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Design Of Web-Based Head Of Environmental Performance Information System Application (Sijali) Using Rapid Application Development (Rad) Method

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ABSTRACT

In the era of increasingly sophisticated information technology development like today, in accordance with the Vision and Mission of the Mayor of Medan, namely Medan Maju, a new breakthrough in the form of digital innovation is needed. Given the frequent accumulation of files from the report reports of each rank, both ASN, PHL, PPPSU, and the Head of the Environment. and often get complaints from the Head of the Environment behind the high intensity of their work in Medan Petisah District they must also make so many reports in hard copy form, so the author thought of facilitating the work of the Head of Environment while efficiently using Paper at the Medan Petisah Sub-District Office by designing a Web-Based Application namely the Head of Environment Performance Information System (SIJALI) using the Rapid Application Development (RAD) method, which later this application can be accessed with a smartphone or computer through a browser or in the form of a website.

Keywords:
Performance Report,
Application,
Website,
RAD,
UML.

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INTRODUCTION

Employee performance (in this case the Head of Environment) is a central issue in the life of an organization because an organization or company will be able to achieve its goals or not, depending on how well the performance shown by its employees. The importance of the role of an employee's performance towards the goals of the organization, makes an organization need to implement management along with good, transparent and objective performance assessments for employees or staff in order to obtain a real portrait of employee performance. And good and effective performance assessments to be implemented in an organization to support the achievement of common goals. Given that the Head of Environment's work is quite high intensity plus having to report his activities every day makes the Head of Environment feel overwhelmed and many are late in reporting the results of their work to the Head of the Government Section which will later be manually summarized at the end of each month. And when collecting the end of month reports, there will be a lot of paper piling up.

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Related research that has been conducted is research conducted by Dandi Adrian, et al entitled Design of Web-Based E-performance Systems at PT. Global Service Management (Case Study: PT. Global Service Management in South Tangerang City). It can be concluded that the system development process involves Users, Administrators, Super Administrators and Owners. (Jakarta & Andrian, 2021). From previous research, there are still some shortcomings in my opinion, including the absence of activity documentation and the less specific Value Coverage, but with the development of this E-Performance application system, it seems to be very helpful for users and owners. Based on the problems above, this study aims to develop the E-Performance System Design which was previously more complex, especially for Employees (Head of Environment), namely the Head of Environment Performance Information System (SIJALI) using the Rapid Application Development (RAD) method.

METHODS

Rapid Application Development (RAD) Method.

The RAD (Rapid Application Development) software development method is a software development process that emphasizes a short development cycle. Another definition states that the RAD software development method is a method that uses an object-oriented approach to system development that includes device and software development. (Musyafa, 2021).

System Development Method.

In developing this system, the Rapid Application Development (RAD) method is used. The following are the stages used. In the Rapid Application Development (RAD) method, it can be seen as follows:

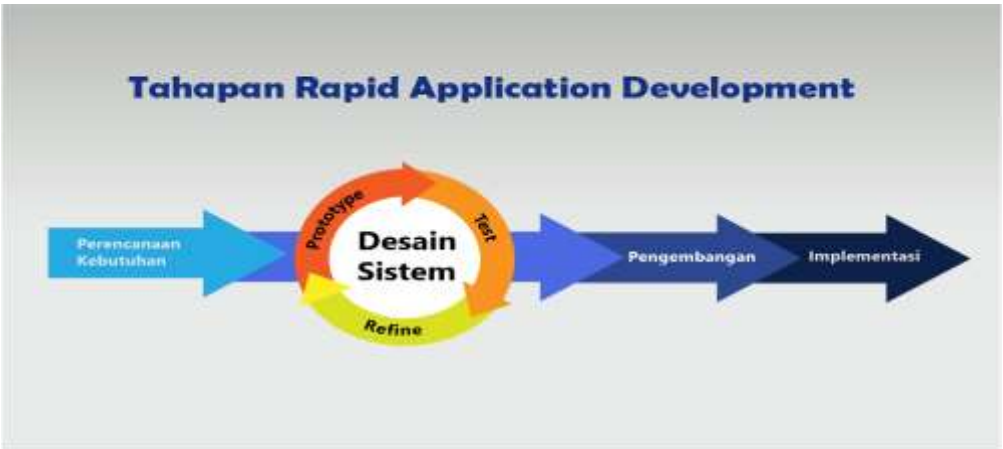

Figure 1. Stages of Rapid Application Development

Medan Petisah District

According to the Elders and Community in Medan Petisah District, the history of the naming of Petisah began with an ice factory located on Jl. S. Parman called "Sari Petojo Es" around the 1960s, the Ice Factory produced ice cubes (ice blocks) packed in crates. Along with the increasing number of people who bought Sari Petojo Ice which was packed in crates that were wet due to the melting of the ice, so the community called "Peti Basah" to "Petisah".

System Design.

In the system design stage, Activeness in communicating and exploring information related to the performance reporting process is very important so that there are no many repetition processes in the system. The output of this stage is a software specification that includes the organization in the system in general, data structure, and others. The following is the flow of using the Head of Environment Performance Information System (SIJALI):

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1. First, the Super Administrator must log in to the super administrator account to be able to access the main menu of the information system directly.
2. The Super Administrator who has successfully logged in to the SIJALI system adds the Village admin (Head of Village Government Section) and creates his/her account.
3. Admins who have been added and have their accounts created can log in to their respective admin accounts.
4. After that, the Admin adds a user and creates a user account for the SIJALI Application, namely the Head of the Environment.
5. Users (Head of Environment) can view, search for and input daily reports.

Designing prototyping by making temporary designs that are centered on presentation to customers by making temporary system designs such as Use Case Diagrams, Activity Diagrams, Sequence Diagrams, and Class Diagrams.

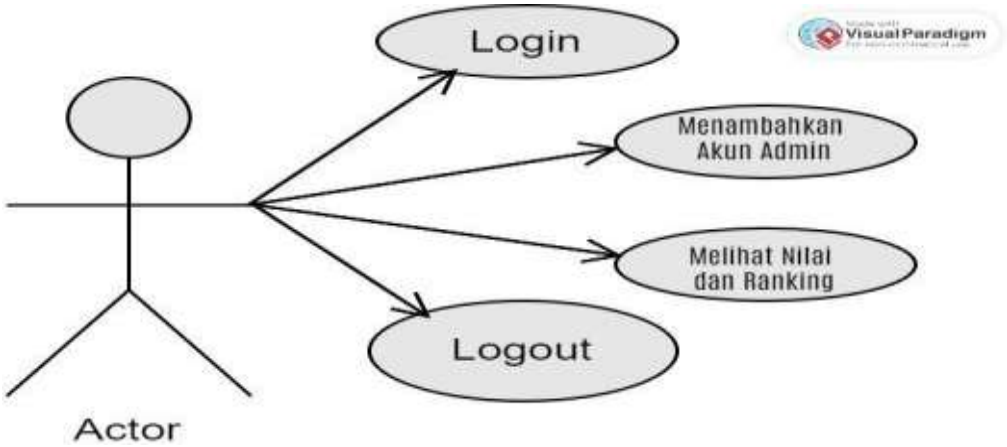

Figure 2. Early prototype of Super Administrator

Initial prototype design of Super Administrator, from the diagram above it is explained that this account has access to start logging in, adding Village Admin accounts, viewing rankings and scores up to resetting passwords.

