NEWFIX LIMITED HUMAN RESOURCE MANAGEMENT INFORMATION SYSTEM

By:

Fred Ogia

10511658

ABSTRACT

The NewFix Tailoring Limited, located in the National Capital District of Papua New Guinea, is one of the clothing companies which focuses mainly of tailoring. It has recruited maximum number of employees to carry out tasks to cater for the high demand from consumers nationwide. However, one of the set back of the company today, in this age of technology, is that most things are done mannually (i.e. recording of employees data, puting out notices for employment, making advertisments, etc.) . This is time comsuming as such that prolongs the process of work. Also via the current management system it is often difficult for employees to meet with the Human Resource Manager (HRM) if they have queries. In addition to the current system, company information about its mission towards consumers and the general public is hardly known. As such that the company's exposure is less. Further more, the employees and the general public (consumers and customers) don't know when new job vacancies or recruitment will been taken place or is available for applying. In order to overcome these setbacks, it proposed that a web-based human resource management information system be designed. This human resource management system will cater for online browsing of information (i.e. company information, easy access in downloading application forms, safe employee data recording, etc.). The research methodology that will be used in this research is the structured approach method, which will involve drafting structured diagrams (i.e. data flow diagrams). For the system development, the prototype model will be used.

Keywords: *Information System, Online System, Web-Based Human Resource Management System*

CHAPTER: 1

INTRODUCTION

1.1 Background.

Information system can be any organized combination of people, hardware, software, communication networks, data resources, and policies and procedures that stores, retrieves, transforms and disseminates information in an organization. People rely on

modern information systems to communicate with one another using a variety of physical devices such as hardware, information processing instructions and procedures like software, communication channels like the network, and stored data that is the data resources. Although todays information systems are typically associated with computers, we have been using information systems since the beginning of civilization. Even today we make regular use of information systems that have nothing to do with the computer.

Technology plays very important role by communicating with clients, managers of other companies, checking the stock market, placing orders, attending business seminars and many more.

With the ease of technology, people now can apply online to seek for employment within the business industry.

Discussing on business, Newfix Tailoring Ltd as used the internet to identify and upgrade the overall running of the business. The main focus was on Human Resource Management (HRM).

With the development and advancement of communication technology such as the Internet, this should not be a problem to access any information about the system or the activity of the business such as seeking information on how to apply, the types of products, about short courses the company offers, when to attend business seminars and how the business operates.

As we look further into business Newfix Tailoring Ltd as identified various constraints regarding the human resource department.

The company at the present stage is still making manual recording of data for 35 plus employees as such there are no proper and systematic process or system of recording of the employees personal bio data. For example, such as personal particulars, date of commencement of work, dates of promotion, leaves, trainings taken, number of dependents, when the next leave be taken and retirement year.

Secondly, some employees are not sure about their entitlements and thus miss out.

Thirdly, discipline procedures, need to follow set procedures to discipline officers to safeguard their rights.

Lastly, training rights, if the administration sponsors them, employees are entitled to certain rights like their pay and book and living allowances.

Based on the above problems being stated, the author has come to analyzing the Human Resource Department (HRD) of Newfix Tailoring Ltd by making the research and giving the title "NewFix Limited Human Resource Management Information System" with the application of applying for jobs online that include providing personal data, providing latest up-to-date progress via web, expected this will be faster and be able to serve the needs of the company and those who browse, and can access it anytime and anywhere in Newfix Tailoring Ltd.

1.2 Identification and Problem Formulation.

The identification and formulation of the problems are as follows:

1.2.1 Identify the problem.

As the backgrounds of the problems have been given above, the problems can be identified as follows:

1. No proper and systematic process or system of recording of the employees personal bio data.
2. Employees are not sure about their entitlements and thus miss out.
3. Discipline procedures, need to follow set procedures to discipline officers to safeguard their rights.
4. Training rights, if the administration sponsors them, employees are entitled to certain rights like their pay and book and living allowances in which the employees are not receiving.

