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ANALYSIS OF THE IMPLEMENTATION OF THE SIMPLE SALARY SIM APPLICATION IN GROGOL DISTRICT, SUKOHARJO DISTRICT

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Abstract **:** Implementation of Civil Servant Salary SIM in the Administrative Service Office of the Education Unit, Grogol District, Sukoharjo Regency. This research is conducted in this analysis which contains the use of the Government Salary SIM application which is implemented in all regions as a means of calculating, storing and maintaining civil servants' data based on computerization and connected to the government-owned Internet network. The research method used was interview, application observation and literature study. The system design that can be concluded by the author is using Context Diagram, DAD, HIPO and input and output system design.

Keywords *: Information System, Education Office, Employees and Salaries.*

1. preliminary

Payroll System is a process that determines employee payroll levels, monitors, supervises, develops and controls employee salaries. Where is the civil servant salary structure applicable in Indonesia, namely basic salary, wife or husband allowance, child allowance, functional or structural position allowance, rice allowance, income tax (PPh), Employee Compulsory Contribution (IWP), other deductions, and rounding off salary to multiples of one hundred.

The Office of Administrative Services for the Education Unit in Grogol District, Sukoharjo Regency, one of the agencies, one of which is to calculate employee salaries according to the employee's current situation and conditions, so that supporting applications are needed to make it easier, efficient, accurate and effective for administrators.[1]

This Salary SIM application is the right application for employee payroll, besides being computer-based, this application is also directly connected to the center, in this case the Department of Education and Culture, the government and the State. Based on the above background, it can be concluded that the formulation of the problem will be resolved, namely, how the application can run according to the wishes of the government and based on existing data to determine the salary level of Civil Servants.

2. Literature review

2.1 Information Systems

Management information System or driver's license (English: management information system, MIS) is part of the planning system internal control a business that includes utilization human, document, technology, and procedure by management accounting to solve such business problems product cost, service, or something business strategy.[2]

2.2 Management information System

Salary Management Information System (SIMGAJI) is a payroll application system developed by PT. Taspen (Persero) which functions to manage salary data for Regional Civil Servants in Provincial / Regency / City Governments through Information Technology that can be accessed and integrated with other work units and can present data accurately, precisely and up to date.

Where this system is used by government officials, for example in terms of the payroll of civil servants with the help of supporting components, both software and hardware, in accordance with the objectives desired by the government. In order to increase effectiveness, actual, accurate, efficient, control, data services, salaries and government strategies compared to the old system which tends to have many shortcomings.[2]

2.3 Supporting component

The supporting components in this application include:

a. C Component Resources
   Resources in this application are humans, hardware, software, data, networks, and information.
b. Functional Components
   Which includes functional components here are administration and operations, management reporting, databases, search, and data management
c. Physical Comments
   Physical components in the form of hardware, software, databases, operational procedures and operating personnel.

2.4 Application Model

This application model is based online at login application to save update data and is based offline when changing data after downloading the data format online in the application.[2]

Basically, the Education Unit Administrative Service Coordinator in Grogol District, Sukoharjo Regency, used an offline application model until 2018 and then used the online method from early 2019 until now.

Model This application is based online at login application to save update data and is based offline when changing data after downloading the data format online in the application

This application uses the Linear sequential model, which is a systematic and sequential software development starting at the level of system progress in the form of analysis, design, code, testing, and data maintenance.

AThe application of a Salary SIM in collaboration with Taspen and the Government of the Republic of Indonesia has a brief mechanism, as follows:

a. Authenticating the name and user name password of the application user administrator account,
b. If the user name and password are correct, then the next step will be entered on the settings screen if there are changes expected by the administrator,
c. Furthermore, the user / administrator performs routine monthly data formation in the form of files with excel extensions to be sent to PT Taspen (Persero) Sukoharjo Branch.
d. Data changes made by the administrator can be in the form of month / year of salary, type of salary, and SKPD
e. Realization of salary payments and salary recapitulation of civil servants

2.5 PHP Programming Language

In the application used for the payroll of civil servants in Grogol District, it uses a high-level programming language, in the form of PHP (Hyprttext Preprocessor Program) which is used as a server side script language, in its development it is inserted into an HTML document.

