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Website-based National University Employee Data Administration Design

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ABSTRACT

Data storage that is done carefully will produce valid data that is good and useful for the user. this careful data storage certainly must be adjusted to a good data storage. Don't have data that has turned out well to be useful for the user. Data management and information storage media related to data, biodata and employee activities are still done manually. Managing data manually is ineffective and a waste of time, when data collection is not effective employee data. This research was made for the National University, this Web-based System as a medium for information, the programs used are HTML, PHP, Composer, and PostgreSql databases, hopefully managing data like this can facilitate the Admin in managing employee data efficiently and effectively .

1. Introduction

Higher education is a very important part as one of the national education spaces that has the responsibility in terms of educating the nation's generation to be better in the future. One way is to realize that education has quality and is directly beneficial to the community. Proper data management will produce accurate and useful information for its users. Good data management must of course be adapted to good data processing as well. Do not let any data that has been made well apparently does not provide convenience and benefits for the user.

Utilization of internet information systems can help an agency to facilitate users in processing data until the administrative activities can be run effectively, well, precisely, easily, accurately, correctly and efficiently. This is all in line with the paradigm shift from hindering regulation to pushing regulation.

Data management that runs at this time is not effective because it is still manually. Even though something has been done by computerization, it is still inefficient, and therefore the simultaneous use of data in each unit cannot be implemented. All this of course will produce the effect of the slow process that runs in the personnel section. Meanwhile, the personnel department can handle a large number of user or employee data. This employee data management includes employee data, absences, daily work plans, daily work reports, and payroll.

Personnel can support other areas by helping to produce new personnel. All of this can be concluded that personnel is one of the resources that flows through agencies and resources departments, prepares employees to do their jobdesks, and handles all data collection related to new and old employees. All personnel information is one system that is interconnected and interacts with people in an organization to achieve certain goals.

2. Research methods

2.1. Method

The system process method that will be used is the waterfall model.

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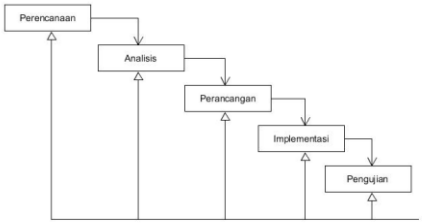

Fig 1. Process stages of the waterfall method

The stages for developing the waterfall method are:

a. Planning
   At this stage the aim is to direct development so that it can be balanced with the system that we are going to make, then limit what is and is not allowed to be done in the design of this system.
b. Analysis
   At this stage of analysis the aim is to get a thorough understanding of the testing system that we will develop based on user input. The purpose of this stage is to solve the problem with the system that we will create. The result of this analysis is to understand the whole system for preparation to the manufacturing (design) stage.
c. Design
   At this stage the aim is to determine the criteria for the form of the architectural system which must be in accordance with the standards and technological constraints, making abstracts that cannot be seen in system implementation. The results of this analysis design a responsive website design.
d. Implementation
   After going through the stages above, then the system can be implemented. To the implementation stage there are several tasks that are carried out, for example implementing a design in a component of the programming code, scripts and tables, then making architecture and testing the system properly.
e. Testing
   After doing the above steps, then there is a test. This testing can be done using the blackbox procedure.

2.2. Method of collecting data

The methods for managing data consist of primary and secondary data:

a. Primary data
   Manage data directly from the place of study. The method used to manage data, for example as follows.
   1) Interview method
      The author asks the employee at the national university student affairs section. Interviews were conducted to determine the employee's track record.
   2) Observation Method
      In this method the authors observe directly related to the problem under study for analysis
   3) Documentation method
      In this method the authors document the field data as report material.
b. Secondary data
   Secondary data can be studied through reference books, articles, SINTA indexed journals and the internet that can be trusted to be the author's reference material during conducting this research.

