DESIGN OF EMPLOYEE PAYROLL INFORMATION SYSTEM WITH RAPID APPLICATION DEVELOPMENT METHOD AND OBJECT APPROACH AT PT. X

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ABSTRACT

The rapid development of information systems according to the company also follows the development of increasingly sophisticated information technology to make the life of the company more advanced. This employee salary management information system is designed to facilitate the implementation of payroll and effective and efficient management of employee salaries. This aims to conduct activities in companies or agencies in employee salary management activities. With the employee payroll system that still uses the manual method from the data collection of the employee to the calculation of employee salaries by the finance department. Therefore, the purpose of this research is expected to help the company in managing employee salaries more effectively and efficiently.

Keywords: Information Systems, Web servers, Payroll, RAD

I. INTRODUCTION

Many companies or government diamonds in this day and age have taken advantage of the rapid development of technology in terms of employee payroll or other things. The development of technology is very influential in the world of work today. One of the important developments is the increasing need for the use or tool of data management that serves to produce a data or information that is very useful. Highly precise and integrated informer will facilitate the process on the related parts contained in a company.

PT. X itself is a company that stands in the field of food or culinary, PT. X continues to strive in business development such as opening new branches in the country and abroad. Therefore PT. X continues to innovate to build an integrated system that is able to facilitate the work of employees in their daily activities. Problems that occur in PT. X is a payroll system and employee salary report that is still done manually, where the employee's report and salary are calculated using the formula of a particular application and the data is only stored in the computer. Of course, this is less effective and efficient, because there could be mistakes in the management of employee salaries. With these problems, it is necessary to provide facilities that can ease the work of employees in the financial field.

Therefore, to help improve effectiveness in PT. X therefore the author designed an employee payroll system aims to provide an overview in controlling the overall activities and performance of human resources in the hope of making it easier for companies to process employee salaries.

II. LITERATURE REVIEW

Information System

According to Jacob (2012), suggesting information systems is an orderly combination of people, hardware, Software and data resources capable of collecting, processing, changing and disseminating information in a company or organization.
According to Sutabri (2012), Information system is a system that exists in an organization where the needs of daily transaction management support the functions of the organization with the aim of providing certain outside parties with the necessary reports.

From the two quotations above it can be concluded that the information system is an interconnected part that operates together to achieve a goal or purpose.

**Web Server**

According to Kurniawan (2008), A web server is a server software that serves to receive HTTP or HTTPS messages from clients known as web browsers and send back the results in web pages that are generally in the form of HTML documents.

According to Sibero (2013), web is a system related to documents used as a medium to display text, images, multimedia, and others on a computer network.

**Payroll**

According to Ranupandojo, Heidjrachman and Suad Husnan (1993), The payroll system plays an important role because this system will determine how much salary employees should receive. But this system must be able to provide the correct and timely salary levels. The company provides salaries or wages to employees to make employees more fit and work better.

**RAD Method (Rapid Application Development)**

According to McLeod (2002) RAD (Rapid Application Development) is an incremental software model process that emphasizes a short development cycle. The RAD model is a "high speed" adaptation of the waterfall model, where rapid development is achieved using a component-based construction approach. If each project's needs and scope constraints are well known, the RAD process allows the development team to create a fully functional system in a very short period of time.

![RAD Cycle](image)

**Figure 1. RAD Cycle**

III. METHODOLOGY AND DATA COLLECTION

1. **Methodology**

In the application development phase using the RAD (Rapid Application Development) method there are several stages that must be done. According to Kendell (2010), there are three phases in the RAD method involving analyzers and uses in the research, design, and application phases.

1. **Requirement Planning**
In this stage, users and the analyst team meet to identify the purpose of the application. The purpose of this stage is to solve problems that occur in the company.

2. RAD Design Workshop

In this stage, a design can be described as a workshop. Team analysts and programmers can work to build and show visual representations of design and work patterns to users. During the RAD design workshop, the user responds to the existing prototype and the analyzer repairs the module designed based on the user’s response.

3. Implementation

In this phase of implementation, the analyzer works intensely with users during the workshop and designs the business and nontechnical aspects of the company. As soon as these aspects are approved and systems are built and filtered, new systems or parts of the system are tested and then introduced to the organization.

2 Data collection

The author does several ways of collecting data:

1. Interview

Interview method is a data collection technique by conducting an interview in the form of a direct Q&A with one of the PT Karywan X to obtain data or information.

2. Observation

Observation method is a system of collecting data by making observations or research directly on the object being studied, so that accurate data is obtained.

3. Library study

This method is used using researches, books, reports related to the title raised as a reference for the author, the information is taken from various sources

IV. RESULTS AND DISCUSSION

A. System design

In this web-based employee salary management information system there are 2 diagrams, namely, Use case Diagram, Dan Entity Relationship Diagram, here is the explanation:

a. Use case Diagram

The following is a Use Case Diagram from the design of employee salary management information system shown below.
A. Activity Diagram

- Login Process

This section explains how the admin process can perform login activities. Admins are required to enter the username and password as previously inputted. If the data is appropriate then the admin will enter the main page, if the admin fails then it will return to the login form.
Employee Data Input Process

This section describes how the process to be able to add employee data. Later the admin will enter employee data in accordance with the form provided that will be stored.

![Activity Diagram Employee data input](image1)

Employee Salary Input Process

This section describes how the process for being able to add employee salary data. Later the admin will enter the employee salary data in accordance with the form provided which later the data of the employee's salary will be stored.

![Employee Salary Input Process Diagram](image2)

Report Print Process

This section will process the admin to print the employee payroll report based on the desired period, which will be exported into PDF form.

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b. Entity Relationship Diagram (ERD)

Below is an overview of the entity relationship diagram (ERD) on the design of employee salary management.

A. System Display

a. login page
This page is an implementation view and login page used by admins to be able to enter the system by entering email and password.

![Login View](image1)

**Figure 8. login View**

### B. Home or Home

This page is the first dashboard page when we have accessed or logged into the system. On this page there is information about the number of employees and the number of employee salary reports. Admin or user can click on the view button on the data amount information aims to see the details of employee data by bringing the admin into the menu of each of those data.

![Dashboard View](image2)

**Figure 9. Dashboard View**

### C. Employee Data

This page is displayed if the user or admin has clicked on the employee data. This employee data page aims to manage that employee data. on this page, admins can input employee data, edit employee data, view employee data details, and delete employee data.
D. Payroll Data Page

Is an implementation of payroll data page that serves to manage data from employee salaries. On this page, users or admins can input payroll data, edit payroll, and delete payroll data.

Figure 10. Employee data view

Figure 11. Employee Salary Data View

a. Print page of employee salary report

This page is a page that serves to print employee payroll data reports accessed by clicking the print report button on the payroll data page. In this page there is a form to select the date of employee payroll data to be print in accordance with the required needs.
Conclusion

1. With the implementation of employee salary management information system can help problems that often occur in PT. X Karna can minimize in the management of employee salaries.

2. With the design of this application is expected to facilitate employees in viewing the employee's monthly salary information itself.

3. With the design of employee salary management application can help the company provide payroll information in real time and accurately related to the company's activities.

Suggestions

The advice that can be given by the author to make the Web-based Employee Salary Processing Information System better in the future is expected to be further development efforts into a better application of employee payroll information system with the addition of features that will further facilitate the processing of payroll data and financial recapitulation of employees.

REFERENCES