PHP is a programming interpreter, namely the translator of the source code lines into machine code that the computer understands directly when the line of code is executed, which is Open Source, which means that users can develop PHP function code according to their needs.[3]

2.6 MySQL database

*Database*This device is in the form of MySQL, which is a database software relationship or DBMS (Database Management System) which can be defined as a certain command syntax or programming language used to manage a database. The Database Design stores data, including class room rank, employee bio, list of basic salaries, person in charge of payroll, list of PTKP, mandatory allowances, special employee benefits, and details of salary components.[4]

3. Research methods

Data retrieval is located atAdministrative Service Office for the Education Unit of Grogol District, Sukoharjo Regency, which is located at Jl. Jati– Langenharjo RT 03 RW 03, Langenharjo, Grogol, Sukoharjo, Central Java.
Methoddata collection by researchers, including the following:

Interview

The interview is a question and answer activity between the researcher and the resource person (Salary Treasurer) to obtain information.

Observation

Observation is an activity of direct observation in the process of using the Salary SIM application on the object of observation.

Literature review

Literature study is an activity to obtain data based on the required references or theories through books, scientific journals or written data related to the subject of research.

Methods in System Development, among others, are as follows:

System Planning

In this system planning stage is entering, storing, changing, maintaining employee data, determining the method and determining the application input results report.

System analysis

In this stage of the system analysis, the login process is in accordance with user access rights, user login validation, data manipulation, deleting data, printing output.

System Design

In this stage the design of this system which is the design of this system is Context Diagram, HIPO, DAD, and Input Design and Output Design.

System Implementation
In this stage, the PostgreSQL data-based system is implemented by converting the database design into a data table by entering the integrity constraints, functions and views of combining multiple tables with the PHP programming language.

System Testing
In this stage the system testing is in the form of functionality testing and questionnaire testing.

4. Results and Discussion
At the results and discussion stages, this contains the results of research in the form of overall system design, including the following:

4.1 Computerized Systems Analysis
The results of the old system analysis are a payroll system that is done manually, using a ledger and calculations using a calculator only and based on the previous month's salary report with the addition of new changes in accordance with the conditions of the Civil Servant.

In the old system, it was quite time consuming, ineffective, inefficient, possible big mistakes and many problems in the process because it was done manually. So it is necessary to have a new system as a solution that can run efficiently, effectively, accurately, actual, computer-based and connected directly to the center so that it is easy to audit.

4.2 System planning
At the system design stage contains an explanation of system design to build management information system applications,[5] are as follows :

a. Contex Diagram
Contex Diagram(CD) for the payroll system using the Salary SIM application are as follows:

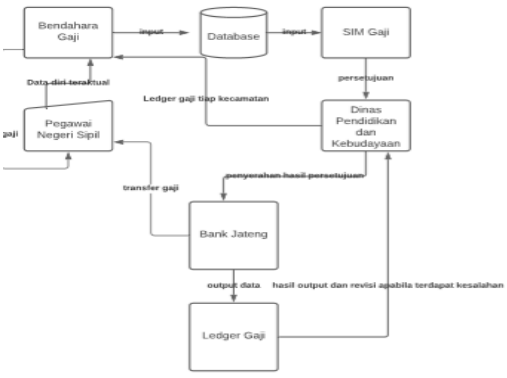

Figure 1. Context Diagram

b. HIPO
HIPO (Input Process Output Hierarchy) is a system development tool and system documentation technique in programs. The most important goal of HIPO is to produce correct output and meet user requirements.

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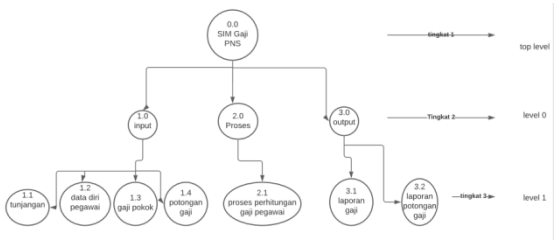

Figure 2. HIPO

c. DAD (Data Flow Diagram)
Data Flow Diagrams(DAD) is a flow diagram that describes the flow from data to the system, DAD helps to understand the system in a logical, structured and clear way. The following is DAD level 0 for using the Salary SIM application, namely:

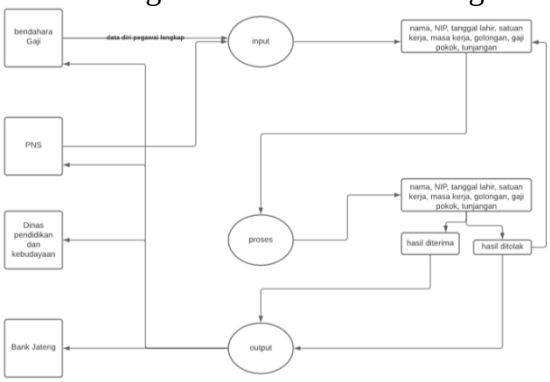

Figure 3.DAD Level 0

4.3 System Implementation

Implementation of the system is the process of making a system in the form of designing a Salary SIM application:

a. Input employee data
Display data input used to input data on Civil Servants.

