



Designing Information Systems for Payroll Process for National University- Based University Lecturers

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ABSTRACT

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Payroll is one of the important things in an organization. Salary is one of the factors that inspire employees. Therefore a timely payroll process will make employees more motivated to achieve organizational goals. The purpose of this research is to build a simple information system to process employee payroll with a case study at the National University. This information system was built using the programming languages PHP, CSS and Javascript as a user interface, and MySQL as a database. The method used in this study is the waterfall method. The stages of the method used are analysis, design, coding and testing

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1. Introduction

Along with current technological developments, requires us as users to be able to compete in mastering science in the field of information technology. Information technology also allows users to enjoy various conveniences resulting from the technology. Technology is also used as a means of delivering information, especially on website-based information systems. The application of information technology makes it easy for agencies or institutions to carry out activities and one of them is payroll management. Utilization of this information technology can help provide fast and accurate calculations to reduce late payroll and calculation errors. National University is one of the universities in the Jakarta area that requires a flexible and well-distributed information system to support the lecturer salary process. Therefore the website of the lecturer payroll process is made to facilitate the lecturer payroll processing. Salary is one important component to increase work motivation is the opinion of Garry Dessler. Salary is a component to meet all employee needs. [1]. Proper salary planning and internal justice in accordance with the duties, responsibilities, and the level of difficulty of the work must be considered by an organization. The Application Process for Payroll for lecturers at the National University uses the PHP program and the MySQL database Therefore the website of the lecturer payroll process is made to facilitate the lecturer payroll processing. Salary is one important component to increase work motivation is the opinion of Garry Dessler. Salary is a component to meet all employee needs. [1]. Proper salary planning and internal justice in accordance with the duties, responsibilities, and the level of difficulty of the work must be considered by an organization. The Application Process for Payroll for lecturers at the National University uses the PHP program and the MySQL database Therefore the website of the lecturer payroll process is made to facilitate the lecturer payroll processing. Salary is one important component to increase work motivation is the opinion of Garry Dessler. Salary is a component to meet all employee needs. [1]. Proper salary planning and internal justice in accordance with the duties, responsibilities, and the level of difficulty of the work must be considered by an organization. The Application Process for Payroll for lecturers at the National University uses the PHP program and the MySQL database Proper salary planning and internal justice in accordance with the duties, responsibilities, and the level of difficulty of the work must be considered by an organization. The Application Process for Payroll for lecturers at the National University uses the PHP program and the MySQL database Proper salary planning and internal justice in accordance with the duties, responsibilities, and the level of difficulty of the work must be considered by an organization. The Application Process for Payroll for lecturers at the National University uses the PHP program and the MySQL database



2. Research Methods

This method is one that is commonly used in designing systematic and sequential information systems namely the waterfall method. The waterfall method has the following stages;

- 1) Requirements analysis and definition
System services, constraints, and goals are determined by the results of consultations with users who are then defined in detail and function as system specifications.
- 2) System and software design
System design stages allocate system requirements both hardware and software by forming the overall system architecture. Software design involves identifying and describing the software system's basic abstraction and its relationships.
- 3) Implementation and unit testing
At this stage, software design is realized as a series of programs or program units. Testing involves verifying that each unit meets its specifications.
- 4) Integration and system testing
The individual units of the program or program are combined and tested as a complete system to ascertain whether it matches the software requirements or not. After testing, the software can
- 5) Operation and maintenance
Usually (although not always), this stage is the longest stage. The system is actually installed and used. Maintenance involves correcting errors that were not found in the previous stages, increasing the implementation of the system unit, and improving system services as new needs.