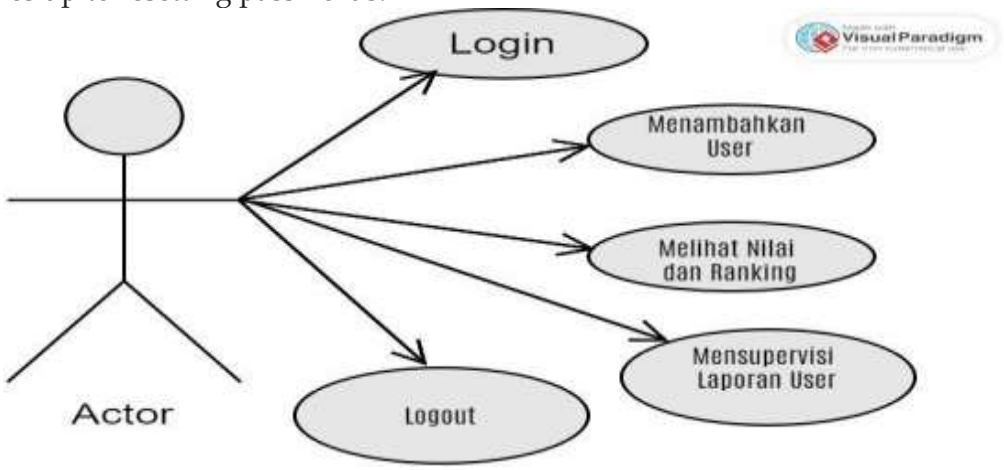

Figure 3. Early Admin Prototype

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Initial Admin Prototype design, from the diagram above it is explained that this account has access to start logging in, adding Head of Environment User accounts, viewing rankings and scores up to supervising Head of Environment Performance Reports.

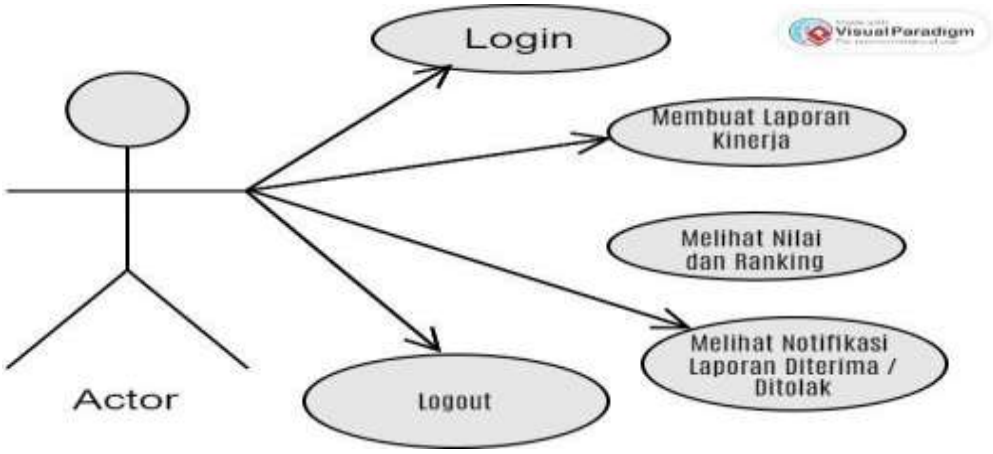

Figure 4. Initial User Prototype (Head of Environment)

System Design

Use Case Diagram describes the functionality provided by the system. In the system design, Use Case Diagram is used to explain all the functions that the system must have which contain features that can be used by admins and consumers. The following is a system use case design. The following is a Use Case Diagram of the Head of Environment Performance Information System (SIJALI) as follows:

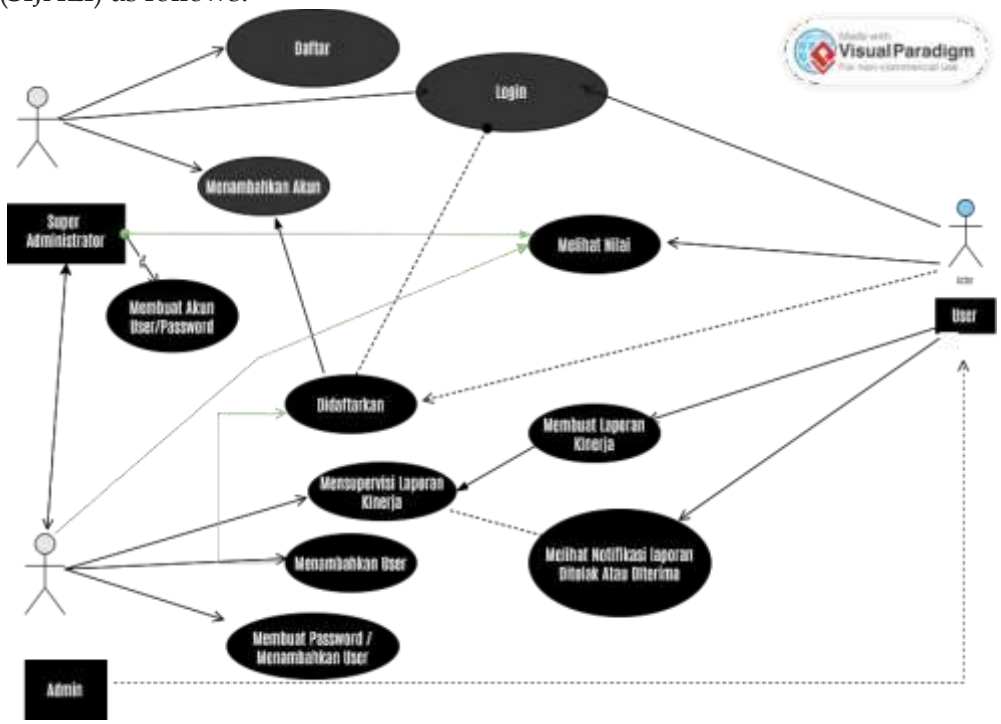

Figure 5. SIJALI Application Use Case Diagram

From the use case diagram, it can be seen that there are 3 actors who use the application and features of the SIJALI Application, including Super Administrator (Sub-district), Admin (Village), and User (Head of Environment).

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Research result

Access to the Head of Environment Performance Information System (SIJALI)

The SIJALI application can be accessed via a browser with the following link https://sijali.pemkomedan.go.id/, but it is more recommended to use Chrome.

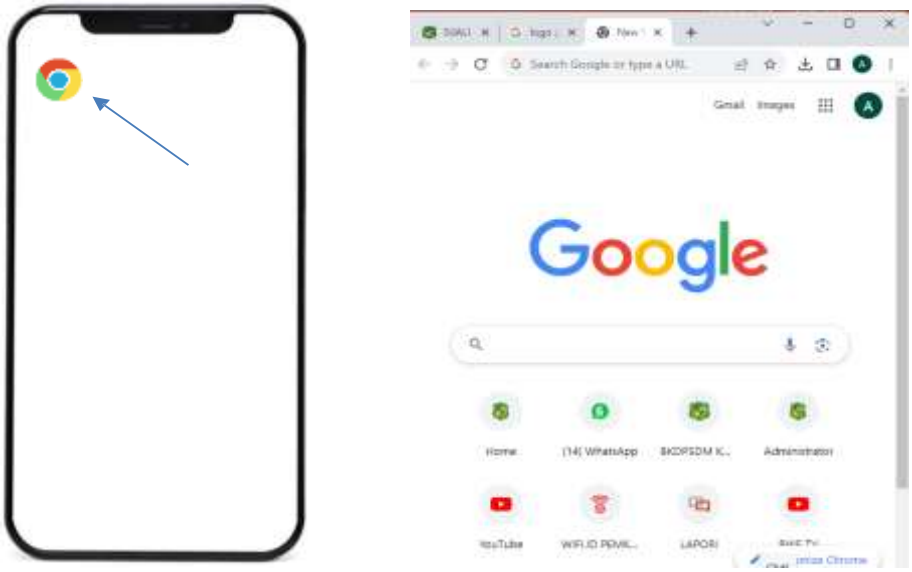

Figure 6. Link to Open SIJALI in Chrome Browser

Super Administrator, Admin and User login display

The login screen is the initial page required to authenticate yourself by entering the correct username and password before you can access the system's administration or dashboard area. This is important to maintain system security.

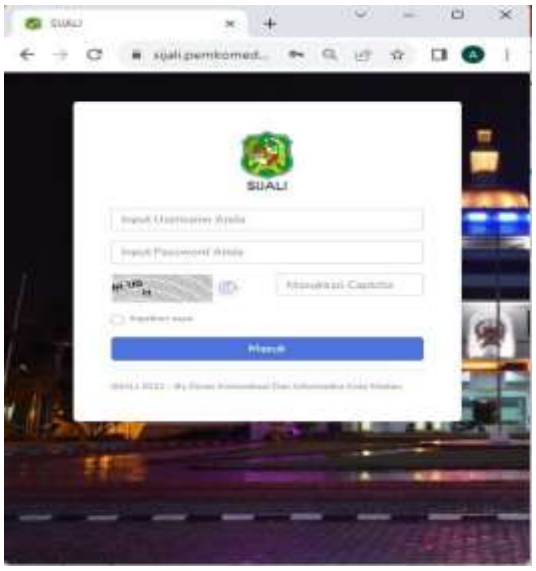

Figure 7. Admin Login View

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Dashboard view

The dashboard view is a graphical interface that gives administrators full control over the system. It presents performance monitoring information, user management, and efficient system settings.

