Implementation of Outsourcing Employee Sales System For Verification and Acceleration Salary Transparency

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Abstract

The high graduation rate makes many private agencies build a company engaged in outsourcing. This requires the existence of a system that supports the process of managing technology-based resources. In practice the payroll process is still done manually, starting from the calculation of attendance to printing invoices sent to clients and this causes a delay in invoicing billing, thereby reducing the productivity of the company itself to grow and develop. With these problems the author feels the need to make an application using several methods such as the process of data analysis, design, which includes usecase diagrams, activity diagrams, sequence diagrams, class diagrams. So that it is expected to be able to produce a payroll system that is effective and efficient and fast and accurate. The payroll system that is designed, can be used to manage employee data, work, holidays, overtime, deductions and benefits that have been determined based on data that has been input and is also used to print invoice reports, salary slips. Finally with the existence of this payroll system, the salary calculation process can be done automatically without counting manually and salary data can be received accordingly, with notes that all data input is valid.

Keywords: Oursourcing, Payroll System, Invoice.

1. INTRODUCTION

The development of information technology in the era of globalization is indeed a lot of experiencing a very large increase [1]. The rate of development is very significant in accordance with the increasing needs of the community for the technology itself. Innovations and creative ideas emerge, both from government agencies and from other organizations where the ideas and innovations make it easier for humans to do something or want something [4].

Currently companies engaged in the service sector are also innovating and creating work support systems in order to maintain their existence in the era of all-digital technology [12]. The use of information systems for existing employee payrolls still uses manual systems in conducting payroll activities. Still constrained in the presentation of reports and invoices. There is always a delay in payment by the client and this is a loss for the company because they have to use bailouts to pay employees hired to the client.

An automated system can assist officers in completing their obligations faster so as to reduce the level of delay that will interfere with company stability. Salary is the amount of money received by majors and administrators for their service contributions, which receive a fixed amount of money based on a monthly rate [2].

Payment system is a system that includes a set of rules, institutions, and mechanisms used to carry out the transfer of funds to fulfill an obligation arising from an economic activity (Law on Bank Indonesia article 1, number 6). From the development side of the payment system, of course, provide benefits and needs for users, such as schools in supporting economic activities in allocating funds to the progress of the school both within the organization and outside the organization. [5]

The payment system also consists of a series of sub-systems or sub-components (payment instruments, institutions, infrastructure) which together form a unit that is needed in the transfer of value from one party to another. the system can be done in a simple form that only involves two parties / individuals directly. The need for a computerized system today includes all fields related to the application of information technology [9]. Every private company or government really needs a computerized system that is relevant, accurate, fast, and efficient. [6] The availability of information that is fast and accurate and supported by the application of an optimal system is an advantage that must be owned by every company. [3] System Design is an activity of making technical designs based on activities at the time of the analysis process. The design here is intended a process of understanding and the role of a computer-based information system. [7] Monitoring is monitoring activities carried out routinely about the progress of ongoing projects or activities monitoring changes in project processes and outputs. [8]

2. RESEARCH METHODS

The research method is a procedure or activity of carrying out research in order to collect information or data and conduct an investigation of the data that has been obtained, which is based on basic assumptions, philosophical and ideological views, questions and issues faced [10] A study has a specific research design. This design describes the procedure or steps to be taken, the time of research, the source of data and the conditions of meaning for what data is collected and by how the data is collected and processed for analysis in making reports [11].

2.1   Method of collecting data

a. *Observasi Research*

At this stage the authors make direct observations of the object of research to obtain accurate and complete data and information from various parties involved and related to the research themes that the authors successfully formulated in the finance section.

b. Interview *Research*

The author interviews the Finance and Purchasing Managers who process financial data, the authors get information related to the author's research.

c. *Studi Literature*

In addition to observing the author also conducts data by means of literature study in this method the author tries to complete the data obtained by reading and studying from books and relevant data. The book and data are used by the author to help the analysis and design that is done.

