Effective Workforce Utilization & Management System

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Abstract- **When a software development company wants to achieve its goals on time and efficiently use its staff on the projects, it is necessary for the company to have hands on information related to number of employees working on various projects along with their skill set and the number of employees still needed to complete the projects on time. Effective Workforce Utilization & Management System is a convenient tool to handle various projects in a software company efficiently.**

INTRODUCTION

Effective Workforce Utilization & Management System is an online tool to manage projects currently running with the company as well as future projects. This tool tracks the employees working for the existing projects and details of new projects like no. of employees required, location, etc. This tool is very useful in estimating revenue, etc which helps higher management to know the status of the various projects and work force. With this tool HR can estimate the requirement of employees for the new projects and hence can recruit exact number of employees.

This application maintains the centralized database so that any changes done at a location reflects immediately. This is an online tool so more than one user can login into system and use the tool simultaneously.

The administrator of this software will be able to create new users and remove any user. He allots passwords and changes them. He can view the details of all employees in the company. He can also view the management reports where the information is presented project wise and location wise.

HR manager should take a decision regarding whether to recruit any employees and whether there is dearth of any resources in a project. The project manager can view the details of the employees in the company and the employees in his projects. He can also get the information of how many employees are there in a particular project and their skill set. When he wants employees for a particular project, he can add that information mentioning how many are working on the project and how many employees are totally needed for the project. This information can be had both for online and offline projects. This information is used in generating a special report called GAP summary.

GAP summary specifies how many employees should be recruited based on location of the project and based on the skills of the employees. When the HR manager sees the GAP reports, he would be able to estimate how many employees are still needed for a project and with what skill sets. He can plan for recruiting the new employees based on this information. He can also divert already available surplus employees if available to another project.

This software thus aids the company management not to waste the resources and plan the projects and employees time to time.

FEATURES OF THE PROJECT

1. Effective Workforce Utilization & Management System is a convenient tool to handle various projects in a software company efficiently.
2. This tool tracks the employees working for the existing projects and details of new projects like no. of employees required, location, etc.
3. This application maintains the centralized database so that any changes done at a location reflects immediately.
4. GAP summary specifies how many employees should be recruited based on location of the project and based on the skills of the employees.

5. With this tool HR can estimate the requirement of employees for the new projects and hence can recruit exact number of employees.

EXISTING SYSTEM

Current system is a manual one in which users are maintaining books etc to store the information like project details, requirement, availability and allocations of employees for the existing project as well as for the new projects. It is very difficult to maintain historical data. Also regular investments need to purchase stationary every year.

Disadvantages:
The following are the disadvantages of current system
➤ It is difficult to maintain important information in books
➤ More manual hours need to generate required reports
➤ It is tedious to manage historical data which needs much space to keep all the previous year's books etc
➤ Daily transactions are to be entering into different books immediately to avoid conflicts which are very difficult.

PROPOSED SYSTEM

Proposed system is a software application which avoids more manual hours that need to spend in record keeping and generating reports. This application keeps the data in a centralized way which is available to all the users simultaneously. It is very easy to manage historical data in database. No specific training is required for the employees to use this application. They can easily use the tool that decreases manual hours spending for normal things and hence increases the performance. As the data is centralized it is very easy to maintain the currently running projects with the company as well as future projects.

Advantages:
The following are the advantages of proposed system
a) Easy to manage all the daily transactions
b) Can generate required reports easily
c) Easy to manage historical data in a secure manner
d) Centralized database helps in avoiding conflicts
e) Easy to use GUI that does not requires specific training.

REQUIREMENT SPECIFICATIONS

Software Requirements
Database : MySQL 5.0, MySQL 3.5
Server   : Apache Tomcat 4.1
Front end : JSP / Servlets, J2SDK 1.4,
               HTML, DHTML, Java Script
Editor   : Edit plus

HARDWARE REQUIREMENTS
Processor   : Core 2 Duo
Hard Disk   : 160GB
RAM   : 1GB or more
Disk Space   : 40GB

MODULES DESCRIPTION

The system after careful analysis has been identified to present itself with the following modules:

1. EMPLOYEE MODULE:
This module deals with major and crucial part which tracks the details of employees currently working with the company. It allows the HR Manager only to add a new employee record into the database and it allows HR User only to easily remove an employee from the database. It allows all types of users to view the list of users current existing in our company. It facilitates us to convert the employee report into excel format just by clicking download to excel button.

2. PROJECTS MODULE:
This module deals with major and crucial part which maintains the details of projects currently with the company & future projects. It allows the project manager to add new projects details to the database. It provides a user-friendly interface to add new projects. It allows PM to view and remove the details related to a project very easily. It provides an option to convert projects report into excel format.

3. REQUIREMENT & ALLOCATION MODULE:

This module deals with major and crucial part which provides Info about project-wise requirements which includes onsite and offshore that was entered by the project managers of different projects. It allows any type of user to view these project requirements. It helps the HR People to view project-wise requirements and start recruiting the people. It also helps in allocating the people to a project after recruitment so that HR people can idea about the gap between requirement and allocation at any point of time very easily by generating HRD GAP Summary report. It provides all these reports to be converted and stored permanently in excel sheets.

4. ADMIN & REPORTING MODULE:

It Provides interfaces to manage this tool like add/remove users, change privileges of users etc. This module used to provide different reports required by the higher management for better analysis. It generates dynamic reports like Role-Location which displays role-wise employees report in different locations, Project-Location report which displays project-wise employees reports in different locations, Role-Skill reports which displays skill-wise role based employees list in different locations, Project-Skill reports which displays project-wise skills report of different employees and Skill-Location report which displays skill-wise employees report in different locations etc.

CONCLUSION

The entire project has been developed and deployed as per the requirements stated by the user, it is found to be bug free as per the testing standards that are implemented. It helps HR people and Project managers of the organization and provides effective communication between them to utilize the resources very promptly with proper planning. Any specification-untraced errors will be concentrated in the coming versions, which are planned to be developed in near future. The system at present does not take care of collecting the resources as resource which was already implemented earlier. This system was integrated with resource pool in the production environment to actually get the real info about the resources. The system needs more elaborative technicality for its inception and evolution.

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