

## SOFTWARE REQUIREMENT SPECIFICATION

Let's take a look at the requirements at user as well as the portal's end.

### FUNCTIONAL & NON FUNCTIONAL REQUIREMENTS

The functional capabilities which make up an e-purchasing system suitable for public procurement specified as the following:

Many-to-many functionality (Many buyers to many sellers), decentralized buyers and sellers, search for suppliers by name, category, locality code, and contract, create purchase requisitions, generate purchase orders while including optional approver workflow, receive goods into the system, allow for the customization of "buy policies", buyer data management, supplier data management.

Following are the non-functional requirements:

- **Performance**

The system must be interactive and the delays involved must be less. So in every action-response of the system, there are no immediate delays. In case of opening windows forms, of popping error messages and saving the settings or sessions there is delay much below 2 seconds, in case of opening databases, sorting questions and evaluation there are no delays and the operation is performed in less than 2 seconds for opening, sorting, computing, posting > 95% of the files. Also when connecting to the server the delay is based editing on the distance of the 2 systems and the configuration between them so there is high probability that there will be or not a successful connection in less than 20 seconds for sake of good communication.

- **Safety**

Information transmission should be securely transmitted to server without any changes in information

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- **Reliability**

As the system provide the right tools for discussion, problem solving it must be made sure that the system is reliable in its operations and for securing the sensitive details.

- **Availability**

If the internet service gets disrupted while sending information to the server, the information can be send again for verification.

- **Security**

The main security concern is for users account hence proper login mechanism should be used to avoid hacking. The tablet id registration is way to spam check for increasing the security. Hence, security is provided from unwanted use of recognition software.

- **Usability**

As the system is easy to handle and navigates in the most expected way with no delays. In that case the system program reacts accordingly and transverses quickly between its states.

## **USER REQUIREMENTS**

The system primarily has 3 types of users:

- **Seller module**

A seller's primary concern on such a portal would be security against fraudulent buyers and random bids. The seller needs to know who got the product and needs to act accordingly. The seller must be able to check his product for bidding and should be able to add one easily. He should also be able to see the reviews about the product and communicate with the customers or bidders regarding any issue that arises.

- **Buyer module**

The bidder should first see which product is been posted on the app which is to be auctioned along with all the needed information about it. If the bidder is interested to buy that product, then he can register for the auctioning and bid the amount. At last, at the end of the auctioning the bidder should get to know the result. The buyer or the bidder should be able to give a feedback to the seller or admin.

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- **Admin module**

The admin must be the one who controls the entire bidding process by deciding the expiry time of each bid. He must be able to add, remove or manage a category. Admin must be able to add or delete comments and take feedback from people regarding the processes going on in the portal.

## **SYSTEM REQUIREMENTS**

Dedicated application server with minimum specification, are as:

- Intel Core 2 Quad
- Memory 2\*2GB DDR3
- Hard Disk 1 x 360 GB HDD SATA
- Ethernet Card 10/100/1000 Mbps e. Microsoft Windows 2003 Small Business Server.

## **INTERFACE SPECIFICATIONS**

The requirement specifications that are acquired from the first phase are studied in this phase and system design is carried out. System design phase describe the hardware to be used which in this project involves the use of laptops and a server and as an alternative the project makes use of a local host server XAMPP. XAMPP can be hosted on a laptop/computer are used to store the data. System design assists in specifying system requirements and also helps in defining overall system architecture.

- **User Interfaces**

The user interface for the software shall be compatible to any browser such as Internet Explorer, Mozilla or Netscape Navigator by which user can access to the system.

- **Hardware Interfaces**

Since the application must run over the internet, all the hardware shall require to connect internet will be hardware interface for the system. As for e.g. Modem, WAN – LAN, Ethernet Cross-Cable.

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- **Communications Interfaces**

The e-store system shall use the HTTP protocol for communication over the internet and for the intranet communication will be through TCP/IP protocol suite.

## **SOFTWARE REQUIREMENTS**

Software requirements are classified into broader areas into front end and back end.

- **Front end**

The front end of the portal has been designed using HTML and CSS which allowed us to create a Real time portal for auctioning. HTML tags and CSS formatting. Bootstrap has been used to customize the portal for a display of smaller or bigger size.

