



Design of a Website-Based Battuta University Employee Payroll System

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ABSTRACT

Everything in this world is bound to change, including technological advancements. Technology will never stop developing. The exchange of data and information is now very fast, even in less than a second. At Battuta University, in processing employee salaries, they still use manual calculations and use the Ms. Excel application. This can cause errors in calculating employee salaries and the process of printing pay slips and employee payroll reports that take a long time. In solving this problem, the author designs a website-based employee payroll application. In designing the application, the author uses a system development methodology, namely the waterfall and qualitative methods, with the application program language made in PHP and MySQL database. The results of this design produce a computerized application program which will be used to process web-based employee salaries at Battuta University and it is hoped that the university will find it easier to input data, compile payroll reports faster and more efficiently.

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1. INTRODUCTION

Everything in this world will change sooner or later, including technological developments. Technological development will never stop. Technology continues to develop from time to time. Where the exchange of data and information was initially slow, now it is very fast and can even be completed in less than a second. So that it affects patterns and ways of working, especially human civilization when using computer technology. Currently, computerization is very influential in various fields because it can save more time, energy and costs so that the results are more optimal. In addition, computerization can help reduce errors caused by lack of accuracy, especially in data processing, so that the results can be better.

In the current era of digitalization, the closest thing to technological development is the existence of websites. Almost all aspects of human life began to be recorded and documented in digital form on the website. A website is a set of publicly available documents that can be used by individuals, groups, businesses, or organizations to build and manage websites. In addition, websites can function for various purposes such as providing information, interacting with users, selling products or services, and becoming a platform for sharing content.

One part of the information that is of primary concern and is often used in a company is salary information. Salary is a wage that is paid periodically in recognition of an employee's work contribution. Employee salary management is part of human resource management that maintains the stability and continuity of company operations. For this reason, a website-based payroll system is needed that can overcome the weaknesses of the previous manual system at Battuta University, where the previous data processing system still uses manual payroll calculations and archive storage media for each payroll data so that errors often occur in data accuracy, limited scope of access, and complexity in the salary calculation process. This new system allows the process of inputting employee data quickly and accurately despite the large amount of data. With this system, calculation and data errors can be minimized so that time efficiency in processing and completing payroll reports is more flexible.

Based on the problems that exist at Battuta University and based on the research results, a new payroll system is needed, and integrated into a database that can make it easier for companies to calculate and collect data, so that it will minimize errors from the previous system. Therefore the author makes a payroll system and writes research results with the title "Design of a Website-Based Battuta University Employee Payroll System".

2. METHOD

Researchers here use waterfall and qualitative methods, as for some of the stages, among others, Observation is a systematic observation and recording of the symptoms studied. With this technique the researcher observes directly. Direct observation is a way of collecting data by using the eye without the help of other standard tools for this purpose. Direct observation can also obtain data from subjects who cannot communicate verbally or who do not want to communicate verbally. At this stage, researchers make direct observations at the research location and find a habit in the company that can cause a problem so that it requires ideas and planning a new breakthrough to solve the problem.

Interview is a form of communication between two people involving a person who wants to obtain information from another person by asking based on a specific purpose. This method aims to obtain answers directly from respondents in connection with the object of research. So that it can obtain valid information by asking directly with the respondent. In this activity, the resource person was Mrs. Irma Herliza Rizki as Vice Chancellor II at Battuta University.

Documentation is a method used to collect data by recording, copying, holding data or documents related to the object under study. The method used in developing this system uses a Waterfall model approach. The Waterfall model is one of the SDLC models that is often used in the development of information systems or software. This model uses a systematic and sequential approach. The stages in this model start from the planning stage to the maintenance stage and are carried out in stages.

