

Software Requirements Specification

for

Tender Management System

Version 2.0 approved

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1 Introduction

1.1 Purpose

The project “Tender Management System” is developed to place the tender by the programmer for the projects which are posted by the clients. By this project contractors can apply for the Tender and clients can reduce their expenses for the development of their project.

The final goal is to produce a stable and high-quality SRS.

1.2 Document Conventions

1.2.1 Alignment

The entire document is in justified alignment.

1.2.2 Convention for the Main Title

1.2.2.1 Font Face: Times New Roman

1.2.2.2 Font Style: Bold

1.2.2.3 Font Size: 24

1.2.3 Convention for the Sub Title

1.2.3.1 Font Face: Times New Roman

1.2.3.2 Font Style: Bold

1.2.3.3 Font Size: 18

1.2.4 Convention for the Body

1.2.4.1 Font Face: Times New Roman

1.2.4.2 Font Size: 12

1.2.5 Abbreviations

1.2.5.1 **TMS**: Tender Management System

1.2.5.2 **SRS**: Software Requirements Specification

1.2.5.3 **DBMS**: Database Management System

1.2.5.4 **SQL**: Structured Query Language

1.2.5.5 **BE**: Bid Evaluation

1.2.5.6 **BO**: Bid Opening

1.2.5.7 **XML**: Extensible Markup Language

1.3 Scope

By going through this website both the clients and programmers are benefited, programmers can get their possible projects through this website and clients can find the appropriate programmer for his project with minimal cost and quality software.

1.4 References

- 1.4.1 <https://www.purchasing-procurement-center.com>
- 1.4.2 <https://www.scribd.com/doc/188364/E-tendering-Srs-5-July>
- 1.4.3 “Bids, Tenders and Proposals: Winning Business Through Best Practice Paperback (2012)” – Harold Lewis

2 History

2.1 Technical Literature

In this modern world every individual is familiar with internet, due to this reason our project was developed, this project makes the life of individuals more comfortable than ever. By residing at home, the clients can get the developer for his dream project and programmer also gets his work in online, this reduces both the cost and valuable time.

2.2 Existing Applications

There are many existing websites in our Market based on Tender Management System.

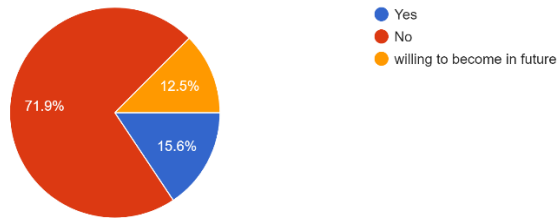
- 1. rfpio.com
- 2. imanager.com
- 3. procure-plus.com
- 4. mavenvista.com

2.3 Customer Surveys

<https://forms.gle/Co7H888ievP5CvVK8>

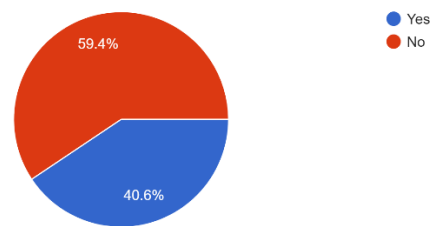
Are you a Contractor?

32 responses



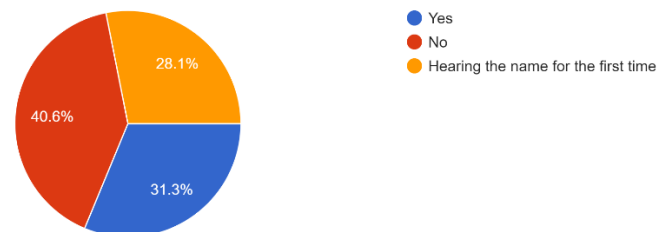
Have you previously used any Tender Management Software?

32 responses



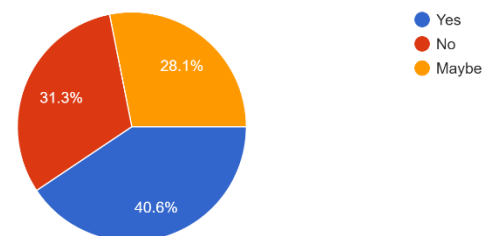
Have you previously applied for a Tender?

32 responses



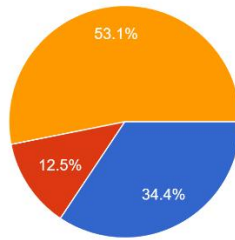
Have you faced difficulty in making a good Tender Document?

32 responses



What type do you prefer for this software?