1.2.1 Formulate the problem.

How e-database system will be used to record employees personal bio data, how data will be stored and how it will be updated at a set period of time.

How employees will be notified in accordance with their bio data the date of commencement of work until a certain period of time set by the company to receive entitlements.

How strategies will be placed in accordance with employees' rights so as to not over rule during duty of work.

How employees receive their pay, book and living allowances.

How to implement data into a programming language integrated with a database so that it becomes a ready-made application package in Newfix Tailoring Ltd.

1.3 Research Objectives.

Research objective is as follows:

1.3.1 Research Purpose.

To do away with the manual database system and implement e-data web based system for the company, employees and for those who browse to seek company information.

1.3.2 Purpose of this Research.

The purpose of this research is:

To make it easy for people to seek information, apply online by use of e-databased web.

To implement e-database application so that employees can see their own personal data and the manager and the Human Resource Manager (HRM) can see all employees' data.

To implement e-database applications integrated into programming languages with the database so that it becomes a ready-made application package in Newfix Tailoring Ltd.

1.4 Research Usability.

The usefulness of the research is as follows:

1.4.1 Practical Uses.

Research carried out has limited usefulness for several parties, including the practical field is as follows:

1.4.2 Manager.

Facilitates to all employees the company's aims and vision, conduct of work and the hire and fire of employees.

1.4.3 Human Resource Manager (HRM).

Facilitates the bio data of all employees, recruits applicants, informs employees of their promotion, next leave to be taken and which employee to receive training.

1.4.4 Employees.

Facilitates the viewing of promotion, pay increase and training to attend if selected.

1.5 Academic Uses.

In the academic field, this research can provide the following functions:

1.5.1 Institution

The result of this paper can be of a guideline to those students taking Human Resource Management (HRM) course on how e-database applications integrated into programming languages with the database so that it becomes a ready-made application package.

1.5.2 Researcher

The results of this study are expected to contribute ideas to other researchers and can be a reference for the improvement or development for other researchers who will examine the field or the same problem.

1.6 Problem Limitations

The restrictions to the problems used in the discussions are more focused in accordance with the objectives to be achieved. The limitations therefore include:

The system is built only to make e-database applications include Internet-based scheduling, schedule information, means of information material and announcements.

Applications built to provide accessibility in filling application forms online and submitting.

Functional system only covers the process of scheduling time for Managers and Human Resource Managers (HRM) at certain point in time to meet up with employees.

CHAPTER: 2

THEORETICAL

2.1 Understanding Information

- Information (shortened as info or info.) is that which informs, i.e. an answer to a question, as well as that from which knowledge and data can be derived (as data

represents values attributed to parameters, and knowledge signifies understanding of real things or abstract concepts). As it regards data, the information's existence is not necessarily coupled to an observer (it exists beyond an event horizon, for example), while in the case of knowledge, information requires a cognitive observer.

- At its most fundamental, information is any propagation of cause and effect within a system. Information is conveyed either as the content of a message or through direct or indirect observation of something. That which is perceived can be construed as a message in its own right, and in that sense, information is always conveyed as the content of a message. **Information can be encoded into various forms for transmission and interpretation** (for example, information may be encoded into signs, and transmitted via signals). It can also be encrypted for safe storage and communication.
- Information system can be defined as a system created by a human who consists of components – components within the organization to achieve a goal of presenting information. It can be concluded that the information system is the element that is regularly intertwined with the aim of managing the data so as to produce useful information.
- The definition of Application System (The Free Dictionary by Farlex) states the it is a group of related applications programs that are designed to perform a specific function. An application system normally consists of a user interface, business logic and a database of some sort.
- The user interface is something that you can see and something that is used to interact with the computer. It could consist of set of screens, web pages or reports. Sometimes the user interface is an input device such as a bar code reader or a voice recognition device.
- A system of record is a type of application system that maintains data and is considered by the business to be the official source of information in the organization. For example, a Human Resources application system would normally be the "system of record" for all employee data. When an employee is hired or fired, the data in the HR system constitutes the official record of employment.
- A decision support system is a type of application system that is designed specifically to read data and present it to decision makers in a format that is suitable for decision making.

