Design Of Web Based Employees Information System Design in SD Kumnamu School Tangerang

Sri Rahayu¹, Yudi Muhtadi², Abizal Al Farobie³
¹ Universitas Gunadarma, Jl. Margonda Raya No.100, Depok
² Universitas Syekh Yusuf, Jl. Maulana Yusuf No.10, Babakan, Kota Tangerang
³ STMIK Raharja, Jl. Jendral Sudirman No.40 Modernland, Cikokol, Tangerang
e-mail: srirahayu@raharja.info, yudi@aptisi.or.id, abizal@raharja.info

Abstract
Payroll systems in every company vary, most have used computer-based information systems, but there are still some companies that have not implemented it as in SD KUNNAMU SCHOOL. In this educational institution in the payroll information system is still using the calculation manually and using MS aids program. Excel. In this study using SWOT method as a method used to determine the strengths, weaknesses, opportunities, and system threats that run today through several stages of interview and literature study. Which produces a payroll information system that can manage computerized payroll, perform absentee calculations, automatically calculate monthly salary, allowances calculation, present salary slips and salary reports required every month or every year and others. System design using UML (Unified Modeling Language) tool, while in making system program using MySQL tool to design database and PHP (Hypertext Preprocessor) as programming language.

Keywords: Information System, Sawmill, SD Kumnamu School.

1. Introduction
In this instant, the development of computer technology is growing rapidly, especially in the world of work. Information from each field is interrelated, information provided by a field can affect other fields [1]. With the existence of computer technology can help in operational activities in all fields. Rather than the previous process, the community is forced to be able to open up insight and balance the situation.

Payroll is a reward or wage equal to the work that has been given on the basis of a policy that is considered fair, where the payroll is carried out by an accounting company. Kumnamu School is a school that stands on the City of Tangerang Sem Karawaci, this is engaged in education. The number of teachers who received salaries ranged from 85 teachers [2], [3]. At present the payroll process for employees at the Kumnamu School Elementary School is still conventional so that it takes time to present reports and is less accurate. Therefore, to facilitate employee payroll reports an information system is needed that can provide access collaboration between employee absences and overtime, so that the accounting department can get the information needed quickly and accurately [4], [5].

Based on the explanation above, it is necessary to design an employee payroll information system at Kumnamu School Elementary School in delivering fast and accurate information.

2. Research Method
The research method used in this study is as follows:
2.1. Data Collection Method
This method consists of Observation (Observation): To obtain data by observing the object under study, so that accurate data is obtained as a basis for research; interview (Interview): In order to get the material for this research obtained by asking questions directly with the parties concerned; and literature study (Literature review): Obtained from the collection of data and
theories from books, papers, and lecture materials as a basis for employee payroll information systems [6], [7].

2.2. System Analysis Method
the analytical method used is by using a SWOT analysis based on logic that can maximize
Strengths, Weaknesses, Opportunities and threats both internally and externally [8], [9].

2.3. Design Method
In making a system program using MySQL tools to design a database, PHP (Hypertext Preprocessor) as a programming language, and UML (Unified Modeling Language) is used to
make a diagram-shaped design [10].

3.4. Research that has been done and has a correlation that has similarities with the research
discussed in this journal, namely:
2. Research conducted by Zulnalis (JOURNAL OF INFORMATION SYSTEMS OF STMIK ANTAR BANGSA, [VOL.V NO.2 - AUGUST 2016].
8. Research conducted by Dr. Mahesh C. Dabre (Volume: 3 | Issue: 6 | June 2014 • ISSN No 2277 - 8179 Research).

Based on the 8 review literature above which discusses payroll and its system, this
payroll system is made to facilitate the payroll process of employees and salary reports
needed, also can improve the performance of educational institutions. On that basis, the
basis for this web-based employee payroll system was made.

