HUMAN RESOURCE INFORMATION SYSTEM WITH BIOMETRIC FINGERPRINT SCANNER

A thesis submitted in partial fulfillment of the

requirements for the degree of Bachelor Science in Information Technology

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**Introduction**

The quick and relentless improvement of Information and interchanges innovation that we have seen in the previous couple of years affected the nature of an individual life, as well as empowered the person to find complex understanding on self, mankind and the world, consequently expanding their imagination and ingenuity in all levels of life. There have been changes particularly on sociology disciplines, for the most part on those, who are exploring human lifestyle and work. Human resource discipline as one of them is in this manner exploring impact of use data and correspondences innovation, which permits quicker procurement of data, as well as offers additional assistance at decision making on human resource field.

As we are now in the knowledge era, the basic element of human resources (HR) research is the acquirement of knowledge. The amount of information currently available is huge and the problem of the HR management is mainly the filtering and integration of information. Numerous theoreticist in, the area of HR management that delved in this problem have reached the conclusion that it's not only the acquirement of information, but mostly its management, stemming from the fact that information is one of the basic resources of every organization. Like an organization manages material, human and other resources, it also manages the information that flow either within the company or outside. Because of that, information management has recently become one of the priority tasks of HR management.

The knowledge management that HR management has to face is in a wider respect composed of two elements: the people and the information technology (IT) (N, 2001). The people are the knowledge carriers and the IT enable them to amass the knowledge, organize it, access (Bernik, Florjančič, Črnigoj, & Bernik, 2007)

**Objectives of the study**

The objective of this project is to develop an Human Resource Management System which implements the ideology of different management system with automation of attendance system to produce more reliability to Holy Child College of Davao. Main objective of this project are:

* Human Resource Management System, which enroll new employees and also check whether the employee is still in organization or resigned.
* To develop Centralized Automated Attendance System, when a registered user entered in the premises of the organization he / she may have to authenticate him/her self through Biometric device.
* Reporting, Generation of loss reports from employee absents and tardiness and Calculation of absent rate.

**Statement of the Problem**

Holy Child College of Davao is still using a Manual Attendance system, which itself leads to many problems. Manual system is difﬁcult to manage as well as diﬃcult to maintain. A register was placed on reception table and every employee has to mark his attendance with signature, which is very old system. besides that, there is no security else the availability of the person on the reception table is must. otherwise attendance can be marked by other person very easily. So, the need was to computerize the Attendance system, but also make an Automated Attendance System which fulfill the requirement of the security with automation of the attendance. which may or may not require any operator to authenticate the users.

**Project Overview**

This system is designed and developed based on the following organizational requirements.

* The software will be only used by authorized person. i.e HR manager or user created by the HR manager.
* Attendance can be mark with Biometric Fingerprint Scanner only.
* The Reports which produced not only be automated but the user will be able to select a choice for the report generation.
* The software is capable of having Information of an employee.

The System will have a single centralized database and all of its module will be connected with each other through that database.

**Project Scope**

The scope of this project Centralized Human Resource Information System with Biometric Fingerprint Scanner is very immense. This system will enable the HR manager to manage employee information and see whether they are still in the organization. this System has many capabilities to resolve diﬀerent scenarios in a well-organized. The System Also provide Diﬀerent reports of records on daily, weekly and monthly bases. When an employee enters will authenticate using biometric fingerprint scanner then attendance will mark with time, date etc. and also application will show the status of the employee. (Either this will IN or OUT, while ﬁrst time when employee show his card then status will in and at the second time this will OUT.

**Significance of the Study**

**Students**. The results of this research work might help students, in all levels and in different courses, to be creative and imaginative in making research papers and other related activities for “copy and paste” attitude is prohibited; teach them to be resourceful and patient for they will be oblige to go to the library to research for additional data or information about their projects, term papers, reports, and the like; develop honesty in everything that they do and respect for others when it comes to the privacy of their outputs in school; and boost self-esteem for they will learn to value themselves by the satisfaction and joy that each finished task brought them.