3. Results and Discussion

At this stage there are results of the analysis, the results of the design and implementation of website testing. The initial stage for now is the results of the analysis documented using UML (unified model language) carried out on the WEB application system that is being made in this study. The analysis is as follows:

3.1 Analysis results

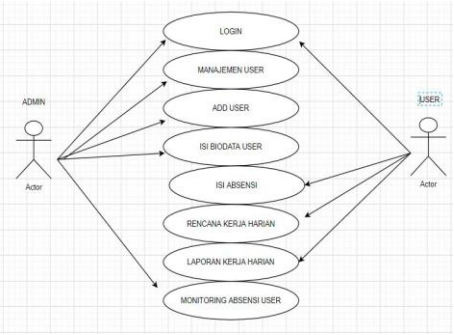

Fig 2. UC diagram

UC (Use case) diagram shows the results of the analysis of the tracer study application system in this study. Further explanation is explained in the following table:

Table 1. Information on UC (use case) diagram

No	UC	Information.
UC, 1	Login	This use case is accessed so that you can login admin or user before entering the admin page.
UC.2	User Management	This use case is accessed by the admin to add user biodata.
UC.3	Add User	This use case is accessed by the admin to add user data.
UC.4	Fill User Biodata	This use case is accessed by the admin to fill in the user's biodata.
UC.5	Fill in Attendance	This use case is accessed by the user to fill their attendance.
UC.6	Daily Work Plan	This Use Case is accessed by the user to fill in a daily work plan before being absent.
UC.7	Daily work report	This use case is accessed by the user to fill out a daily work report before being absent.
UC.8	Time Attendance Monitoring	Use Case is accessed by admin to monitor user attendance

3.2 System Design Results

Based on the results of the analysis of the tracer study information system, then after that make the system design results to find out how the activity flow in each system that is being made.

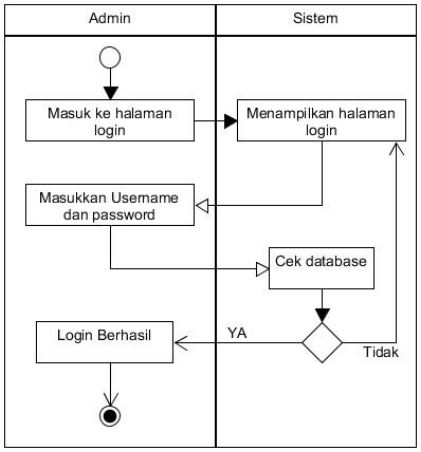

Fig 3 Activty diagram admin login

The login activity diagram in Figure 3 is an activity that can be done by the admin. This diagram consists of the login page display activity that can be accessed by the admin and then the admin fills in the username and password.

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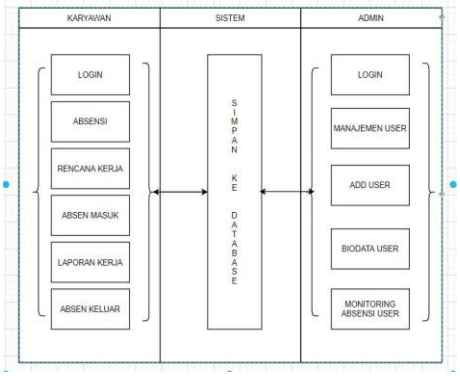

Fig 4. Activity form employee and admin flow

The alumni input activity diagram in Figure 4 is an activity that can be carried out by a user managed by the admin. The diagram consists of activities to display the input results of each user.

3.2. Login page

The login page can be accessed by the admin and user.

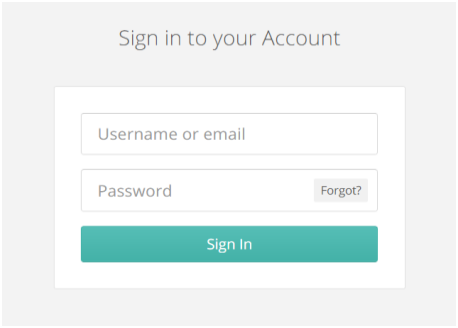

Fig 5 Login display

3.3. User input data form page by admin

This page can only be filled by the admin to add users, to add or register to be able to login.

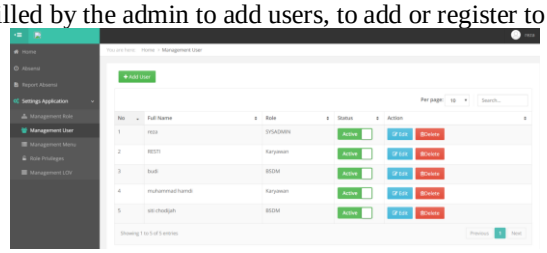

Fig 6. Display user add

3.4. Filling in user biodata by admin

This page is filling in the complete biodata of the user filled in by the admin.