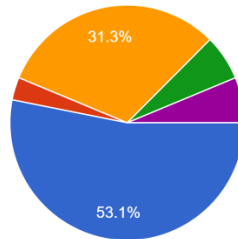
32 responses



- App based
- Website based
- Both

What OS do you prefer for the Software?

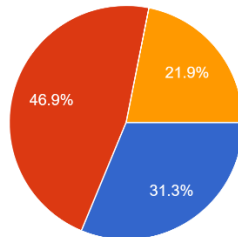
32 responses



- Android
- iOS
- Windows
- Mac
- Linux

What is the preferred user interface?

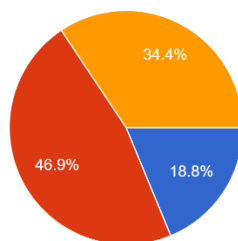
32 responses



- Plain and Simple (Low Resource)
- Illustrative and Interactive (High Resource)
- Somewhere in between (Average Resource)

What is your preferred login type?

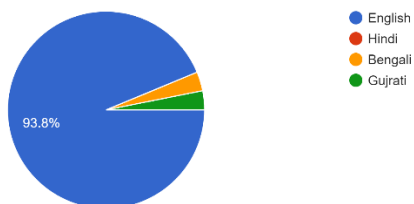
32 responses



- Facebook
- Gmail
- Phone Number + OTP

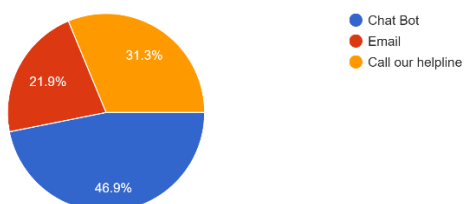
What Languages do you prefer the software to support?

32 responses



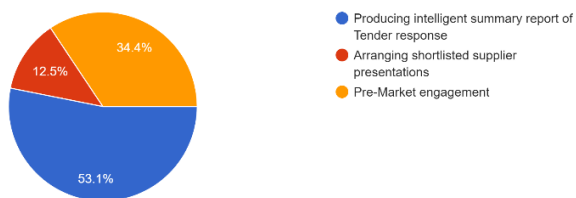
What is your preferred mode for contacting us?

32 responses



Choose a Flagship feature you want to include?

32 responses



Any tips/advice to improve the experience

8 responses

No

Good

Make it plain and simple

Yes

Userfriendly UI

Ok

2.4 Expert Advice

The Software is the best and most affordable to find the perfect developers. The software supports features like producing intelligent summary report of the tender response and pre-market engagement.

2.5 Current/Future requirements

- 2.5.1 Bias-free system and process
- 2.5.2 It gives the developer an accurate insight of the profile details as per there required parameters.
- 2.5.3 Error free Tender, bid management system.
- 2.5.4 Portal System - integrated gateway to support smooth business processing and to provide integrated information of public procurement.
- 2.5.5 e-Registration System
- 2.5.6 e-Contract System

3 Overall Description

3.1 Product Functions

3.1.1 Hardware Requirement

- A device (Computer/ laptop/ android/ ios) with at least 4 GB RAM
- Hard disk space required – 500 MB
- WIFI Router for wireless Internet Connectivity
- Minimum snapdragon 600 series/ i3 8th gen/ apple a11 bionic

3.1.2 Software Requirement

- A database like DBMS (MySQL) to store the details
- A web browser like Chrome, Mozilla, Firefox, etc.
- IDE – Visual Studio, Eclipse
- Operating System - At least Windows 7 64-bit, Mac 10.11, android Oreo (8) and iOS 11

3.2 Functional Requirements

3.2.1 Registration:

Description: There are basically two kinds of users namely buyer and supplier. Existing members would log in and new ones will sign up.

3.2.1.1 Creating New Account (Sign Up):

- **Input:** The user needs to give the following credentials:
 - Login Name
 - Password
 - Email/Mobile Number (preferred mode of communication)
 - Date of Birth
 - Address (Country, State, City, Pin Code)
 - Working field
- **Output:** A new account is created and user receives a confirmation mail.

3.2.1.2 Log In:

- **Input:** The existing user must input the following:
 - Login - Name/Email ID/Mobile Number
 - Password
- **Output:** If credentials match, then the home page appears. Else throw ERROR

3.2.1.3 Forgot Password:

- **Input:** Registered Email ID or Mobile Number.
- **Output:** Reset password link will be sent to the registered Mobile/Email.

3.2.1.4 Account Deletion:

- **Input:** User requests and confirms the account to be permanently deleted.
- **Output:** The account gets permanently deleted from the servers.