2.2   Method Data Analysis

In this study, the analysis method is carried out by the steps of observing and analyzing the current system, and determining UML (Unified Modeling Language) which includes use case diagrams, activity diagrams, sequence diagrams.

2.3   Discussion

To be able to describe the procedure as a whole requires several stages of analysis as a form of information gathering in order to get a model that suits your needs and be able to provide solutions quickly, effectively and efficiently, starting from the stage of gathering information and needs, analyzing documents, designing relationships between documents and designing database diagram models and system design models [13]. Some of the stages that are meant up to the created floating model can be seen in figure 1,2,3,4,5.
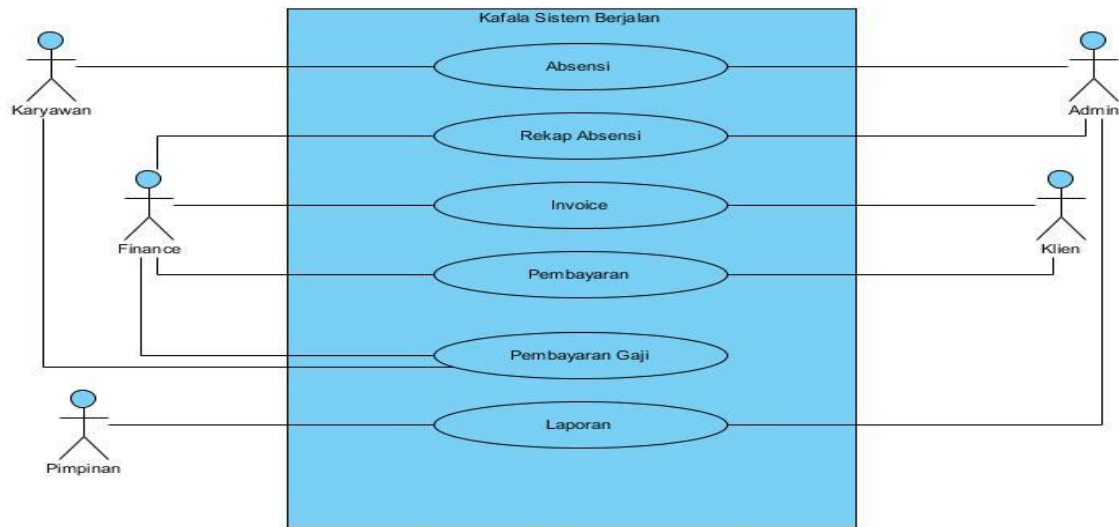
1.   Use Case Diagram Prosedur Berjalan

Figure 1. Use Case Diagrams

Based on the use case diagram (figure 1) that runs the current system that covers all activities in the payroll reporting system. There are 5 (five) Actors who carry out activities, namely finance employees, admin leadership and clients whose function is to handle attendance, attendance recaps, invoices, payroll payments and reports.

There are also 6 (six) use cases which is a process that occurs in the running system, namely attendance involving admin and employees, checking documents related to attendance recap, involving admin, while related: invoice and payment involving finance and client, then payment of salary from finance to employees, then the report by the admin to the leadership.
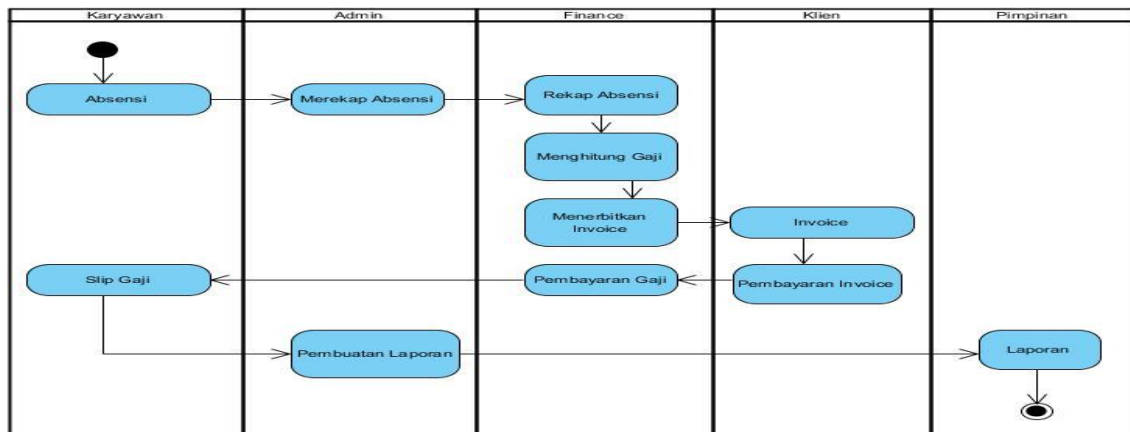
2.   Activity Diagram Prosedur Berjalan