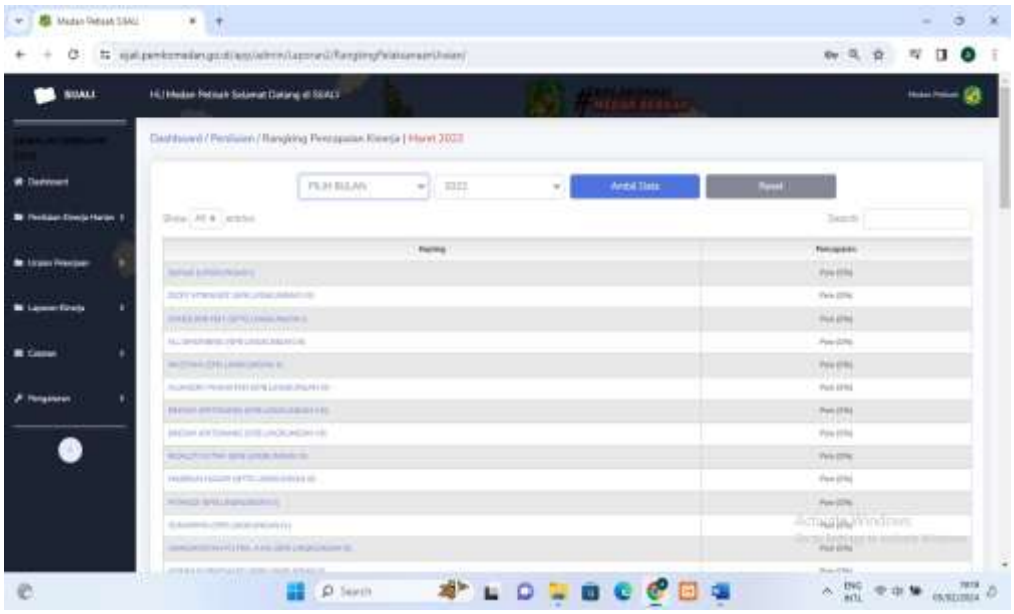

Figure 8. Super Administrator Dashboard View (Sub-district)

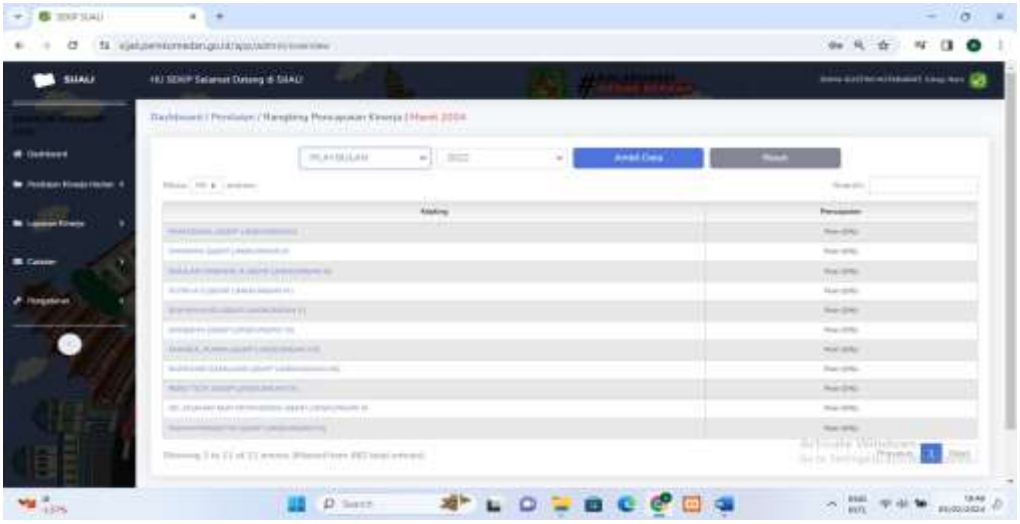

Figure 9. Admin Dashboard View (Sub-district)

Figure 10. User Dashboard View (Head of Environment)

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Add User Menu Vie

The Add User Menu view is a menu for Super Administrators and Admins to add users, enter User Data and Create Accounts.