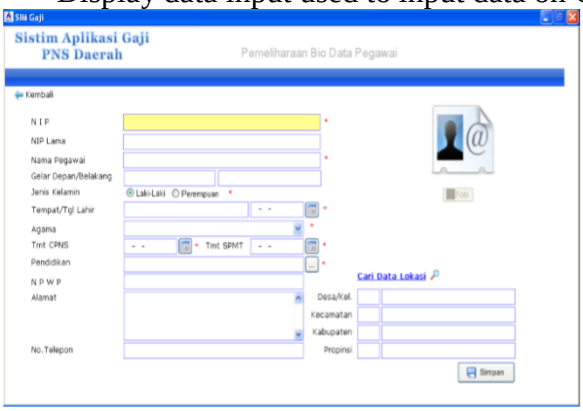

Figure 4. Employee Data Input Form

b. Display Criteria Settings
The criteria setting form display is used to determine the value of each of the criteria.

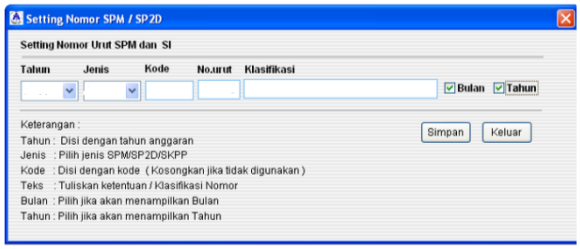

Figure 5. Criteria Setting Form

c. Report Result Display
Display the results of the Salary SIM report. Following are the results of the report received.

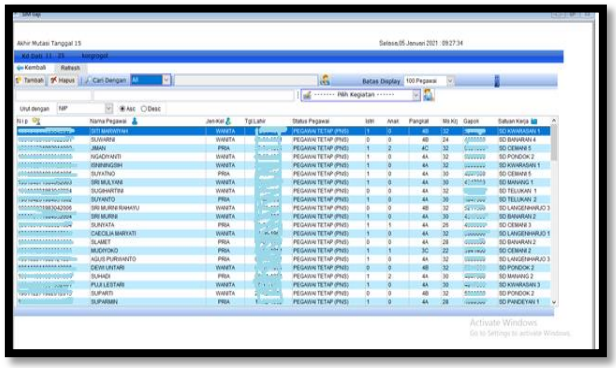

Figure 6. Report Results

Following are the results of the rejected data report selection as follows:

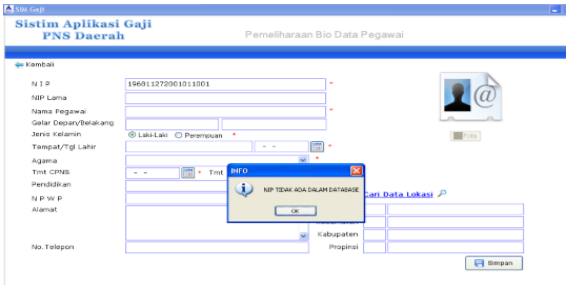

Figure 7. Rejected Data Report Results

4.4 System Testing

Testing is a system test process at the end which is also useful for testing the system. There are two system tests, namely the functionality test and the questionnaire test. following the test:

a. Functionality Testing
Functionality testing uses the Black Box, which is useful for knowing the output results in each form in the program system. following the results of the recapitulation.

No.	Respondents
1	Treasurer Salary
2	Chief Treasurer
3	Kec. Service office staff. Grogol
4	Author

Table 1. Functionality Test

b. Quizoner Testing

Questionnaire testing is a technique used to process the data that has been obtained to make the research results conclusions drawn from the results given to several respondents. With the assessment criteria the higher the value given, the better the assessment on the application. Here the authors convey a summary of the questionnaire from the treasurer salaries, chief treasurers, staff of the Office of Education Unit Administrative Services Kec. Grogol, and author.

c. Stage 1

In the process of determining the questionnaire test for this system, several respondents were involved. This can be seen in table 2. Below.