3.2.2 Buyer:

3.2.2.1 Post tenders:

- **Input:** Users may Select appropriate category and subcategory of tender:
 - Enter all details corresponding to tender e.g. it's location.
 - Select tender that is to be uploaded
 - View tender before uploading it.
 - Upload tender
 - Enter threshold parameters which if not fulfilled by any quotation then a mail is sent to the quotation owner saying that you are not fulfilling the threshold requirements.
 - Enter preference parameters on which final top entries will be selected.
 - Enter weightage of each preference parameter so that point got by tender quotations will get calculated.
- **Output:** After successful upload, a mail is sent to the buyer saying that the tender has been uploaded.

3.2.2.2 View responses to tenders (quotations) submitted by supplier:

- **Input:** Select the tender whose response you want to see
- **Output:**
 - Select any particular quotations and view it completely
 - Information corresponding all tender responses (quotations) will get displayed
 - If desired, categorize them according to evaluation parameters entered at time of posting the tender

3.2.2.3 Evaluate tender responses:

- **Input:** View response to a particular tender

- Arrange them according to evaluation parameters
- Tenders will be evaluated as to whether all the Threshold parameters are satisfied. Tenders that meet these parameters will proceed to next stage. Tenders that do not meet threshold parameters will not be considered further.
- At the next stage, select the tender which is best with respect to maximum number of preference parameters
- Weightage may be provided to preference parameters depending on which preference parameter is how much important.
- Selection of final quotation will be done manually.
- Declare that a particular tender has been selected

- **Output:**

- A mail is sent to the selected supplier saying that your tender response has been selected.
- A mail is also sent to all other suppliers saying that your response was rejected
- At the conclusion of the evaluation process, an evaluation report is prepared. This report will include:
 - An outline of the methodology used in evaluating the tenders;
 - An outline of the responses received;
 - Recommendations.
- This report will be sent to all suppliers who have submitted their quotations for this particular tender

3.2.3 Supplier:

3.2.3.1 View public tenders submitted by buyer

- **Input:** Users can click on the following sections
 - Information (important points) corresponding all public tender
 - Threshold parameters
 - Select any tender you want to view
 - View complete tender
 - If desired, download the tender
- **Output:** On clicking respective page will be displayed.

3.2.3.2 Respond to tenders

- **Input:** Users can click on the following sections
 - Select the tender to which you want to respond
 - If tender is not closed then only the supplier can submit the quotation
 - Enter bid/quotations as a response
 - Payment will be made through credit card
 - Enter all details i.e. values of the parameters corresponding to your quotation
 - Select quotation that is to be uploaded
 - View quotation before uploading it.
 - Upload quotations
 - If required these quotations can be changed as many times before the tender is closed.
 - If the quotation is not fulfilling the threshold requirements then a mail is sent to the supplier.

- **Output:** After successful upload, a mail is sent to the supplier saying that the quotation has been uploaded.

3.2.4 Searching:

Description: The web GUI should provide search functionality in each of the registries in two basic forms: (a) A quick search mode, providing just a basic list of search fields for each target entity; (b) An advanced search mode, providing the full range of supported search fields. This approach will help the users to find their results in a faster way and also to use specific criteria for their results.

3.2.4.1 Tenders Search

- **Input:** The search engine must accept various search criteria including:
 - Name, tender reference number, Common Procurement Vocabulary (CPV)
 - CA, procedure, status.
- **Output:** The tender names closest to the typed keyword will be shown.

3.2.4.2 Organization Search

- **Input:** The search engine must accept various search criteria including:
 - For CA search: name, address.
 - For EO search: name, address, CPV, preferred supplier status.
- **Output:** The Organization name closest to the typed keyword will be shown.

3.2.4.2 Users Search

- **Input:** The search engine will accept various search criteria including:
 - Name, Surname, username, email, organisation, country.
- **Output:** Respective Users will be displayed.

3.2.5 Support:

Description: The users have facility to contact Support regarding any issue.

3.2.5.1 Chat Bot

- **Input:** User can type their problems to a Chat Bot.
- **Output:** The Chatbot is AI powered and can provide trouble shooting for frequently asked problems.

3.2.5.2 Access Help forum

- **Input:** User can click on the following sections Online 'help files', 'tutorials' and 'start-up guides'
- **Output:** Respective page will be displayed.

3.2.5.3 Helpline Number/Email

- **Input:** User can also choose helpline number or email to contact.
- **Output:** Contact Information will be displayed on the screen.

3.2.6 Administration:

3.2.6.1 Reviewing Tender Documents

- **Input:** Admin can choose to review the Tender posted by the Buyer.
- **Output:** Review page of the tender will be displayed.

