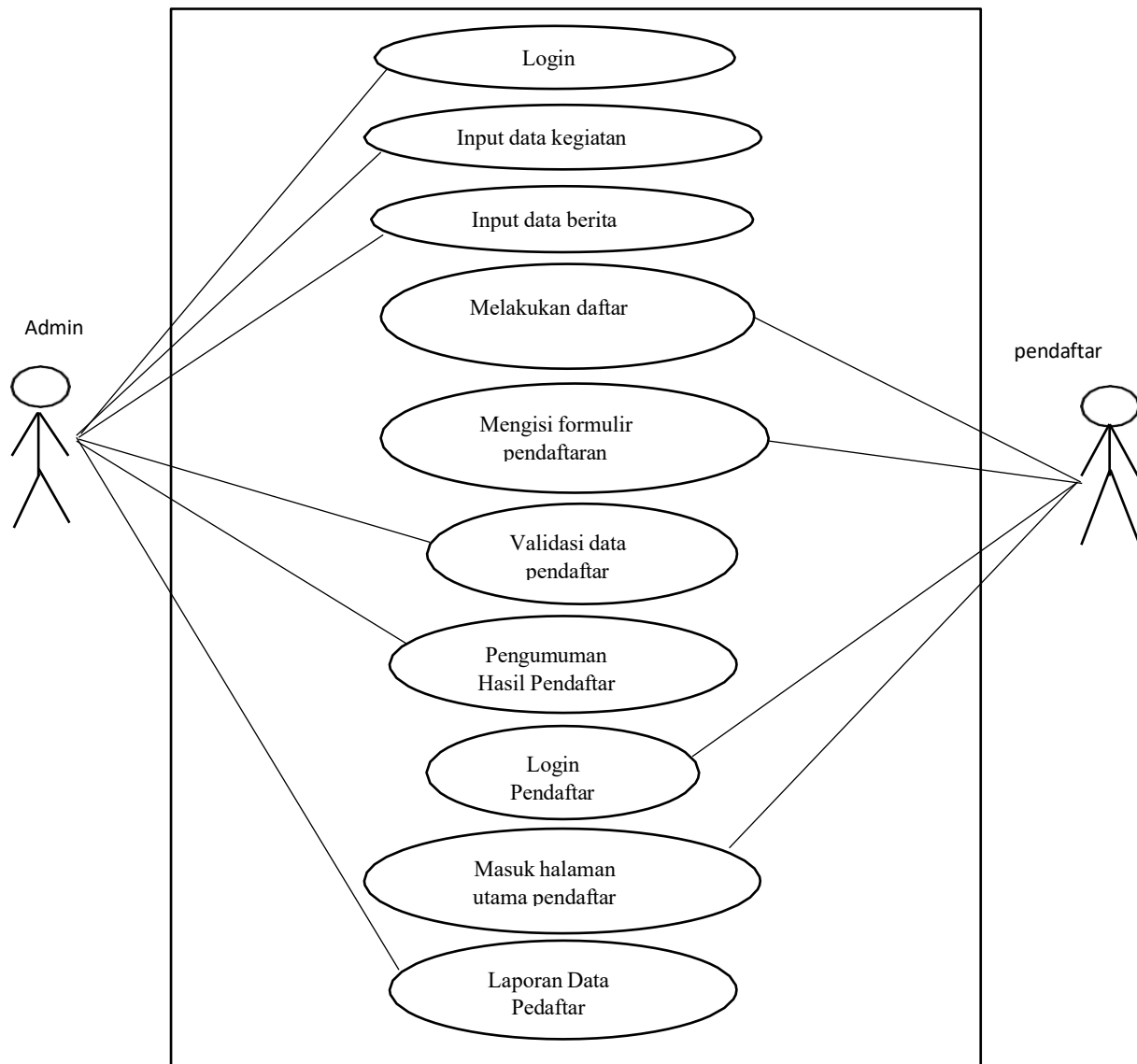


Fig. 1 : Proposed Use Case diagram

Based on the activity diagram above, the Admin Login opens the website then the system will display the login form, after that the admin enters the username and password, if the username and password are correct then the system will enter the main page, if it is wrong then the system will display the login form again, Done.

