Efficient Web-based Software Project Monitoring, Tracking and Control System

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Abstract— Project Monitoring Tracking, and controlling system provides a highly-standardized, automated technique of project management, planning management and budget across a diverse group of activities of employees.

This system oversees all the tasks and metrics necessary to ensure that the approved and authorized project is within scope, on time, and on budget so that the project proceeds with minimal risk. Monitoring of each project progress status as compared to the planned project progress.

Keywords— Project monitoring system, Time Tracking system.

I. INTRODUCTION

Information technology playing an increasing role in the economy, companies have grown more heavily dependent on the successful delivery of information systems (IS). However, many software projects result in systems that do not function as intended, or even those that never delivered. As organizations continue to invest time and resources into strategically important software projects, monitoring and controlling the risk associated with such projects becomes a critical concern. In a software project, plans are usually drawn to ensure that work is carried out to the desired progress, which highlights the importance of tracking and control in software projects. Therefore, progress on the project is required to be monitored and compared as the work proceeds in order to be able to identify and measure these differences. Mechanisms of project monitoring and control are essential for successful project delivery, as they provide an understanding of the project's progress so that appropriate corrective actions can be taken when the project's performance deviates significantly from the plan. A project's documented plan is the basis for monitoring activities, communicating status, and taking corrective actions. Progress is primarily determined through the comparison of the actual work product, task attributes, effort, cost and schedules to predefined plans at prescribed milestones or control levels within the project schedule or work breakdown structure (WBS). Since progress monitoring typically includes periodically measuring actual completion of activities and milestones, comparing actual outputs against the schedule documented in the project plan, and identifying significant deviations from the estimated project plan schedule, project members are required to periodically fill in progress reports. Meanwhile, the project manager must regularly review each project member's progress, performance, and results to identify and document significant issues and deviations from the plan. Most of the existing project management and control (PMC) systems evaluate the differences between the planned progress and work progression by quantitative data analysis, such as earned value management.

II. TECHNOLOGIES SELECTION

Technology used in the application are available to the public on the internet. To run PHP scripts only web   browser and web server with build-in PHP interpreter is needed My SQL database servers are very often provided together with web servers, but there is a possibility of downloading support for java script technology is implemented by default in all popular web browsers and does not require additional software installation from the Internet a separate version at no charge.

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III.EXISTING SYSTEM

The existing system Display a form to enter the number of hours spent by an employee on a task in a day like following: It should be possible to enter the time sheet either for one task at a time and one day at a time, It should be possible to enter the time for all the assigned tasks at a time, It should be possible to enter the time for all the tasks in a week at a time, It should be possible to modify the time sheets entered earlier. Once the time sheets are entered ,they should be approved by their manager. Is a huge process to monitor .

IV. PROPOSED SYSTEM

An employee timesheet is a record that you can look back on to find out how much time you spent doing something. Employee timesheets were originally developed for employers to track the number of hours worked for payroll. Employee timesheets are used to record the start and end time of tasks or simply the duration of the task. Employee timesheets may contain a detailed breakdown of tasks accomplished by the employee. Automated billing facilitates client invoicing by providing access to accurate data for all the hours worked by consulting staff. This in turn expedites the invoicing process avoiding billing backlog. In turn, payments are received much faster and the inconvenience of missed bills is eliminated. Time tracking is mainly useful for cost cutting which is done is 3 ways they are by making payroll processing more efficient, by making costs visible so you can lower them, and by automating billing & invoicing.

V. MODULES

Client Module:

The client details are stored in a centralized server. Each client will be allocated a unique id to track the client easily. The details of the client project information will be updated in the server. For consuming necessary time, keeping all troubles less, and to organize all documents into one place and most important , to keep track of projects that are in production for customers or for keeping an eye on errors or mistakes that occur during the work process, then a good web based management system

Admin Module:

The details of the employee project information will be updated in the server. For consuming necessary time, keeping all troubles less, and to organize all documents into one place and most important , to keep track of projects that are in production for customers or for keeping an eye on errors or mistakes that occur during the work process, then a good web based management system

Project Module:

The project allocation is performed based on the projects and the employee availability and skillset and duration of the project .The time allocation is also performed in the scheduling process .The complete work scheduling process is finalized with term of the client modules.

