

## **Software Requirements Specification (SRS)**

# **E-BIDDING WEBSITE**

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## **1. Introduction**

### **1.1 Purpose**

This Software Requirements Specification provides a complete description of all the functions and specifications of the system behind an E-Bidding Website - a web portal for online auction. This document is intended for users of the system including developers, implementers, and the mentor.

### **1.2 Scope**

- This website will be designed to be hosted on any **PHP enabled web server** (ex WAMP) and allow new user to register and once registered allows them to participate in online auction, sell their articles or buy one. They will also be able to search for article by their preferences. The data will be stored in MySQL database (preferably MySQL 5.1.53 would be used). The interface development will include HTML, CSS coding on an **open source editor** (ex Joomla, Notepad++, Gimp, QuantaPlus, Firebug) and javascript and jquery (on jEdit or Notepad++ mostly) to enhance client server interaction.
- Usage of softwares like Dreamweaver that are not open source will not be done unless the software we have is an original one.

### **1.3 Definitions, Acronyms, and Abbreviations.**

SRS: Software Requirements Specification

UML: Unified Modelling Language

HTML: HyperText Markup Language

CSS: Cascading Style Sheets

PHP: Php, hypertext processor

MySQL: My Structured Query Language

SQA: Software Quality Assurance.

CAPTCHA: Completely Automated Public Turing test to tell Computers and Humans Apart.

### **1.4 References**

- Software Engineering – A Practitioner’s Approach “by Roger S Pressman
- 830-1998 - IEEE Recommended Practice for Software Requirements Specifications.

(<http://ieeexplore.ieee.org/xpl/articleDetails.jsp?reload=true&arnumber=720574>)

## **1.5 Overview**

The entire SRS is divided into 3 sections, introduction, overall description, and specific requirements. Then each section is further subsectioned to entail the notion of its parent section in length.

**This section** just briefs the notion of the development, the detailed concept is described in later sections.

**Section 2** does not state specific requirements. Instead, it provides a background for those requirements, which are defined in detail in Section 3 of the SRS, and makes them easier to understand.

**Section 3** contains all of the software requirements, to a level of detail sufficient to enable designers to design the system to satisfy these requirements, and testers to test that the system satisfies these requirements.

## **2. The Overall Description**

### **2.1 Product Perspective**

The project will make use of a database and a web server that can be accessed with any web browser.

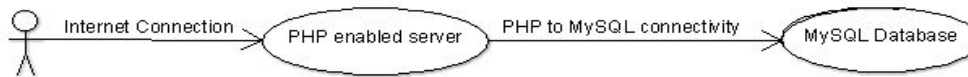
#### **2.1.1 System Interfaces**

E-bidding will be a web application for auction of any articles which allows registered users to bid and buy articles. It not only allows user to buy but also allows users to sell their article. E-Bid encompasses numerous files and information from the article database and buyer/seller database. This system will be completely web-based, linking e-bid to its users via a standard web browser. An Internet connection is necessary to access the system. Website will run smoothly on the browsers developed after 2005 and browser should be javascript enabled.

#### **2.1.2 Interfaces**

E-bidding web site will be operated on a php enabled webserver like wamp or other php enabled servers over internet. The ebid users will interact with the application which in turn will fetch information from the MySQL Database through PHP.

connectivity.

