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Employee Performance Mining System

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Abstract: Employee Performance and Recognition Portal is online Performance Appraisal and Recognition system used by all the employees in different sections of the company. Salary hike and promotion depends upon the employee performance. This portal is a one stop shop for all the employees to provide details like tasks performed and performance measures improved etc to their superiors. It allows superiors to evaluate and analyze the employee's performance and work done by him and target achieved in a given period of time and to rate him. It provides a very good interface between superiors and subordinates. Based on these ratings and overall performance shown by employees ranks will be allotted to them among the group of employees with same designation. This rank is called consolidated rank.

I. INTRODUCTION

This application maintains the entire data in a centralized and secured database server to maintain consistency in report generation and allows users to access from any location. This is an online application that allows multi user access of system and to track or manage the data simultaneously. Various roles and authentications have been provided and access to various areas in the tool is restricted according to the role given to users. The aim of this application is to reduce the manual effort needed to manage the details of tasks and performance measures of each and every employee which is very tedious. And maintaining historical data used by HR team in generating consolidated data is not possible. This portal helps them in generating consolidated rank or required reports with a single click. Also this application provides an interface to management and other users to manage the details of and to generate required reports. This helps to prevent unnecessary delays and human errors. This system helps in generating foolproof reports with in not time by users which is very difficult in current system (manual system).

II. EASE OF USE

A. *Features*

1) 24 X 7 availability
2) Better component design to get better performance at peak time.
3) Flexible service based architecture will be highly desirable for future extension.
4) Professional look and feel.
5) Browser testing and support for IE
6) Website is highly customizable and flexible enough to easily deploy without much effort.
7) Secured data driven role based access.

B. *Project Scope*

This intranet application has been developed to be implemented in place of existing manual system. This application provides effective appraisal system for the employees by evaluating their performances and retains the present functionality available in the current system. The specific purpose of this system is to store and process information about different tasks, weightage, self ratings and final rating at different stages and generates the reports as and when required. The administrator is responsible for maintenance of this system. Based on the Type of user category of the user i.e. administrator, appraisee, appraiser, reviewer the various parts of the system are made available.

III. PROBLEM STATEMENT

Problem statement is one of the basic and important phases of project development. When the basic problem is determined, it is documented and the symptomatic problem is analyzed, then the current list of basic problem is completed. A system is simply a set of components that interact to accomplish some purpose.

In "DCKMS" maintaining the details of different types of tasks, their status, details of tasks, their self rating, login details of the different types of users (Appraisee, Appraiser, Reviewer, and Admin), personal details of the employees. Final evaluation details, employee average rating and consolidated rank details are to be kept in a database and also can be retrieved easily when the authorized user wants to get or update the data.

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Actually the process going on here is when the user (employee) submits his task details then he needs to store inside an excel sheet and send it to his appraiser manually and if appraiser wants to send evaluated rating details to the employee then he needs do the same thing. Evaluating each and employee task details, calculating average rating of all the employees yearly for two times and finally generating consolidated tanks based on some criteria at different levels leads to human errors in the current system.

IV. SYSTEM ANALYSIS

System Analysis is first stage according to System Development Life Cycle model. This System Analysis is a process that starts with the analyst.

Analysis is a detailed study of the various operations performed by a system and their relationships within and outside of the system. One aspect of analysis is defining the boundaries of the system and determining whether or not a candidate system should consider other related systems. During analysis, data are collected on the available files, decision points, and transactions handled by the present system.

A. *Existing System*

Some drawbacks of the Existing system are as follows:

1) Difficulty in maintaining employee individual rating information in an excel sheet.
2) More manual hours need to calculate average based on different constraints and generating.
3) Difficulty in maintaining role based security.
4) Difficulty in co-relating different ratings.
5) Doesn't provide effective communication between different levels of employees.
6) Doesn't provide security.
7) Difficulty in generating the reports.

B. *Proposed System*

The Employee Performance and Recognition Portal is to replace the existing manual system with a software solution which has following advantages:

1) Faster processing when compared to existing one.
2) Centralized database helps in avoiding conflicts.
3) Easy to use GUI that does not requires specific training.
4) Provides facility for the employees (appraise) to post their rating details which will be forwarded to their appraiser effectively.
5) Allows the appraiser to re-rate the employee ratings.
6) It helps in calculating the average rating of the employees and generates consolidated ranks.
7) Helps in generating different reports within no time.

V. REQUIREMENT ANALYSIS

The Requirements are broadly divided into two groups:

A. *Functional Requirements Specification*

1) *Hierarchy of Users:* The hierarchy of the system is maintained by the privileges to access the system. There are three types of users.
2) *Appraise:* Every employee is an appraisee and submits his appraisal to his manager with tasks and performance measures for evaluation. Appraisee can give self rating. He can submit the rating. Appraisee can send the request for re-rating. He can generate all the reports.
3) *Appraiser:* Appraiser is appraisee's reporting manager. Main function is to evaluate appraisal and rate appraisee's performance. He also can give rating initiation. He can generate consolidate rank. He can verify the reviewer's request.
4) *Reviewer:* Reviewer is appraiser's reporting manager to view the appraisal. Reviewer can verify the appraisee request. He can view the appraiser contacts. He can generate all the reports.

B. *Non-Functional Requirements*

1) *Documentation:* User is provided a manual in the system. This will guide user or the operator in driving the system in a perfect manner. There is no need to specify the technical documentation for the user.

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2) *Hardware Considerations:* If the software is to be executed on existing hardware or on predetermined software, all the characteristics of the hardware, including memory restrictions should be specified. In addition, the current use and load the characteristics of the hardware should be given:

Configuration	Require	Recommended
Main Memory	256 MB	512 MB
Microprocessor	PentiumIV	PentiumIV
Hard disk Drive	40 GB	80 GB
Printer	Any Printer	Any Printer

The system should be consisted with the hardware such that any up gradations made to the current system should support.