5. Implementation and Testing

5.1. Interface Implementation

Interface implementation, in this case, involves creating the display that the user will see by designing the interface on a form on the website. The interface implementation must align with the user's requirements so that the program can be used immediately. Interface implementation includes the following:

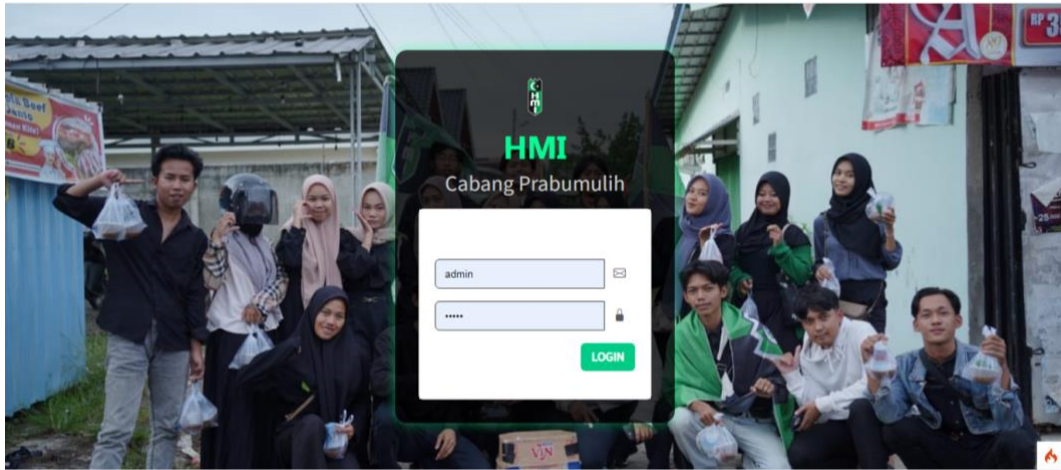


Fig. 2 : Admin Login Page View

On the admin login page, it functions to verify the user to be able to access the website as an admin based on the username and password that have been registered in the database with several special features.

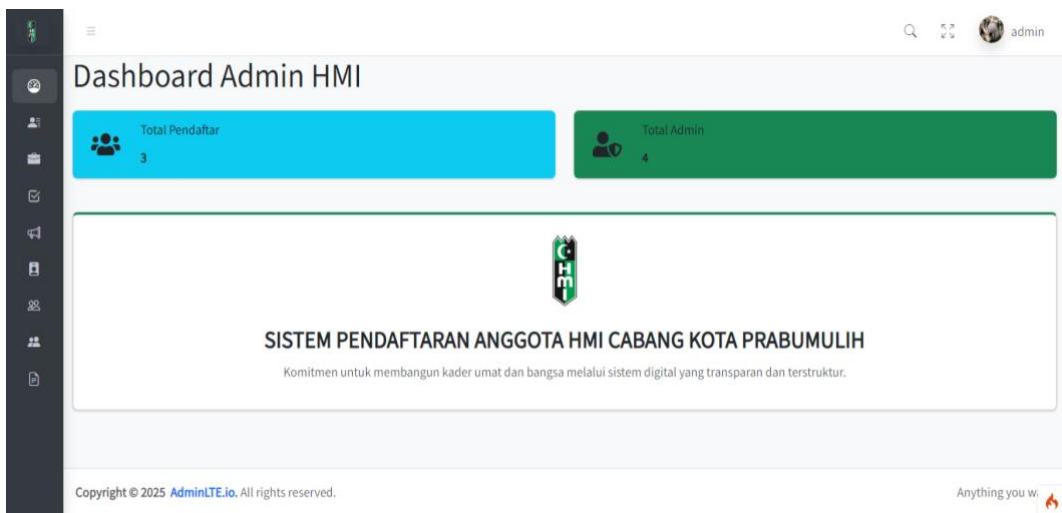


Fig. 3 : Admin Dashboard Page View

On this page, the admin can see the homepage of the HMI Prabumulih website which displays the number of registrants.