Some of the commonly used tags in HTML are:

- The <header> element is used to identify content that precedes the primary content of the web page and often contains website branding, navigation elements, search forms, and similar content that is duplicated across all or most pages of a website.
- The <div> element defines an arbitrary block of content which can be placed and styled as a single unit.
- The <form> element is used to create an HTML form. The <form> element does not actually create form fields, but is used as a parent container to hold form fields such as <input> and <textarea> elements.
- The <frame> element was used to break a single browser window into multiple independent browsing contexts.

- **Back end**

In the backend we've used MySQL as the database and PHP as a server. The queries were written in MySQL and then imported to PHP and hence linked to the front end of the application. MySQL is a powerful database language that lets you store, organize and access data easily.

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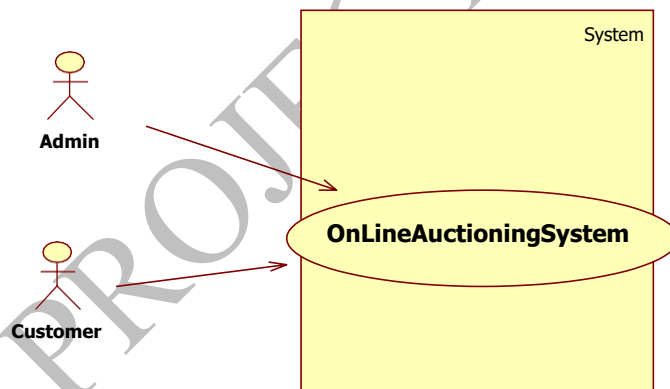
## USECASE DIAGRAMS

**Use case Diagrams** represent the functionality of the system from a user's point of view. Use cases are used during requirements elicitation and analysis to represent the functionality of the system. Use cases focus on the behavior of the system from external point of view.

**Actors** are external entities that interact with the system. Examples of actors include users like administrator, buyer, seller...etc., or another system like central database. System here refers to the Online Auctioning system and the actors that are using the system are Admin and Customer. Admin can view all the customers, view the bid items, view today and end day auction items and view the profiles of the customers.

Customer registers, and upon successful login can buy or sell the items, can view his profile, can view the new auction items today and end day. After providing login details for admin login the details will be validated and after successful validation it will be redirected to the admin home page.

**Use case diagram of system:**

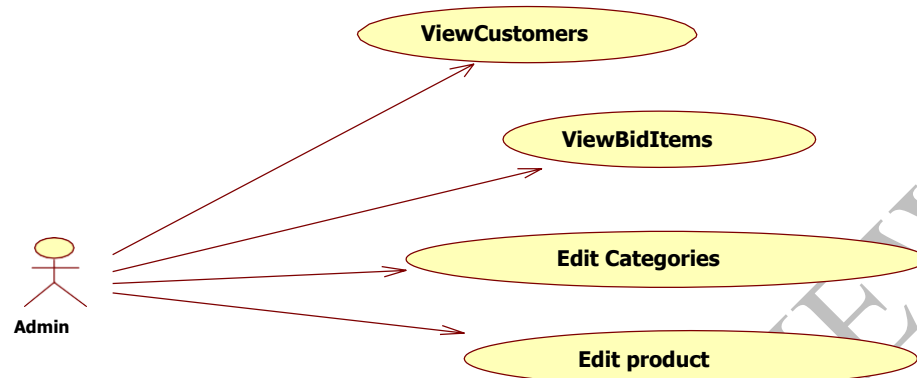


**System use case diagram.**

- The above system use case diagram shows that both Admin and customer can access the Online Auctioning System.

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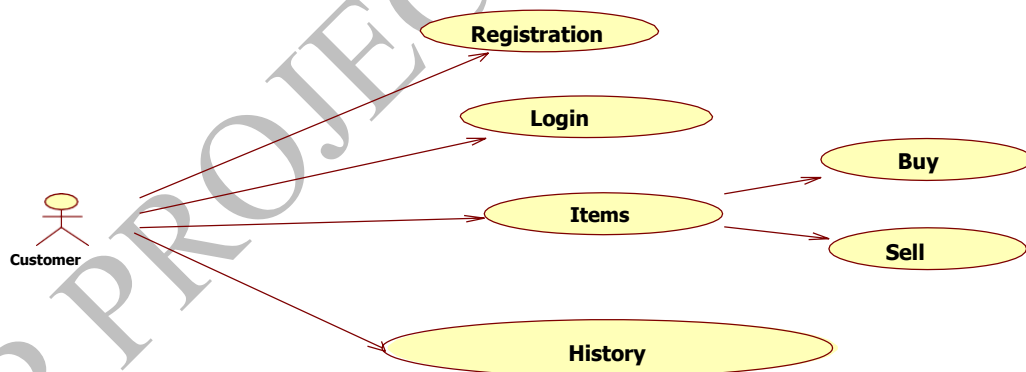
### Use case diagram of Admin:



### Admin use case diagram.

- The Above use case diagram of Admin shows the Functionalities of Admin such as viewing a customer, view bid items, edit categories, edit products.