Figure 2. Activity Diagram

Based on the activity diagram (figure 2) that runs the system currently covers all payroll activities. This system involves 5 (five) Actors, namely, employees who attend attendance then receive a paycheck, admin will do the attendance and report making, finance absences recap, calculates salaries, issues invoices and salary payments while clients will receive invoices and invoice payments, the leader will receive a report.
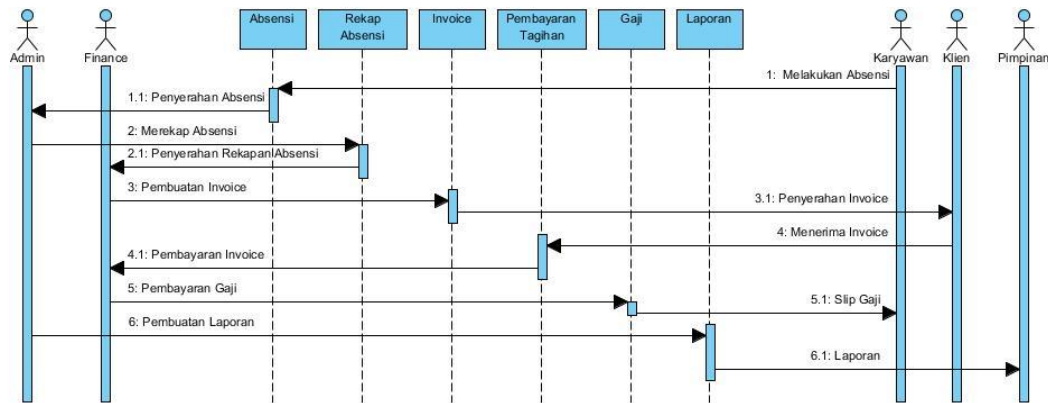
3.   Squence Diagram Prosedur Berjalan

Figure 3. Sequence Diagram

Based on the sequence diagram picture (picture 3) that runs currently there are 5 (five) actors who perform activities including: admin, finance, employees, clients, and leaders who will complete 12 message specifications of communication between objects that contain information about activities what happens, namely absenteeism, submission of absenteeism, absenteeism, absenteeism, submission of invoices, submission of invoices, receipt of invoices, payment of invoices, payment of salaries, payroll slips, preparation of reports and reports.

The above design (figures 1, 2, 3) is a description of the running procedure which at this stage involves several documents such as attendance data, invoices, and invoice receipts and salary slips. Where attendance data is recapitulated by the admin that serves as a reference to the calculation of salaries to be made by finance. An invoice made by finance that serves as proof that the bill will be sent and received by the client. Invoice receipts are made by the client which functions as the invoice receipt already received and paid. Salary slips will be received by employees according to the amount of salary that has been transferred by finance.

4.   Class Diagram

Based on the class diagram picture (figure 4) that runs the current system which includes all activities on the payroll system. There are 10 (ten) classes, namely employees, clients, salary components, deductions which are master and invoice tables, contract_work, attendance as transaction tables, as well as detail_contract tables and employee_ detail tables as history tables. And there is a user table which is an access table to enter the system.