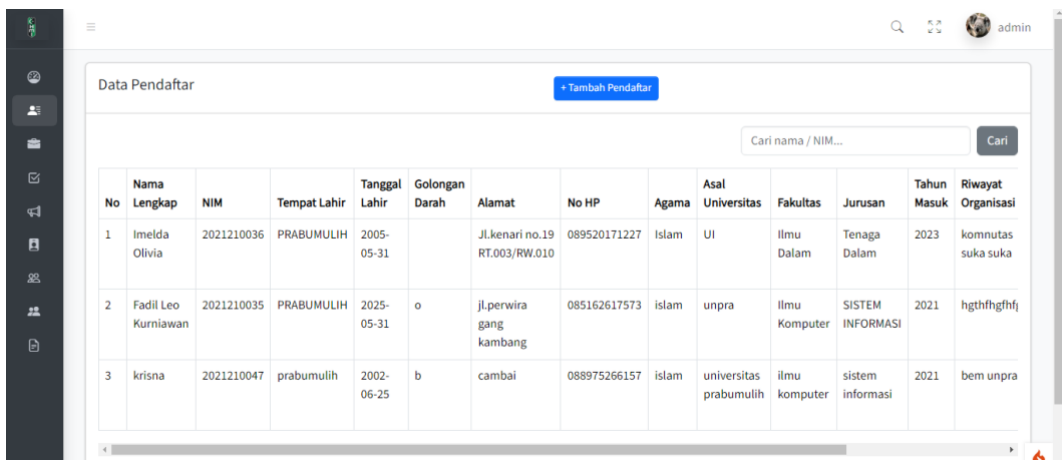


Fig. 4 : Applicant data page view

On this page is the registrant data display page to see how many registrants there are and all the registrants' personal data.

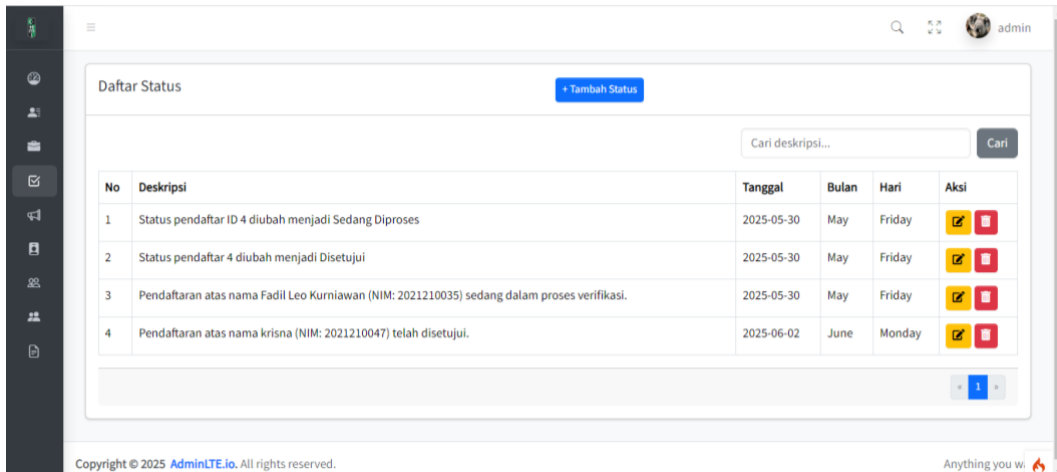


Fig. 5 : Applicant Status Page View

This page displays the applicant's status data for validation or approval.

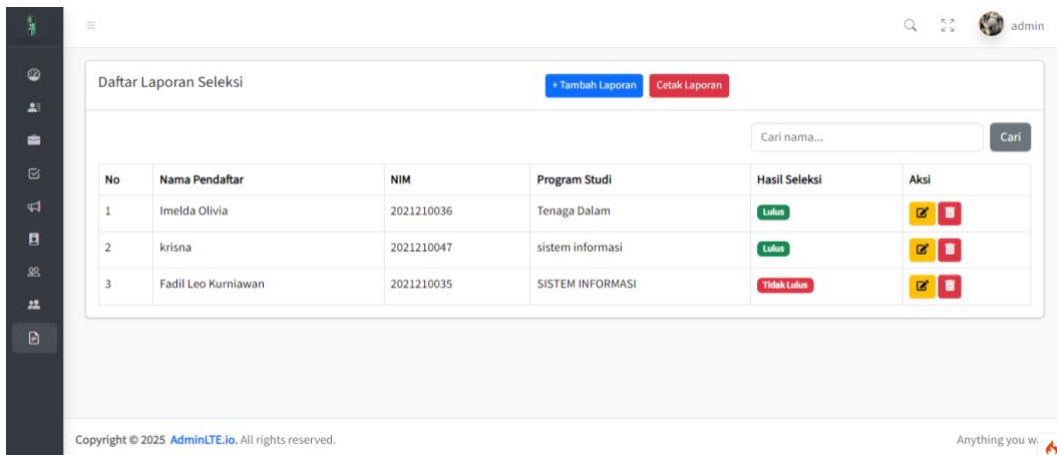


Fig. 6 : Report Page View

On this page is the report display page where we can edit, add and print.

