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Analysis and Design of Employee Payroll Accounting Information System at Public Accounting Firm of Tasnim, Fardiman, Sapuan, Nuzuliana, Ramdan & Partners

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Abstract: This study aims to find out and at the same time analyze how the payroll system is currently being implemented at Public Accountant Firm Tasnim, Fardiman, Sapuan, Nuzuliana, Ramdan & Partners, whether the payroll system has been running effectively and propose a payroll accounting information system design at Public Accountant Firm Tasnim, Fardiman, Sapuan, Nuzuliana, Ramdan & Partners. The data used in this study is primary data obtained directly from Public Accountant Firm Tasnim, Fardiman, Sapuan, Nuzuliana, Ramdan & Partners and is a descriptive qualitative research, namely a case study using qualitative data obtained from internal companies. The data analysis technique used is system analysis, proceed to the proposed flowchart stage, proposed DFD, proposed ERD to payroll system design using Microsoft Access and Visual Basic 6.0. Based on the results of this study, the payroll system at Public Accountant Firm Tasnim, Fardiman, Sapuan, Nuzuliana, Ramdan & Partners still has problems in the payroll system, namely the procedure for payroll documents is still manual or still using handwriting and the calculations are still using the excel program whose input must use the formula complicated so that time is not efficient.

Keywords: *analysis and design, accounting information system, and employee payroll*

1. Introduction

The ability to improve human resources is a non-negotiable option to deal with developing countries like Indonesia. The improvement in question is that it will be able to make progress gradually due to the understanding and insight of the community about the challenges and opportunities that are currently being faced.

One of the most important developments is the increasing need to use data processing tools to produce the information needed by companies that want to grow their business and reach the pinnacle of success, and these companies must adapt to the transformation of information by using data processing support tools, namely computers. Computer are used as data processing equipment, and all fields in a company or agency can be computerized, this is considered important and main. Because it can support the company to successfully achieve its goals. In everyday life, in the world of work and business, as well as in government agencies, the demand for information continues. Humans really need a good information system to speed up the work process and get faster and more accurate results.

In a previous research, (Irawan et al, 2017) entitled Employee Payroll System at LKP Grace Education Center, based on the results of his research it can be concluded that the use of a manual payroll system contains a lot of risk of recording errors in payroll procedure data so that the desired information system target cannot be achieved. Processed information can be obtained quickly, precisely and accurately if a time is needed as material for analysis for those who need the information. However, this research is limited to only analyzing payroll procedures so that there is no design for risk control in the company studied so that it only focuses on the transformation of the recording procedure method from manual to computerized without any internal control to minimize risk in the company studied.

In the results of the analysis of the payroll system at the Public Accounting Firm Tasnim, Fardiman, Sapuan, Nuzuliana, Ramdan & Partners in implementing the payroll system at this time it is still limited to paper in table format where the input is still manual by using handwriting to calculate cash out of employee payroll. In the use of absent employees, they have used attendance tools but must be recapitulated into paper in written employee data table format. In accounting records, the Public Accounting Firm of Tasnim, Fardiman, Sapuan, Nuzuliana, Ramdan & Partners so far has no special bookkeeping, only to calculate the monthly accumulation of cash disbursements which are calculated manually through Microsoft Excel application software which requires using very complicated formulas. This company is still classified as manual in its payroll accounting system, it needs better and computerized development so that it can run faster in the payroll system process. With this research an update from previous research, alternative recommendations to replace the manual payroll system to computerized implement the results of the analysis that have been carried out and then create a database software to store, archive, manage payroll data quickly and accurately and develop existing systems. by adjusting the internal control that has been carried out by the Public Accounting Firm Tasnim, Fardiman, Sapuan, Nuzuliana, Ramdan & Partners. In implementing the system that we have designed and created for the Tasnim, Fardiman, Sapuan, Nuzuliana, Ramdan & Rekan Public Accounting Firms, it has been implemented successfully, making it easier for managers to obtain data accurately and quickly and making it easier for managers to make decisions.