Based on the class diagram picture (Figure 4) above, it can be clearly seen that the level of the relationship of one to many employee tables (1: M), namely employees with attendance tables, employee tables with user tables, employee tables with component_ salary tables, while detail_ employee tables are created because of level of many to many (M: M) relationships between the employee table and the contract_work table. detail_kontrak table created because of the level of many to many (M: M) relationships between the contract_work table and the compound_ salary.

5.   Use Case Diagram Usulan
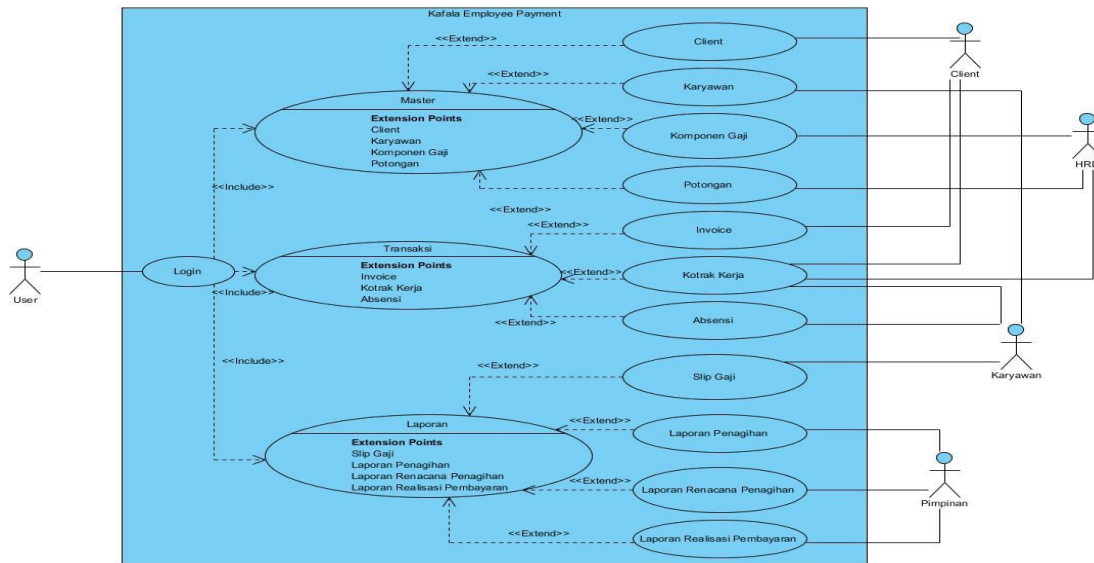
Gambar 5. Use Case Diagram

Berdasarkan gambar *use case diagram usulan (gambar 5)* terlihat jelas bahwa terdapat 15 (limabelas) use case yang terdiri dari 3 (tiga) use case utama yaitu master, transaksi, laporan. Use case master memiliki 4 (empat) yang terdiri dari use case client yang terhubung dengan aktor client, use case karyawan berhubungan dengan aktor karyawan serta use case component gaji dan use case potongan berhubungan dengan aktor HRD. Use case transaksi memiliki 3 (tiga) yang terdiri dari use case invoice yang berhubungan dengan actor client, use case kontrak kerja berhubungan dengan actor : client, HRD, dan actor karyawan, dan use case absensi berhubungan dengan actor karyawan. Use case laporan memiliki 4 (empat) yang terdiri dari use case slip gaji berhubungan ke aktor karyawan, laporan penagihan, laporan rencana penagihan, laporan realisasi pembayaran yang terhubung dengan pimpinan. Serta use case login merupakan akses awal untuk masuk kedalam sebuah sistem, berdasarkan informasi username dan password yang ada pada tabel user.

Use diagram sebagai bentuk rancangan sistem yang akan diciptakan (gambar 5) merupakan desain model tampilan utama yang berorientasi pada kebutuhan menu pada aplikasi yang disiapkan, selain itu untuk kebutuhan penyimanan informasi data agar dapat digunakan secara histori juga digambarkan dalam bentuk class diagram (gambar 4) lengkap dengan informasi *field* dan *type* data sesuai kebutuhan penyimpanan data.