3. Results and Analysis
3.1 Problems faced
The process of calculating employee salaries is still conventional with the tools in the
form of Ms.Excel application that still requires a long time when the salary calculation is done,
so that there is often a delay in making payroll reports to the chairman of the foundation [11-13].
Data storage is still in the form of archives, so data loss often occurs when needed. Making
employee salary reports requires a relatively long time [14]. This causes delays in the
management decision-making process or the chairman of the foundation.

3.2 Troubleshooting
It is necessary to make a web-based employee payroll information system application
so that the work process can be done quickly, precisely and accurately [15]. It is necessary to
create a database system for data storage that is safer than data loss and faster data retrieval
when needed. The employee payroll information system application is also designed to make
payroll reports so that reports that are made no longer need a long time, and payroll reports can
be quickly submitted to the board of directors.
3.3 Procedure for employee payroll system

![Use Case Diagram](image)

Figure 1. Use Case Diagram

Image Use Case Diagram One system that covers all activities in the employee payroll system process. The picture has 22 Use Cases that are run on Actors that explain the flow in the system, which is as follows: The Admin Head logs in. After logging in, the page that is displayed is Home, and there are several features on the Home page [16], [17]. On this page, the Admin Head inputs employee data. After that the Admin head inputs and imports employee attendance. Coconut Admin who has finished inputting the previous data, then input the teaching load data, and basic salary. Then the Chief Admin inputs the salary slips and salary components. The Chief Admin can find out reports or reports from each employee. While the Chairperson of the Foundation can only check employee payroll reports.

3.4 Database Design

Database Specifications

The database specifications used in the proposed system are as follows:

1. File Name: User
   - Media: Hard drive
   - Fill in: id_user + username + password + name + level + photo + email
   - Record length: 172 characters
   - Primary Key: id_user

<table>
<thead>
<tr>
<th>No</th>
<th>Field Name</th>
<th>Type Data</th>
<th>Length</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>id_user</td>
<td>Int</td>
<td>10</td>
<td>Id user</td>
</tr>
</tbody>
</table>

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2. File Name: Employee
Media: Hardisk
Fill in: NIP+Name+Position code +Date of Birth + Address + Email
Record Length: 295 character
Primary Key: NIP
Foreign Key: Position code

Table 2. Employee Table

<table>
<thead>
<tr>
<th>No</th>
<th>Nama Field</th>
<th>Tipe Data</th>
<th>Length</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>NIP</td>
<td>Varchar</td>
<td>5</td>
<td>Employee id number</td>
</tr>
<tr>
<td>2</td>
<td>Name</td>
<td>Varchar</td>
<td>30</td>
<td>Name</td>
</tr>
<tr>
<td>3</td>
<td>Position Code</td>
<td>Varchar</td>
<td>10</td>
<td>Position Code</td>
</tr>
<tr>
<td>4</td>
<td>Date of birth</td>
<td>Date</td>
<td></td>
<td>Date of Birth</td>
</tr>
<tr>
<td>5</td>
<td>Address</td>
<td>Varchar</td>
<td>200</td>
<td>Address</td>
</tr>
<tr>
<td>6</td>
<td>Email</td>
<td>Varchar</td>
<td>50</td>
<td>Email</td>
</tr>
</tbody>
</table>

3. File Name: Attendance
Media: Hardisk
Isi: attendance code + month + NIP + total attendance
Record length: 34 character
Primary Key: Id Attendance
Foreign Key: NIP

Table 3. Attendance Table

<table>
<thead>
<tr>
<th>No</th>
<th>Nama Field</th>
<th>Tipe Data</th>
<th>Panjang</th>
<th>Keterangan</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Id Attendance</td>
<td>Int</td>
<td>11</td>
<td>Attendance Code</td>
</tr>
<tr>
<td>2</td>
<td>Month</td>
<td>Varchar</td>
<td>7</td>
<td>Month</td>
</tr>
<tr>
<td>3</td>
<td>NIP</td>
<td>Varchar</td>
<td>5</td>
<td>NIP</td>
</tr>
<tr>
<td>4</td>
<td>Attendance Duration</td>
<td>Int</td>
<td>11</td>
<td>Attendance Duration</td>
</tr>
</tbody>
</table>