**Instructors/Professors**. The conclusions of this study may benefit educators in terms of the confidentiality of their innovations in their chosen field like classroom management styles, teaching strategies, and the like; security of their testing materials; and preservation of the originality of their researches.

**Information Technology**. The findings of this research paper may boost software developers and IT specialists’ morale and lift up their desire in creating software and other related innovations for the betterment of our society and for a more secured and convenient future.

**Business**. The outcome of this investigation may encourage more individuals to engage in business and commerce for trust exists in society due to confidentiality and security of data of employers and employees, business proposals, and the like. With such, more businesses will be established that will lead to more employment.

**Future Researcher**:  The results of this investigation serve as reference material when conducting a similar study on this software. Moreover, they can study the application as their benchmark for further enhancement.

**Software and Hardware Requirements**

The system can run on cloud or on a local server. The system is developed using open-source technology such as Hypertext Pre-processor (PHP) and MySQL. To run this HRMS, the host needs PHP version 7 or greater, and MySQL version 5.0 or greater. Although, Apache or Nginx is the most robust and best server for hosting the system, the software can run on any server that supports PHP and MySQL.

As the software operating system independent, and will run perfectly on Windows, Linux or Mac. As the software runs similar to a website, user will be able to interact with HTML interface or with the help of any web browser such as Firefox, Google Chrome or Safari. The system can also be interacted from computers which maybe tablet PC or a mobile phone that supports networking and has a web browser.

If a user wants to log on to the system, user has to open the web browser and type the URL of the application. User will be able to interact with through HTML interface, input data and retrieve data from system through the web browser. The speed of the system depends on the hardware or hosted type. If the system is hosted on local server, then it will be very fast and multiples of users can use the system concurrently without any difficulties.

**Development Methodology**

A system development methodology refers to the framework that is used to structure, plan, and control the process of developing an information system. A wide variety of such frameworks have evolved over the years, each with its own recognized strengths and weaknesses. One system development methodology is not necessarily suitable for use by all projects. Each of the available methodologies is best suited to specific kinds of projects, based on various technical, organizational, project and team considerations. CMS has considered each of the major prescribed methodologies in context with CMS’ business, applications, organization, and technical environments. As a result, CMS requires the use of any of the following linear and iterative methodologies for CMS systems development, as appropriate(Centers for Medicare & Medicaid Services 2008). Before, developing software, it is advisable to choose the methodology which suits best for the selected system. Hence, before the start of this project, we have considered some methodologies of system developed that helped us choose Agile Method which was presumed best for the development of HRIS.

**Agile Software Development**

Agile software development is a group of software development methodologies based on iterative and incremental development, where requirements and solutions evolve through collaboration between self-organizing, cross functional teams. It promotes adaptive planning, evolutionary development and delivery, a time boxed iterative approach, and encourages rapid and flexible response to change. It is a conceptual framework that promotes foreseen interactions throughout the development cycle. Agile is an iterative and incremental (evolutionary) approach to software development which is performed in a highly collaborative manner with "just enough" ceremony that produces high quality software which meets the changing needs of its stakeholder

Agile development emphasizes working software as the primary measure of progress. This, combined with the preference for face-to face communication, produces less written documentation than other methods. The agile method encourages stakeholders to prioritize "wants" with other iteration outcomes, based exclusively on business value perceived at the beginning of the iteration (also known as value driven). Agile Modeling (AM) is a practice-based methodology for effective modeling and documentation of software-based systems. Simply put, Agile Modeling (AM) is a collection of values, principles, and practices for modeling software that can be applied on a software development project in an effective and light- weight manner.

**REVIEW OF RELATED LITERATURE**

**Introduction**

This document is a review of some of the relevant and recent scholarly work on the importance of HRMS to organizations, types of methodologies for developing of software, and on programming methods. This literature review shows that for the development of HRIS, Waterfall is the most appropriate development methodology, and Model View Controller is the preferable software pattern for programming the system. It also shows that PHP is the ideal tool for developing this web-based HRMS.

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