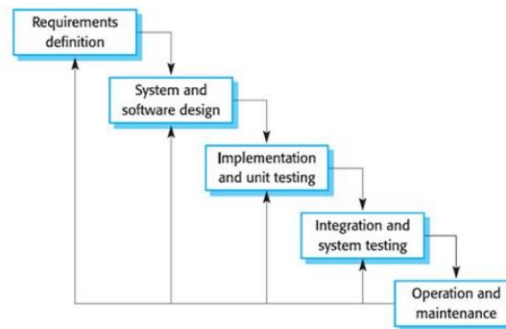


Fig 1. Waterfall method

Figure 1 is a chart of the waterfall method which is the development method used in the design of this information system.

3. Results and Discussion

In this study researchers used the Hardware specifications as follows:

Table 1
Hardware Specifications

Device	Specification
Processor	Intel Inside Core i3
RAM	2GB
Hard drive	500 GB

Table 2
Software used

Software
Xampp v3.2.3
Sublime Text 3
Adobe Dreamweaver CS5

A. Use Case Diagrams

Use case diagrams are diagrams that illustrate the relationship between actors and the system. In the picture Use Case Diagrams can be concluded that the admin can access all features while the user can only see Attendance.

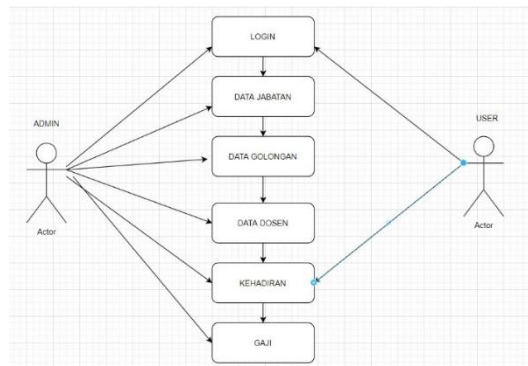


Fig 2. Use Case Diagrams

B. Flow chart

In this view shows the system workflow as it should from the start to. In the website flowchart section begins by starting to open the website first. Then after opening the website will be shown the initial appearance of the website along with an information slider that contains information on research that has just been completed or so on. Continue on the initial menu there are categories of research that we want to see or download including lecturer research, final project, thesis and thesis of students at the National University . In addition there is also community service information that has been carried out by a research team or lecturer at the National University.

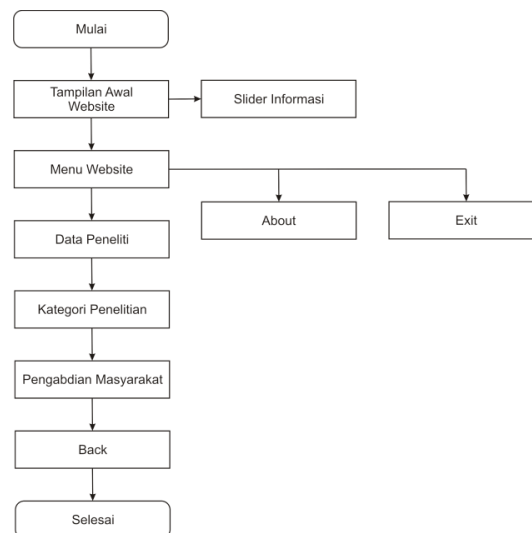


Fig 4. Application Flowchart

C. Activity Diagram

Class Diagrams that illustrate the relationship between classes and objects with each other. The following is a class diagram of the SIPPM information system for a lecturer based on a website using the waterfall method.

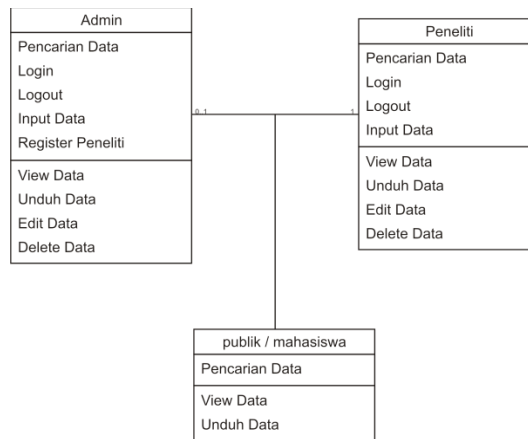


Fig 5. Class Diagram

D. ERD (Entity Relationship Diagram)

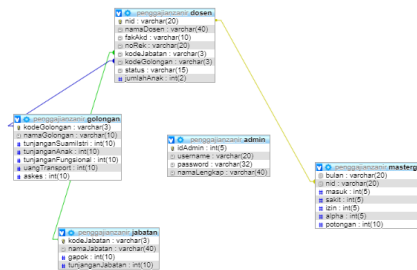


Fig 6. ERD (Entity Relationship Diagram)