2. Research Method

The type of analysis utilized in this study is descriptive research with information analysis methods, specifically qualitative data analysis. in line with (Moleong, 2011) descriptive research aims to outline what's presently in effect. In it there's an attempt to describe, record, analyze and interpret the conditions that are currently occurring or exist supported the first data obtained. In alternative words, descriptive research aims to get information concerning this state and see the link between the prevailing variables. This study doesn't check the hypothesis or does not use a hypothesis, however solely describes the data because it is in accordance with the variables studied.

Type of Data Source Used

1. Primary Data

   Primary data is that the results of original analysis or data while not interpretation or statement that represents a political candidate opinion or position. enclosed among the first sources are memos, letters, interviews or full speeches (in audio, video, or written

transcript format). Primary sources are continually the foremost authoritative as a result of the knowledge has not been filtered or taken by a second party (Cooper & Schindler, 2014, p.96)

2. Secondary Data
   Secondary data is associate interpretation of primary data. Encyclopedias, textbooks, handbooks, magazine and newspaper articles, and most news broadcasts are thought of secondary sources of knowledge (Cooper & Schindler, 2014, p.96).

Data collection technique

Data collection techniques used by researchers are as follows:

1. Interview
   The interviews used in this study asked structural questions, because the researchers used interview guidelines that were arranged systematically and completely to obtain the data sought. The data collection method that is widely used in research is by interviewing respondents to obtain information about a problem of interest (Sekaran & Bougie, 2016, p.113).
2. Observation
   In this study, researchers conducted direct observations to find facts in the field to observe the subject and object of research so that observers could know the actual conditions. This observation uses participatory observation, where the observer is directly involved physically and personally observes what has been going on or used as research data sources (Cooper & Schindler, 2014, p. 178).
3. Document Review
   Document review is the retrieval of data obtained through documents (Saifudin, 2014, p. 6). Researchers collect documents and are intense so that they can support and add to the belief and proof of an incident. The documents used in this research are employee data, salary data, attendance card, salary payment slip, and proof of cash out.

Analytical and Planning Techniques

1. System Analysis
   At this stage, the author conducts interviews with related parties about the Public Accounting Firm of Tasnim, Fardiman, Sapuan, Nuzuliana, Ramdan & Partners employee payroll system to collect data on employee payroll systems on Public Accounting Firm of Tasnim, Fardiman, Sapuan, Nuzuliana, Ramdan & Partners. Researchers use problem analysis techniques by way of case studies by using qualitative data from the company's internals and then describe it through the creation of a document flowchart chart then assess the effectiveness and efficiency of existing procedures, using internal control system analysis, then provide proposals for good procedures for Public Accounting Firm of Tasnim, Fardiman, Sapuan, Nuzuliana, Ramdan & Partners. Then design system development with the use of DFD (Data Flow Diagram) and ERD (Entity Relationship Diagram) model.

2. System Planning

   At this stage the author begins the design of the system by modeling data using entity relationship diagrams. After that continued with the design of databases, inputs and outputs. In designing a software system that creates the process flow is to use Microsoft Visio, then to create a database using Microsoft Access, and the final step to create a program using Microsoft Visual Basic 6.0.

3. Result and Discussion

3.1. System Analysis

System analysis is the process of working to test an existing information system with its environment so that instructions are obtained for various possible improvements that can be done in improving the capabilities of the system. Performing a system analysis must be with actions against the existing system and the next step is to analyze the needs of the wearer.

In the payroll accounting information system applied by Public Accounting Firm of Tasnim, Fardiman, Sapuan, Nuzuliana, Ramdan & Partners, obtained the results of the analysis that the payroll accounting system on Public Accounting Firm of Tasnim, Fardiman, Sapuan, Nuzuliana, Ramdan & Partners has the weakness that there is still a framework of tasks, namely the HRD section that makes the recap of salaries and employee salary payments that should be done by the accounting and finance section, This can lead to the risk of manipulation of salary payment data.

