

SUCCESSFUL IMPLEMENTATION OF ERP SYSTEM FOR A CA FIRM

Ankit Sherkar¹, Rushikesh Chaudhari², Akhilesh Sakure³, Prof. Reshma Koli⁴

^{1,2,3}Final Year Student, Department of Computer Engineering, Terna Engineering College, Nerul, India.

⁴Professor, Department of Computer Engineering, Terna Engineering College, Nerul, India

Abstract - Enterprise resource planning (ERP) system is a system which consists of collection of software which can be used to satisfy various needs of an organization. As this systems provide one stop solution to various organizational needs, demand for such systems is huge. Generally, planning and implementation of such systems take a long time as the scope of these systems is wide and cost of the systems is high. Thus, it is important that implementation of such system is done successfully. If implemented successfully, this can act as valuable asset for an organization but if not, whole venture can be costly and time consuming. This research paper studies the existing literature on this topic and examines the important factors that lead to implementation of successful ERP systems.

Key Words: ERP (Enterprise resource planning), CA (Chartered Accountant)

1. INTRODUCTION

Enterprise resource management is one of the most important factor that leads to the success of business. Any organisation consists of various departments or sections. This departments deal with different needs of an organisation. In accomplishing this the subsequent data, resources and software may be used. In organisations with bigger structure, this increases complexity in managing all the subsets of organisation as the amount of data is huge. Thus, in integration various functional groups within an organisation, Enterprise resource planning (ERP) systems play a huge role.

1.1 Gathering goals of user

There may be various reasons for an organization for feeling need of having Enterprise resource planning (ERP) system. These reasons vary for each organization. Some requirements vary with respect to size of an organization. Organizations with bigger structures generally have more functional departments and thus data that needs to be stored and processed is more. Also, functions and modules that need to be implemented need to be known by the developer. Some organizations demand only specific functionalities rather than integration of all functional departments. Hence, it is important to list out requirements of the organization. These requirements can be gathered through various medium like Software requirement specifications (SRS), forms, interviews, questioners, surveys.

1.2 Planning

Developers need to concisely plan the development process. Developers decide the model that they implement. Time that is needed for the implementation is predicted. In some models, software is developed through various phases. In such cases, the date of completion of each phase is estimated. Also, if software or prototypes are deployed through these phases, the release dates for prototypes is given to respective organization as per required specification.

1.3 Training

Enterprise resource planning (ERP) systems consists integration of functionalities of various working departments within an organization. Specific employee within an organization needs to know about the functionality in system that is related to his/her work. For efficient use of Enterprise resource planning systems, employees need to be given proper training. The time required for training and cost needed for it is calculated.

1.4 Installation of system and Testing

Enterprise resource planning system is installed in working premises of organization. Amount of hardware required depends on various perspectives like amount of data that needs to be stored, connectivity required and number of users using the system. Adequate testing of system is done by testers. The software testing is the most important procedure that needs to be implied before deployment of software. All the modules need to checked atomically as well as integrated testing needs to be conducted.

1.5 Reviewing final system

After system is implemented, final review is conducted. System is reviewed and longtime effects are analyzed.

2. LITERATURE SURVEY

Following table shows literature regarding Enterprise Resource Planning Systems.

Table -1: Literature Survey

| Paper/Article | Author | Summary |
|--|---|---|
| A Method of Optimizing Django Based On | Jian Zhou, Lin Chen, Hui Ding, Jingxuan Tu, | This paper looks at optimizing performance of |

| | | |
|--|--|--|
| Greedy Strategy[1] | Baowen Xu | Django based project with use of greedy algorithm |
| Workload Management in Database Management Systems: A Taxonomy[2] | Mingyi Zhang, Patrick Martin, Wendy Powley, Jianjun Chen | This paper looks at distribution of workload in databases and performance metrics used to measure the efficiency |
| Algorithms for Automating Task Delegation in Project Management[3] | Bogdan Pop, Florian Boian | This paper proposes algorithm for automating task delegation for improving performance of management projects |

3. PROPOSED METHODOLOGY

The methodology for the project research involved data collection, research approach, defining scope, selecting software development paradigm and software architecture.