In the picture above is an Entity relationship diagram (ERD) of the database where there are 4 related tables, namely position, class, lecturer, and master salary.

E. Implementation

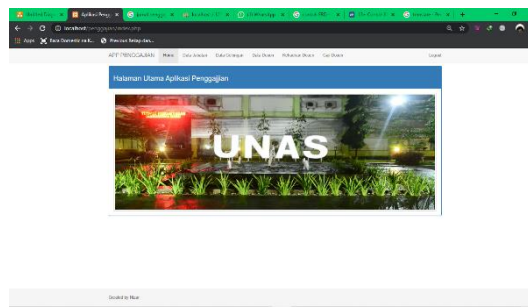


Fig 7. Main Display Application

The picture above is the main display on the Lecturer Payroll website. Main Display only contains UNAS tumbnails.

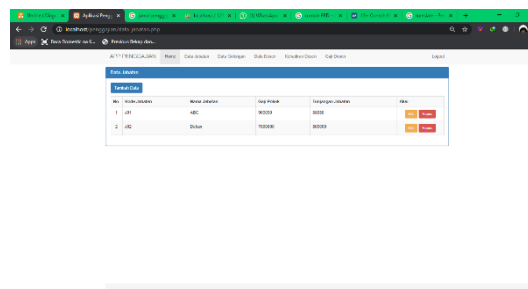


Fig 8. Fill in Job Data

In the Position Data contains the Position Code, Position Name, Main Salary and Position Allowances.

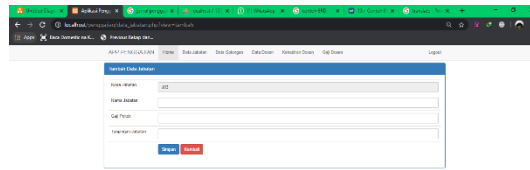


Fig 9 Add data to the Position Data menu

The picture above is a display if we want to add position data.

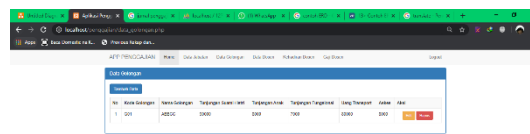


Fig 10. Group Data Page

In Figure 10 a group data page display contains the Group Code, Group Name, Husband and Family Allowances, Child Benefits, Functional Allowances, Money Transport, Askes.

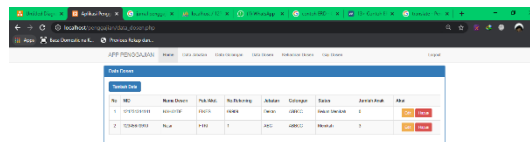


Fig 11. Lecturer Data Page

In picture 11 is the Lecturer Data page consisting of NID, Lecturer Name, Facult / Akd, Record Number, Position, Group, Status, Number of Children.

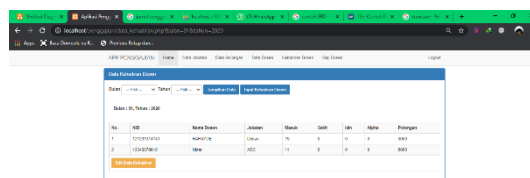


Fig 12. Lecturer Attendance Page

In picture 12 is the Lecturer Attendance Data page, consisting of: NID, Lecturer Name, Position, Entry, Permission, Pain, Alpha, Pieces.

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