- HRM (Human Resource Management) is the science and art of regulating the relations and the role of labor efficiently and effectively in order to achieve the common goal of the company, employees and community.
- A database is a collection of data related to each other, are stored in the computer hardware and software used to manipulate it. The database is one important component in information systems, as a basis for providing information to users.
- Database Management System (DBMS) is software that allows users to define, designing, maintaining, and specify access control to the database.
- Network consists of two or more computers that are linked in order to share resources (such as printers and CDs), exchange files, or allow electronic communications. The computers on a network may be linked through cables, telephone lines, radio waves, satellites, or infrared light beams.
- A Web server is a system that delivers content or services to end users over the Internet. A Web server consists of a physical server, server operating system (OS) and software used to facilitate HTTP communication . A Web server is also known as an Internet server. (Cory Janssen, Techopedia)
- A web server is an information technology that processes requests via HTTP, the basic network protocol used to distribute information on the World Wide Web. The term can refer either to the entire computer system, an appliance, or specifically to the software that accepts and supervises the HTTP requests. (Wikipedia)
- A browser is a software application used to locate, retrieve and display content on the World Wide Web, including Web pages, images, video and other files. As a client/server model, the browser is the client run on a computer that contacts the Web server and requests information. The Web server sends the information back to the Web browser which displays the results on the computer or other Internet-enabled device that supports a browser.
- A browser is software that is used to access the internet. A browser lets you visit websites and do activities within them like login, view multimedia, link from one site to another, visit one page from another, print, send and receive email, among many other activities. The most common browser software titles on the market are: Microsoft Internet Explorer, Google's Chrome, Mozilla Firefox, Apple's Safari, and Opera. Browser availability depends on the operating system your computer is using (for example: Microsoft Windows, Linux, Ubuntu, Mac OS, among others). (All about cookiest)

- The approach can be interpreted as a starting point or our view of the learning process. Teacher-centered approach lowers the learning strategy directly (direct instruction), or expository deductive learning. Meanwhile, the learning approach is student-centered learning strategies lowers discovery and inquiry and inductive learning strategies (Sanjaya, 2008: 127).
- The method is an elaboration of approaches. One approach can be translated into a variety of methods. The method is a learning procedure that is focused on achieving the goal. Techniques and tactics taught the elaboration of learning methods.
- Technique is the way a person in order to implement a method. For example, the way how that should be done so that the lecture method is done effectively and efficiently? Thus before a lecture process should pay attention to the condition and situation.
- The learning model is a form of learning that is reflected from start to finish typically presented by the teacher in the classroom. In the model of instructional strategies for achieving competence are students with approaches, methods, and techniques pembelajaran.Nah, the following is a brief review of the differences in the term.
- Learning strategy can be interpreted as a plan that contains a series of activities designed to achieve specific educational objectives (JR David in Sanjaya, 2008: 126). Further described is a learning strategy learning activities that must be done so that teachers and students learning objectives can be achieved effectively and efficiently (Kemp in Sanjaya, 2008: 126). The term strategy is often used in many contexts with meaning is always the same. In the context of teaching strategies can be interpreted as a general pattern of action teacher-learners in the manifestation of the teaching activity (Ahmad Rohani, 2004: 32). Meanwhile, Joyce and Weil prefer to use the term teaching models instead of using teaching strategies (Joyce and Weil in Spiritual, 2004: 33.

CHAPTER 3

OBJECTS AND METHODS

3.1 Research Object

The object of the research is NewFix Tailoring Ltd which is located in Port Moresby, National Capital District, Papua New Guinea. The research mainly focuses on its Human Resource Management (HRM) system and was carried out at Indonesian Computer University (UNIKOM), Bandung, Indonesia.

