International Journal of Research in Social Sciences
(ISSN: 2249-2496)

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Title

EFFECTIVE APPROACH OF WEB BASED HUMAN RESOURCE MANAGEMENT SYSTEM FOR OPTIMISTIC DEVELOPMENT OF INSTITUTIONS

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ABSTRACT:

In this paper a new approach of web based human resource management system has been developed. The purpose of this research is to develop the web based system with a comprehensive and efficient foundation for web based recruitment and orientation for human resource department (HRM). The previous system was manual in which different registers were involved to maintain the information, data and was fed directly into the registers. It was difficult to find appropriate data because it was in scattered form. It was very difficult to access appropriate data and to generate reports. So the previous system was less efficient, difficult to maintain and had great chances of inaccuracies. The developed system has improved the present system by making it smooth, efficient and accurate by converting the manual system into a web based system according to the prescribed constraints and restrictions. The system is performing such tasks like recording, analyzing, computing, interpreting, processing and generating the required reports.

Keywords: .Net Framework, Repositories, SQL Server 2008, VB .Net, Web

Introduction:

An information system provides a set of services that are used by an enterprise to carry out a business process. System components typically consist of hardware, software, data, and workers. Systems are specified by the services it provides along with other non-behavioral requirements such as reliability and owner's cost.

The objective of software development is to ensure the high quality of a software product, such as high reliability, maintainability, reusability and built ability. Software development process not only brings great benefits to the software development team but also increases the quality of the software products [1].

The Web Based system has been designed after the complete analysis of manual system. It was planned that initially planned system would be practiced or computer after verification; current manual system is converted to web based one. The replacement of existing system with online system was necessary to improve, performance, information, economics, security, efficiency, service and universal accessibility.

The initial step in this project was to study the nature of the problem and determining its scopes. In real working environment a mix approach (structured and unstructured modeling) is adopted. Authors also use both methods. Preliminary requirements are gathered by using the DFDs. UML is used to documents the initially gathered requirements and later designed specifications [2].

Material and Methods:

The new system has been designed after the complete analysis of the manual system and has been developed by adopting new techniques and methods.

Objectives of the System's Study and Design

Designing any web based system is an important and helpful to establish the objectives of the new system. i) To be effective, the system must be flexible and capable of adapting to changing environmental conditions. Thus this developed system has been designed to meet its desired objectives and goals. ii)It is acceptable to the organization's design standards and provides a smooth flow of information from one step to the next. iii) Accuracy has been increased during data storage and report generation. iv) The new system is error free and efficient in searching. v) It provides proper data storage and maintenance. There is no need of maintaining voluminous amount of files and indices to handle valuable data. vi) The system has user defined checks for security purpose to ensure the granted services to the user and validation for the data input as mentioned in. vii) Graphical user interface of the system provides user-friendly interface as the system is developed using Microsoft visual web developer Express edition 2010. Viii) The new web based system was necessary to improve performance, information, economics, security, efficiency, service, precision and accuracy.

Objectives of the Developed System:

The objective of the developed system includes i) Accuracy: The developed system is error free and accurate, so that correct and timely retrieval of information is possible. ii) Economy/time saving: Because the decision-making is based on up-to-date information, hence due to high processing speed the developed system will take less time to calculate results. iii) Security: Only the authorized users can access the developed system, hence it provides high level of security to the data. iv) User Friendly: The developed system is user friendly. Until recently, web sites were

limited to show the static information. Now most organizations want to be user interactive in their websites. So dynamic web sites are being mostly created where user can communicate with the organization. Web based human resource management system is also an effort to communicate with consumer on the Internet.

The objective of the software development is to ensure the high quality of a software product such as high reliability, maintainability, and build ability to achieve goals in component-based engineering, its strength, and weaknesses [3]. System testing and evaluation verifies that the newly designed Web based human resource management system meets the specified requirements, compiles with end user objectives and achieves anticipated When we introduce a new system its benefits and drawbacks are compared for the purpose of evolution. To evaluate a system, it is not only necessary but also unavoidable to keep the system updated in terms of business and economic environment as well as technological change in the electronic data processing [4]. It is recognized that the system which produces information processing, accuracy, completeness and consciences will be declared as successful. Evolution verifies "HUMAN RESOURCE MANAGEMENT SYSTEM" meets specified requirements, compiles with the end user objectives and achieves anticipated benefits. The benefits and drawbacks of the existing system have been carefully evaluated, while introducing the web based system. It has to be insured that the objectives, for which the computer-based system has planned have been achieved**.**

DISCUSSION:

The new web based system has many advantages, over the manual system, some of these foremost, attractive advantages and features of web based system are:

EFFECIENCY:

It has been proved that the web based human resource management system is more efficient as compare to manual system as represented in the figure.