To reduce the risk, it is best to separate each task. In addition, the documents used in the payroll accounting information system on Public Accounting Firm of Tasnim, Fardiman, Sapuan, Nuzuliana, Ramdan & Partners have no accounting bookkeeping function on cash out to find out the expenditure of money on salary payments and the addition of documents to archive in each section. So that researchers make proposals to design the latest system to replace the old system, this latest system design uses a database system to transform information that is run manually into a systematic system.

3.2 Alternative Design of Computerized Payroll System

1. **Context Diagram**

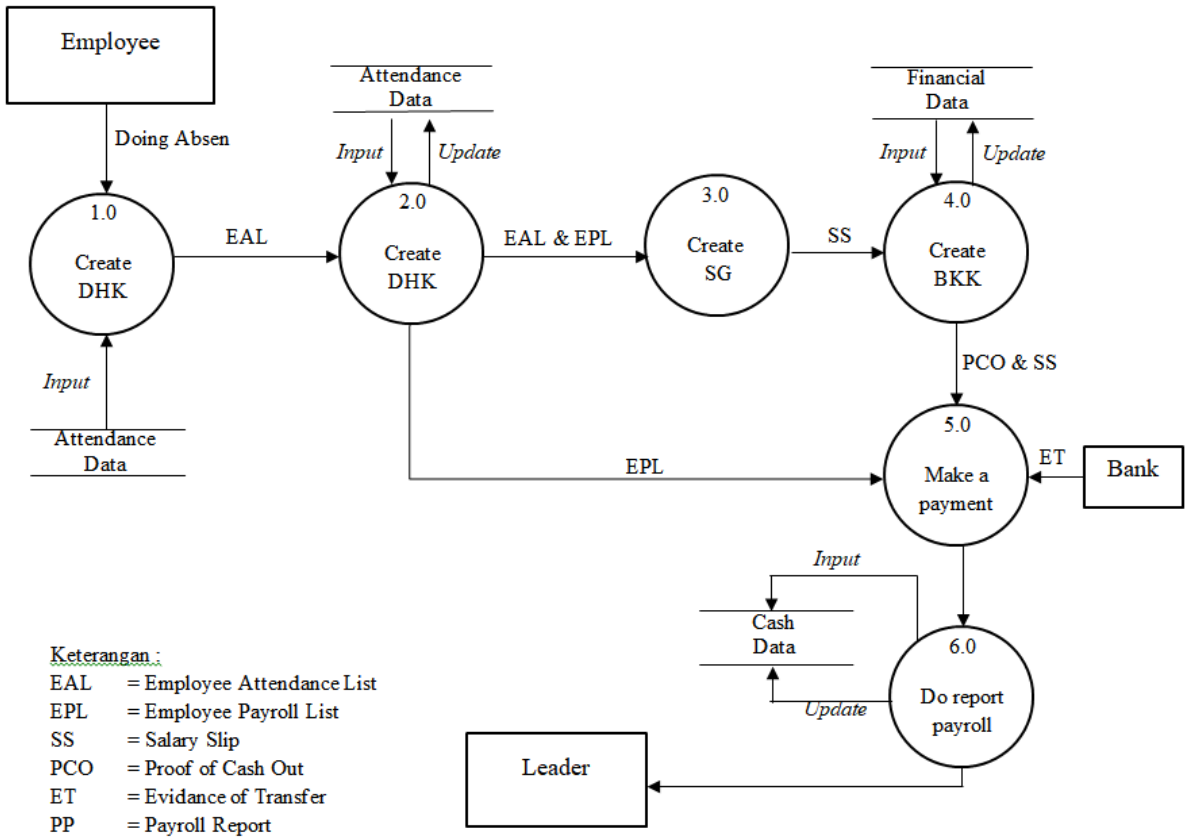
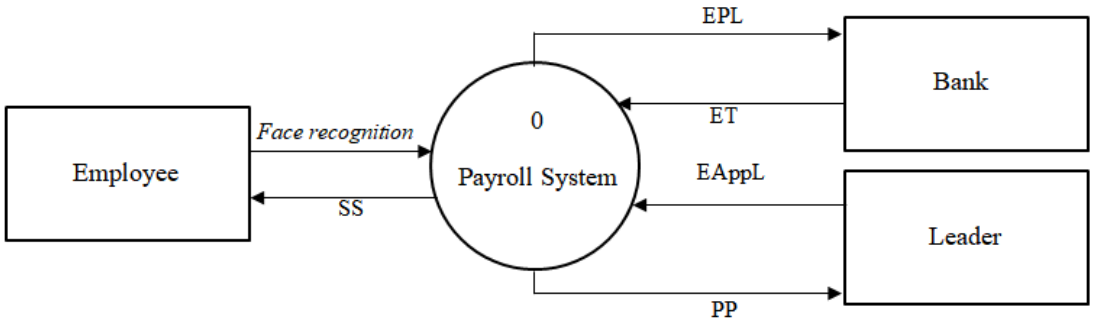