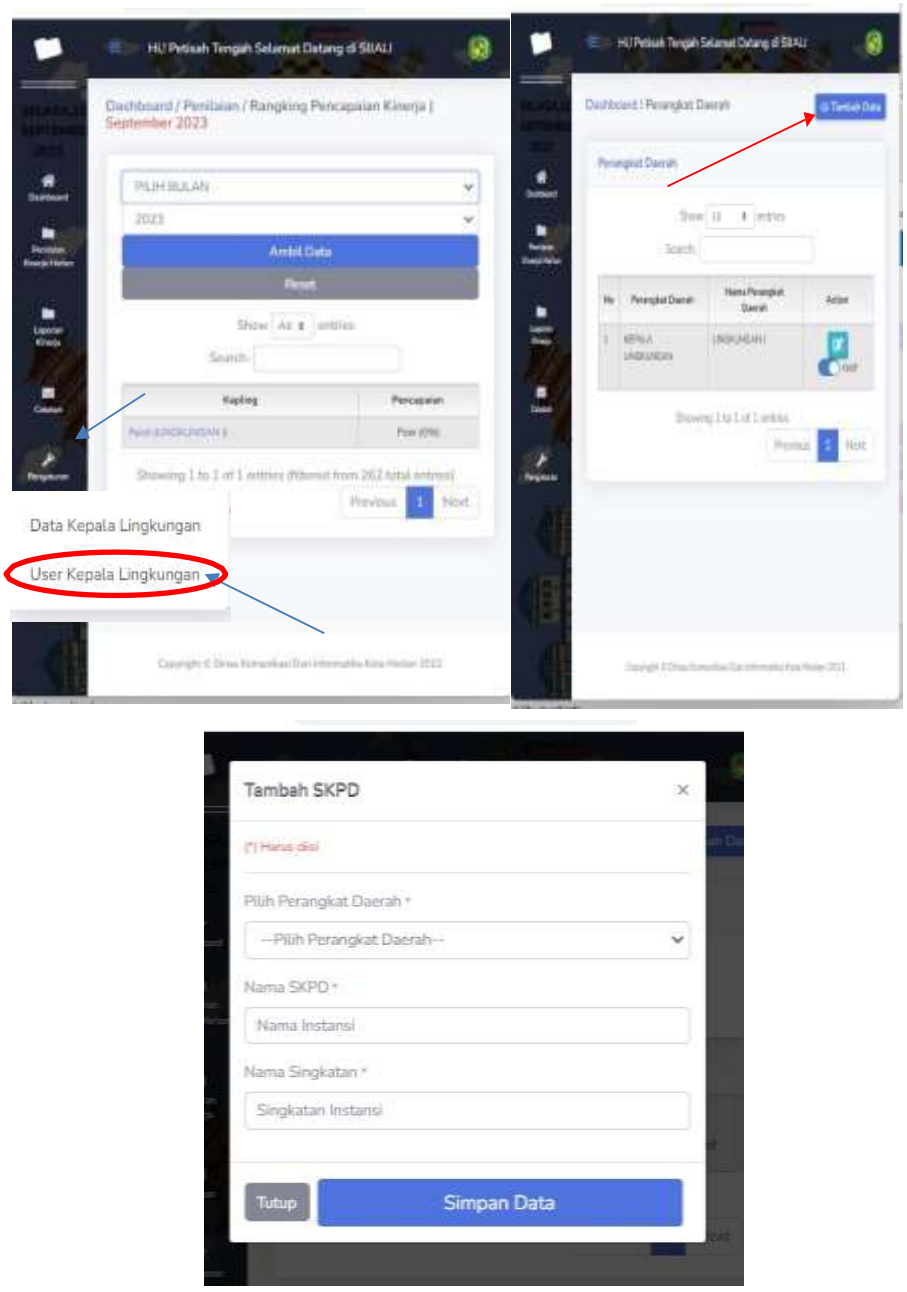

Figure 11. Add User Menu View On Admin

Performance Report Content Menu Display

The Performance Report Content Menu is a feature or menu that is only available on the user account (Head of Neighborhood), with this feature they can input the results of their work accompanied by photos as supporting evidence. For Job Descriptions taken from the Job Description List that has been Shared through