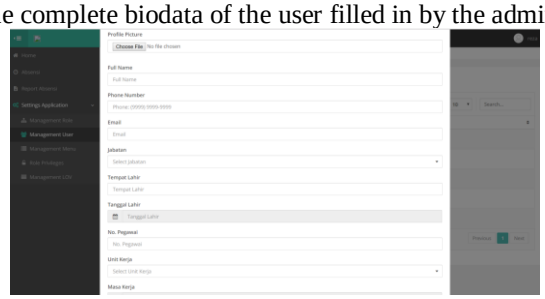

Fig 7. Display of filling user biodata

3.5. Admin page for monitoring user attendance

This page is the monitoring or report on user attendance by the admin.

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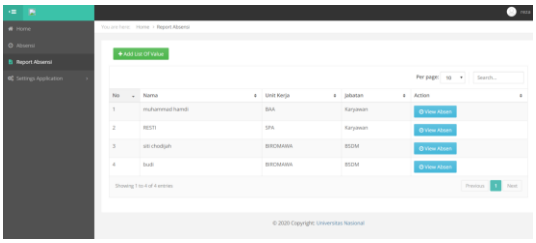


Fig 8. Display to view user attendance reports

3.6. The filling page is absent by the user / employee

This page is for users to fill in attendance. When filling in absences, users must upload the daily work plan file first, and for absences out users must upload daily work reports, and attendance. Absent in and out during working hours, this menu is made daily.

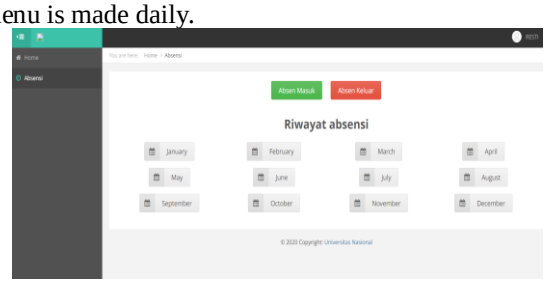
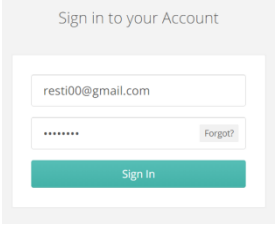
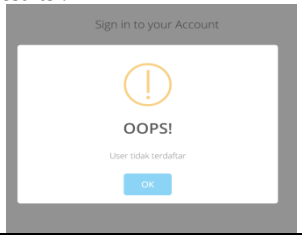
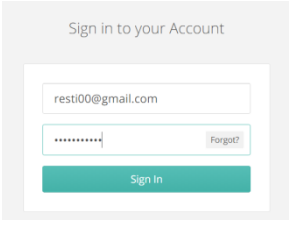
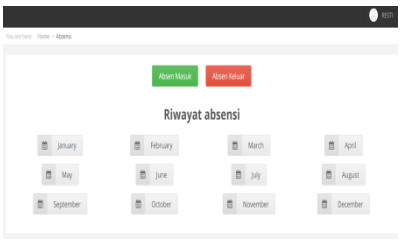


Fig 9. Display attendance filling by use

3.7. Test result

Here the author tests the website using the blackbox method on the function of each menu in the program. Blackbox testing is to provide input to the program, then it is processed so as to produce the expected output and according to the needs of the system.

Table 5
Blackbox testing table on the login form

No.	Testing scenario:	Expected results:	Conclusion:
1	Enter incorrect user email address and password, then click "Sign in" Test login: 	The system denies login access and displays an "invalid username and password" alert Test results : 	Invalid
2	Enter your user email input and password correctly, then click 'Sign In' Test case: 	The system immediately receives login access and enters the user's page. Test results : 	Valid

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4. Conclusion

From this discussion we can conclude that the employee data application information system at a national university has not been carried out optimally due to the lack of university information on employees. To optimize what happens, therefore an information system design for employee data website application is made to make it easier for the university in terms of employee data collection.

There are also conclusions that the authors found in this study are:

a. Applications made to facilitate the process of managing employee data and also to avoid data information that is wrong or missing due to a manual system.
b. In designing, this information system uses a postgreSQL database for storing news data making it easier for users to use at any time and made to be able to provide complete data information.
c. This system will be used if the standards of the campus criteria are met for good use for employees.

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