Figure 3.1 Context Diagram

The payroll system of Public Accounting Firm of Tasnim, Fardiman, Sapuan, Nuzuliana, Ramdan & Partners, begins with employees doing absences with face recognition and the data is provided to the system. After that the chairman gives a decision letter on the appointment of employees. Then the system provides employee payrolls to banks and banks provide proof of transfer. The system provides pay slips to employees and provides payroll reports to the leadership.

2. Zero Diagram



Keterangan :
EAppL = Employee Appointment Letter
SS = Salary Slip
PCO = Proof of Cash Out
ET = Evidance of Transfer
PP = Payroll Report

Figure 3.2 Zero Diagram

In the zero diagram there are six processes, namely the process of making employee attendance lists, making employee payroll lists, making salary slips, making cash out receipts, making payroll payments, and making payroll reports. In the process of making the employee attendance list (EAL) starting from a system that accepts employee absent input through facial recognition. Furthermore, the employee attendance list (EAL) is submitted to the process of making the employee payroll list (EPL). The next process is to make a list of previous employee salaries (EPL). Then in this process the system inputs salary data and updates salary data. Next, provide employee attendance list (DHK) and employee payroll list (EPL) to the process of making salary slips (SS).

In the process of making salary slips (SS) this system receives employee attendance lists (EAL) and employee payroll lists (EPL) to check whether they are appropriate, if they are appropriate, the salary slip (SS) is ready to be given to the process of making proof of cash out (PCO) . In the cash out (PCO) proof process, the system receives a salary slip (SS) to be used as information on the amount of salary that will be given to employees. In this process, cash outflow (PCO) inputs financial data and updates financial data. Furthermore, proof of cash out (PCO) and salary slip (SS) is given to the process of making payments. In the process of making payments, this system receives a list of employee salaries (EPL), proof of cash out (PCO), and salary slips (SS) to see how much must be paid to employees. The next process is to make payments through the bank. After making the payment, the bank concerned provides evidence of transfer (ET) as proof that the bank has paid the employee's salary. In the last process, namely making a payroll report (PP), this processed system inputs cash data and updates cash data. Furthermore, in the process of this payroll report (PP) will be given to the leadership.