3.2.6.2 Publishing Tender to Portal

- **Input:** Admin can verify and publish the tender to the Portal.
- **Output:** Tender will be published to portal.

3.2.6.3 Managing library of legal documents, case studies and bid responses

- **Input:** Admin can view and manage the tender database system.
- **Output:** Database will be updated.

3.2.7 User (not registered):

3.2.7.1 can view rank given to buyer and supplier

3.2.7.2 can view public tenders submitted by supplier

- **Input:**
 - Click on view public tenders
 - Select any tender you want to view
- **Output:**
 - Information corresponding all public tender will get displayed
 - Threshold parameters will also get displayed
 - View complete tender

3.3 Non-Functional Requirements

3.3.1 Correctness Requirement

All the different requirements specified in the document have been correctly implemented. It covers all the requirements that are expected from the Tender Management System.

3.3.2 Portability requirement

The software is XML and programming language based. So that the end-user part is fully portable and any system using any web browser should be able to use the features of the system, including any hardware platform that is available or will be available in the future. An end-user uses this system on any OS; either it is Windows or LINUX. The system shall run on PC, Laptops, Mobile, etc.

3.3.3 Efficiency Requirement

The software is highly efficient and various tasks in its various modules simultaneously. Even if the system fails, the system will be recovered back up within an hour or less.

3.3.4 Usability Requirement

The software has a simple but efficient user interface, which can be used by all types of users, both technically sound as well as people not having so much technology knowledge. So, any user can use its functionalities without any sort of complications.

3.3.5 Reusability Requirement

The system should be available at all times, meaning the user can access it using a web browser, only restricted by the downtime of the server on which the system runs. In case of a hardware failure or database corruption, backups of the database should be retrieved from the server and saved by the administrator. Then the service will be restarted. It means 24 X 7 availability.

3.3.6 Reliability Requirement

The system provides storage of all databases on redundant computers with automatic switch over. The reliability of the overall program depends on the reliability of the separate components. The main pillar of reliability of the system is the backup of the database which is continuously maintained and updated to reflect the most recent changes. Thus all overall stability of the system depends on the stability of the container and its underlying operating system.

3.3.7 Maintainability Requirement

A commercial database is used for maintaining the database and the application server takes care of the site. In case of failure, a re-initialization of the program will be done. Also, the software design is being done with modularity in mind so that its maintainability can be done efficiently.

3.4 User Characteristics

The software does not require any specific computer knowledge to use it except the developers and administrators of it. Standard users are thought to be from any gender and any nationality. On the other hand, administrators and potential developers need a high level of expertise to understand web technologies.

3.5 Design & Implementation Constraints

Any update regarding the article will have to be recorded and the correct information must be updated and all the cost calculations must be done as soon as possible. The backup of all the data must be done on a hard disk. There are not so many strong firewalls so proper antivirus scans must be done before use. There is no provision for saving incomplete data.

3.6 Assumptions & Dependencies

3.6.1 Assumptions

- Coding is error-free.
- The system should have an apt storage capacity and provide fast access.
- Users must use their username and correct passwords.

3.6.2 Dependencies

- The product needs the following third-party applications for the development of the project:
 - NetBeans
 - UI/ UX (for editing layouts, icons, buttons, etc.)
- There will be the availability of Internet via 3G, 4G, 5G or Wi-Fi.

4 Interface Requirements

4.1 User Interfaces

The program offers a decent graphical interface for the user that can be run on the device by a user, performing the necessary tasks such as posting, reviewing, sharing. a. Login Page
b. Home Page

- c. Page to display Tenders, etc.

4.2 Hardware Interfaces

The system must run over the internet, all the hardware shall be required to connect to the internet.

- a. WAN - LAN Network
- b. Ethernet Cross-Cable
- c. Modem

4.3 Software Interfaces

The system is on the server so it requires any scripting language PHP, VBScript etc. The system requires a Database also to store any transaction of the system like MYSQL, etc. system also requires DNS (Domain Name Space) for the naming of the internet. At the last user needs a web browser to interact with the system.

4.4 Communication Interfaces

We will be a completely stand-alone system that lets other platforms connect, fetch and transform data at certain levels. The platform will provide APIs and tools for third-party developers to let them create high-level integrated plugins and programs. The main communication interface with the other platforms will be the application Platform.

5 Conclusion

In olden days online projects tender are not available, all the members use to gather and bid the product later they finalize the cost of the product. But in this site no need of gathering all the time to bid the product instead of that we can bid the product in our site so that it is easy for both the developer and client. Client can know the cost of the project in the site itself, and can choose the best price and best developer.