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Design and Implementation of E-Management System for ICT Company

Wasnaa Kadhim Jawad

University of Information Technology and Communications

wsnaakash@yahoo.com

Abstract

Recently, the using of electronic based institutes as a part of government has been increased sharply. This is for numerous reasons related to the flexibility and extendibility in addition to the accuracy and time saving. E-Management System becomes prevalent in all institutions and firms due to its high efficiency that could meet work requirement. In this paper, a website based management system has been proposed to manage the employee's information in terms of different activities, such as promotions, salary and registration. The proposed system consists of two main parts: a website design as a Graphical User Interface (GUI) and a database.

The obtained results show that the proposed system has achieved a high performance and significant efficiency in terms of managing and storing the considered information.

Keywords: E-Management System, Graphical User Interface, database**.**

I. INTRODUCTION

Nowadays the use of Information and Communications Technology (ICT) is increasing, because people need faster communication, also storage information and fast data processing. Human Resources Management System is one of the important parts in the electronic approach that uses web applications designed using (PHP, MySQL, JavaScript, HTML, and CSS). HRMS could be used in institutions and companies to organize and arrange the personnel files as well as the managing and organizing of the employees' salaries and undergone updates during the year. The HR systems have been considered previously in various research projects because of its substantial role and important. In [1], authors affirmed the need to standardize the research process, especially in the field of Human Resources (HR).Researchers needed to develop a process in which development of questionnaire, administration of questionnaire and structuring of comparable measures should follow the same way. Results of such a research could not be generalized without a process which is close to uniformity. In [2], author asserted that HR represented the greatest potential competitive advantage of companies. The condition of the materialization of this prerequisite is an effective management of human resources, i.e. careful planning, organizing, leading and controlling. In [3], authors proved that High Commitment Work Systems (HCWS) are the systems that create employee commitment and includes the HR practices like employee participation, inside promotion, team rewarding, profit sharing, training and gain and job security. In[4],authors affirmed that the technological advancement can be the most challenge for the future of HRM due to one way of communication it will often create artificial distance between individuals and organizations [5].

2. Algorithm of Human Resources System

The proposed algorithm considers the HR and the other for repository of employee's data in the database. The HR system part consists of five major processes as indicated in the Figure (1). These processes are:

Employees: This process is used to add, update, delete and search for a specific employee.

Promotions: This process is used to perform the activities of adding, updating and searching of a promotion for a specific employee.

Thanks: This process is utilized for doing the actions related to thanks and awards including adding, updating and searching for a specific employee.

Vacations: This process is performing add, update and search activities of vacation for a specific employee.

Salary: This process is so critical and fateful, in this process we add allocation and presumption for a specific employee. Depending on these two factors, the salary is calculated for a specific employee or for all employees.

3. Algorithm of Warehousing System

In warehousing system, there are three main processes as shown in Figure (12) below that explains the proposed algorithm in a flowchart. These processes are:

❖ Add: this process is used to add new material in warehousing system.

❖ Remove: this process is used to remove material from warehousing system.

❖ Inventory: this process is used to view a list of materials in the warehousing system and their quantities.

4. RESULTS

In order to test the proposed system, different activities can be performed. As mentioned earlier, the web pages have been designed using PHP, CSS and scripting with Java. The considered database is built utilizing MySQL server.

As the proposed system includes numerous activities belong to the main HR required actions, the salary side has been adopted due to the limitation in paper number. The proposed system is tested by adding allocations and presumptions for each employee and depending on these two factors we can calculate salary for a specific employee or for all employees. Figure (1) shows salary calculation page.

The procedure of calculating and searching for salary can be summarized in the next steps as:

❖ When the user clicks on Calculate button as showed in Figure(1),the required

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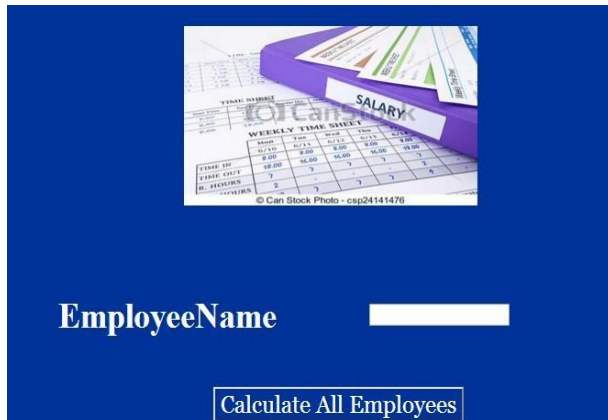information about each employee and salary are calculated

FIGURE (1): CALCULATE SALARY PAGE

In addition the proposed system is also tested by adding new promotion for each employee deserves. The procedure of adding new promotion can be summarized as follows:

❖ When the user clicks on Add New Promotion button as shown in Figure(2),add new promotion is performed by inserting the required data , as indicated in Figure(3).When the user clicked on "Save Data" button these information is stored in the database.

Figure (2): Promotion main page

Figure (3): Add New Promotion page

In addition, warehousing system is also evaluated by viewing all materials found in the warehouse and their quantities. Viewing all the items is performed by displaying every material found in the warehouse and their quantites as indicated in Figure (4) below.

Sequence	Item Name	Item Balance
1	Computers	22
2	Printers	13
3	Chairs	20

Figure (4) Inventory page

5. CONCLUSIONS

An E-Management System was proposed based on designed WebPages and built database. The main task of the proposed system is the management of different activities related to the salary promotion and so on using the designed HRMS interfaces, while saving the dealt resulting information in the built database.

It consisted of two main parts, a website and a database. The website is designed using PHP, JavaScript, HTML and CSS environments, while the database is built using MySQL environment. The website pages are used as a GUI to facilitate interacting with the system by users. The proposed system was tested over different activities and the obtained results showed the outperformance of it in comparison with the traditional management systems.

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