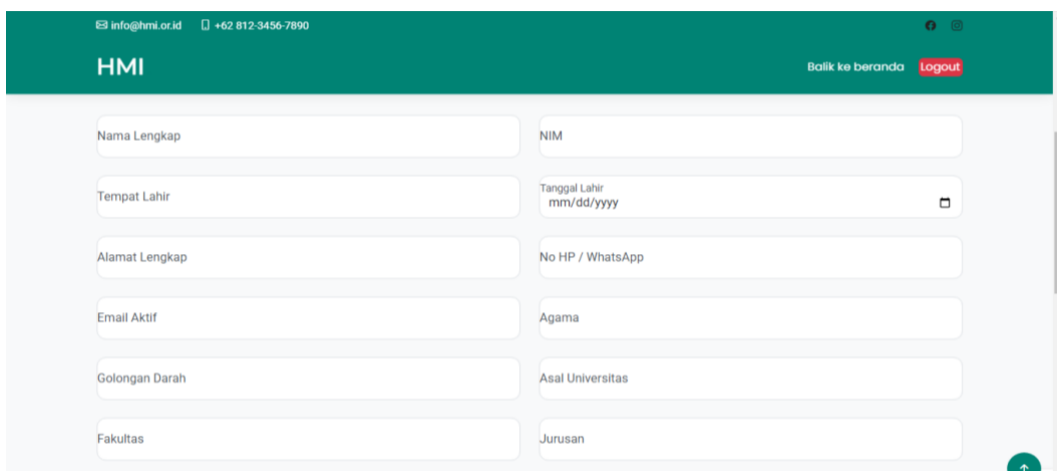


Fig. 7 : Applicant List Page View

This page displays the requirements for participants to register as new members.

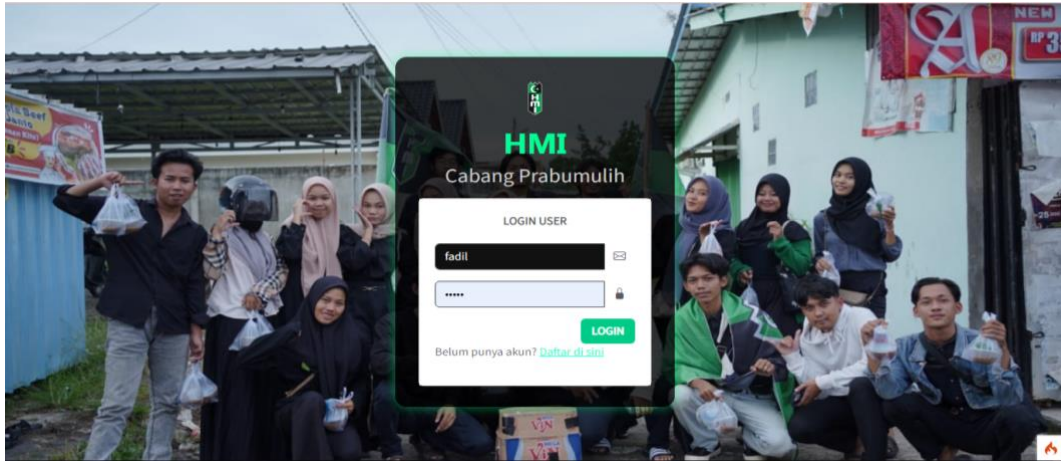


Fig. 8 : Display of the User Login Page

This page displays the user login page, which is useful for entering the HMI Prabumulih City website.

