# Software Requirement Specification (SRS) for Tenders and Quotations Management System (TQMS)

## 1. Introduction

### 1.1 Purpose:

Tenders and Quotations Management System (TQMS) is intended to help organizations to automate the process of issuing Tenders, receiving quotations, Approve / Reject a Quotation and Create a Purchase Order. TQMS software makes it easier for organizations to find the best vendor / supplier for their needs.

This document is meant to delineate the features of TQMS, so as to serve as a guide to the developers on one hand and a software validation document for the prospective client on the other.

### 1.2 Scope:

We describe what features are in the scope of the software and what are not in the scope of the software to be developed.

*In Scope:*

- Authentication / Authorization of Admin, Tender Managers, Vendors
- Management (CRUD) of Users like Tender Manager, Vendor
- Tender Management (CRUD)
- Submit Quotation for a Tender
- Accept / Reject Quotations
- Generate PO for the accepted Quotation

*Out of Scope:*

Due to time constraints the following would not be implemented.

- Creation of a installer
- The workflow / coordination required to conclude whether to accept / reject a particular Quotation is outside the scope of this application.

### 1.3 Definitions, Acronyms, and Abbreviations:

*Acronyms and Abbreviations:*

TQMS: Tender and Quotations Management System

SRS: Software Requirements Specification.

GUI: Graphical User Interface

WWW: World Wide Web.

PO: Purchase Order

*Definitions:*

Admin: A System Administrator

TMUser: Tender Manager who can manage the Tendering process

Vendor: Potential suppliers, who offer products or services that match

Tender: Tender usually refers to the process whereby governments and financial institutions invite bids for large projects that must be submitted within a finite deadline.

Bid: Bid is an offer provided by a company when Request for Proposal (RFP) does not contain clear scope or the requirements are not clearly defined.

Quotation: Quotation is offered by the vendor when requirements / specifications / scope is clearly defined/known in Request for Quotation (RFQ).

Purchase order: A purchase order is a commercial document and first official offer issued by a buyer to a seller, indicating types, quantities, and agreed prices for products or services.

**1.4 References:**

Appendix A: User Screens.

**1.5 Overview:**

The rest of this SRS is organized as follows: Section 2 gives an overall description of the software. It gives what level of proficiency is expected of the user, some general constraints while making the software and some assumptions and dependencies that are assumed. Section 3 gives specific requirements which the software is expected to deliver. Functional requirements are given by various use cases. Some performance requirements and design constraints are also given. Section 4 gives some possible future extensions of the system. Finally the appendices in Section 5 share the user screen.

**2. Overall Description:**

**2.1 Product Perspective:**

Tender Management System is a web application which allows a user to define Tenders and allow registered Vendors to bid against them. The user would evaluate all the Bids / Quotations against a Tender and accept one based on the quoted price and other criteria. In the end, the Tender Manager should be able to create a Purchase order for the Accepted Quotation.

**2.2 Product Functions:**

TQMS should support the following use cases:

| S.No | Class of use cases | Use cases | Description of use cases |
|---|---|---|---|
| 1 | Use case related to Installation / Configuration | Installation | Install all the required software and configure based on the documented steps |
| 2 | Use case related to User Management | Create User | Creates a TMUser / Vendor |
| 3 | | Update User | Update existing a TMUser / Vendor |
| 4 | | Delete User | Delete the existing a TMUser / Vendor |
| 5 | Use cases related to system authorization | Login | Login into TQMS |
| 6 | | Change Password | Change user password |
| 7 | Use cases related to Tenders | Create Tender | Creates a new Tender |
| 8 | | View Tenders | TMUser should be able to view all Tenders created by him / her<br>Vendors should be able to view all the Tenders notified to him / her. |
| 9 | | Update Tender | Modifies an existing Tender |
| 10 | | Delete Tender | Deletes an existing Tender |
| 11 | | Notify Tender to set of Vendors | Notify the details of the Tender to set of vendors by email so that they can logon to TQMS and submit their Quotations. |
| 12 | Use cases related to Quotations | Add / Submit a Quotation against a Tender | Vendor submits the quote for a Tender |
| 13 | | View Quotations of a Tender | TMUser should be able to view all the Quotations of a Tender |
| 14 | | Approve/ Reject a Quotations | The process to arrive at a decision to Approve / Reject based on Technical/Financial aspects is manual.<br>TMUser should be able to Approve / Reject a Quotation. |
| 15 | | Creates a Purchase order | TMUser creates and notifies a PO for the accepted Quotation by Email to Vendor |

**2.3 User Characteristics:**

a. There are two kinds of users in TQMS whose roles and responsibilities are clearly divided.
b. The user should know the details of how this system works

**2.4 Principal Actors:**

a. The three principal actors in TQMS are "System Administrator", "Tender Manager" and “Vendor”.