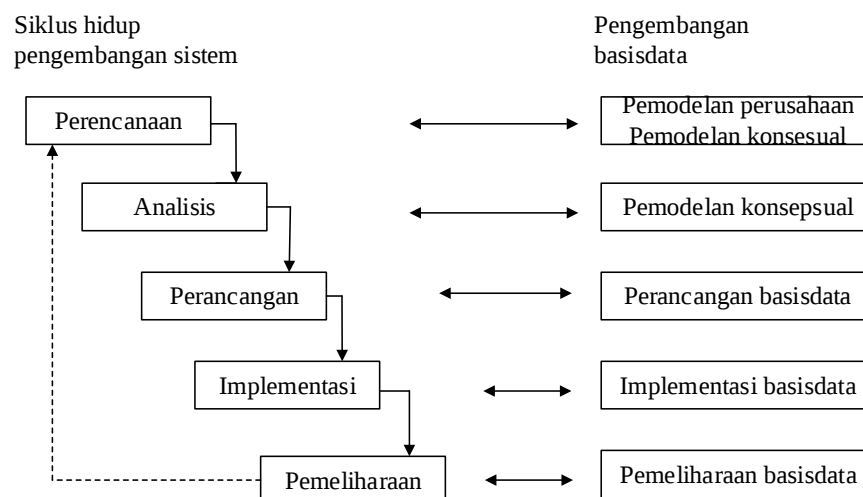


Figure 1. SDLC Model

3. RESULTS AND DISCUSSION

3.1. Use Case Diagram

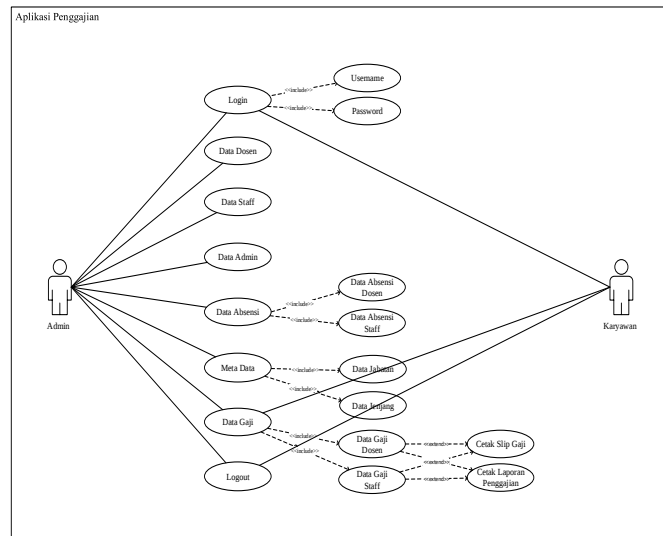


Figure 2. Use Case Diagram

Figure 2 above is a use case diagram in which there are 2 actors, namely Admin and Employees.

3.2. Activity Diagram

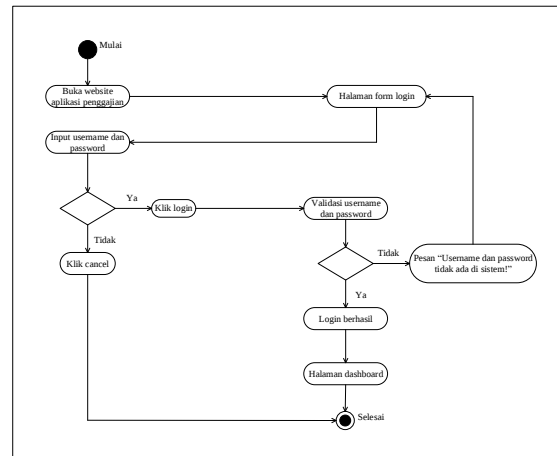


Figure 3. Activity Diagram

There are 8 activity diagrams contained in this search, namely Activity diagram login, Activity diagram lecturer data, Activity diagram staff data, Activity diagram admin data, Activity diagram attendance data, Activity diagram meta data, Activity diagram salary data, Activity diagram logout.

3.3. Sequence Diagram

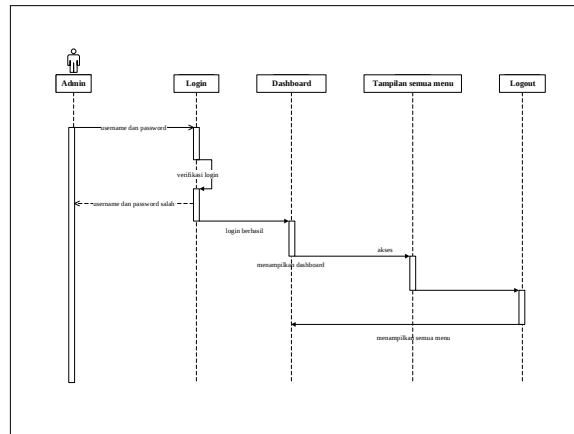


Figure 4. Sequence Diagram

Figure 4 above has one actor, namely the admin and four objects, namely Login, Dashboard, Display of all menus, and Logout.