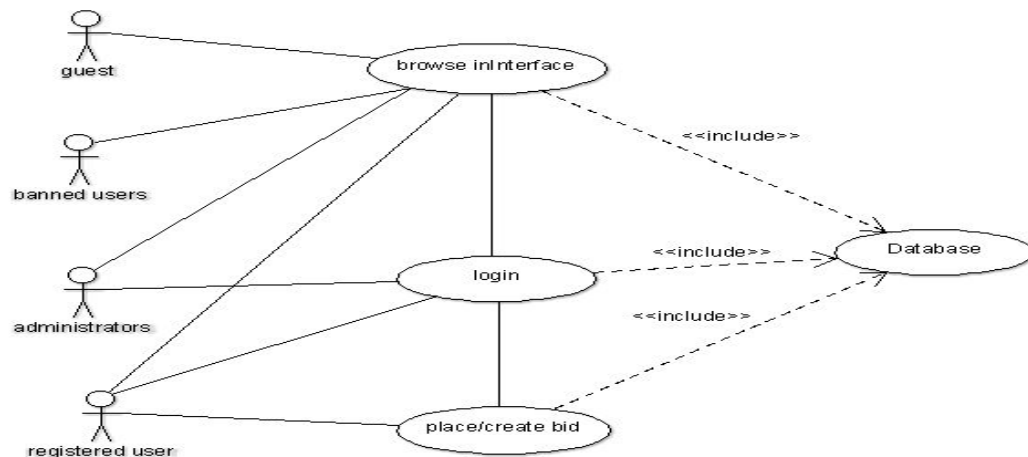


### **2.1.3 Communications Interfaces**

It's a web based application so Internet connection is mandated to run it . Web server , web space , domain name are basic requirements . The server number in the domain name should be same as the number of the web server , we are hosting our website on. The user side has to keep javascript enabled in order to start communication with the interface

### **2.1.4 Operations**

There are 4 types of users on the system: guests, registered users, administrators and banned users. Before a user can make use of the full functionality of the site, the user has to register. The user will have to enter some personal information in a form in order to do this. Both guests and users can browse the different auctions, but only registered users can bid on auctions or place their own auctions. Users can browse through auctions with categories or tags. Users can also search for auctions. When a user places an auction, he or she also has to specify payment methods, transport methods, a minimum price, a duration for the auction and other general information about the auction.



**box around the interface is not present**

## 2.2 Product Functions

*Provide a summary of the major functions that the software will perform. Sometimes the function summary that is necessary for this part can be taken directly from the section of the higher-level specification (if one exists) that allocates particular functions to the software product.*

*For clarity:*

- 1. The functions should be organized in a way that makes the list of functions understandable to the customer or to anyone else reading the document for the first time.*
- 2. Textual or graphic methods can be used to show the different functions and their relationships. Such a diagram is not intended to show a design of a product but simply shows the logical relationships among variables.*

## 2.3 User Characteristics

*Describe those general characteristics of the intended users of the product including educational level, experience, and technical expertise. Do not state specific requirements but rather provide the reasons why certain specific requirements are later specified in section 3.*

## 2.4 Constraints

*Provide a general description of any other items that will limit the developer's options. These can include:*

- (1) Regulatory policies*
- (2) Hardware limitations (for example, signal timing requirements)*
- (3) Interface to other applications*
- (4) Parallel operation*
- (5) Audit functions*
- (6) Control functions*
- (7) Higher-order language requirements*
- 8. Signal handshake protocols (for example, XON-XOFF, ACK-NACK)*
  - 1. Reliability requirements*
- (10) Criticality of the application*
- (11) Safety and security considerations*

## **2.5 Assumptions and Dependencies**

- The application does not deal with advertisement charges and its transaction and any subsequent legal issues out of it.
- The application will not be responsible for shipping and transport of the articles. It is left to the buyer and seller of the articles.

## **3. Specific Requirements**

### **3.1 External Interfaces**

The following are the details of the interfaces:

- Home page of website with currently going on bids on it.
- Login/register page for Sellers/Buyers
- Users Bid Cart for viewing the Buyers current Bids.
- Sellers Cart for viewing the Sellers current products for Bids.
- Payment Page for buyers.
- Admin Page to manage the biddings.

### **3.2 Functions and Functional Requirements**

The following are the major features provided by the system.

#### **3.2.1 User Registration**

This allows a user to be a member of e-bid and enables him to sell or bid of



items and participate in the community forum. This is a essential part of the system of high priority as it adds new customer to the buyers /sellers community.

### **3.2.1.1 Functional requirements**

- The user selects the 'sign up' link to get the registration form and after following the instruction fills in the required information to create his/her profile.
- Client side validation will be done for checking provided information.
- The user will be asked for a login and password
- After client side validation for uniqueness a activation link will be sent by mail.
- On activation the user is now registered to e-bid

### **3.2.2 Selling**

Here the registered users can post their articles for bidding .Its a essential part of the project.

#### **3.2.2.1 Functional requirement**

- The seller is authenticated.
- Article description form is provided to the seller .A snapshot of the article may also be uploaded.
- The category of the article needs to be selected. The description may include minimum bid value, time for bid and other article characteristics.
- On client side validation the database of items for bidding will be updated.

### **3.2.3 Searching**

Any user can search for article based on category, cost and other parameters .This will be the top priority module as it is very essential for a prospective buyer to find the article he/she is looking for .The search will be of two type basic and advance search

#### **3.2.3.1 Functional requirement**

- Any user will be selecting either basic or advance search.
- If the user selects basic search, the search will be performed on the product and category. This is for users who are not very particular about the product features.
- If the user selects advance search, he/she will be presented with form to fill inthe advance features of the product like vendor, model, color etc. The search will be searched on these preferences and search results will be displayed.