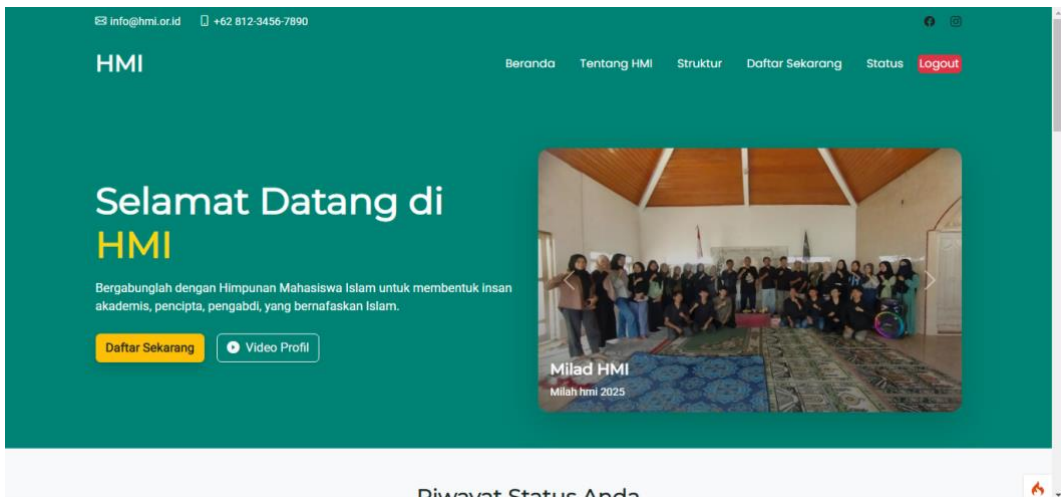


Fig. 9 : Applicant Home Page View

This page is the homepage of the HMI organization, including the structure, activities, vision, mission, and history of HMI Prabumulih City.

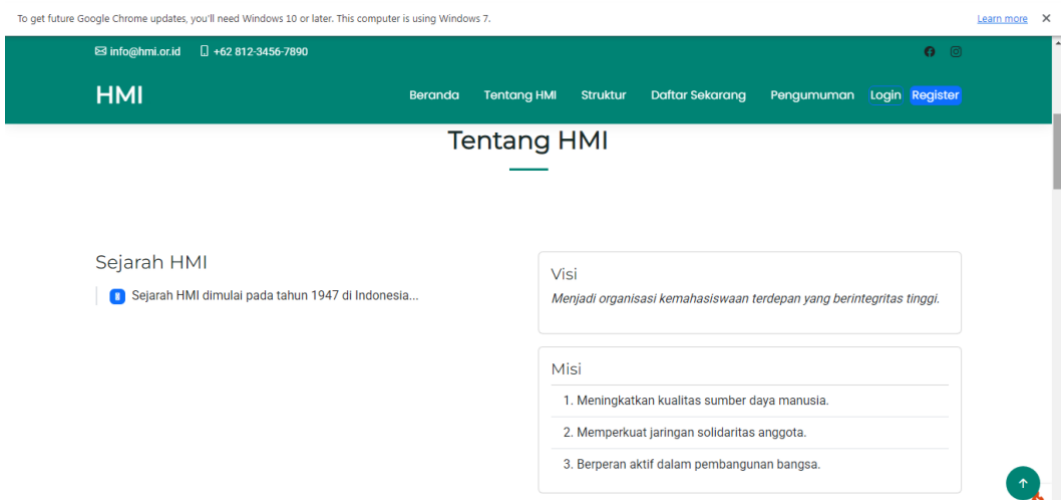


Fig. 10 : Profile Page Views

This page contains the vision, mission and history of HMI Prabumulih City.