3.2 System Approach Method

The method the researchers used is systems approach which it uses object-oriented systems approach which are visualized with UML (Unified Modeling Language) and are as follows: Use Case, Activity Diagrams, Sequence Diagrams, Class Diagrams, collaboration Diagram, Component Diagram, and Deployment diagrams.

3.3 System Development Method

The system development method used in the research is the Prototype Model. The Software Prototyping refers to building software application prototype which displays the functionality of the product underdevelopment but may not actually hold the exact logic of the original software. Software Prototyping is becoming very popular as a software development model, as it enables to understand the customer requirements' at an early stage of development. It helps get back valuable feedbacks' from the customer and helps software designers and developers understand about what exactly is expected from the product development.

3.4 Testing Software

There is a lot of testing techniques that can be used to test a software, including; Black Box Testing and White Box Testing. As for software testing that is done in this project is the Black Box Testing. According to Vangie Beal (webopedia.com), can also be known as, functional testing. A software testing technique is whereby the internal workings of the item being tested are not known by the tester. For example, in a black box test on a software design the tester only knows the inputs and what the expected out comes should be and not how the program arrives at those outputs. The tester does not examine the programming code and does not need any further knowledge of the program other than its specifications."

Table 3.1: Document Analysis.

NO	DOCUMENT NAME	COMMENTARY
1	Recruitment	**Description:** Documents containing information about recruiting. **Function:** Managing applications **Source:** Human Resource Manager (HRM) **Attribute:** Applicant Field of work, Years

		of experience, previous work experience, achievements,
2	Employees Profile	**Description:** Documents containing information about profiles of employees. **Function:** Manage employee profile. **Source:** Human Resource Manager (HRM) **Attribute:** Employee name, employee id, employee field of work, employee time sheet.
3	Discipline Procedures	**Description:** Documents containing information about disciplinary. **Function:** Guiding employees within the working force. **Source:** Director **Attribute:** Procession of company property, illegal dealings, hacking company information, leaking out company information.
4	Employees Entitlements	**Description:** Documents containing information on entitlements. **Function:** awarding entitlement to employees serving the firm exceeding the set period of time. **Source:** Accountant **Attribute:** served longer in the firm, good production rate.
5	Employees Training Rights	**Description:** Documents containing information on training of employees. **Function:** Enhancing employee productivity. **Source:** Production Manager **Attribute:** Improving employee's skill, commitment, willing to learn,

CHAPTER 4
RESULTS AND DISCUSSION

4.1 System Design

System design can be defined as: "Stage after an analysis of the system development cycle: definition of functional requirements for the design and implementation of preparation; describe how a system was formed."

4.2 Objective System Design

1. The application web-based Human Resource Management System of NewFix Limited is aimed that the Human Resource Manager (HRM) will receive sent application forms, read queries from employees, manage employees' data and giving passwords to employees for their profiles.
2. The application will serve as an informative center for seeking information regarding the company's progress such as producing monthly reports, news and events etc.,,,
3. The application also serves to help employees to send queries if there is no satisfactory within the organization, see the various job descriptions, be able to log into their account, etc.,,
4. The application also will assist the general public to seek information about the firm, be able to download and upload application forms and also send queries on the grounds of seeking more information.

4.3 Proposed System Overview

The proposed system for NewFix Limited Human Resource Management will to use the concept of client-server, to the client using the browser and the server using PHP and MySql and done online, where the user or client can access these applications using the Internet access provider or use wifi internet connection.

4.4 Proposed Design Procedure

This design includes the use case diagrams, activity diagrams, sequence diagrams, class diagrams, collaboration diagrams, component diagrams and deployment diagrams that produce a better system. Process designed broken down into several sections which can be formed into a single unified system component.

4.5 Class Diagram

Class diagrams aims to describe the static structure of classes in the system. Class used to represent something that is handled by the system. Following is the class diagram for the proposed Human Resource Management NewFix Limited.

