Project Management Process Repository for Projects Monitoring

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Abstract—Monitoring of software project plays a vital role in the success of various projects as most of the time spends for the evaluation of project progress. Thereby automating the processes of evaluating progress, time spend for tracking the progress of various projects can be reduced. Project management process (PMP) is followed for individual project in an organization. The concept of PMP repository act as input to the generation of various reports. These reports have been proven very useful for management team to evaluate the progress of various projects. Automated process is being followed for the extraction of information from PMP document repository. The extracted information is stored into database and the analysis report is generated based on the data extracted from repository and stored into database. With the increase in the size of the data maintained by the repositories, automated extraction of such data from repository has become a necessity. By mining such historical information, we can support managers to track the progress of complex software systems.

Keywords: Document Repository, Project Management Process, Extraction of Data from Repository

I. INTRODUCTION

Project management is a discipline of planning, organizing, and managing resources to bring about the successful completion of specific project goals and objectives. One of the major components of project management is monitoring and controlling. Monitoring and controlling consists of those processes performed to observe project execution so that potential problems can be identified in a timely manner and corrective action can be taken, when necessary, to control the execution of the project. The key benefit is that project performance is observed and measured regularly to identify variances from the project management plan.

II. PROBLEM IDENTIFIED

In order to track the progress of individual projects, managers need to rely on various project related documents. Managers need to go through the entire documents to understand the status of progress for projects. Every time managers need to open each and
every document and check out various parameters affecting the progress of projects. The whole process is time consuming and requires a lot of effort on the part of managers. The documents related to project management process plays an important role to measure the progress of different project.

III. PROJECT MANAGEMENT PROCESS COMPONENTS
The project management process includes various documents of project management process for different projects. The documents of project management process have the fixed template. The main classes of document which are involved in projects are as follows:

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Document Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>01.</td>
<td>Project Management Process</td>
</tr>
<tr>
<td>02.</td>
<td>Schedule</td>
</tr>
<tr>
<td>03.</td>
<td>Status report</td>
</tr>
<tr>
<td>04.</td>
<td>Issue Log</td>
</tr>
<tr>
<td>05.</td>
<td>Closure Report</td>
</tr>
<tr>
<td>06.</td>
<td>Handover-take over</td>
</tr>
</tbody>
</table>

Table 1-Project Management Process Document classes

IV. PROJECT MANAGEMENT PROCESS REPOSITORY:
Project Management process repository includes various documents for individual projects. Project management process is followed foe individual project in organization. Repository also maintains the versioning of documents.PMP repository includes N number of project each of the project maintains their various project management documents. The structure of repository includes PMP, Schedule, status report, closure report, issue log, hand over take over documents.

![Figure 1. Project management Process Repository](image)

V. PROPOSED SOLUTION
The Automatic information retrieval from document repository and analysis of information being extracted has become necessity. This process will play important role in identifying and analyzing the current project progress.

The proposed solution includes the retrieval of information from predefined document template. Document repository includes documents from project management process and various project matrices. Extracted data is then stored into appropriate database table. The data stored in
database will be used to generate simple as well as customized reports based on project management processes and various matrices maintained for individual project. The input to repository is provided in form of new document. Whenever a new document is uploaded into repository, a version number is associated with the document. User can traverse through the repository and extract the information from various documents. PMP repository will include advance search functionality allowing user to search and find content quickly and efficiently. PMP repository becoming major source of information related to different project. Repository should be maintained and updated regularly. The automated process of project’s progress evaluation is described in figure below:

In figure 2 first data is extracted from document repository of project management process. The process of extraction is continued until all documents in repository are traversed. Once data has been extracted from repository of documents, it is stored into database. Finally reports are generated based on data stored into database.

The implementation using the proposed approach is under process

VI. CONCLUSIONS:

The process of information extraction and generation of analysis report based on extracted information helps managers to make appropriate decision to smoothen the progress of the projects. There is no need to go through the multiple documents stored in the repository to analyze the information stored in repository. The automatic information extraction and report generation will reduce the time taken to analyze the project progress.

Mining the repository will help in analyzing the status of various activities, without going deep in each and every document, stored in the repository.

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REFERENCES


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