### Use case diagram of Customer:



### Buyer/Seller (Customer) use case diagram.

- The customer can be a buyer and a seller.
  - A customer will first sign up as a buyer or a seller and then login into the system.
  - Different functionalities will be provided to both buyer and seller.
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## DESIGN AND ANALYSIS

The complete detailed design of the system with module description with activity, data flow diagram.

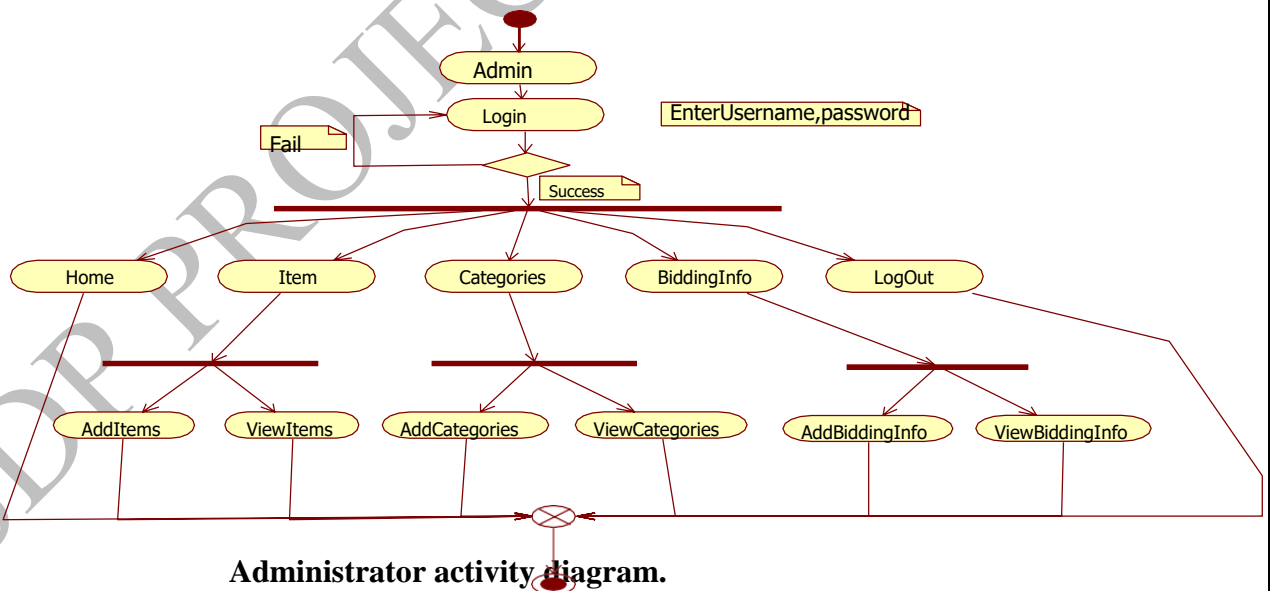
### SYSTEM ARCHITECTURE

The system after careful analysis has been identified to be presented with the following modules and roles.

The modules involved are:

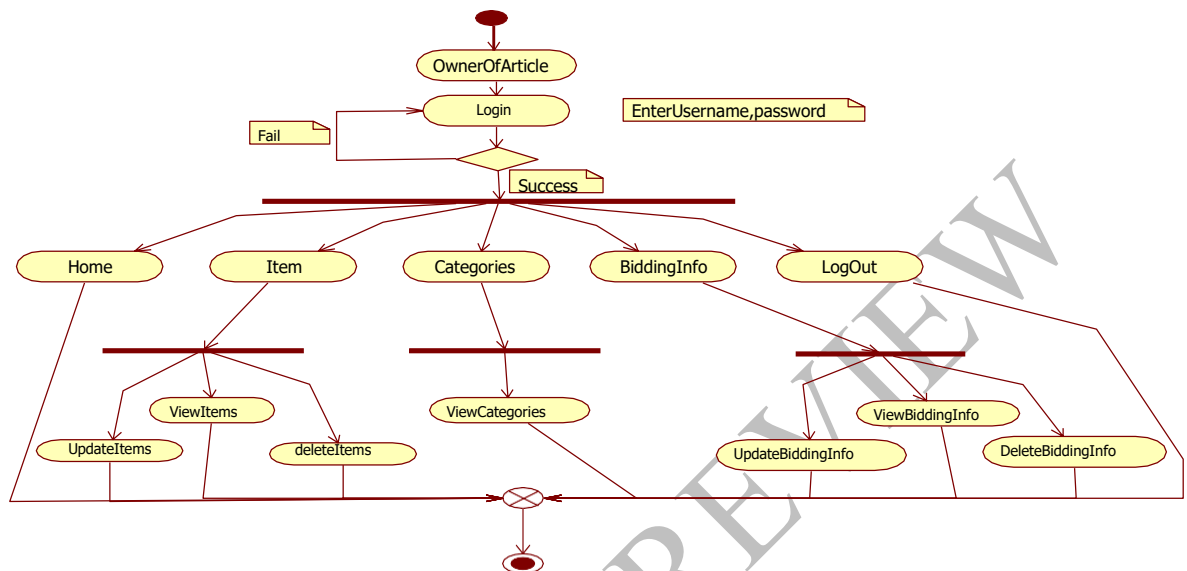
- Seller module
- Buyer module
- Admin module

### ACTIVITY DIAGRAM



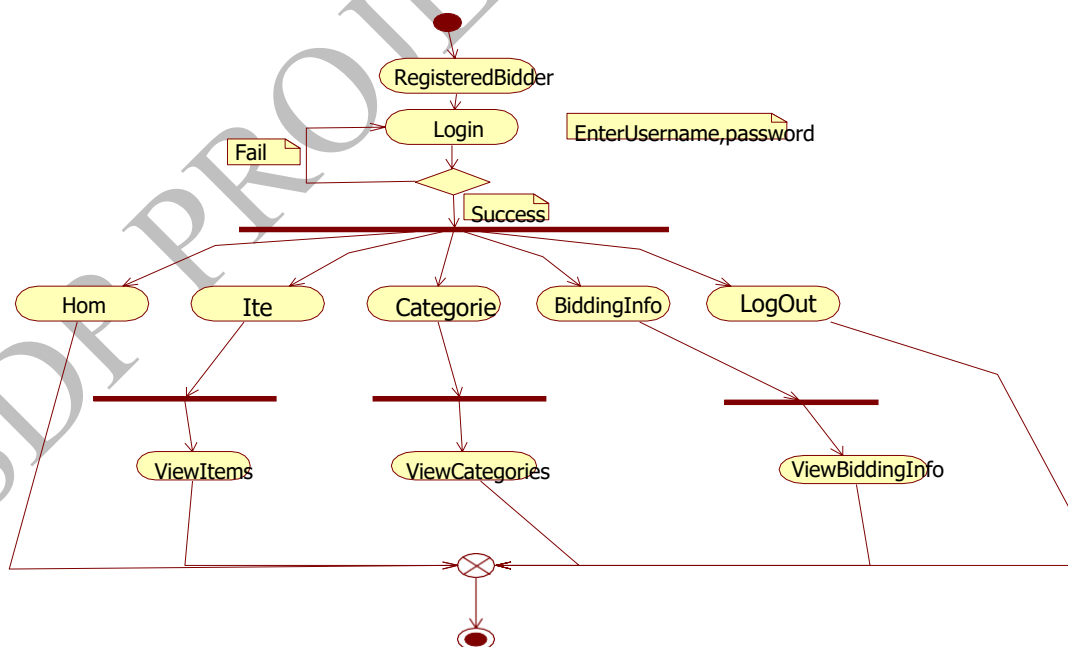
**Administrator activity diagram.**

After successful validation of login credentials Admin will be redirected to the home page and from the home page he can add items for auction, view items that are up for auction, add categories, view categories, add bidding info and view bidding information.



**Seller (Owner of the Article or customer) activity diagram.**

After successful validation of login credentials seller/owner will be redirected to the home page and from the home page he can view items, update or delete items, view categories, view bidding info, update bidding info and delete bidding info.



**Buyer (Registered Bidder or customer) activity diagram**



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After successful validation of login credentials registered bidder will be redirected to the home page and from the home page he can view items, view categories and view bidding info.



-----Thank You -----