4.6 Deployment Diagram

Following is the deployment diagram which shows the physical infrastructure or the components of the proposed system, such as the hardware, machines, and servers.

4.7 Implementation

The proposed web-based human resource management information system will be developed using the PHP programming language and it's database will be developed using MYSQL. System implementation involves allowing the end users to use the system to see if it serves it's main purpose. By system implementation, the end users can test the system and then provide feedback so that the system developers can improve the system.

4.8 Software Implementation

Implementation of software is with a PC or laptop operating systems Windows, Mac, Ubuntu, Linux and connected to the Internet. The software implementation is as follows:
Implementation of software PC / Laptop:

1. Operating System Windows XP / 7 / Windows 8.
2. XAMPP 1.7.4 for Internet and local database storage.
3. Adobe Dreamweaver CS3, Sublime Text to write coding in PHP program.
4. Code Igniter Framework 2.0
5. Mozilla Firefox 11 as a browser.

4.9 Hardware Implantation

To be able to run applications designed it takes hardware as a supporter. The hardware requirements are as follows:
Hardware implementation:

- Processor: Intel (R) 2:10 GHz Core2Duo
- Memory: 1024MB RAM
- Hard drive: 250GB Seagate

- VGA: Intel (R) HD Graphics
- Monitor: 15 "Advance

4.10 Conclusion Results of Testing

From the results gathered from the testing of the above cases, it can be concluded that the system is functioning well and thus is free from errors.

CHAPTER 5

CONCLUSIONS AND SUGGESTIONS

5.1 CONCLUSIONS

Based on this research thesis entitled " The Human Resource Management Information System of NewFix Limited", the following conclusions can be drawn.

1. The development of the web-based Human Resource Management Information System of NewFix Limited is effective as it overcomes the hard work of sending application via post offices as such that can be uploaded directly.
2. This system now has been created will now overcome the burden of keeping employees profile manually. All data will be kept safe within the database as such will be easy for updating, retrieving, adding, quick viewing, etc.
3. All data is kept safe given with passwords so no data will be leaked out to other people or clients.
4. The development of this web-based application makes it more convenient for employees or the general public to browse to see if there is job available to apply or not.
5. Information regarding the organization can be read easily via the web-based organization.
6. Makes it possible for employees to send in their queries via the application rather than making appointments to consult the management takes time.

5.2 SUGGESTIONS

As the Human Resource Management Information System will be accessed by many people in terms of seeking information, applying for jobs, and within the organization the employees and the management itself, it will be necessary to make further mainantenance on the system to cater for any security flaws and any other system errors. In addition to that, as employees and also the general public are more familiar with aneroid devices today, as such it is suggested that after implementation of the web-based system, an aneroid application will be developed to make the human resource management information system more flexible.

BIBLIOGRAPHY

[1] Behrouz A. Forouzan. 2007. *Data Communications and Networking*. Fourth Edition. McGraw-Hill.

[2] James A. O'Brien and George M. Marakas. 2010. *Introduction to Information Systems*. Fifteenth Edition. McGraw-Hill.

[3] Jeffrey A. Hoffer, V. Ramesh and Heikki Topi. 2011. *Modern database Management. Tenth Edition*. Pearson Education.

[4] Mike O'Docherty. 2005. *Object Oriented Analysis and Design: Understanding System Development with UML 2.0*. John Wiley & Sons, Ltd.

[5] Tavangarian D., Leypold M., Nölting K., Röser M. 2004. *Is e-learning the Solution for Individual Learning*. Journal of e-learning. 6(1):20–24.

[6] Wahana Komputer. 2011. *Mastering CMS Programming with PHP & My SQL*. Penerbit ANDI, Yogyakarta.

[7] Whitten and Bentley. 2007. *Systems Analysis and Design Methods*. Seventh Edition. McGraw-Hill.