**2.5 General Constraints:**

a. For full working, TQMS requires Internet connection.
b. PIMS is a multi-user software.

**2.6 Assumptions and Dependencies:**

a. Full working of TQMS is dependent on the availability of Internet connection

**3. Specific Requirements:**

**3.1 Functional Requirements:**

We describe the functional requirements by giving various use cases.

*Use case related to installation:*

**Use Case 1:** Installation

*Primary Actor:* Admin

*Pre Condition:* Internet connection is available.

*Main Scenario:*

1. System Administrator initiates installation of Application Server and other required software to configure the web application based on the documented steps.

2. System creates the application files in the context of Application Server.

3. A System Administrator (Admin) user would be created by default in the System.

*Alternate Scenario:*

3 (a) Network Failure

3 (a)1. Installation aborted

*Use cases related to user management:*

**Use Case 2:** Create User

*Primary Actor:* Admin

*Pre Condition:* Nil

*Main Scenario:*

1. Start the application. Admin prompted for login and password.

2. Admin gives the login and password.

3. System does authentication.

4. Main screen is displayed.

5. Admin creates a new user such as TMUser / Vendor

*Alternate Scenario:*

5(a). User creation fails

**Use Case 3:** Modify user

*Primary Actor:* Admin

*Pre Condition:* User must exists in the System

*Main Scenario:*

1. Start the application. Admin prompted for login and password.

2. Admin gives the login and password.

3. System does authentication.

4. Main screen is displayed.

5. Admin modified the details of a TMUser / Vendor

Alternate Scenario :

5(a). User modification fails

**Use Case 4:** Delete user

*Primary Actor:* Admin

*Pre Condition:* User must exists in the System

*Main Scenario:*

1. Start the application. Admin prompted for login and password.

2. Admin gives the login and password.

3. System does authentication.

4. Main screen is displayed.

5. Admin deletes the TMUser / Vendor

*Alternate Scenario:*

5(a). User deletion fails

*Use cases related to system authorization:*

**Use Case 5:** Login

*Primary Actor:* TMUser

*Pre Condition:* Nil

*Main Scenario:*

1. Start the application. User prompted for login and password.

2. User gives the login and password.

3. System does authentication.

4. Main screen is displayed.

*Alternate Scenario:*

4(a). Authorization fails

4(a)1. Prompt the user that he typed the wrong password

4(a)2. Allow him to re-enter the password.

**Use Case 6:** Change Password

*Primary Actor:* TMUser

*Pre Condition:* User logged in Main Scenario:

1. User initiates the password change command.

2. Users are prompted for old password, new password and confirm new password.

3. User gives the old password, new password and confirms the new password.

4. System does authentication.

5. New password is registered with the system.

*Alternate Scenario:*

4(a). Authorization fails

4(a)1. Prompt the user that he typed the wrong password

4(a)2. Allow him to re-enter the password. Give him 3 chances.

4(b). New password and confirm new password do not match.

4(b)1. Allow him to re-enter the attributes. Give 3 chances.

*Use cases related to Tenders:*

**Use Case 7:** Create Tender

*Primary Actor:* TMUser

*Pre Condition:* TMUser logged in.

*Main Scenario:*

1. TMUser initiates the “create tender functionality.

2. System asks the TMUser to enter all the details related to the tender

3. TMUser enters the tender details

4. A tender is created.

*Alternate Scenario:*

4(a). Tender with the same name exists.

4(a)1. System asks the TMUser for a different name.

4(a)2. TMUser enters a different name.

4(a)3. Tender gets created.

**Use Case 8:** View Tenders

*Primary Actor:* TMUser

*Pre Condition:* TMUser logged in. There are one or more tenders associated with the TMUser.

*Main Scenario:*

1. TMUser initiates the “View tenders” functionality.

2. Tenders associated with the TMUser displayed.

*Alternate Scenario:*

2(a). No information is displayed when there are no tenders associated with the TMUser.

**Use Case 9:** Update Tender

*Primary Actor:* TMUser

*Pre Condition:* User logged in. Tenders to be updated exist in the System.

*Main Scenario:*

1. TMUser opens an existing Tender and modifies some details in it.

2. TMUser initiates the “update tender functionality.

3. A tender is updated.

*Alternate Scenario:*

3(a). Tender with the same name exists.

3(a)1. System asks the TMUser for a different name.

3(a)2. TMUser enters a different name.

3(a)3. Tender gets updated.

**Use Case 10:** Delete Tender

*Primary Actor:* TMUser

*Pre Condition:* TMUser logged in. Tenders to be deleted exist in the System.

*Main Scenario:*

1. TMUser selects a tender and initiates the “Delete tender functionality.

2. A tender is deleted.

**Use Case 11:** Notify Tender to set of Vendors

*Primary Actor:* TMUser

*Pre Condition:* TMUser logged in. There are one or more tenders associated with the TMUser.

