Towards Implementing An HRMS: A Case Study Of The University Of Jos, Bursary Department

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ABSTRACT

The purpose of this study was to develop a computerized Human Resource/Payroll system for the Bursary Department of the University of Jos that will efficiently process the University's payroll as well as integrate Human Resource functions into the system. The study sought to understand how the current system works by conducting interviews on the users of the current system as well as studying the workings and operation of the current system, afterwards, a way of improving the efficiency of the current system was proposed. The rationale for the study was that every existing system can be improved upon. This study set out to achieve its aim by designing a Human Resource/Payroll management software that is similar to the current system but differs in the sense that more functions were incorporated into it. The tools used in designing the software were HTML, PHP, MySQL and Javascript. Based on the usability test carried out by the users, the empirical analysis shows that the system had an 80% success rate with the admin and 60% success rate with the users of the system welcomed the idea of the new software. In future, the system can be used for the whole University and not just a particular Department.

Keywords: Payroll management system, data retrieval, Human Resource Management System.

1. INTRODUCTION

The bursary Department of the University of Jos is the financial controlling and disbursement unit of the University. It has been structured into three Divisions which are also sub-divided into various units for easier administration.

The divisions are

– Treasury Services Division

– Financial Accounting Division

– Main Account Division

The Bursary department is headed by the Bursar, he is the Chief Financial Officer of the University and is presently been assisted by the Deputy Bursars each heading a division mentioned above. (Moven, 2014)

The study aims at developing a computerized Human Resource Payroll Management system for the Bursary Department of the University. It would identify the problems encountered by the present system and seek ways to improve on it.

The objectives of this project are to develop a computerized Human Resource/Payroll system for the University of Jos that will efficiently process the University's payroll as well as integrate Human Resource functions into the system.

A feasibility study was carried out to find out the requirements of the users. Questionnaires and interviews were used in carrying out this study. At the end of the feasibility study, a software was designed using MySQL, PHP and Javascript that would efficiently address the needs of the users.

The human resource payroll Management system provides companies with integrated functionality to manage the employee, Registration, Attendance and Payroll of the Organization. It achieves this by

- Managing multiple or single pay runs and establish permanent and one off transactions
- Make payments for full time and part time including wages, salaries and annual leave.
- Link important documents such as CV's to an employee's file.

2. LITERATURE REVIEW

The term payroll encompasses every employee in an organization that receives a regular wage. Payroll sums all the financial records of an employee- salaries, wages, bonuses and deductions. An employee's gross income amount is entered into a computer program, regular deductions (tax, withholdings, health insurance, co-operative) are subtracted, the remaining balance becomes the employees net pay for that time period. Payroll could also be described as the amount paid to employees for services provided by them during a given time period. The function of the payroll office is to ensure that all employees are paid accurately with the correct allowances and deductions, it also ensures that the deductions are remitted to the various organizations in a timely manner.

The University of Jos has over the years switched from manual payroll processing to automated payroll processing and this has led to a faster, more accurate and less strenuous ways of processing payroll. The University of Jos employs the use of the structured pay master in processing payroll, it has five setups

- Parameter setup
- Personnel setup
- Payroll setup
- Utilities
- Report writer

The parameter setup encompasses the faculty setup, Department setup, pay point setup and the staff category setup. The Personnel set up has to do with adding new employee record, updating employee record, deleting employee record, changing employee pay point. The Payroll setup has to do with calculating the pay, verifying the pay and uploading the salary. Utilities involve backing up the data, restoring corrupt files and maintaining password. Report writing involves giving a report for the pay period such as printing of pay slips.(Moven, 2014)

It has been established that the University of Jos currently has a functional payroll system. The current system though, can be improved upon, and this project work aims at carrying out that improvement by creating a Human Resource payroll system that efficiently calculates payroll as well as integrating Human Resource functions into the system.

3. DATA ANALYSIS/ FINDINGS

3.1 METHODOLOGY

Use case models are used to represent each interaction with the system. A use case is a methodology used in system analysis to identify, clarify, and organize system requirements. Use case diagrams are employed in (Unified Modeling Language), a standard notation for the modeling of real-world objects and systems. System objectives can include planning overall requirements, validating a hardware design, testing and debugging software product under development, creating an online help reference, or performing a consumer-service-oriented task.