3.   RESULTS AND DISCUSSION

2.1.   Design Database

To be able to depict the form of the database as a whole, researchers use the mySql application as a form of basic description, and in the end the form of the database design can be adjusted to use anything as needed.

a. Tabel Master: User
Primary Key   :   id_user
Foreign Key   :   -
Structure Tabel   :   { nama, NIP, password, role, photo }

#	Name	Type	Collation	Attributes	Null	Default	Extra
1	id_user	int(5)			No	None	AUTO_INCREMENT
2	nama	varchar(30)			No	None	
3	NIP	int(10)			No	None	
4	password	varchar(20)			No	None	
5	role	varchar(10)			No	None	
6	photo	varchar(100)			No	None	

Table 1. User Table Structure

b. Tabel Master: *Client*
Primary Key   :   id_Client
Foreign Key   :   -
Structure Tabel   :   { Lembaga, Alamat, No_Telp }

#	Name	Type	Collation	Attributes	Null	Default	Extra
1	Id_Client	int(4)			No	None	AUTO_INCREMENT
2	Lembaga	char(50)			Yes	NULL	
3	Alamat	text			Yes	NULL	
4	No_Telp	char(15)			Yes	NULL	

Table 2. Client Table Structure

c. Tabel Master: Karyawan
Primary Key   :   NIP
Foreign Key   :   -
Structure Tabel   :   { Nama_Karyawan, jabatan, divisi, penepatan, Tgl_Lahir, j_kelamin }

#	Name	Type	Collation	Attributes	Null	Default
1	NIP	int(10)			No	None
2	Nama_Karyawan	char(25)			Yes	NULL
3	jabatan	varchar(15)			No	None
4	divisi	varchar(15)			No	None
5	penepatan	varchar(20)			No	None
6	Tgl_Lahir	date			Yes	NULL
7	Jenis_Kelamin	char(9)			Yes	NULL
8	Alamat	text			Yes	NULL

Table 3. Employee Table Structure

d. Tabel Master: Komponen Gaji
Primary Key   :   Code_komponenGaji
Foreign Key   :   NIP
Structure Tabel   :   { tgl, upah_pokok, tunj_jabatan, tunj_trans, tunj_makan, lembur, backup}

#	Name	Type	Collation	Attributes	Null	Default	Extra
1	Code_komponenGaji	int(4)			No	None	AUTO_INCREMENT
2	tanggal	date			No	None	
3	NIP	int(10)			No	None	
4	upah_pokok	int(10)			Yes	NULL	
5	tunjangan_jabatan	int(10)			Yes	NULL	
6	tunjangan_transport	int(10)			Yes	NULL	
7	tunjangan_makan	int(10)			No	None	
8	lembur_rutin	int(10)			No	None	
9	lembur_khusus	int(10)			No	None	
10	back_up	int(10)			No	None	

Table 4. Salary Component Table Structure

e. Tabel Master: Potongan
Primary Key   :   Code_Potongan
Foreign Key   :   -
Structure Tabel   :   { Nama_Potongan, Nominal_potongan }

#	Name	Type	Collation	Attributes	Null	Default	Extra
1	Code_Potongan 🔑	int(2)			No	None	AUTO_INCREMENT
2	Nama_Potongan	char(25)			Yes	NULL	
3	Nominal_potongan	double			No	None	

Tabel 5. Struktur Tabel Potongan

f. Tabel Transaksi: Invoice
Primary Key   :   No_Invoice
Foreign Key   :   Id_Client
Structure Tabel   :   {Tgk_invoice, Periode, Uraian, qty, biaya_perorang, total }

#	Name	Type	Collation	Attributes	Null	Default
1	No_Invoice 🔑	char(20)			No	None
2	Id_Client 🔑	int(4)			Yes	NULL
3	Tgl_Invoice	date			Yes	NULL
4	Periode	char(8)			Yes	NULL
5	uraian	text			No	None
6	qty	int(5)			No	None
7	biaya_perorang	int(10)			No	None
8	total	int(10)			No	None