*Main Scenario:*

1. TMUser views a Tender and initiates process to notify to set of Vendors

2. TMUser selects a set of Vendors to whom the details of the tender has to be notified

3. System notifies the Tender details to all the selected Vendors by email.

*User cases related to Quotations:*

**Use Case 12:** Add / Submit a Quotation against a Tender

*Primary Actor:* Vendor

*Pre Condition:* Vendor logged in. Vendor can open the Tender which was notified to him/her.

*Main Scenario:*

1. Vendor opens the Tender and quotes a price.

2. Vendor submits the Quotation

3. System updates the Quotation details against the Tender in the System

4. System notifies the TMUser about the Quotation by email.

**Use Case 13:** View Quotations of a Tender

*Primary Actor:* TMUser

*Pre Condition:* TMUser logged in. There are one or more Quotations associated with the Tender.

*Main Scenario:*

1. TMUser opens the Tender and initiates the “View Quotations” functionality.

2. Quotations against the Tenders are displayed in GUI.

*Alternate Scenario:*

2(a). No information is displayed when there are no Quotations submitted against the Tender..

**Use Case 14:** Approve / Reject a Quotation

*Primary Actor:* TMUser

*Pre Condition:* TMUser logged in. There are one or more Quotations associated with the Tender.

*Main Scenario:*

1. TMUser initiates the “View Quotations” functionality for a Tender.

2. Quotations against the Tenders are displayed in GUI.

3. TMUser selects a Quotation and Approve / Reject

4. System updates the Approval / Rejection details.

**Use Case 15:** Create Purchase Order

*Primary Actor:* TMUser

*Pre Condition:* TMUser logged in.

*Main Scenario:*

1. TMUser selects a Tender.

2. TMUser initiates Create Purchase Order

3. System sends an email notification to the Vendor whose Quotation is Accepted for the Tender.

**3.2 Performance Requirements:**

(a) Should run on a 500 MHz, 64 MB machine.

(b) 90% of the responses should be within 4 sec

**3.3 Design Constraints:**

1. Security: All the information shared in the application is safe and secure and persisted in. a RDBMS in secure manner

2. Fault Tolerance: Data should not become corrupted in case of system crash or power failure.

**3.4 External Interface Requirements:**

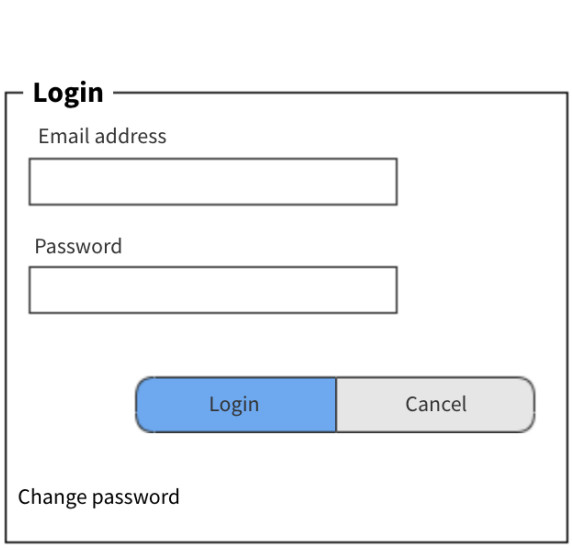
Appendix A shows the intended user screens.