Table 2. Respondents Data

No	Jenis Uji	Komponen Sistem yang diuji	Sikenario Uji	Hasil yang diharapkan	Hasil yang didapat	Status Uji	Hasil Pengujian
1	Uji Normal	Form Login Admin sebelum masuk halaman awal daerah	Masukkan user Id dan Password dengan benar	Tampil halaman awal menu utama admin menuju homepage	Muncul tampilan "Initialize data base config "	Normal	Diterima
	Uji Salah	Form login Admin sebelum masuk halaman awal daerah	Masukkan user Id dan Password dengan salah	Munoul pesan kesalhan	Tampil tulisan user Id dan Password incorect	Normal	Diterima
2	Uji Normal	Form login admin halaman awal daerah	Masukkan user Id dan Password dengan benar	Munoul halaman awal untuk input data	Tampil halaman awal homepage	Normal	Diterima
	Uji Salah	Form login admin halaman awal daerah	Masukkan user Id dan Password dengan salah	Munoul pesan kesalhan	Tampil tulisan user Id dan Password incorect	Normal	Diterima
3	Uji Normal	Form input data admin	Masukan data admin secara benar dan lengkap	Data tersimpan dengan baik dan benar	Muncul pesan penyimpanan berhasil	Normal	Diterima
	Uji Salah	Form input data admin	Masukan data admin dengan salah	Tidak dapat menyimpan data	Tidak bisa menyimpan	Normal	Diterima
4	Uji Normal	Form output data admin	Keluaran data admin secara benar dan lengkap	Data tersimpan dengan baik dan benar	Muncul pesan penyimpanan berhasil	Normal	37 Diterima
	Uji Salah	Form output data admin	Keluaran data admin dengan salah	Tidak dapat menyimpan data	Tidak bisa menyimpan	Normal	Diterima

4.5 SWOT analysis

In this Salary SIM application, of course there are advantages and disadvantages in making it. The author tries to do a SWOT analysis in this application.

The SWOT analysis for this application is:

a. Strength

The strength of this application is that there is a dual security system in the application so that if it is not a user who is authorized to run the application, it will not run multiply and cannot even be opened publicly, is confidential and limited, has better time efficiency,

b. Weakness

The weakness of this system is that it cannot be opened without an internet network, the time to use the application is limited, and in the input table, you have to enter a separate formula and cannot calculate it automatically.

c. Opportunities:
In using this application, the user can increase the ability to use his computer by always learning about updates to the application and increasing the ability to calculate using formulas as appropriate in Microsoft Excel.

d. Threat
The threat to the use of this application is the possibility of hacking by irresponsible individuals due to increasingly sophisticated technology and quality human resources. So that the possibility of hacking employee personal data is very worried about being misused by irresponsible people. And security is expected to increase security for opening data.

With the SWOT analysis of the Salary Management Information System application, the authors conclude that this application is quite helpful, efficient and effective in both internal and external payroll and auditing systems. And it is very possible for further system development in the process without the need for internet connectivity and can be opened at any time with enhanced security in accordance with the development of technology, information and communications that are developing.

Finally, I hope this application can run better by optimizing the application, increasing data input and output and increasing the security of employee privacy data, so that the application can be trusted as a maximum supporting application and assistant to the government. But actually this application is good enough and needs a little update on security and connectivity.

5. Closing

At the end of the pentup pneluis makes conclusions and suggestions, including the following:

5.1 Conclusion

So the conclusion of this system contains advantages, among other things as follows:

1. The system is efficient, effective and easy to operate in calculating employee salaries,
2. Only those who are authorized can operate the application,
3. A dual security system that keeps state data and employee identities safe,
4. From the questionnaire given by the author to 4 respondents including the author, with an average value of 8.83, this application is suitable for use on a national scale and is quite good and needs improvement,
5. Tests carried out both manually and by computer, this application runs normally and is in accordance with the system

5.2 Suggestion

Suggestions from the application analysis carried out by the author include:

1. Edited without an internet network so that if it is not constrained by the internet network, it can streamline the civil servant salary calculation process
2. Edited at any time by the authorized party to change the data, because any time constraints will make it difficult for administrators to change the data
3. The templete presented in the application is equipped with a formula for making it so that the salary entered must be balanced in the calculation, making it easier for administrators to calculate.

Thus the suggestion that the author made, is expected to be used as a correction and build a salary management application system that is even better and can continue to be useful for those who use it and the country to be even better. And for the next writer can fix deficiencies in this application.

It is hoped that with this implementation analysis the writer will learn more and better, and hope to provide updates, development and provision of solutions for application systems to make it even better so that it can facilitate the operation of this application.

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