4. Name File: Salary basic
Media: Hardisk
Fill in: Position Name+Salary basic
Record length: 21 character
Primary Key: Position Code

Table 4. Basic Salary Table

<table>
<thead>
<tr>
<th>No</th>
<th>Field Name</th>
<th>Type Data</th>
<th>Length</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Position Name</td>
<td>Varchar</td>
<td>10</td>
<td>Basic salary</td>
</tr>
<tr>
<td>2</td>
<td>Salary Basic</td>
<td>Int</td>
<td>11</td>
<td>Basic Salary</td>
</tr>
</tbody>
</table>
5. File Name: Salary component master data  
Media: Hardisk  
fill in: Component Name + Status  
Panjang Record: 40 character  
Primary Key: Component Name

<table>
<thead>
<tr>
<th>No</th>
<th>Field Name</th>
<th>Type Data</th>
<th>Long</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Component Name</td>
<td>Varchar</td>
<td>30</td>
<td>Component Name</td>
</tr>
<tr>
<td>2</td>
<td>Status</td>
<td>Varchar</td>
<td>10</td>
<td>Status</td>
</tr>
</tbody>
</table>

Table 5. Master Data Table of Salary Components

6. Nama File: Detail Komponen Gaji  
Media: Hardisk  
Isi: Kode Detail+Komponen Gaji+Kode Jabatan+Gaji  
Panjang Record: 62 karakter  
Primary Key: Id Detail  
Foreign Key: Kode Komponen+Kode Jabatan

<table>
<thead>
<tr>
<th>No</th>
<th>Field Name</th>
<th>Type Data</th>
<th>Length</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Details id</td>
<td>Int</td>
<td>11</td>
<td>Detail Code</td>
</tr>
<tr>
<td>2</td>
<td>Component Code</td>
<td>Varchar</td>
<td>30</td>
<td>Component Code</td>
</tr>
<tr>
<td>3</td>
<td>Position Code</td>
<td>Varchar</td>
<td>20</td>
<td>Position Code</td>
</tr>
<tr>
<td>4</td>
<td>Salary</td>
<td>Int</td>
<td>11</td>
<td>Salary</td>
</tr>
</tbody>
</table>

Table 6. Salary Component Detail Table

7. File Name: The burden of teaching  
Media: Hardisk  
Fill in: Id the burden of teaching+NIP+Component code+the amount of load  
Panjang Record: 57 character  
Primary Key: Id the burden of teaching  
Foreign Key: NIP+Component Code

<table>
<thead>
<tr>
<th>No</th>
<th>Field Name</th>
<th>Type Data</th>
<th>Length</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Id the burden of teaching</td>
<td>Int</td>
<td>11</td>
<td>Id the burden of teaching</td>
</tr>
<tr>
<td>2</td>
<td>NIP</td>
<td>Varchar</td>
<td>5</td>
<td>NIP</td>
</tr>
<tr>
<td>3</td>
<td>Component code</td>
<td>Varchar</td>
<td>30</td>
<td>Component code</td>
</tr>
<tr>
<td>4</td>
<td>The amount of load</td>
<td>Varchar</td>
<td>11</td>
<td>The amount of load</td>
</tr>
</tbody>
</table>

Table 7. Teaching Load Table

4. Conclusion
As the end of writing this thesis report, the writer gives conclusions based on the discussion and research results in the previous chapter as follows:
1. Payroll information systems of employees who are running still use the Ms.excel application in which data processing takes a long time and in the presentation of reports is less accurate.
2. With a computerized system that provides absent access collaboration that will simplify and speed up the employee payroll process.
The new system is designed with web-based as an employee payroll application designed to produce payroll reports that are fast and accurate, so that there are no more delays or errors in inputting employee salary data or completion of payroll reports.

References