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JUDUL: Human Resource Payroll Management System (HRPMS)

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HUMAN RESOURCE PAYROLL MANAGEMENT SYSTEM

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**This report is submitted in partial fulfillment of the requirements for the Bachelor
of Computer Science (Software Development)**

**FACULTY INFORMATION AND COMMUNICATION TECHNOLOGY KOLEJ
UNIVERSITI TEKNIKAL KEBANGSAAN MALAYSIA 2006**

DECLARATION

I hereby declare that this project report entitled

HUMAN RESOURCE PAYROLL MANAGEMENT SYSTEM

is written by me and is my own effort and that no part has been plagiarized
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SUPERVISOR: _____  _____ Date: 01/11/2006_

(ENCIK AHMAD FADZLI NIZAM BIN ABDUL RAHMAN)

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ABSTRACT

This report is an attempt to generalize and analyze the project with title Human Resource Payroll Management System (HRPMS) for EPS Softec System Sendirian Berhad. Overall, I have developed the system that integrates web pages, controls, data access, validation, encryption and security. There are five modules that in the HRPMS, which was Login, Registration, Time Management, Payroll Management and Leave Management by using ASP Scripting. Besides, the system has also using Java Script, connection string, MySQL database, SQL command and so forth. The documentation of the program has been upgraded. I cannot guarantee that the propose system is the best product in the current market that currently growing up because the technology always be changed from time to time. But the propose HRPMS would be help the organization in their management of the payroll transaction. It can save their time to reduce the paperwork. In a nutshell, during the development of HRPMS, I can continued to grow in knowledge, excel in technology application, interact and share with my supervisor and manager of company develop the world class solution and real world challenges, develop the skill being learned in university to the benefit I get from it.

ABSTRACT

Tesis ini bertujuan untuk membuat analisis dan membangunkan projek yang bertajuk Human Resource Payroll Management System untuk EPS Softec System Sendirian Berhad. Secara keseluruhannya, saya membangunkan system ini dengan menggunakan laman web, mengesahkan data dari segi security. System ini dibangunkan dengan menggunakan Java Script, ASP dan MySQL dalam mengendalikan pangkalan data. Dengan kemajuan teknologi yang berkemgankan dari semasa ke semasa, kami tidak dapat memastikan bahawa system ini ialah yang terbaik. Tetapi, diharapkan system ini dapat membantukan syarikat dalm mengendalikan data dalam organisationnya. System ini dapat menjimatkan masa dalam menguruskan sysrikat. Di samping itu, saya dapat meningkatkan rahap pengetahuan saya ke tahap yang lebih tinggi dan menghadapi cabaran pada masa hadapan.

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LIST OF ABBREVIATION

KUTKM	Kolej Universiti Teknikal Kebangsaan Malaysia
HRPMS	Human Resource Payroll Management System
IIS	Internet Information Services
OT	Overtime Hours
ASP	Active Server Pages
HTML	Hypertext Markup Language
DBMS	Database Management System
HRIS	Human Resource Information System
RUP	Rational Unified Process
UML	Unified Modeling Language
HTTP	Hypertext Transfer Protocol
FTP	File Transfer Protocol
SQL	Structured Query Language
RAM	Random Access Memory
NIC	Network Interface Card
IT	Information Technology
DSN	Data Source Name
ODBC	Open DataBase Connectivity
LAN	Local Area Network
TCP/IP	Transmission Control Protocol/Internet Protocol
ERD	Entity Relational Database
SCM	Software Configuration Management
SDES	Software Development Environment Setup
I/O	Input and Output

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CHAPTER I

INTRODUCTION

1.1 PROJECT BACKGROUND

The proposed system that will be built is Human Resource Payroll Management System (HRPMS) for EPS Softec System Sendirian Berhad. The EPS Softec System Sendirian Berhad will use this system to replace the current manual system. The company's admin and employees will be the end user of this system.

The company has maintained a very limited computerized module of the payroll processing application. The majority of the work is manual and maintained on numerous spreadsheets. The informational database is not integrated with the Human Resources Department, therefore all personnel data must be re-keyed by each department. Both departments have limited staff personnel and during heavy processing periods such as quarterly and yearly reporting and semester adjunct hiring's, the activities can become burdensome. The current payroll processes are extensively manual intensive.

This replacement is due to problems that arise when using the current system. The current system consumes a lot of time in order to keep track of all records in some processes such as registration of a new employees, calculation of salary, keep track on employee's schedule and etc.

The payroll administrator's jobs will be easier and more efficient once the proposed Human Resource Management System has been replaced the current system. This is the computerized system, which will improve and enhance the services provided by the company's admin to staffs. The paperless system stores all the records in database. This will improve data integrity and easier to save, retrieve and manage those records. End users can retrieve the information such as employee status or the citizenship details with easily from the database in the new system and save a lot of time.