3.1 Research Methodology

The first step to develop a project for client is to research and analyze the domain of interest of the client and the project and gather requirements which in turn helped to frame the goals of the project.

A) Data Source

Research included gathering both Primary and Secondary data. Primary data is the first hand data, which was collected on visits to the firm by observing the workplace thoroughly as to get familiar with field of interest. Secondary data was collected through medium of research papers, websites and other resources related to working of different consultancies.

B) Research Approach

The research approach used were part qualitative research and part quantitative i.e. a combined approach. Quantitative research was carried out by analyzing a questionnaire filled out by the CA. It was used to understand the basic requirements and expectations from the project. Scope, specification tools and software architecture were decided to on basis of this data.

3.2 Scope

This project will provide systematic approach for management of tasks within a CA firm. With digitalization the process of data collection and storing is will be more precise. Users can access the web application from anywhere which will reduce any time delays occurring due

to unavailability of man power at the firm. This will provide efficient management of resources. Report generation aspect of the project will help the firm to analyze its employee and client in more professional manner. As part of qualitative research multiple visits were given to onsite location (of the firm). In depth one one-on-one interview was carried out with the CA to get details about the traditional functioning of the firm and the issues faced that were limiting the productivity of the firm. Workflow in the firm was thoroughly observed and analyzed to highlight important protocols involved for functioning.

3.3 Design Methodology

This web-application provides a system to manage the employees, clients and other details of the firm. It contains two users

1. CA
2. Employee

Both type users have their own user interfaces specific to the firm's need. Relation between CA and employees is one-to-many relationship. He has the authority to register and validate employees and new clients as well as to prepare tasks associated with a client that can be assigned to respective employee for the required time period. This will save time of both parties and will give more accurate and efficient results. CA also has access to payment tracker and report generation which allows him to generate reports and invoice as per requirement. The employee can view the task assigned to him and return the status of the tasks with the required file or information to keep CA updated. The clients will be notified via email when the employee finishes the tasks related them. This will allow easier tracking of progress on the both ends of the system.

3.4 Project Development Plan

We are using Incremental model for the development of this application as it helps in developing working software faster and early during software life cycle. It is also more efficient to test and debug during a smaller iteration and Every iteration is an easily achieved milestone.

Project has been categorized into two phases

i) Iterate 1:

- a) Requirement gathering
- b) Model creation
- c) Template design
- d) Implementation
- e) Testing
- f) Deployment

ii) Iterate 2:

- a) Adding Notification system
- b) Adding Payment model
- c) Report Generation

d) Testing

e) Deployment

4. RESULTS AND DISCUSSIONS

The web-application follows client-server architecture and provides facilities such as task delegation, form digitalization, managing client’s repository, tracking of progress of each individual task and a dedicated chat/discussion thread, a notification system for time sensitive services (GST), report generation, automated email to the clients and payment tracker. Thereby providing and enabling an efficient system with seamless communication between its users, specifically the admin (CA) and the employees under him.