Tabel 6. Struktur Tabel Invoice

g. Tabel Transaksi: Kontrak Kerja
Primary Key   :   No_Kontrak
Foreign Key   :   Id_Client
Structure Tabel   :   { tg_kontrak, Periode, Nama_pihakPertama, Nama_pihakKedua, tgl_awalKontrak, tgl_akhirKontrak}

#	Name	Type	Collation	Attributes	Null	Default
1	No_Kontrak 🔑	char(16)			No	None
2	Id_CLient 🔑	int(4)			Yes	NULL
3	Tgl_Kontrak	date			Yes	NULL
4	Periode	char(17)			Yes	NULL
5	Nama_pihakPertama	char(50)			Yes	NULL
6	Nama_pihakKedua	char(50)			Yes	NULL
7	tgl_awalKontrak	date			No	None
8	tgl_akhirKontrak	date			No	None

Table 7. Structure of the Work Contract Table

h. Tabel Transaksi: Absensi
Primary Key   :   Code_Absensi
Foreign Key   :   NIP
Structure Tabel   :   { Tanggal_masuk, Jam_hadir, Tanggal_Pulang, Jam_pulang }

#	Name	Type	Collation	Attributes	Null	Default
1	Code_Absensi 🔑	int(4)			No	None
2	NIP 🔑	int(10)			Yes	NULL
3	Tanggal_Masuk	date			Yes	NULL
4	Jam_Hadir	time			Yes	NULL
5	Tanggal_Pulang	date			Yes	NULL
6	Jam_Pulang	time			Yes	NULL

Table 8. Attendance Table Structure

3.2. Processing Chart for Client Payment Data

Figure 6. Graph of Processing Data on Client Payments in the Last 3 Years

The graph above (figure 6) is a graph of processing data on client payments in the last 3 years based on time (month). This can assist management in supporting decisions for which payments are priority payments. The graph above can be taken based on Datewarehouse, as defined "Doing Data Warehouse (DW) to your business or system is not only think about the trend only, but how to understand the DW knowledge itself and how to implement it" [14]. And how to measure it "Measures are a standard unit used to express the size, amount, or degree of something, qualities are often difficult to be measured as it needs to have some certain parameters or elements, and those parameters must be quantifiable and verifiable" [15].

