Software Project Management Plan for “Tender Management System”

Bachelor of Technology
Computer Science and Engineering

Submitted By

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1. Introduction

For the Tender Management System (TMS) project, the primary objective is to develop a robust electronic procurement platform. This software application will encompass a minimum of three core functionalities that seamlessly communicate over the internet. The core features of the system will encompass fundamental e-commerce operations, including user authentication, product catalog browsing, and bidding and procurement activities. The development approach for the entire system will prioritize the use of the JAVA programming language, with a strong emphasis on maintainability and scalability, ensuring that future enhancements can be seamlessly integrated.

I. Project Overview

The project is to create a comprehensive initiative aimed at designing and developing an efficient digital platform for streamlined tender procurement processes. The TMS will facilitate the entire tender lifecycle, from announcement and document submission to evaluation and awarding. It will harness advanced technologies and intuitive interfaces to enhance user experience and ensure transparency and compliance. This project endeavors to revolutionize tender management, improving efficiency and accountability, while offering a user-friendly interface for both buyers and suppliers. The TMS represents a pivotal step towards modernizing and digitizing our procurement operations, ultimately reducing costs, saving time, and fostering a more competitive and fair tendering environment.

II. Project Deliverables

1. Preliminary Project Plan	10.09.2023
2. Requirements Specification	30.09.2023
3. Analysis [Object model, Dynamic model, and User interface]	15.10.2023
4. Architecture Specification	26.10.2023
5. Component/Object Specification	11.11.2023
6. Source Code	18.12.2023 - 31.01.2024
7. Test Plan	01.02.2024 - 27.02.2024
8. Final Product Demo	15.03.2024 - 20.03.2024

III. Evolution of this document

This document will be updated as the project progresses. Updates should be expected in the following sections:

i. ***References*** - updated as necessary.
ii. ***Definitions, acronyms, and abbreviations*** - updated as necessary.
iii. ***Organizational Structure*** will be updated as the team leaders are assigned for each phase.
iv. ***Technical Process*** **-** this section will be revised appropriately as the requirements and design decisions become clearer.
v. ***Schedule*** **–** as the project progresses, the schedule will be updated accordingly.

Revision History

Revision	Date	Updated By	Update Comments
0.1	07.08.2023	Anuvab Chakravarty	First Draft
0.2	06.09.2023	Anuvab Chakravarty	Second Draft/Final Draft

IV. References

- "Software Engineering: A Practitioner's Approach" by RogerS. Pressman
- "Agile Software Development, Principles, Patterns, andPractices" by Robert C. Martin
- TechBeacon - techbeacon.com
- IEEE Computer Society - computer.org

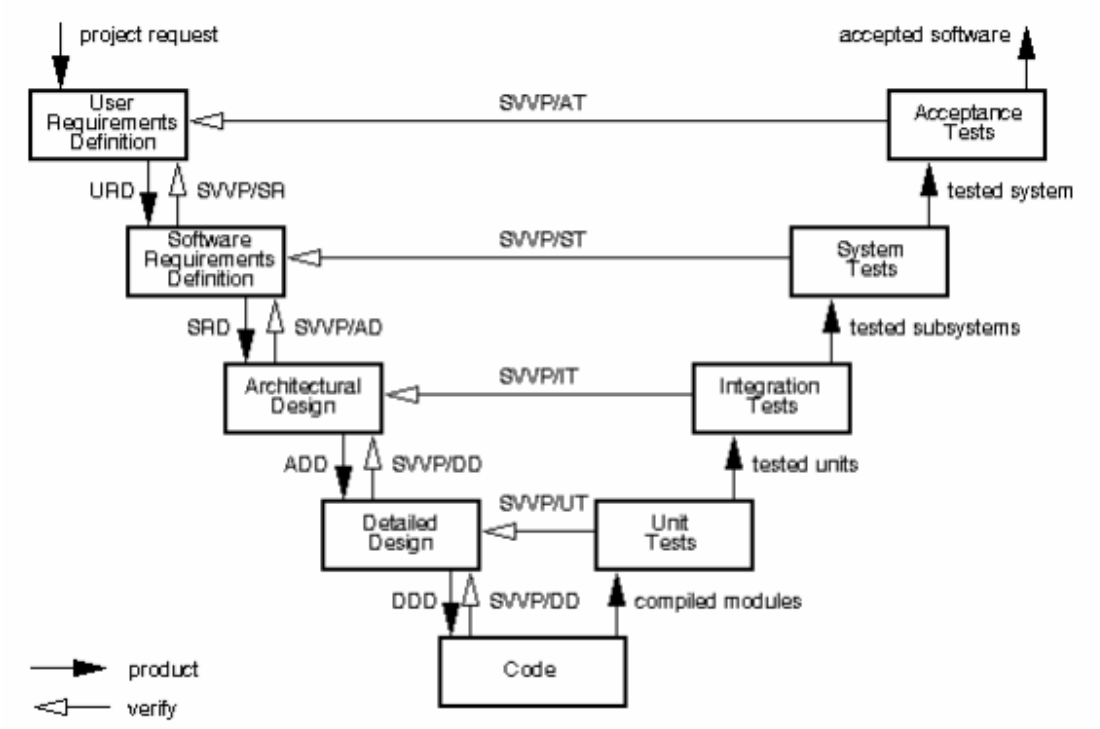
V. Definitions, Acronyms, and Abbreviations