3. Diagram Level

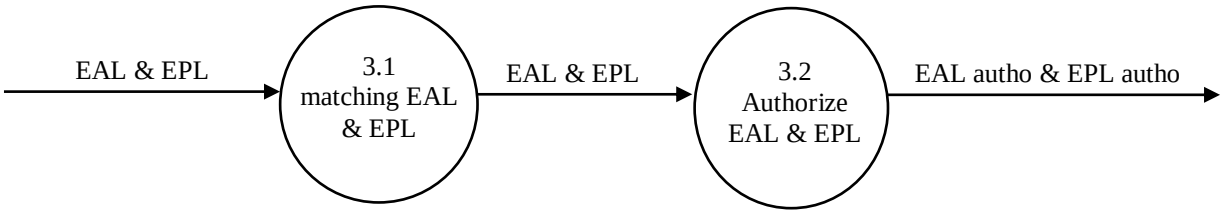


Figure 3.3 Level Diagram

In the process of making employee attendance lists (EAL) and employee payroll lists (EPL), before being processed to the next process there is an advanced process, namely matching the two documents and authorizing the two documents. Then the system produces an employee attendance list (EAL) and employee payroll list (EPL) that have been authorized and will be given to the next process.

4. Entity Diagram Relationship (ERD)

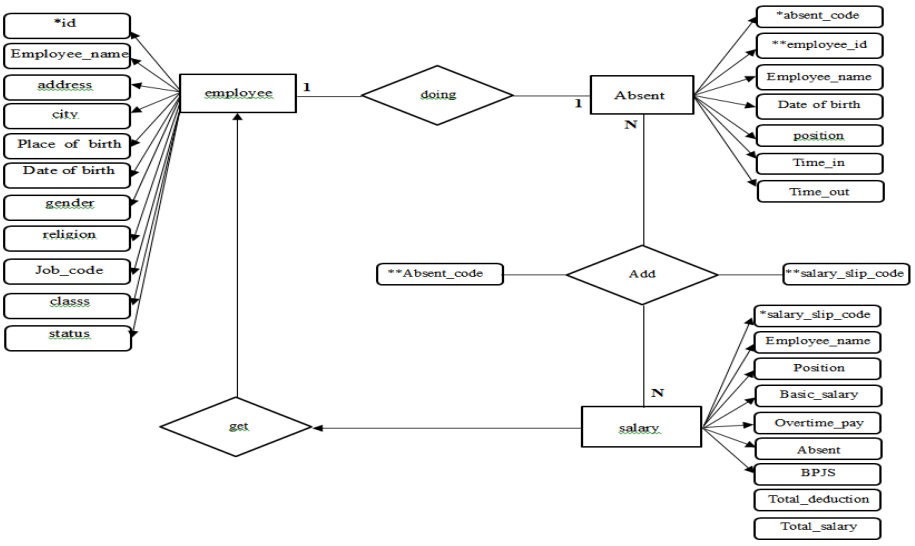


Figure 3.4 Entity Diagram Relationship (ERD)

The Entity Relationship Diagram (ERD) above illustrates the relationship between entities where the employee entity will relate to the salary entity which has a one-to-one relationship with cardinals (1:1) which means that every employee who does attendance for work will get a salary. Furthermore, the attendance entity will relate to the employee entity that has a relationship to determine salary payments with one to one cardinality, which means that each salary paid will be received by one employee. Otherwise, each employee will receive one salary that is their due. Then the payroll entity will be related to the attendance entity that has a salary relationship for employees.