Besides that, Human Resource Payroll Management System can handle and manage complex calculations that would otherwise be prone to errors. For example, the complex calculation may take the input, rate or basic salary from the employee detail or transaction entry. Therefore, the formula rate that use in the system will simplify the complex calculation because it is system generated. User just have to key in the required field in the form, then employee's pay, allowance advanced, deduction and others will be generated.

The proposed Human Resource Payroll Management System has many benefits especially in improving efficiency of company's services and more systematic as well as more reliable compare to current manual system.

1.2 PROBLEM STATEMENT

EPS Softec System Sendirian Berhad is specialized in computer software, hardware and services. The company currently does not using the computerized system in the management of the employees. The current system does not keep track the employee attendance, overtime hours, leave apply and so on. Since, the company's business are growing up and planning to have branch at other area, the online based system is needed to manage the employee's problem. It can solve the problem as the number of employees is increased. The problem statements are list as below:

- The current system needs the human involved in most of steps of registration process flow. For example, the new employee's information will be filling in into an employment form and the form will be keep into a file. This will generate a higher risk compare to the computerized system. The data may be lost if any accident are happened. Therefore, the clerk have to re-entered the data and it may be happened the duplication of data.
- Most of the process are done manually which included the checking the existing employee, calculate the working hours of the employee and generate a pay-slip to the employee. The clerk will check the formula rate of the employee whether he is monthly pay or daily pay because the formula for the calculation of the allowance code such as Basic, Overtime, Advance, Deduction and so on is different between both of them. Then, the clerk will use the required formula of allowance code to calculate the salary. After the salaries are calculated out, the amount of salary will fill the pay-slip form which are already prepare for the employee.
- The current system is using the punch card system to manage the working hours of employee. All employee have to punch the time he is in or out from the company. The current system arrange the shift time of the employee by manually. The supervisor for each department will arrange the employee under his construction and arrange the shift time for them. Most of the shift time are decided by the management
- The employee has to filling in a leave form before he is applied the leave and get the approver from the manager. If the leave is approved, then the leave form is keep into a file. At the end of the month, when the payroll clerk to calculate the monthly salary, she has to check whether the employee has applied the leave or not. The type of leave will be affecting the salary such as annual leave, sick leave, and unpaid leave and so on. If the employee is a permanent staff, then the leave

balances have to change every time depends on the leave type that the employee apply.

- The system does not generate report for the company at the end of the month or yearly. It is time consuming to generate report by using the manual system because the payroll clerk has to collect all the data form the large amount of employees.
- The system were not categories the citizenship between the local worker and the foreign worker. The foreign worker who were under contract may be faced the problem by the due date of the employment contract.

1.2 OBJECTIVES

The objectives of the development of the HRPMS are:

- The purpose of this application is to maintain time and attendance data calculate the payroll to manage the employee in the EPS Softec System Sendirian Berhad.
- This system minimizes the clerical work required to produce the payroll.
- The system can produce report such as pay slips, annual income statement, employee resign report and so on.
- Time and attendance data for all the employees are manage systematically.
- The system able to minimize data entry and calculation the staff's pay, allowance, advance, deduction and others based on the formula rate.
- This can improve data integrity and easier to save, retrieve and manage those records. End users can retrieve the information such as employee status or the citizenship details with easily from the database in the new system and save a lot of time.

1.4 SCOPES

The Human Resource Management System is a system that manages to handle with many functions by using computer. The modules that run by the Human Resource Management System is registration, payroll processing, time and attendance management and leave management, generate report based on the requirement of the company.

The end user in the Human Resource Payroll Management System is the manager and the payroll clerk. The clerk will handle the payroll processing, time and attendance and calculation of leave balances functions. Only the authorized clerk can login to access those functions. The login process is a means of security for the entire system.

The Human Resource Payroll Management System to be developed can divide to four main modules which are registration, payroll, and time management and leave management. The HRPMS is suitable for most of the industrial organizations which need an effectively human resource management system.

a) In the module Registration

The registration module can manage the employee data file. First of all, the user (payroll clerk) will key in the employees information into the payroll system. All the information fields are group into the systematic part such as Particular Detail, Spouse Information, Employment Detail, Previous Employment, Government Detail, Salary Detail and Family Information. Then, the administrator will arrange the salary structure to the employee according the formula rate, join date, and confirm date and salary for the employee.

In the form of Employee Profile, we used the validation function to control the invalid insertion for some of the field such as Master Code, formula rate and so on. Only

the code that key in through Master Code can be used as the input for employee. For Example, if the user key in the formula rate wrongly, the system will empty the fields until user insert the correct insertion. The formula rate such as Monthly or Daily is required.

In the forms that contain the date's field, the validation function to control the invalid insertion are included. In most of the form, there may contain the date that required user to key in the date. In order to make sure that the date is correct in used; we pop out the error message to user. For example, if the user key in the date wrongly, the system will prompt an error message to inform the correct format of the date.

b) In the module Payroll Management

In the payroll module, the transaction entry option is to control the processing of salaries. It is use for the monthly maintenance of all allowance code and deduction for each employee. For first time usage of this option, user has to remember to key in the necessary allowances code. Employee detail must be keyed-in in employee detail or else employee's name does not appear. The transaction entry is just can be used by the existing employee. That mean the employee already is one of the staff in the company. Then the employee can calculate the salaries or continued with the payroll processing. The validation of the existing employee will be one of the functions in the transaction entry.