i. TMS – Tender Management System
ii. UML - Unified Modeling Language
iii. AD - Architectural Design
iv. ADD - Architectural Design Document
v. ATP - Acceptance Test Plan Client Monitor, Agent or Submitter
vi. DD - Detailed Design
vii. DDD - Detailed Design Document
viii. PM - Project Manager
ix. QAM - Quality Assurance Manager
x. SM - Senior Management SPMP Software Project Management Plan (this document)
xi. SR - Software Requirements
xii. STP - Software Test Plan Submitter Application that submits jobs to dispatchers

2. Project Organization

I. Process Model

The process used for this project will be a V-model such that each stage of the model allows us to do testing after completing a phases. Referring to the diagram below, each phase is tested after completion.



II. Organizational Structure

Team Members –

i. Anuvab Chakravarty
ii. Arif Ali

Name	Organization/ Position	Contact Information
Anuvab Chakravarty	Project Manager	anucbs2018@gmail.com +91-8334999569

Arif Ali	Business Analyst	Arifali2015@gmail.com 09468847142

Days	Deliverable	Team Leader	Deliverable Description
4	1	Anuvab Chakravarty	Project Plan
20	2	Arif Ali	Requirements Specification
15	3	Anuvab Chakravarty	Analysis
11	4	Arif Ali	Architecture Specification
37	5	Anuvab Chakravarty	Component/Object Specification
47	6	Anuvab Chakravarty	Source Code
26	7	Arif Ali	Test Plan
5	8	Anuvab Chakravarty	Final Deliverable

III. Organizational Boundaries and Interfaces

Team leaders throughout each development of the phases will be responsible for coordinating team meetings, updates, communications, and team deliverables.

IV. Project Responsibilities

For the most vital responsibilities per phase of each team members, please refer to segment 2.2. Ultimately the project team is responsible for the successful delivery of the product. The team member tasks per deliverable according to expertise and the phases are as given below:

1. Project Plan – Whole Team
2. Requirements Specification – Arif Ali
3. Analysis – Anuvab Chakravarty
4. Architecture Specification – Arif Ali
5. Component/Object Specification – Anuvab Chakravarty
6. Source Code – Anuvab Chakravarty
7. Test Plan – Arif Ali
8. Final Deliverable – Entire Team

Name	Organization/ Position	Role/Responsibilities
Anuvab Chakravarty	Project Manager	• Managing and leading the project team. • Developing and maintaining a detailed project plan.

		• Monitoring project progress and performance. • Managing project evaluation and dissemination activities. • Develop corrective actions when necessary.
Arif Ali	Business Analyst	• Prepare reports on project plans, status, progress, risks, deadlines and resource requirements. • Develop and perform work flow analysis to find out the difficulties in reaching goals. • Provide project cost estimates.
Anuvab Chakravarty	Designer	• Propose effective design solutions to meet project goals. • Prepare design layouts and sketches according to company design standards. • Keeping of records and files.
Arif Ali	Staff	• Documentation of daily activities. • Making kick-off meeting reports. • In-charge of materials needed for team building activities.

3. Managerial Process

I. Management Objectives and Priorities

The management objective is to deliver the product in time and of high quality. The PM and QAM work together to achieve this by respectively checking that progress is made as planned and monitoring the quality of the product at various stages.