5. Computerized Alternative System Flowchart

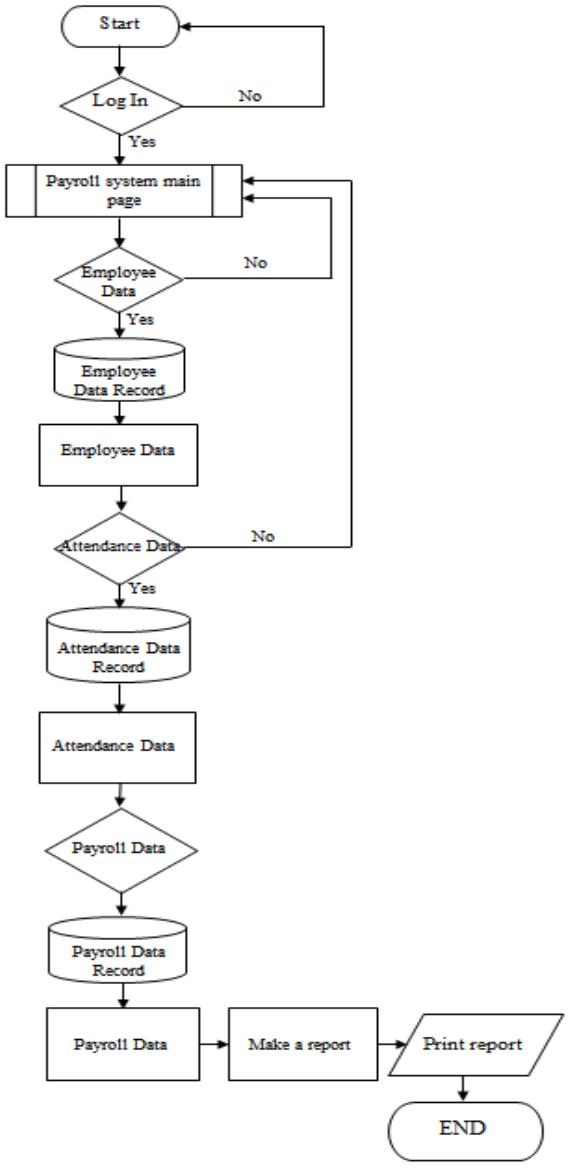


Figure 3.5 Alternative Flowchart System

5. Implementation of proposed system design

1. Form Menu Login

Figure 3.6 Menu Login

2. Form Menu Home

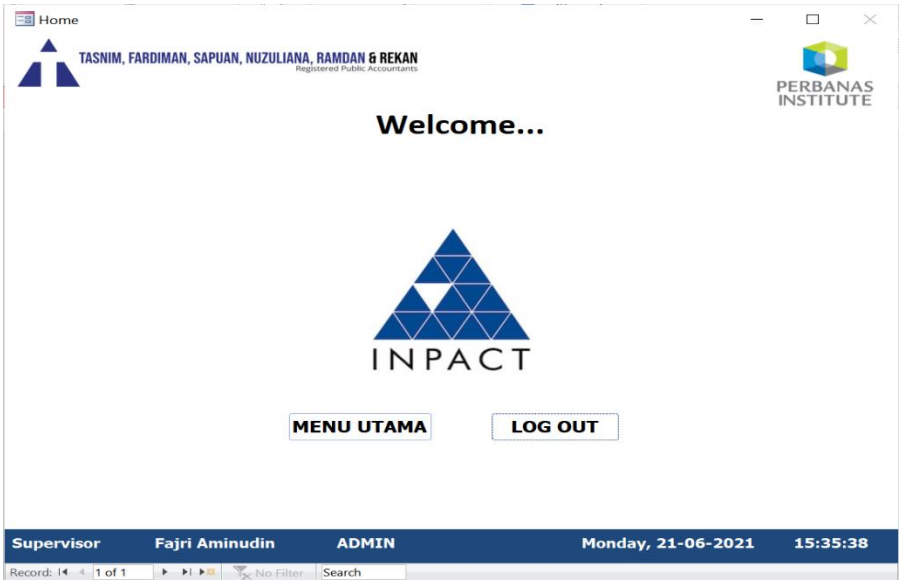


Figure 3.7 Menu Home

3. Form Main Menu

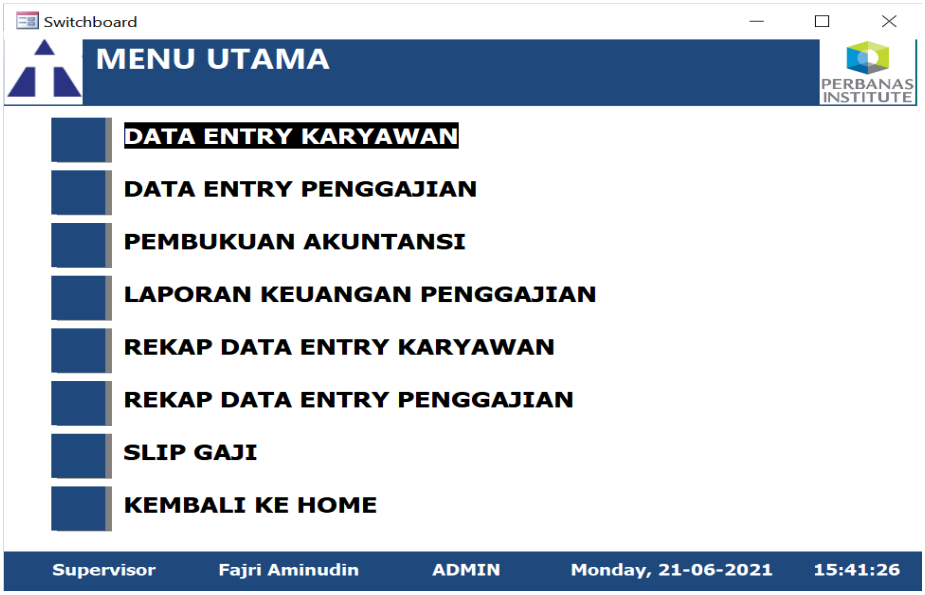


Figure 3.7 Main Menu

4. Form Entry Employee Data

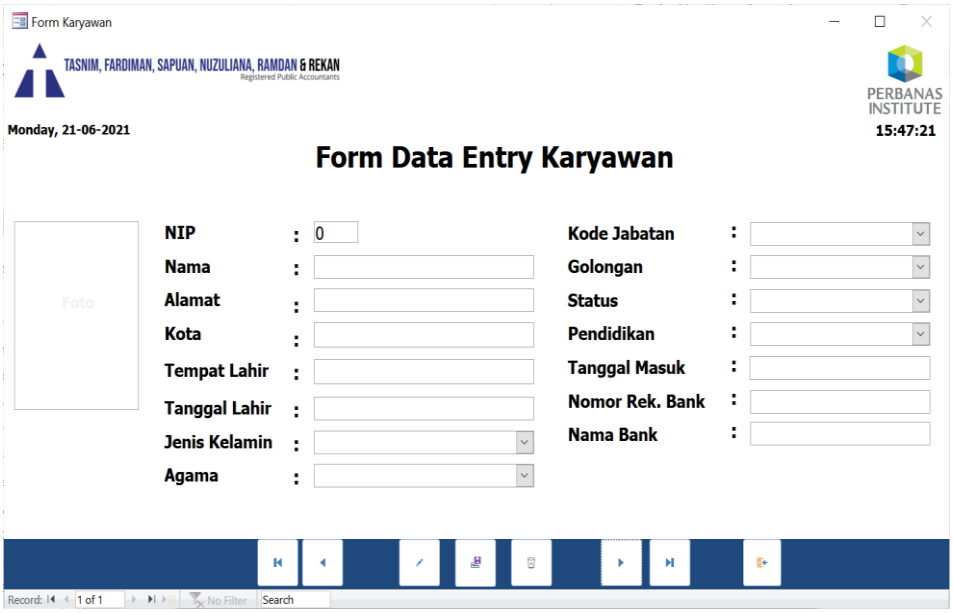


Figure 3.8 Entry Employee Data Menu

5. Form Entry Employee Attendance

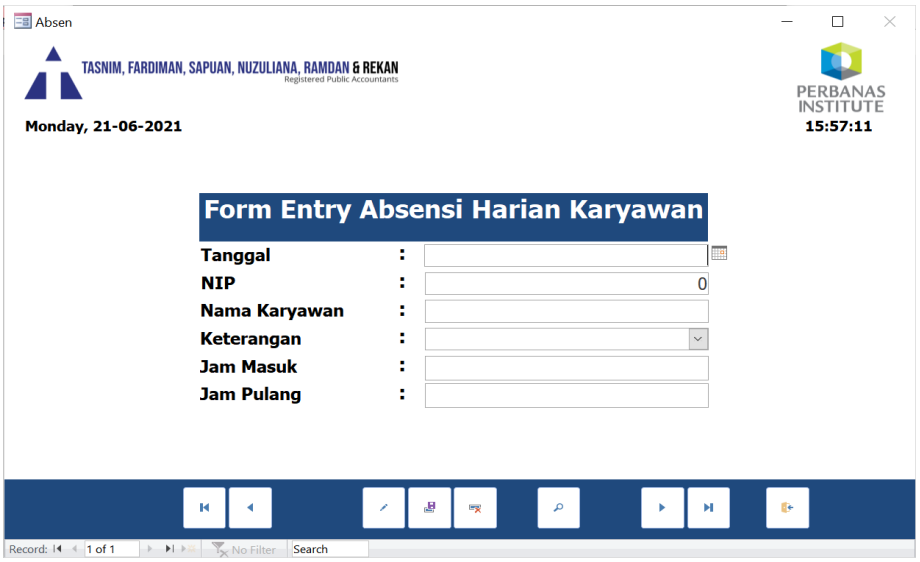


Figure 3.8 Entry Employee Attendance Menu