### **3.2.4 Bidding and Buying**

The buyers will be able to bid on any item available for bidding .This is core part of this auction web application.

#### **3.2.4.1 Functional requirement**

- The buyer searches the item to bid from search option.
- The buyer is authenticated for his first bid on a item and the item is added to his bidding list.
- For subsequent bids, he selects the item he wants to bid from the list of items he is currently bidding and updates his bid
- Administrator has no hand in the process , he can just add or remove the products if the bid was a spam.
- After the bidding is done the winners are announced and they are requested to take the product if the buyer refuse to buy the bid is sent to the next winner and the bid is automatically removed from the page.

### **3.3 Performance Requirements**

The site is real time bidding based. The moment a user bids on an article, both the user and the seller are notified the same.

The performance is based on number of users being served at a time, that will depend on the server the site is hosted on. Normally if we consider a general scenario, 20-30 users will be easily served at a time. Later on, depending on the traffic, this capacity can be increased.

### **3.4 Database Requirements**

The Database will be made as a Relational Database .

Seprate database will be made for

- the products and auctions details.
- the users informations.

### **3.5 Design Constraints**

*Specify design constraints that can be imposed by other standards, hardware limitations, etc.*

#### **3.5.1 Standards Compliance**

*Specify the requirements derived from existing standards or regulations. They might include:*

- (1) Report format*
- (2) Data naming*
- (3) Accounting procedures*
- (4) Audit Tracing*

*For example, this could specify the requirement for software to trace processing activity. Such traces are needed for some applications to meet minimum regulatory or financial standards. An audit trace requirement may, for example, state that all changes to a payroll database must be recorded in a trace file with before and after values.*

### **3.6 Software System Attributes**

#### **3.6.1 Reliability**

Test or Mock runs will be done on a sample user group to find out bugs or loopholes in the system. The same will be then corrected in the further iterations of debugging.

Errors in the code will be divided into 2 groups: small errors and fundamental errors. Fundamental errors will be given top priority and will be fixed immediately. Small errors will be given attention according to their importance in the smooth functioning of the system.

#### **3.6.2 Availability**

The whole system will be hosted on a dedicated server having good response time specifications and stable Operating System. Preferably WindowsXP or Windows7 will be used for this purpose.

A dedicated machine will be able to handle the traffic expected.

A rollback checkpoint will be created every hour by the system, in case of a shutdown due to unavoidable reasons, the system will rollback to the last checkpoint state.

### **3.6.3 Security**

#### **3.6.3.1 Entry level security:**

- E-mail verification for the registering users.

#### **3.6.3.2 Counter measures against malicious access to the system:**

- Captcha protection.
- User login and password information required to do view and/or use the system.

#### **3.6.3.3 To counter the chance of fake users/automated scripts running on the system**

- Log of every activity of the user will be kept, this includes:  
    Login time.  
    Activity during a specific login.

#### **3.6.3.4 Administrators have certain powers over the other users, so as to moderate and control the usage of the system for a good hassle free functioning.**

- Can remove any item from bidding if seller found fake/unreliable.
- Can remove users if found guilty of any type of malpractices.
- Can give warnings to users prior to removal.
- Can debar any user from bidding for a certain duration.

### **3.6.4 Maintainability**

Maintainence like removing unnecessary features or adding new features can be done at the code level and will reflect immediately on the live website. The interface can also be touched up whenever required.

### **3.6.5 Portability**

Any machine having xampp/wamp server installed on it, can be used to easily host. Since the code is mostly in php and the databse is MySQL, these two need to be present on the host machine.

#### **4. Change Management Process**

To incorporate changes in the requirements and to see if proper changes to the system meet the requirements, change management process will be done iteratively with all the activities, the following strategy will be followed.

The user/stakeholder will identify a new requirement or a modification in a requirement and communicate it to the team lead via support section or via email. The team will assess the feasibility of the proposed change considering the time constraints and structural constraints of the implemented modules and develop an implementation strategy. A change plan will be created for the implementation of the change and sequence of the changes is determined. The team will then continue implementing the new requirements. Then testing will be done on the new programmed system. During the testing phase, the product will be tested for satisfying the requested changes. The changes will then be verified for the last time, and a new system release is made.

#### **5. Document Approvals**

Approved by: Mr. Mahadev Gawas

Signature:

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Date:

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