II. Assumptions, Dependencies, and Constraints

In this project plan, a number of factors are taken into account. The following list shows the way milestones on various project phases have been scheduled:

- The team budget of 2 persons x 4593.6 hours = 9187.2 hours
- The project deadline of 20th March, 2024.
- The final presentation is on 15th March, 2024.
- The peer evaluation deadline is on 31st January, 2024.
- Other days the weekends holiday is closed.

NOTE: Due to the deadline of 20th March 2024, running out of time will have its reflection on the product, and not on the duration of the project. By assigning a priority to every user requirement, a selection can be made of user requirements that may be dropped out if time runs out.

III. Risk Management

This section mentions any potential risks for the project. Also, schedules or methods are defined to prevent or to reduce the risks as below:

i. Technology risk
ii. People risk
iii. Financial risk
iv. Market risk
v. Structure/process risk

The following are the possible risks to be encountered during the development of the project and how they can be prevented.

1. Miscommunication
   Prevention: Team members should not hesitate to ask and re-ask questions if things are unclear. Team members should have a written copy of the tasks assigned to them every meeting.
   Correction: When it becomes clear that miscommunication is causing problems, the team members should gather in a meeting to clear things up.

2. Time shortage
   Prevention: Care is taken to plan enough spare time. *Correction*: When tasks fail to be finished in time or when they are finished earlier than planned the project planning is adjusted
3. Illness or absence of team members
   Prevention: Team members should warn their team leader or the PM timely before a planned period of absence.

Correction: Work can be taken over quickly by someone else or be distributed among the team members if a person gets ill.

Monitoring and Controlling Mechanisms:

The monitoring of progress is done by the PM using the following means:

Project Kick-off Meetings

The project group meetings take place within the class room or through chat. These meetings are meant to inform each other of the progress made on various tasks and to assign new tasks.

Progress Report

Progress report is done every Friday. This is meant to inform and show the progress in the development of the project and how things are going.

IV. Monitoring and Controlling Mechanisms

The monitoring of progress is done by the PM using the following means:

i. Weekly project status meetings
ii. Shared document repository
iii. Project tracking by MS project plan
iv. Tracking utilizing baselines in MS project

4. Technical Process

I. Methods, Tools, and Techniques

The project will be implemented utilizing V-model methodology, and tools such as Dreamweaver, Microsoft Project, Star UML, Java, MySQL, QTP, and Load Runner will be utilized. The risks for each category are listed to complete the project successfully. For each risk, a description, a probability of occurrence, the associated action and the impact of the risk are given.

II. Software Documentation

Documentation such as Project Charter, Business Requirement Document, Functional Specification document, Cost Benefit Analysis, Technical Specification document, Detail Design Document, Test Plan, Implementation Plan, Detailed Project Report, and Benefit Realization document.

III. Project Support Functions

All project support documents will be completed in applicable phases.

5. Work Elements, Schedule, and Budget

a) The project is accounted for project resources, technologies and tools required to whole analysis, implementation, and test of the application.
b) The project lead will be rotated for each phase within 2 team members.
c) The document for all phases will be revised in subsequent phases if applicable.

Budget and Resource Allocation

Salary	2,00,000.00
Office Operations/Supplies/Equipment/Consumables	80,000.00
Miscellaneous	30,000.00
Total	**Rs. 3,10,000.00**

Schedule

Identify The Company	4 days	Wed 6/9/23	Tue 12/9/23
Conceptualize the project	1 day	Tue 12/9/23	Wed 13/9/23
Establish the mission, vision and Objectives	3 days	Wed 13/9/23	Tue 19/9/23
Identify the scope of the project	1 day	Tue 19/9/23	Wed 20/9/23
Develop preliminary schedules and cost estimates	1 day	Wed 20/9/23	Thu 21/9/23
Create Project Charter	1 day	Thu 21/9/23	Fri 22/9/23
Develop the business case for the project	1 day	Mon 25/9/23	Tue 26/9/23
Select development tools	2 days	Tue 26/9/23	Thu 28/9/23
Identify Customer Needs	3 days	Thu 28/9/23	Mon 2/9/23
Establish Target Specifications	2 days	Mon 2/9/23	Wed 4/9/23
Generate Product Concepts	2 days	Wed 4/9/23	Fri 6/9/23
Refine Product Specifications	2 days	Mon 9/9/23	Wed 11/9/23
Plan the remaining Development Project	1 day	Wed 11/9/23	Thu 12/9/23
Detail Design	4 days	Thu 12/9/23	Tue 17/9/23
3D Modelling	5 days	Tue 17/9/23	Tue 24/9/23