PAYROLL SYSTEM USING RFID

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DECLERATION

I hereby declare that this project entitled

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is written by me and is my own effort and that no part has been plagiarized without citations.

STUDENT: _____ Date: 11 NOVEMBER 2008
(MOHD ZAKIAMANI BIN MAT NAWI)

SUPERVISOR: _____ Date: 11 NOVEMBER 2008
(MOHD ZAKI BIN MAS'UD)

DEDICATION

To my beloved Family, I love you all. To My Supervisor, Thank you so much for the assist and help. To my all my friends, thank you for your hardship and support.

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ABSTRACT

The function of this system is to calculate the payment of the factory workers. It can store all information and records about the payment in one main database. This system will be used by the staffs at the human resource department to calculate and record the data about the workers there. There are five modules in this system. They are RFID scanner, RFID management, database management from RFID, the workers payment calculation and new-worker registration. All the data about a worker will be stored in one database in order to help the staffs to check and find information about the workers who are working on that day. One example of the stored data is information on the workers themselves and attendance. This system helps the staffs to get information about the workers more quickly and systematic. This system is designed to prevent problems occured when using the manual system.The methodology used is the development of this system is the SDLC methodology. The structure of SDLC methodology consists of the stage of planning, analysis, designing, testing and implementation. The scope of this research is focusing more on the user of this system regarding the attendance and personal data of the workers. This system is a web-based system which will be controlled by one main server and can be accessed by the client in the same networking.

ABSTRAK

Sistem yang dibangunkan ini berfungsi untuk membuat pengiraan gaji bagi pekerja kilang. Ianya dapat menyimpan segala maklumat dan rekod berkenaan gaji pekerja di dalam satu pangkalan data. Sistem ini akan digunakan oleh staf di bahagian sumber manusia bagi mengira dan merekod data bagi setiap pekerja yang terdapat di dalam kilang tersebut. Sistem ini mempunyai lima modul yang berlainan iaitu mengimbas RFID, pengurusan RFID, pengurusan pangkalan data dari RFID, pengiraan gaji pekerja dan mendaftar sebagai pekerja baru. Segala maklumat mengenai seseorang pekerja akan disimpan di dalam satu pangkalan data bagi memudahkan staff menyemak dan mencari maklumat mengenai pekerja yang bekerja pada hari yang berkenaan. Data yang disimpan adalah seperti maklumat pekerja dan kehadiran. Sistem ini sedikit sebanyak memudahkan staff memperolehi maklumat pekerja dengan cepat dan sistematik. Sistem ini bertujuan untuk mengatasi masalah yang dihadapi terhadap sistem semasa yang masih menggunakan sistem manual. Metodologi pembangunan sistem ialah metodologi *SDLC*. Struktur metodologi *SDLC* merangkumi peringkat perancangan, analisis, rekabentuk, pengujian dan implementasi. Skop kajian ini lebih tertumpu kepada pengguna sistem ini iaitu kehadiran dan maklumat pekerja. Sistem ini merupakan sistem berasaskan web di mana ia akan dikawal oleh satu *server* dan dapat dicapai oleh *client* dalam rangkaian yang sama.

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LIST OF ABBREVIATIONS

DFD	-	Data Flow Diagram
DB	-	Database
DBMS	-	Database Management System
DDL	-	Data Definition Language
ERD	-	Entity Relational Diagram
PHP	-	Pre-Hypertext Processor
RFID	-	Radio Frequency Identification
SDLC	-	System Development Life Circle
FTMK	-	Faculty of Information and Communication Technology

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CHAPTER I

INTRODUCTION

1.1 Project Background

Payroll system using RFID is the system which based on the original present system. The system is developed for staff and factory workers. It is function as a detector for the workers attendance by using RFID application. This system will record workers attendance and count up their payroll based on the recorded time captured by the system. This will help for Human Resource (HR) to count up workers payroll easier.