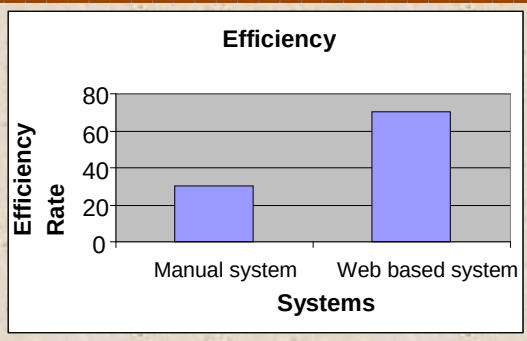

Fig.1. Efficiency, manual system vs. Web based system

The above figure shows that the web based system is more than twice efficient then the manual system.

SELF DOCUMENTRY:

The introduced system is of more helpful to users and it even increases the range of users up to those personnel having little knowledge about the computers. The main objective of the system is to consider the end users and managerial requirements**.**

SPEED AND ACCURACYT:

The established system gives a quick response to its queries, because the decisions are on up-to-date information. If the speed of processing is high, it will take less time to access information from database and will save a lot of time.

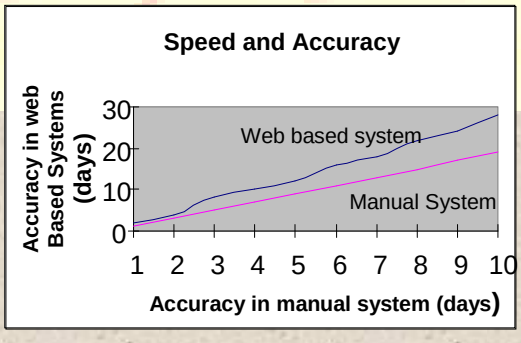

Fig.2. Speed and Accuracy in manual system and web based system

In the above figure, this has been observed that the speed and accuracy of the manual system is very low as compare to the web based system.

FLEXIBILITY:

To provide efficient data maintenance and storage for different users, the system must be flexible and capable of adapting to changing environmental conditions, thus this system is designed so as to meet its desired objectives and organizational goals [5].

MANAGERIAL ACCEPTABILITY:

The data updating is made in an easy way so that the management in obtaining any type of report may not face any problem in dealing with it. The designed system is acceptable to the organization's design standards and should provide a smooth flow of information from one step to the next. The following figure shows the managerial acceptability in web based system which is increasing day by day.

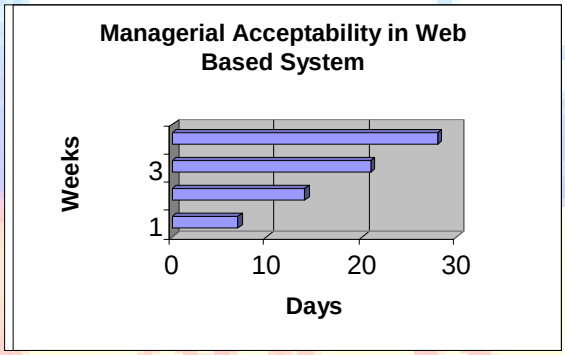

Fig. 3. Managerial acceptability in web based system

ELIMINATING DATA REDUNDANCY:

The developed system remove optimum redundancies, which are present in the manual system one of the basic reason for developing the repository is to remove the redundancy, so it has been tried to avoid redundancy as much as possible.

SECURITY:

Security in system provides safeguard in protecting system's data from deliberate damage, accidental damage or access by unauthorized person. This is done by a user name and password on the main page of the system. Only the respective user can access the system. The reliability of the system may be secured by giving regular and guaranteed services to the user [2].This can be shown with the help of the following figure.

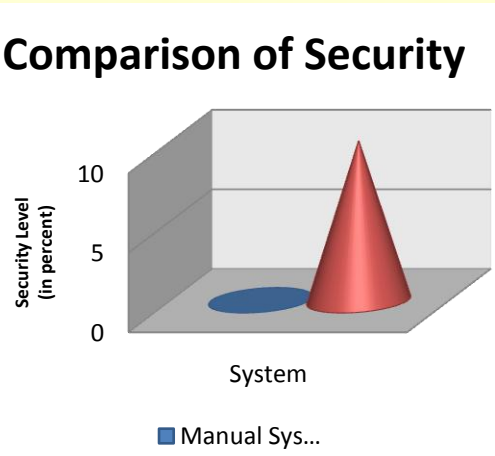

Fig.4. Comparison of System in terms of user friendly

ECONOMY:

The developed system is cost beneficial when compared with manual system and so it satisfies the economic objectives as well. This can be shown with the help of the following figure.