3.3.   Diagram HIPO
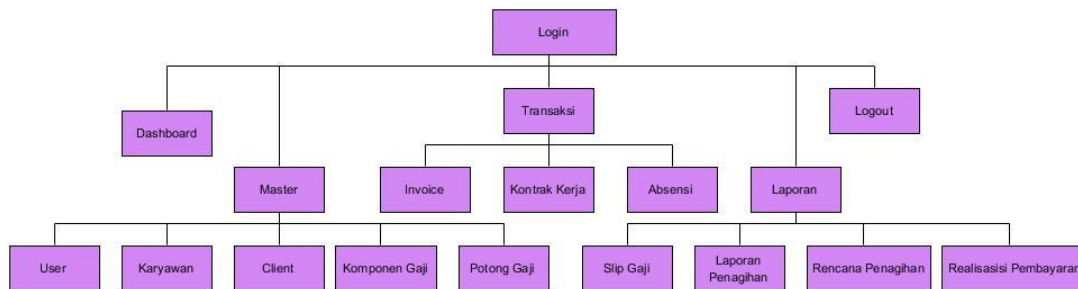
Figure 7. HIPO diagram

To illustrate the menu structure of the system designed can be illustrated with a HIPO (Hierarchy Input Process Output) diagram. To provide a structure for understanding the functions of the program. Seen from the HIPO diagram above (figure 7) there are 1 (one) main functions (diagram 0) and 5 (five) functions below, namely the dashboard menu function (diagram 1), master menu (diagram 2), transaction menu (diagram 3) , report menu (diagram 4) and logout menu (diagram 5). Inside the master menu function (diagram 2) there are 5 (five) sub menu functions, namely the user menu function (diagram 2.1), employee (diagram 2.2), client (diagram 2.3) salary component (diagram 2.4) and discount (diagram 2.5). In the transaction menu function (diagram 3) there are 3 (three) sub menu function functions, namely the invoice function (diagram 3.1), work contract (diagram 3.2) and attendance (diagram 3.3). In the report function (diagram 4) there are 4 (four) sub menu functions, namely pay slips (diagram 4.1), billing reports (diagram 4.2), billing plans (diagram 4.3) and payment realization (diagram 3.4). for the logout menu (diagram 5)
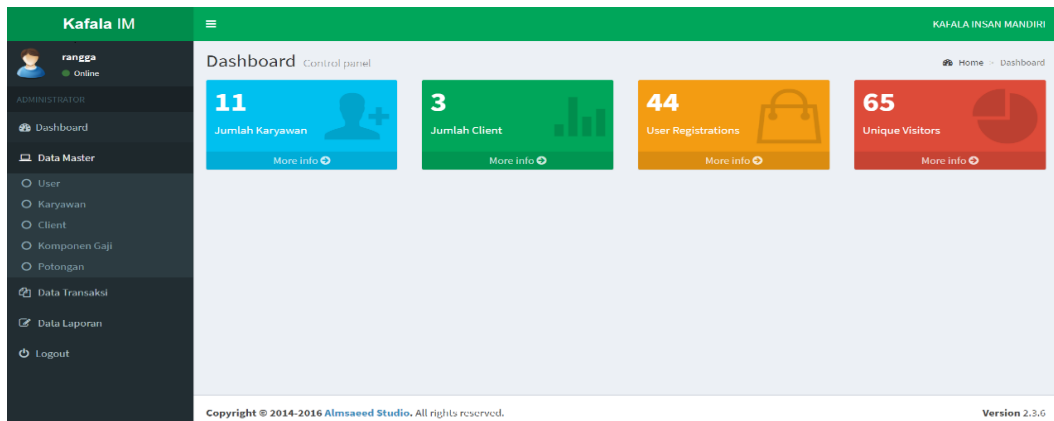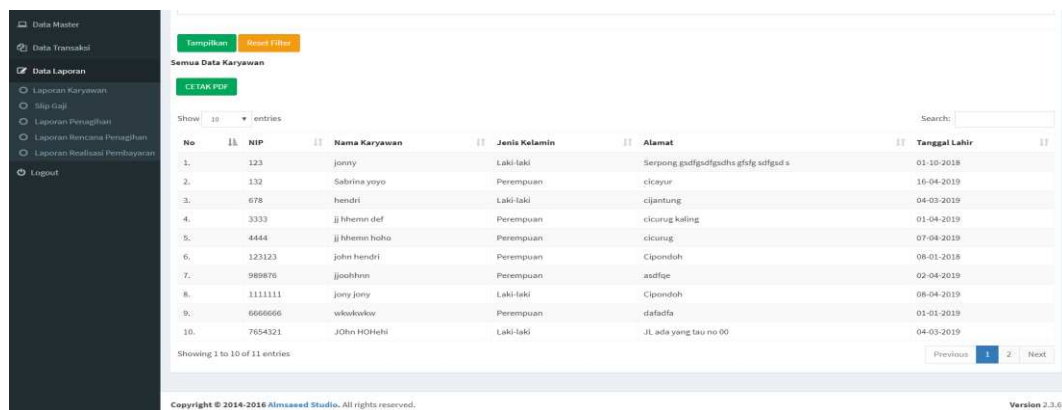
3.4.   Display Design

Figure 8. Main Display

Seen in the display screen above (figure 8) is the main screen display consisting of the master menu, transaction menu and report menu.

Figure 9. Transaction Menu Display

Seen in the above screen display (figure 9) is the main screen display which consists of the master menu, transaction menu and report menu, where the transaction menu has a delivery order sub menu, invoice sub menu and invoice receipt sub menu.