The user of the system is the workers and staff of the factory. The user scanned their card to the system which then the time and date of the check-in and check-out will be recorded. This system is more systematic system than usual type of manual system. It functions assist the staff in HR department in to determine the salary daily. At the mean time, the current problem is that the manual system that has been using now is difficult, which they are using cards to write down the time of the workers start and finish working. This leads to many mistrustful actions

during time and date taken. And also, sometimes, the staff gets troubles to count the total of over time (OT) to be received by their workers.

As a result, with this RFID system for salary payment there wills is no time deceiving happening again. This is because the system is using the real time and therefore the staff could not change the time accordingly.

1.2 Problem Statement

The problem statement of the project:

1. No documentation that linked with salary system.

   - During research with factory staff about the project, there is no documentation about salary system there. So, it is difficult to collect data about the information of employee for staff HR to make checking process during calculate salary process. Other than that, there are policies that must be followed and certain confidential data only can be gained by important people only.

2. Data entered incorrectly

   - When the number of workers increases, the process of data entry will to be difficult. This situation may trouble the staff in charged to calculate the employee payment, and this may cause to redundant employee data problem. While using this system, it may avoid the problem because these systems using the Identification Card (ID) concept such as ID card chip.

3. Not exist yet.

- The current payment system still using the old concept, which using regular swap card system. This shown lack of security while swapping for attendance. Staff should swap twice a day, which by default the first swap means in and the second swap means out.

1.3 Objective

The main objectives of this project are to:

1. Make Human Resource job to do the calculation payment on that day easier.

2. Help the staff to record staff information.

3. Help HR to check the staff attendance system and do the attendance ratio.

4. Ensure overtime calculation by the workers run smoothly.

1.4 Scope

1. System scope

This project will focus on case study on salary system in environments factory only. This system can cover attendance, calculation salary and checking information employee.

2. User scope

There are two users that will use the system. The main user of the system is staff and workers using scanner to check attendance. The external user is HR uses the information of the punch card to make the payroll counting.

1.5 Project Significance

The Payroll System using RFID has been developed to help factory to manage their employee. There are several benefits that have come up with the development of the system as will be explained below.

Payroll System using RFID will record the employee's information and staff information. With this information, the factory can keeps track of their employee. Factory wills easily obtain the information of employee as they request.

Beside that, with this project, factory can keeps track of employee information. This information is important to make sure that factory can evaluate its achievements. With the employee information, claim for increasing salary process can be easily. This information also help factory to determine the efficiently

1.6 Expected Output

Expectations are based on the system can view result through swap machine. So, a case study must be made on the environments of factory by collecting the correct data employee to link with other system. After the data have been collected, the attendance system will send information to the salary system. Salaries actually are survey by that person in human resources department at company. The clerk will check the employers' attendance system. Thus, the monthly salary will be accounted based on the average of employers' attendance.

1.7 Conclusion

Finally, the project will be a case study on the payroll system using RFID at factory environment. In this chapter also have been state the objective and scope of the project and for the next chapter, there will be a literature review of the project and project methodology that will be used in project. For project requirement, there are three important parts that are involved in my project i.e. software requirement, hardware requirement and other requirement. It also included with milestone of the project or called Gantt chart.

CHAPTER II

LITERATURE REVIEW AND PROJECT METHODOLOGY

2.1 Introduction

In this chapter 2, it will focus on literature review and project methodology. The literature review is focused on the research of the current system and the new system that will be developed. The purpose of a literature review is to convey the reader about the knowledge and also can established the ideas have been on a topic and what are the strengths and weaknesses.

This section is started by existing system. It will discuss and review about approach and related research, reference about this system. Besides that, it also states other approaches that will be used in this project after comparison with previous approaches. In project methodology section, selected approach or methodology will be described the activities that may do in every stage. All the requirements in this system will be explained in high level project requirements and followed with project schedule and milestones.

2.2 Literature Review

In this part, this project will explain about the detail of system that integrates with RFID in various aspects. All the information will be collected from the related thesis, journal, book and also website from the internet. This is important to give an understanding on RFID functions and the system itself. On the other hand this part will help in order to get as much as information before the project can continue to the next part.