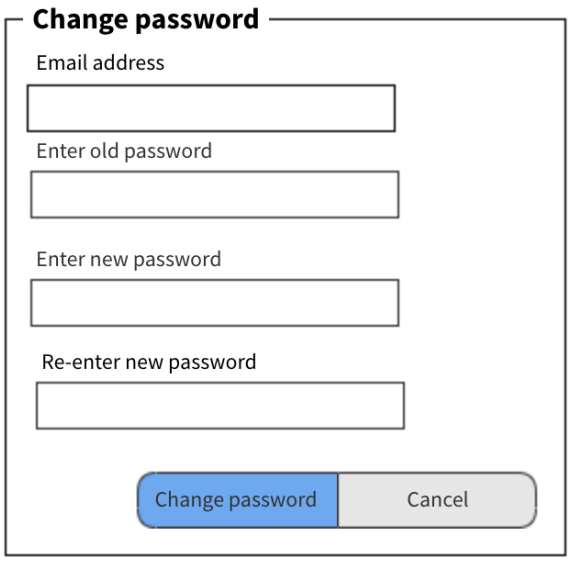
**4. Future Extensions:**

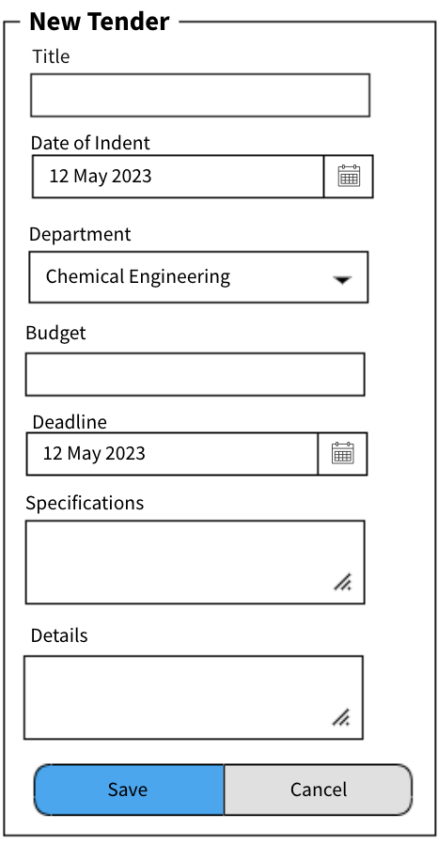
a. TMQS software application can be extended in future with a workflow where multiple approvers make a final decision on whether to accept/reject a Quotation in an automatic manner..

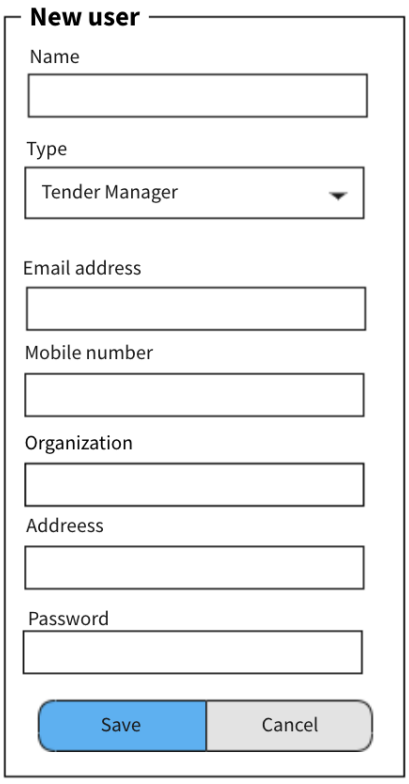
## 5. Appendix

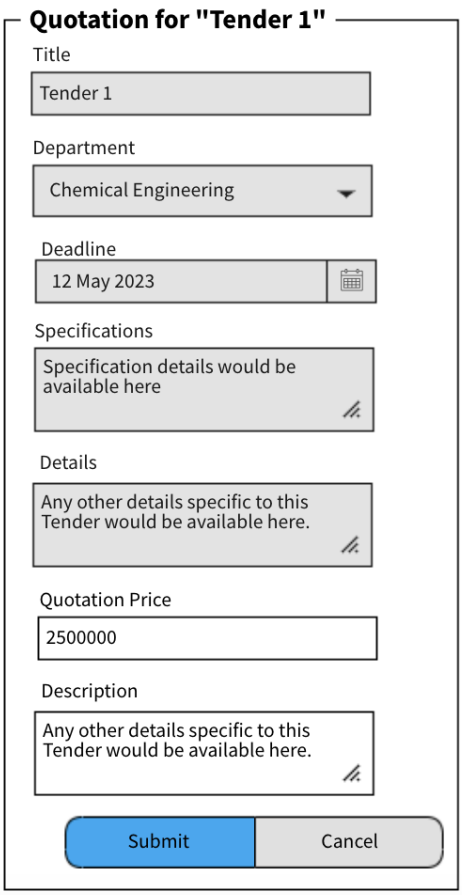
### 5.1 Appendix A:



## List of Tenders

| ☐ | Id | Name | Department | Base price | Location | Deadline | Description | Quotations |
|---|---|---|---|---|---|---|---|---|
| ☑ | 1 | Tender 1 | Chemical Engin… | 70000 | USA | May 17 2023 | Mac computers | View |
| ☐ | 2 | Tender 2 | Civil Engineering | 100000 | India | May 20 2023 | Library building | View |

## List of Quotations for Tender '1'

| ☐ | Quotation id | Vendor id | Quotation amount | Deadline |
|---|---|---|---|---|
| ☑ | 1 | 1 | 70000 | 17-May-2023 |
| ☐ | 2 | 2 | 100000 | 17-May-2023 |

Approve | Reject

## Notify Vendors for Tender '1'

| ☐ | Name | Mobile | Email | Organization | Address |
|---|---|---|---|---|---|
| ☑ | ABC Ltd Inc | 900123456 | abc@gmail.com | ABC | 123 street Hyderabad |
| ☐ | XYZ Ltd Inc | 900123457 | xyz@gmail.com | XYZ | 456 street Bombay |
| ☑ | PQR Ltd Inc | 900123487 | pqr@gmail.com | PQR | 789 street Chennai |

Notify | Cancel