the Admin (Sub-district) to their respective Heads of Neighborhood.

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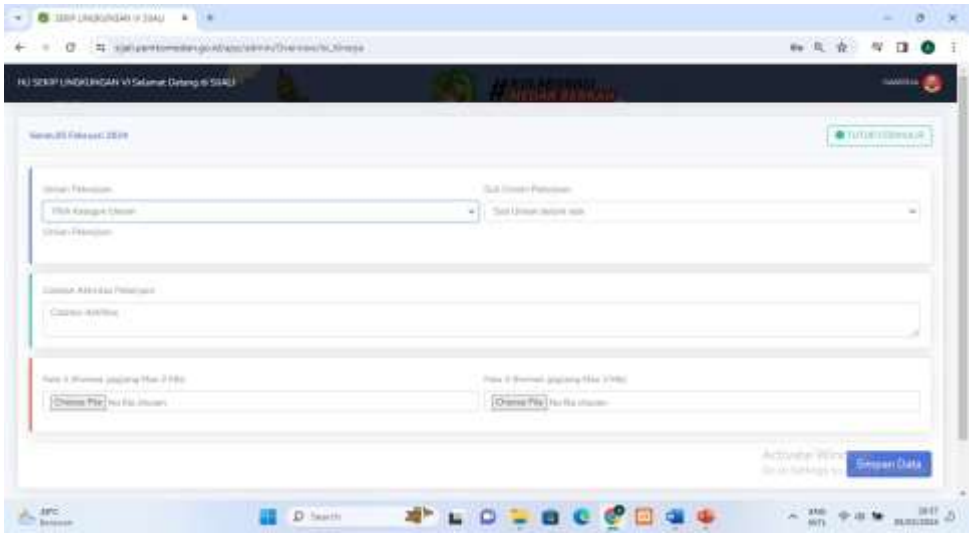

Figure 12. Performance Report Content Menu View

Display of Supervision Menu by Admin (Sub-district)
In the Supervision menu, the Admin (Sub-district) has the right to accept or reject reports sent by the Head of the Environment by including notes or reasons for rejection.