2.2.1 Domain

Application domain for the project is Information Technology (IT) in Bioinformatics. The project used RFID technology in managing the payment salary of data refers the attendance staff. In cluster based discipline, this project is within the reach of software technology, network and information system.

2.2.2 Keyword

i) System

System is a set of interacting or interdependent entities, real or abstract, forming an integrated whole. The concept of an 'integrated whole' can also be stated in terms of a system embodying a set of relationships which are differentiated from relationships of the set to other elements, and from relationships between an element of the set and elements not a part of the relational regime.

ii) RFID

Radio-frequency identification (RFID) is an automatic identification method, relying on storing and remotely retrieving data using devices called RFID tags or transponders. An RFID tag is an object that can be applied to or incorporated into a product, animal, or person for the purpose of identification using radio waves. Some tags can be read from several meters away and beyond the line of sight of the reader.

iii) Web Based

Web sites, also called Web pages, are really Internet sites that all use the same techniques and HTML tags to create multimedia documents with hypertext links. Each Web page can contain many screens or printed pages of text, graphics, audio, and even video, and the starting point for any Web site is called its home page. Although each page is an Internet site, it must be accessed via a special program called a Web browser, which can translate the HTML into the graphical images, text, and hypertext links intended by the creator of the page.

iv) Salary

A salary is a form of periodic payment from an employer to an employee, which is specified in an employment contract. It is contrasted with piece wages, where each job, hour or other unit is paid separately, rather than on a periodic basis. From the point of a view of running a business, salary can also be viewed as the cost of acquiring human resources for running operations, and is then termed personnel expense or salary expense. In accounting, salaries are recorded in payroll accounts.

2.2.3 Previous Research

2.2.3.1 Existing System

1) Medlin Software

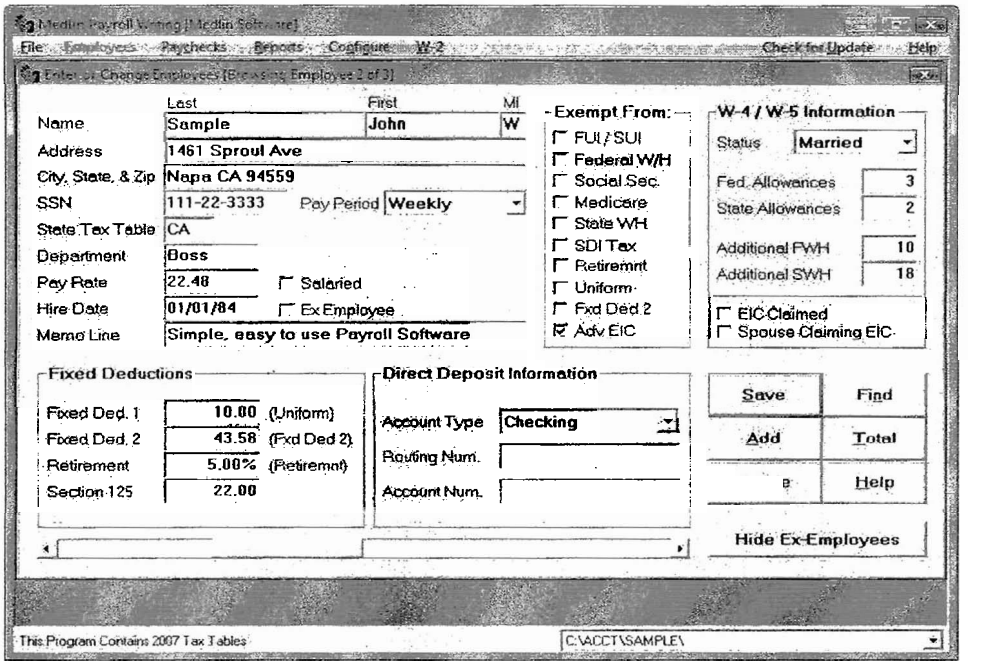

Figure 2.1 Employee Entry Screen

Figure 2.1 shows about Includes state withholding payroll tax calculations for every state as well as Federal Income Tax, Social Security, and Medicare. Medlin Software also allow all payroll frequencies (payroll periods) are allowed by daily and weekly.