6. Form Entry Employee Salary Data

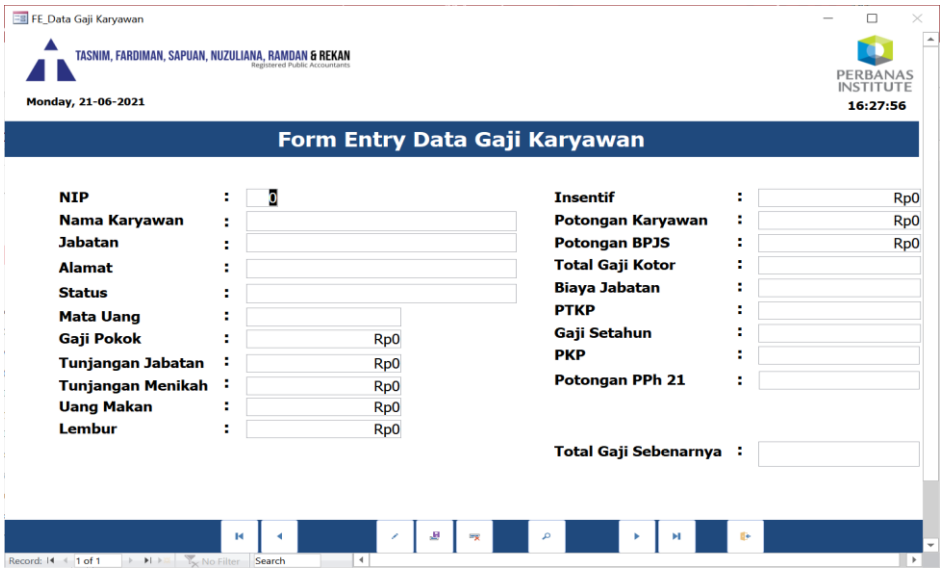


Figure 3.9 Entry Employee Salary Data

4. Conclusion

The results of this study conclude that the Public Accounting Firm of Tasnim, Fardiman, Sapuan, Nuzuliana, Ramdan & Partners in implementing the payroll system is now still limited to paper in table format where the input is still manual by using handwriting to calculate cash out of employee payroll. This company is still classified as manual in its payroll accounting system, it needs to develop a better and computerized system so that it can run the payroll system process faster and obtain information quickly. The recommended proposal is to design a new system using a database where it can replace a manual system that is still not efficient in terms of time and energy in carrying out its procedures without compromising existing procedures. This new design is compiled in a computerized manner starting from building a database, payroll procedure forms to the required reports according to the company's request. This new design can help the company's activities and performance so that the information obtained is very fast and accurate and very different from the manual system.

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