The important function the proposed system is the process of the transaction for the record for each of the exiting employee. The record is process as user click on the "Process" button. The purpose to process the record is to calculate the salary for the employee. The record for each of the transaction can be referring through the historical data database. It is useful as when there have a large amount of employee have the record and process in the same time. User can review all the record for the entire employee at the same time at the end of the month.

The Historical Data is to view previous transaction based on selected employee ID. This table is for Read-Only purpose. No modification is allowed in this table. In order to modify an entry, user have to go to Transaction Entry for modification.

Beside of that, the system will be able to generate report for the company. Payroll System Reports such as Pay slip, Employee Report (Resign, Confirm or Joining) and Annual Income Statement have to print out after the payroll processing is completed. The pay slip has shown all the allowance code that has been process.

c) In the module Leave Management

The leave management module can let the user define leave code and leave code setup. This form is use to save the leave code's information and criteria that define by user themselves. The related information that may key in are Leave Code, Leave Description, Leave Entitlement, Rounding Code, From, To, Input. Some of the examples of the Leave Code are Annual Leave, Medical Leave, and Unpaid Leave and so on.

Beside of that, the system can let the user define leave day rounding table for the company itself. The table is used to save the value that will be used to round the value of entitlement. The leave entitlement is calculated out depends on the month that the employee joined in the company. Then the numbers of month are retrieved to calculate the actual leave day that can be taken by the employee. Before the value of the leave day is display, it must be rounded become an integer value.

The system provides a flexible leave application for the employees. The leave form will be fill in and submit to the clerk. Then the clerk will key in the required information into Update Leave Transaction. In this form, the leave entitlement of the employee is calculated and balances of the leave day are display in the form. The number of the leave day that taken will be calculated by the program and display in the

text box. So the balance of the leave day is calculated after the forms is submitted and save into database. So the latest leave balance will be shown in the leave form for the future used.

d) **In the Time Management Module**

For the time management module, user can define shift code that will use in the company. This is a table that will enable user to key in shift code and its details to be used in Shift Assignment. The information in the form such as below:

- Shift Code – name of shift in form of code
- Description – description of code
- Work in – time start for specific code
- Work out – time end for specific code
- Minimum OT – requirement time in order to claim OT
- Generate Transaction Entry

This table is allowing user to key in employee transaction manually. User can also do correction on previous transaction. In order to accumulate data for all transaction, user must undergo the process step in order to print the correct report.

1.5 **PROJECT SIGNIFICANT**

Human Resource Payroll Management System (HRPMS) can handle and manage complex calculations that would otherwise be prone to errors. For example, the complex calculation may take the input, rate or basic salary from the employee detail or transaction entry. So the formula rate that use in the system will simplify the complex calculation because it is system generated. User just have to key in the required field in

the form, then employee's pay, allowance advanced, deduction and others will be generated.

With the HRPMS, the user would not feel unsatisfied because all the functions' response time is very fast. There is no more time consuming for the payroll process and transactions. As example, a searching function will give the results to the user within a minute where all the related information will be displayed automatically and systematically.

The system can handle the management with more systematically. Therefore, it is save times in all the process comparing to the manual system. They let you specify your new systems requirements faster than traditional methods. The development of the propose system able to meet the user requirement and specification with the improvement in the future.

1.6 EXPECTED RESULT

Typically, HRPMS technology replaces the core Human Resource activities by streamlining them electronically. The activities are payroll processing, time and attendance management, leave management and administration of the company. While using the internet or corporate intranet as a communication, the HRPMS technology can convert these into web-based HRPMS components and permit to reduce transaction costs, leading to greater human resource and organizational efficiency.

Through HRPMS, human resource activities shift away from paper based processes to using self-service functionalities that benefit employees and manager. Costly and time consuming administrative tasks are being individually handled and permit to reduce transaction time, leading the organizational management effectiveness.

1.7 CONCLUSION

The proposed system, Human Resource Payroll Management System is the state of the art human resource management software that can be easily and securely accessed through any web browser anywhere in the world. This intranet accessibility allows companies to deploy their payroll management solution across multiple remote locations because it is developed into web-based software. This payroll processing software will improve the company's payroll process, saving time and money, and provided services with real-time access to accurate and up-to-date information.

By using the proposed system, most problems in the current system can be solved effectively. The online portal will be developed by using HTML, JavaScript and server-side scripting (ASP). So the end user can access this system concurrently. All the information that needed will be stored in database by using MySQL, which is a relational database management system (DBMS) software.

The end product of proposed system will be delivered in a very user-friendly way. The system will contain certain important features such as learn ability, usability and interactive interface. All these features can ensure the end users to navigate the system easily and effectively.