Figure 10. Display the Report Menu

Seen on the screen above (figure 10) is the main screen display consisting of the master menu, transaction menu and report menu, where the report menu has a sub menu of supplier debt bills, debt maturity, presentation due and estimated payments.

3.5.   Query Penciptaan Informasi

Query Penambahan Data:
```
function tambah_aksi(){
        $No_Kontrak = $this->input->post('No_Kontrak');
        $conn = mysql_connect('localhost','root','','employee_payment');
        mysql_select_db($conn,'kontrak_kerja');
        $cek = mysql_num_rows(mysql_query($conn,"SELECT * FROM karyawan
        WHERE No_Kontrak='$No_Kontrak'"));
        if ($cek > 0){
        echo "<script>window.alert('No_Kontrak yang anda masukan sudah ada')
        window.location='http://localhost/Employee_Payment/karyawan/tambah'</scri
pt>";
        }
                $Id_CLient = $this->input->post('Id_CLient');
                $Tgl_Kontrak = $this->input->post('Tgl_Kontrak');
                $Periode = $this->input->post('Periode');
                $Nama_pihakPertama = $this->input->post('Nama_pihakPertama');
                $Nama_pihakKedua = $this->input->post('Nama_pihakKedua');
                $data = array(
                         'No_Kontrak' => $No_Kontrak,
                        'Id_CLient' => $Id_CLient,
                        'Tgl_Kontrak' => $Tgl_Kontrak,
                        'Periode' => $Periode,
                        'Nama_pihakPertama' => $Nama_pihakPertama,
                        'Nama_pihakKedua' => $Nama_pihakKedua);
                $this->m_kontrak_kerja->input_data($data,'kontrak_kerja');
                redirect('kontrak_kerja/index');   }

    Query Update Data:
    function update(){
        $No_Kontrak = $this->input->post('No_Kontrak');
        $Id_CLient = $this->input->post('Id_CLient');
```

```
$Tgl_Kontrak = $this->input->post('Tgl_Kontrak');
$Periode = $this->input->post('Periode');
$Nama_pihakPertama = $this->input->post('Nama_pihakPertama');
$Nama_pihakKedua = $this->input->post('Nama_pihakKedua');
$data = array(
        'No_Kontrak' => $No_Kontrak,
        'Id_CLient' => $Id_CLient,
        'Tgl_Kontrak' => $Tgl_Kontrak,
        'Periode' => $Periode,
        'Nama_pihakPertama    ' => $Nama_pihakPertama,
        'Nama_pihakKedua      ' => $Nama_pihakKedua);
$where = array(
        'No_Kontrak' => $No_Kontrak);
$this->m_kontrak_kerja->update_data($where,$data,'kontrak_kerja');
        redirect('kontrak_kerja/index'); }
```

Query Edit Data:
```
function edit($id){
$where = array('No_Kontrak' => $id);
$data['kontrak_kerja']   =   $this->m_kontrak_kerja->edit_data($where,'kontak_kerja')->result();
        $this->load->view('header');
        $this->load->view('edit_kontrak_kerja',$data);
        $this->load->view('footer');        }
```

Query Hapus Data:
```
function hapus($id){
        $where = array('No_Kontrak' => $id);
        $this->m_kontrak_kerja->hapus_data($where,'kontrak_kerja');
        redirect('kontrak_kerja/index');   }
```

3.   CONCLUSION

Based on the results of the analysis and research that has been done related to the outsourcing employee payroll system has not fully supported the acceleration of invoice verification and transparency of company salaries to employees, this is because the process is still manual from recording to filing, thus impacting on employee inconvenience. which affects the level of trust.

5.   SUGGESTION

To overcome this problem a payroll system needs to be built that can accelerate invoice verification, through various analysis and design methods using uml as system design, and MySql as database management, and php as a programming language that can create computerized data processing systems so that they can creating invoice verification quickly and creating salary transparency that can increase employee confidence.

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