3.4. Class Diagram

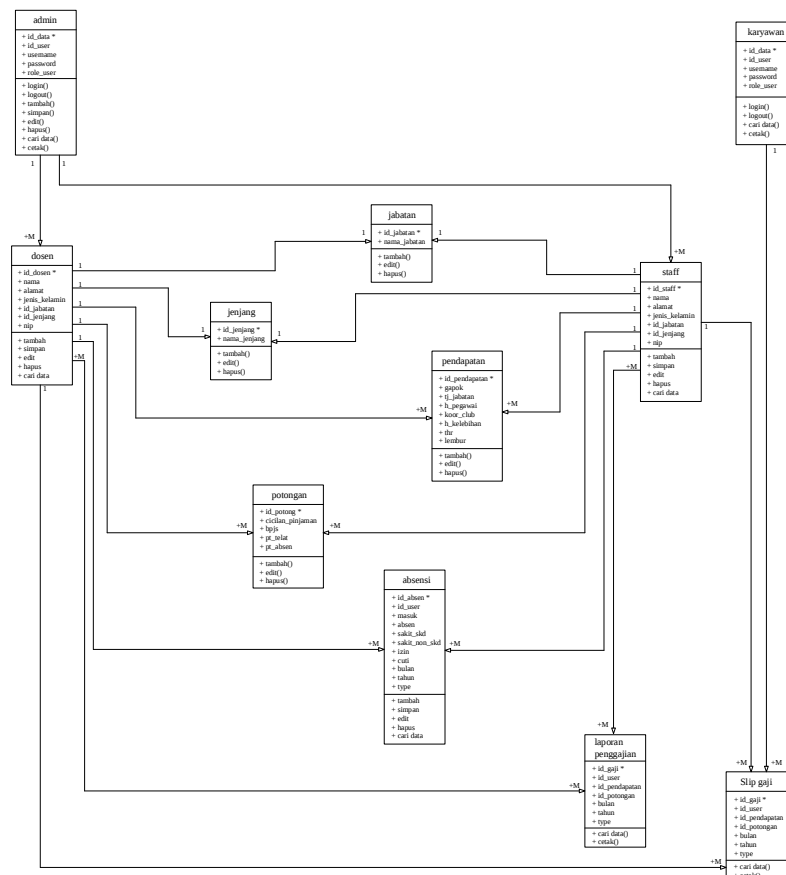


Figure 5. Class Diagram

Figure 5 above illustrates a relationship that occurs between admin, employees, lecturers, staff, positions, levels, income, deductions, attendance, payroll reports, and salary slips.

3.5. Implementation

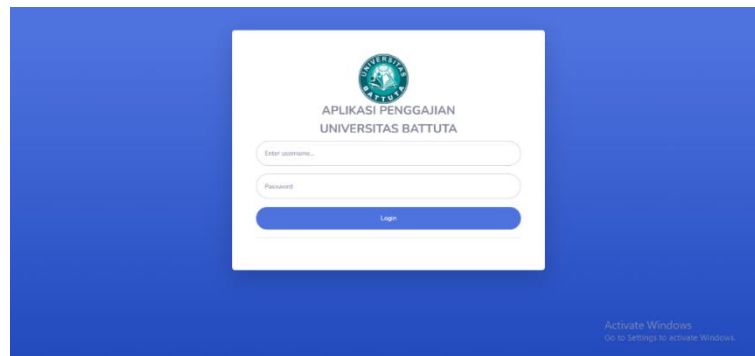


Figure 6. Login View

Figure 6 above, is the process of logging into the system by entering a username and password.

4. CONCLUSION

The employee payroll system at Battuta University is still manual so a computerized employee payroll system is needed which can automatically help salaries to be paid on time. The use of an employee payroll system that is integrated with attendance and employee data can minimize salary calculation errors and produce accurate and reliable data. With an automatic output system, it can speed up the process of printing employee pay slips and payroll reports quickly and efficiently. And to maintain data security it is necessary to apply data encryption and periodic data backup. In addition, with this computerized system, payroll management becomes easier, so that admins no longer need to manually record data through Microsoft Excel.

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