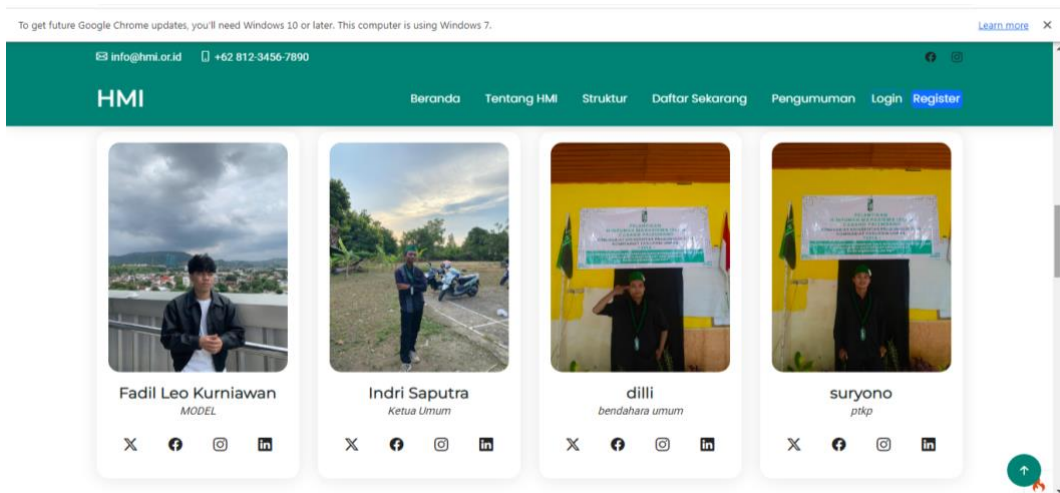


Fig. 11 : Management Page View

This page contains the administrators and heads of the HMI Prabumulih City Organization.

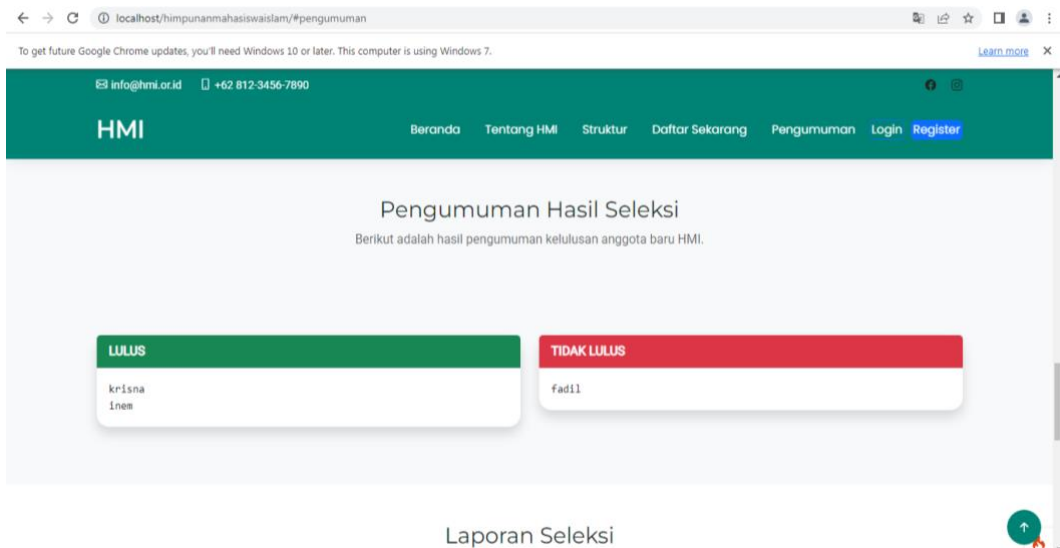


Fig. 12 : Announcement Results Page Display

This page displays the selection results of prospective applicants.

5.2. System Testing

System testing is the stage performed after the interface is implemented. It involves testing the website and existing features to ensure they are used correctly. Based on the test results, the author concluded that the interface implementation test was functional and running according to design.

6. Conclusion

Through the design and development of a web-based system, the registration process can be conducted more flexibly, anytime and anywhere during the new member registration period. This system allows applicants to fill in their data independently, making it easier for both the committee and applicants to complete the registration process in a more structured and efficient manner. Therefore, a Design and Build Plan for the HMI Prabumulih City Member Registration Organization was created, which can be summarized as follows:

1. The Rapid Application Development (RAD) approach was used in the system development process because it supports rapid development and is responsive to changing needs. The system is equipped with a simple user interface, a secure database, and applicant data management features that facilitate the committee's verification and recapitulation processes.
2. The web system design for the HMI Prabumulih City member registration organization uses the RAD method with a UML model supporting design tools, use case diagrams, activity diagrams, and class diagrams. The programming language used is PHP and the MySQL database. The research method used is descriptive qualitative, where data is presented in the form of verbal sentences rather than symbols, numbers, or figures.

Functional testing results indicate that the system functions as expected and meets the basic needs of managing new member registration online. Overall, this system provides a practical solution to the problems that have been faced by the registration committee and prospective

members of HMI Prabumulih City. This is a text of acknowledgements. Do not forget people who have assisted you on your work. Do not exaggerate with thanks. If your work has been paid by a Grant, mention the Grant name and number here.

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