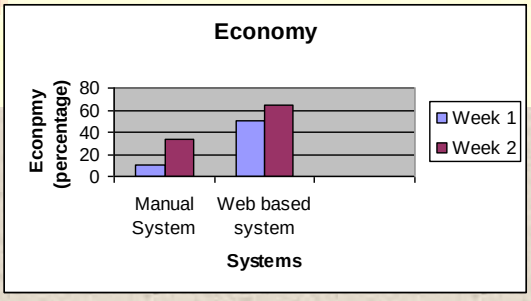

Fig.5. Comparison of systems in terms of Economy

AMENDMENT OF DATA:

In the manual system the process of amendment of records is time consuming and inefficient process and mostly up to date data is not always available. To remove this drawback it has been to make many changes in data whenever it occurs.

RECORD STORAGE:

The record storage in the new system is much faster and requires less manual storage of data [6]. New backup technologies are making it possible to back up data more completely and economically, using less places, with simpler and faster restore procedures and intriguing side benefits. This backup technology does not require faster drives, although better hardware helps. Instead, these technologies involve better ways of handling the data you want to back up and it also work well in Oracle environments [7].

TIME SAVING:

Everyone wants a quick response to his queries. Due to high speed of processing, the system takes less time to access information from database, and hence can save a lot of time.

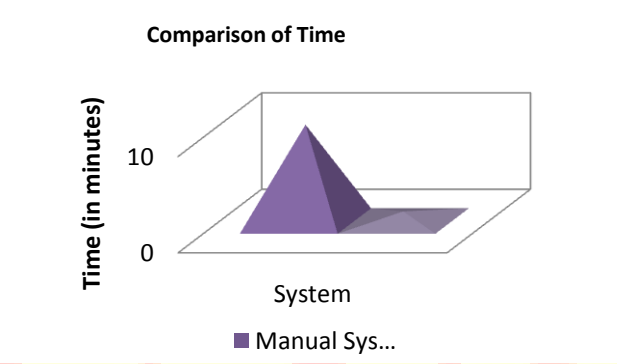

Fig .6. Time saving in web based system

EFFICIENT RETRIEVAL:

In the new system, the retrieval of the information is very fast, as one doesn't have to waste his time in searching in the different files. Hence retrieval of information becomes very fast [8].

DELETION OF RECORDS:

Deletion of record is very important phase in the file designing. Deletion of records is made possible with the help of record key. The system which is developed by using ASP 3.0 is more

flexible. Any type of report according requirements is prepared with the help of report writer within no time.

FILE MAINTENANCE:

File maintenance in the new system would be very easy and efficient, which is very cumbersome in the manual working system. All these problems can be solved by new system in which a small file organization would be designed to combine all the source information.

HUMAN INTERVENTION:

In the manual system, there is no security of data because data is not present at one place. Only the authorized person is responsible for processing; only they will be allowed to access the system. So human intervention will be minimized in the developed system.

A database management system uses the data model as its underlying structure. A data model embodies the relationship between the entities. Today most database implementations are hierarchical and network models. Another data model that is gaining importance is called a relational data model. A relationship is the mapping or linkage between two sets of data. It can be i) one to one ii) one to many iii) many to many. Following are advantages that were attained in the developed system. i) There were no duplicate rows. ii) row order is significant. iii) column order is insignificant as column has a unique name. iv) To the end user a very simple data model was presented.

This relational model removes the details of the strong structure and access strategy from the user interface. As all relational data models are based on well-developed mathematical theory of relations, thus giving a solid foundation, which is not present in any data model.