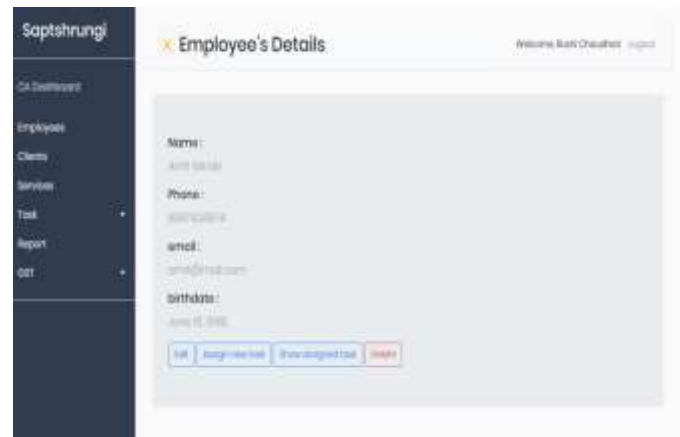


fig 3: Employee details

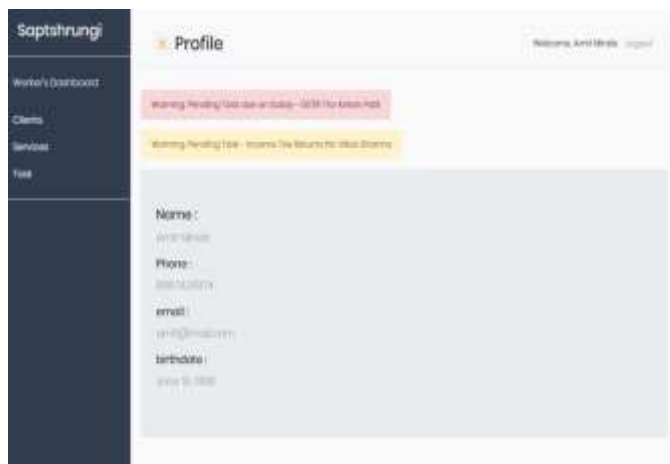


fig 1. Employee Dashboard

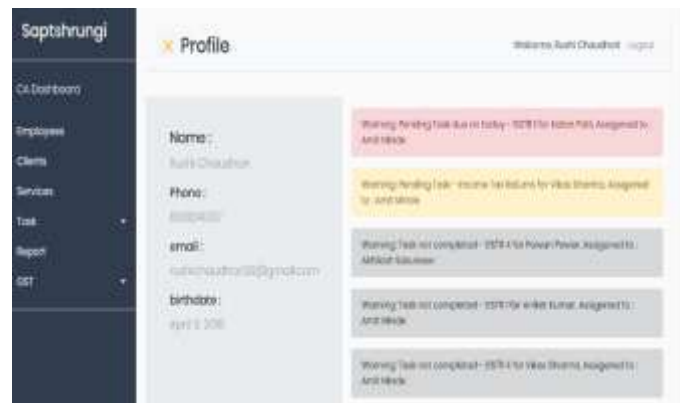


fig 4: CA Dashboard

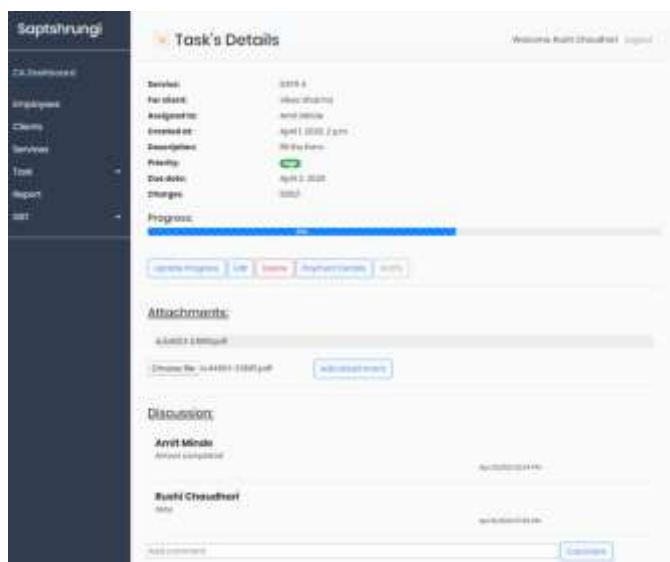


fig 2: Task details

5. CONCLUSION

The Workload Management System is the web application that succeeds in managing the workload of the firm by providing an extensive and hassle-free system for task delegation within the firm. It can work on any system with minimal requirements and a reliable internet connection thereby allowing firm to keep operating from anywhere and at any time. The progress status and the notification system help firm to operate under necessary time constraints which in turn increase productivity and efficiency by reducing the possible errors and mishaps. The system is useful for maintaining central repository of all the necessary requirements of the firm. By keeping client in the loop via email notification and payment invoice, the system provides seamless communication between all the important parties. Project thus fulfills all the requirements of firm.

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