Employee Module:

The employee personal and official details are registered for project allocation based on the skillset of the employee. Each employee is allocated with specific id and it will be easier to track the employee time sheet work allotment.

Project Scheduling:

The project allocation is performed based on the projects and the employee availability and skillset and duration of the project. The time allocation is also performed in the scheduling process. The complete work scheduling process is finalized with term of the client modules.

Time Tracking:

A smart time tracking web application for individuals and/or teams, to see how much time employee spends on client project, task and/or activity. See individual time in the reports, which user can filter and group by client, project, etc.

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There are many features. The main benefits from Time Tracking are:

- Find out how employee spend time and monitor the time expenses

- Increase efficiency and earn more for hourly paid work

- See the productivity of team improvement

- Know the profitability of tasks and projects

Reports:

The web application will help to arrange reports management inside company, by keeping documents in one centralized server. Also, the most important it helps to keep track on new projects that are implemented and for those that are under implementation for customers and also to keep eye on errors or mistakes that occur during our work process for some projects. The system is web-based; there is a possibility to add documents/specifications for the specific project.

VI. SYSTEM ARCHITECTURE DIAGRAM
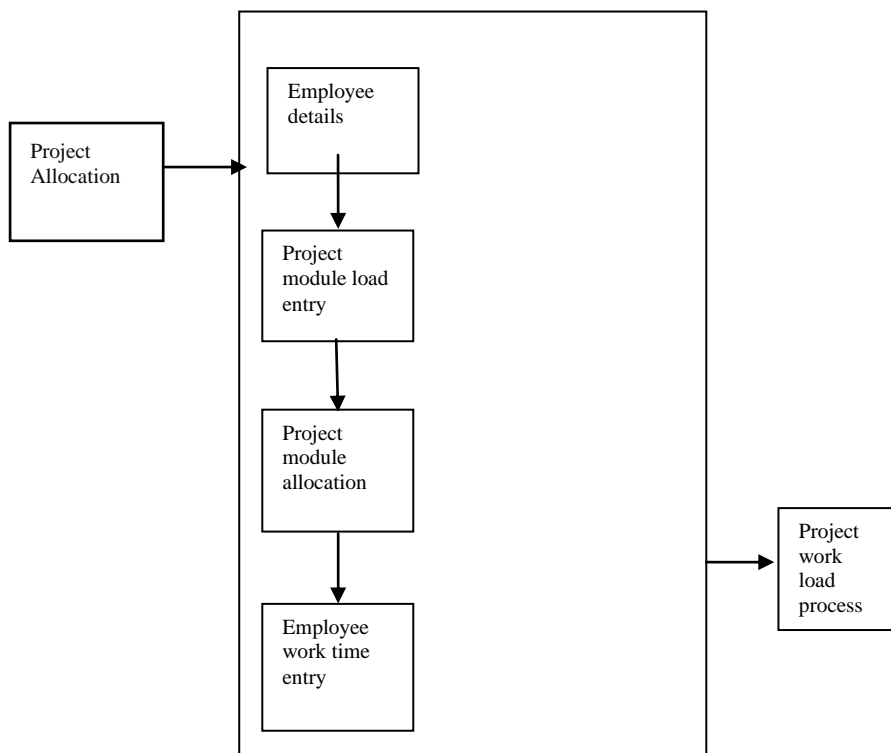
In this work, the Time Tracking and Management is proposed based on the web-based application. We believe this is the study to demonstrate the use of textual entailment recognition on project monitoring and control. The experimental results show that the Time tracking monitoring and control can effectively evaluate the percentage of progress completion to reduce the human efforts and the costs of the project. However, we find it difficult to further improve the performance of progress completion evaluation of project progress reports under the circumstance of deficient background knowledge. Moreover, our error analysis shows that modifier detection is critical in textual entailment recognition. We speculate that the structured syntactic information may play a critical role in detecting the modifier. This indicates that future success in textual entailment recognition largely depends on effectively exploring structured syntactic information and suggests the urgency in exploring more effective syntactic features for textual entailment recognition in the future. In the future, we will explore more semantic knowledge in textual entailment recognition, which has not been covered deeply by the current research. Meanwhile, we will expand this approach to include more massive projects and even apply it to other applications in Time Tracking and Management.

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