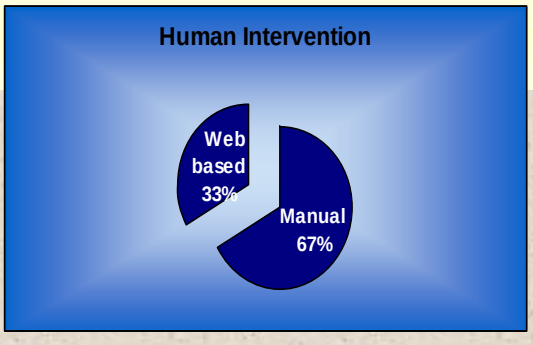

Fig. 7. Human intervention in the manual system and the web based system

RESULTS:

The WEB BASED HUMAN RESOURCE MANAGEMENT SYSTEM provides information to the user and management around the world about their tree structures and commission calculation. This system is very efficient and meets the requirements of the management as well as the user [9]

To provide the information and manage the job applicant is very beneficial for institutions. The developed system is very efficient and meets the requirements of HRM department. It helps the department to check previous records whenever they needed and required. This is an advantage of the developed system. Security is provided as only authorized users like data entry operator and admin can alter and delete the data. The developed system provides a user friendly interface for the end users. It hides the complicated details that can create confusion to the end user. The following figure shows the expected benefits trends and cost comparison to the benefits [10].

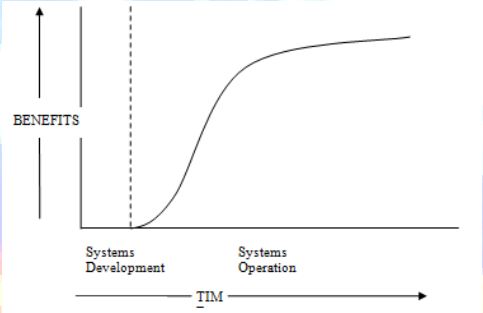

Fig. 8. Comparison between benefits and cost

The benefits provided by the system vary with time. No benefits are realized before the system becomes operational. Once it is operational, benefits typically increase rapidly at first, and then level off.

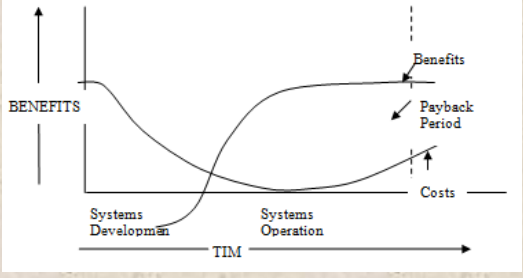

Fig.9.Cost and benefits curve representation

A system's cost curve and benefit curve plotted on the same graph. The line indicates the payback period when the accumulated benefits equal to the accumulate cost.

Conclusion:

The world has been converted into a global village. The concept of Internet revolutionized the whole world. Now every industry is getting benefits from the information highway. Information technology is playing a vital role in calculating and managing the every kind of problems in every industry from calculating the cost to generating reports for mangers and end users.

The biggest milestone in the achievement of mankind has been the discovery of computers and no doubt, the top invention of this century is the invention of computer. Its application in almost all the fields in the world is due to its classical features. The use of computer has become very popular and it had brought about revolutionary changes not only in the field of science but also in every sphere of human activity.

The application of information technology (IT) in modern times has brought immense changes to the scope and nature of information systems. So profound are these changes that some writers believe we are living through an information revolution, on a scale that is little short of a second industrial revolution.

On the industrial front, the computer plays a key role in every type of operation. It is virtually instantaneous calculations and control of automated systems help to increase production, shortens delivery time and improves quality. It aids in research engineering design and on-line process control of continuous operations.

A system, which utilizes electronic means especially computer, is a Web based system. The application used in this research paper will eventually lead to an increased usage of computer and with better, perfect and timely reports, and easy way to manage data about the recruitment and orientation process of "human resource management". This is an era of centralized data processing, so the issue of data security was given due importance, because the data security protects the data in the repository against unauthorized or accidental disclosure, or destruction.

Different managerial reports are produced thus providing a ground for the decision making system. In short the web based version of this system unveiled a number of facilities and advantages that is available to the management, which helps them in doing their job efficiently.

The developed system has the following useful advantages over the manual system. The newly developed system is efficient and suitable for information's retrieval. It has been developed in such a way as it can provide the user with the facility of updating the data whenever required. In this system, user does not face any difficulty during data insertion, modification and deletion.

The output produced is quite accurate and reliable. Report generation is very easy and fast. No batch file initialization is needed as was the case with the previous system but the system normally initialized, necessary files once the server instance is started i.e. repository is started. It satisfies the anticipated as well as the unanticipated requirements of the end user. For best result before inserting data in the repository, the data can be checked for validity. The speed and the processing time of the system is quick thus giving better data manipulation and correct calculated results. Indexes are automatically maintained with the primary key of each table, it improves the processing of transaction.

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