Use Case diagrams show the various activities the users can perform on the system. The System is something that performs a function. They model the dynamic aspects of the system. It provides a user's perspective of the system. (Tanko, 2015)
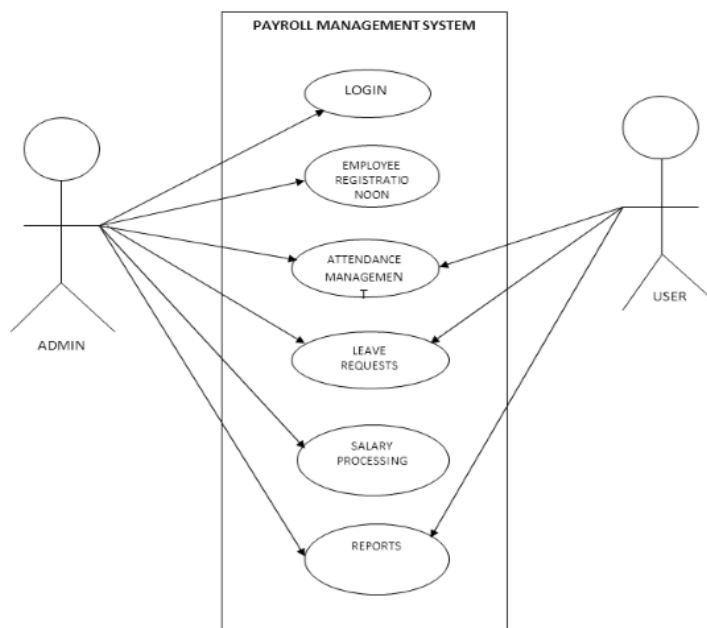
All these modules exist on the designed software.

3.2 TESTING

This is carried out to ensure that the system conforms to its specification and meets the requirements as proposed. The test involves the direct users of the system. The test was carried out in line with Usability

testing which is a technique used in user centred interaction design to evaluate a product by testing it on users, this gives direct input on how real users use the system. Usability testing focuses on measuring a human-made product's capacity to meet its intended purpose.

The users of the system are staff of the University of Jos, Bursary Department, they are classified into two categories

- Administrative staff- these group have privileged rights to the system, they can log in and access all system modules.

- Users- this group can only access selected modules.

The following tasks were created for the various users of the system to perform

- Log in to the system(Admin and user)

- Create an employee record(Admin)

- Make a leave request(User)

- Fill out the attendance form(User)

- View/Print pay slip for a given month

A total of ten staff were selected to participate in the usability test, five were to serve as admin while the other five were to serve as users of the system. The following table highlights the results of the test:

(Log in Result)

	Tasks	Rating	Admin	User
1.	Log in	Success rate	5/5	3/5
2.		Task times	0secs-1 minute	0secs-1.5 mins
3.		Error rates		
4.		Problems experienced	NA	User inputed wrong log in details
5.		Comments/recommendations	Constant use of the system to enhance familiarity	Constant use of the system to enhance familiarity

(Creating Record Result)

	Tasks	Rating	Admin	User
1.	Create an employee record/view an employee record	Success rate	4/5	2/5
2.		Task time	0secs-10 minutes	0secs-15 minutes
3.		Error rates		
4.		Problems experienced	Admin found it difficult to locate the module under which employee registration could be found	User found it difficult to locate the module under which employee record could be viewed
5.		Comments/recommendations	Constant use of the system to enhance familiarity	Constant use of the system to enhance familiarity

(Making Requests Result)

	Tasks	Rating	Admin	User
1.	Make/Approve a leave request	Success rate	4/5	2/5
2.		Task time	0secs-10 minutes	0secs-15 minutes
3.		Error rates		
4.		Problems experienced	Admin found it difficult to locate the module under which requests could be found	User found it difficult to make the request successfully
5.		Comments/recommendations	Constant use of the system to enhance familiarity	Constant use of the system to enhance familiarity

(Attendance Management Result)

	Tasks	Rating	Admin	User
1.	Fill out attendance form	Success rate	NA	3/5
2.		Task time	NA	0secs-20 minutes
3.		Error rates		
4.		Problems experienced	NA	User found it difficult to work with the time format
5.		Comments/recommendations	NA	Constant use of the system to enhance familiarity

(Viewing Reports Result)

	Tasks	Rating	Admin	User
1.	View/print payslip	Success rate	4/5	4/5
2.		Task time	0secs-10 minutes	0secs-15 minutes
3.		Error rates		
4.		Problems experienced	Navigating around the payroll module	Navigating around the payroll module
5.		Comments/recommendations	Users are becoming more familiar with the system	Users are becoming more familiar with the system

4. CONCLUSION

This project aims at improving the efficiency of the University of Jos, Bursary Department by integrating Human resource (HR) functions with payroll functions to result in a system that handles the human resource as well as manages payroll. To achieve this, a software was created that handles these two functions- managing HR functions and calculating employee salary for the month, the designed software can conveniently carry out the following activities:

- Create, update and delete an employee record, the employee record that is to be created contains information about the employee such as name, sex, age, date of birth, next of kin information, date of first appointment, Etc.
- Manage the attendance information of the employees
- Has provisions for the employees to access the system individually and make requests to the system.
- Calculates the salaries of the employees
- Creates and view reports on the employees.

The designed software integrates HR functions with payroll functions, it not only captures necessary information about employees but also enables the employees to interact with the system by making requests to the system and viewing payroll reports.

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