3) *User Interface and Human Factors:* The user interface used is a graphical user interface (GUI). When the user clicks buttons, select the checkbox item, uses the mouse or perform any relate action, an interface event occurs. A little training for the user to the system is needed. A preliminary user manual with all user commands, screen formats. An explanation is giving how to feedback and error messages.

VI. SOFTWARE AND HARDWARE REQUIREMENTS:

A. *Development Environment*

1) *Operating System: Windows 2000/XP:* The system will be built on windows compatible environment. The application will be web based using Java technology.
2) *Web Server:* Apache Tomcat Web Server to serve as Servlet\JSP engine. The system requires Apache Tomcat Web Server
3) *Server side Application Software:* Java Server Pages (JSP)
4) *Client Side Application Software:* Java Script, HTML
5) *Data Base: MySQL 5.0:* The system requires MySQL as a database, however the system will be JDBC complaint to work on any standard database.
6) *Client Browsers:* Internet Explorer 6.0 or Netscape Navigator 4.7
7) *Java Software:* Jdk1.5.0
8) *Hardware:* Pentium PCs with 256 MB RAM/ 80 GB HDD.

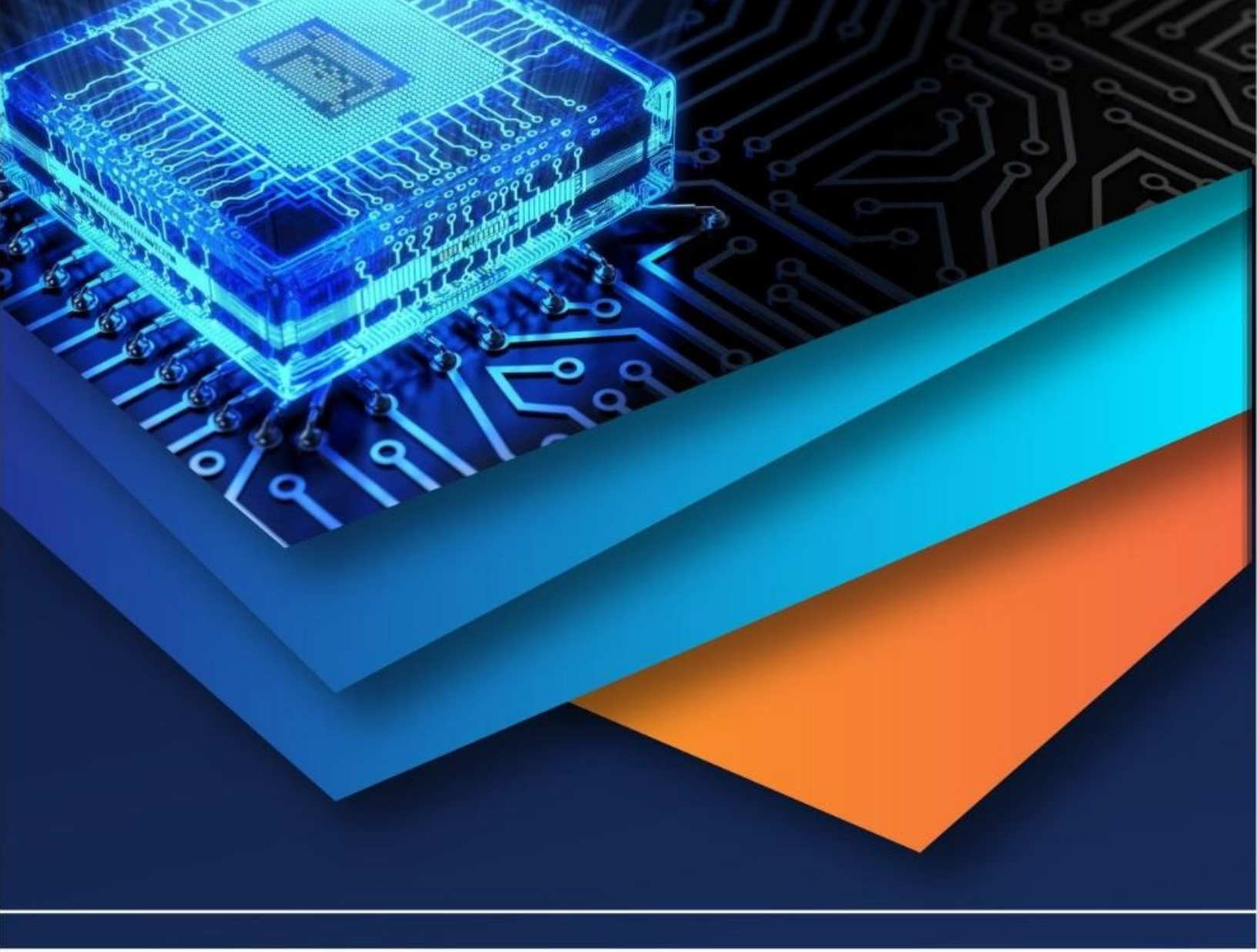
VII. CONCLUSION

The new system, Employee Performance and Recognition Portal has been implemented to cater the needs of company employees and administrative people of the company in submitting appraisals, evaluating the appraisals, calculating the average ratings of the employees and finally generating the consolidated ranks effectively with role based access. The present system has been integrated with the already existing. The database was put into the My SQL server. This was connected by JDBC. The database is accessible through Intranet on any location. This system has been found to meet the requirements of the users and departments and also very satisfactory.

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