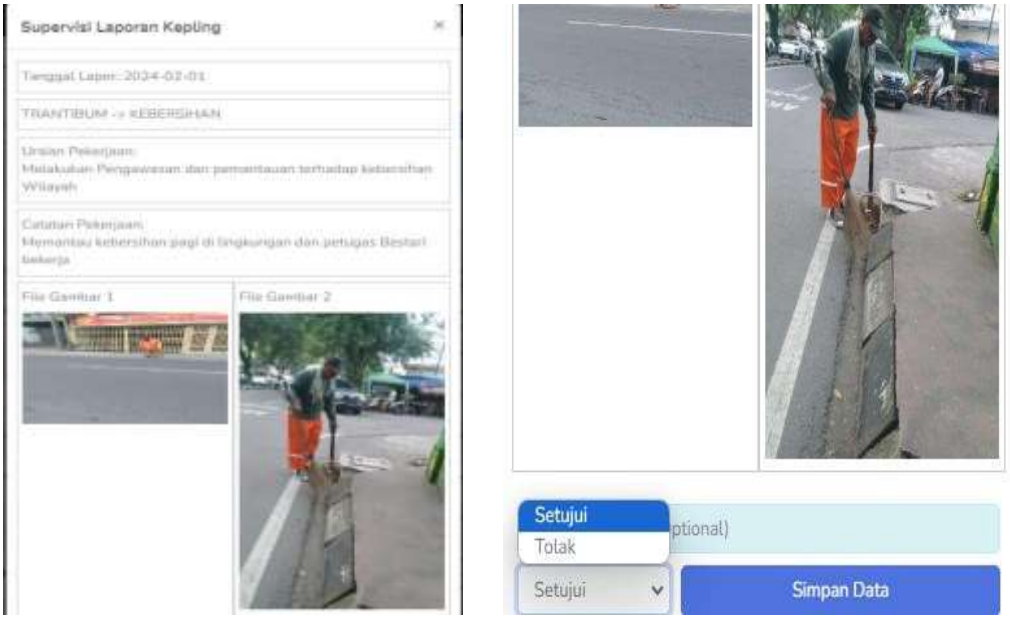

Figure 13. Supervision Menu View

Display the Performance Achievement Ranking menu
In this menu, the ranking order of each Head of Environment will be displayed, ranking is done through the accumulation of the most points as follows:

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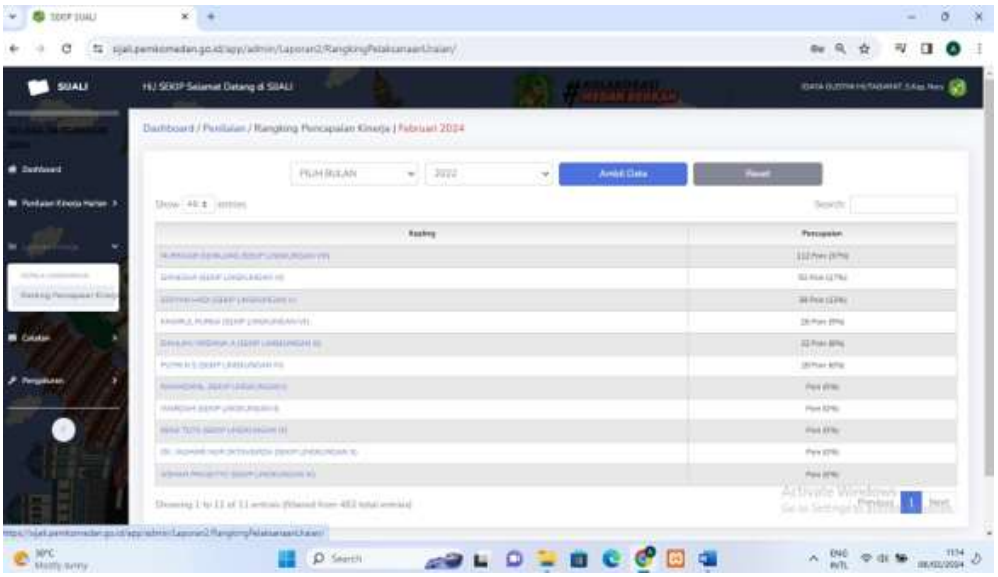

Figure 14. Head of Environment Performance Achievement Ranking Display

Discussion

In designing this system, the Rapid Application Development (RAD) method is used. The results of the system implementation and evaluation include the interface display, features, and performance testing and evaluation. Implementation focuses on the principle of intuitive, attractive, and easy-to-use interface design with the Dashboard page, Head of Environment Ranking and points and the Performance Report Content page as well as Performance Report Supervision. After the implementation and evaluation stages, collect feedback from users/Head of Environment regarding the Design. This method facilitates testing the functionality and interaction between system elements. The testing process involves:**:**

1. Test Scenario Determination: Establish test situations to test the core features of the system.
2. Functionality Testing: Testing whether the system runs according to user expectations.
3. Input Error Testing: Perform testing for invalid or potentially damaging input.

The design of the Head of Environment Performance Information System (SIJALI) application aims to create a user-friendly and efficient platform for users who want to create performance reports.

CONCLUSION

From the results obtained for the design of the Head of Environment Performance Information System (SIJALI), the author can draw the following conclusions: Super Administrator can access all features and have full control. This APK system is able to process reporting faster and more efficiently. The Reporting System is tiered and well integrated. This approach is successful in utilizing the Rapid Application Development (RAD) method which can provide a clear initial view of how the application will function, allowing for more efficient development and a better understanding of user needs.

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