Software Requirements Specification

for

BUY 'N SELL SYSTEM

-NITC-

Version 1.1

Prepared by - Team No. 8

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1.Introduction

1.1 Purpose

The purpose of this document is to specify the software requirements of *Buy 'n Sell* services software for NITC.It also explains the need,the features of the system and also describes the constraints under which it will operate.

1.2 Definitions, Acronyms and Abbreviations

Administrator	Refers to the person in charge of monitoring the website and its activities.
User	Any person with a valid NITC mail id using the software.
Buyer	A user who has successfully won a bid or bought an item in the open-sale.
Seller	A user who posts an item for sale on the website.
OTP	One Time Password
NITC	National Institute of Technology Calicut

1.3 Intended Audience and Document Overview

This document is intended for developers who can review the project's capabilities and therein add or improve more features,the end users/clients of this application, and mentors of this project.The next chapter *Overall Description* gives an overview of the functionality of the product and various constraints related to the development and use of the product. The third chapter *External Interface Requirements* is primarily written for the end users. The fourth chapter *System Features* specifies the various features provided by the product.The last chapter,*Other Nonfunctional Requirements,* provides the nonfunctional

requirements of the product. All the chapters of this document describe the same product but are intended for different audience.

1.4 Product Scope

This is a system used within NITC. "*Buy 'n Sell* System NITC" is an online platform used for buying and selling items within the NITC community. The sale will be of two types, open cry auction and open-sale.A user can put up an item for sale in the auction or open-sale.If the item is in the auction, the highest bidder gets to buy the item.After the auction is over both the seller and the winner of the auction will be notified via email.If the item is in the open-sale, any user who wants to buy the item has to contact the seller and then the item will be removed by the seller after the sale.

1.5 References

[1] IEEE Recommended Practice for Software Requirements Specifications. IEEE Computer Society, 1998.
[2] Software Requirement Specification ULTS.
[3] Wikipedia page of Software requirements specification.

2. Overall Description

2.1 Product Perspective

"*Buy 'n Sell*", a replacement to the existing "NITC Market Place" in FB, is an online platform for all the NITCians to buy and sell items.

- The software provides user interface to both the buyer and the seller.
- The communication between the buyer and the seller is through a database server which stores the following information:

1) **Seller Details:** Each item on the site will display the details of the item and seller.
2) **Buyer Details:** All the users are verified and their information is stored in the database,so whenever a user tries to buy an item,the user's(buyer) contact information will be made available to the seller after the auction is complete whereas in open-sale,the buyer contacts the seller.

2.2 Product Functions

All users have the below functions

- Log In /Sign-up
- Reset password
- Sell Item
- Bid (The seller puts up an item in the auction,following which the users can place bids to get that item. The highest bidder will win the bid and will get the item.)
- Modify Bid (There will be a case wherein the seller receives a few bids and if he/she is satisfied with the highest amount so far, he/she has the option to end the bid before the actual end of the bid.Also at any point of time if seller wants to extend the time of bid ,he/she can use the modify bid function.)

- Buy (The seller puts up an item in the open-sale, following which the users can buy it.The price of the item is fixed. The details of the seller are public. The buyer can directly contact the seller for item.)
- Notify Buyer / Seller
- View Item Details
- View Seller Details

2.3 User Classes and Characteristics

The users of this system are buyers, sellers and the administrator.
Seller: A seller can request the administrator to add his/her item to the auction or open-sale along with the item details,the price(in case of open-sale),the minimum amount expected and the duration of the auction(in case of auction).In case of auction,the seller will be notified with the buyer details and bid details after the completion of the auction.
Buyer: A buyer can bid for any item in the auction or buy an item in the open-sale.The details of all items and sellers are made available.All the previous bids for each products are viewable.

Administrator: An administrator approves/disapproves the requests of the sellers. He can also add or remove any user.

2.4 Operating Environment

It works on Windows,Mac and Linux operating systems.It also works on mobile and all other devices with web browsers.

2.5 Design and Implementation Constraints

Some limitations that should be taken into consideration are related to the security and reliability of the system.The system should be designed in such a way that it will be impossible for a third party to see or change data in any way.

Such an intrusion could allow a third party to act as a seller/buyer causing significant loss.Furthermore,the application should be available at all times,and resistant to database,network and other failures.

- Buyers and sellers do not have any direct access to the database.They can edit their respective details in the database by updating them in their user profile.
- Payment facility is not made available.
- This system does not support distributed database facility.

2.6 User Documentation

A manual with a basic understanding of how this website works can be provided to the users.A specific document should be prepared for the maintenance of the site. All the users can write to the administrator via email regarding any issues or suggestions.

2.7 Assumptions and Dependencies

The following are the assumptions we made in this application:
1) The administrator has control over the working of the online system which includes giving permission to add as well as remove items from the site.
2) Although the online platform is for selling and buying items,the site or administrators are not responsible for the quality of the item and exchange between buyer and seller.

3. External Interface Requirements

3.1 User Interfaces

The software provides a PHP - enabled web-page for the front end, which can be understood easily.

3.2 Software Interfaces

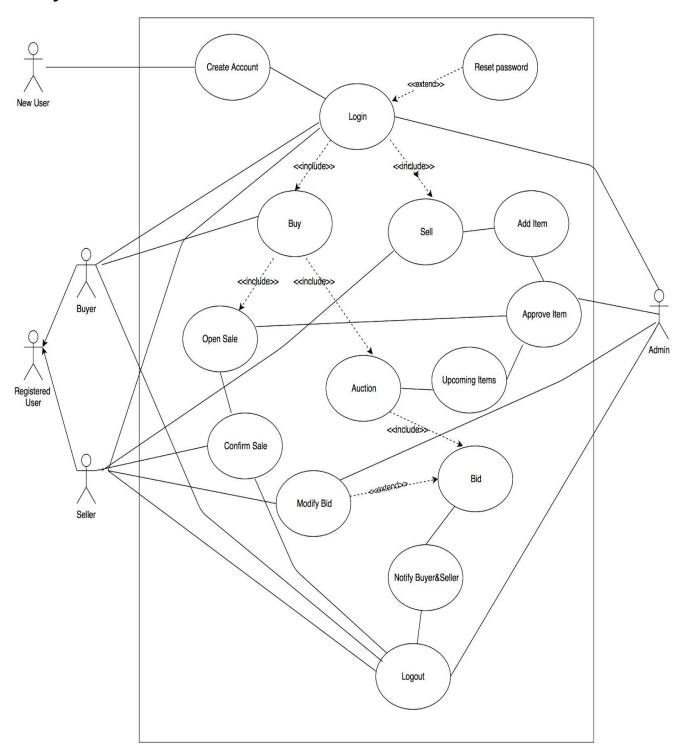**Operating System:** WINDOWS ,MAC OS ,LINUX
Front End : HTML/CSS/PHP/JAVASCRIPT/AJAX /JQUERY
Back End : MySQL Server(XAMPP-Apache,LAMP)

3.3 Communications Interfaces

- The HTTP protocol to communicate with the server and request data.

4.System Features

Use Case Diagram

4.1 Login use case

4.1.1 Description and Priority

The NITCians with a valid email id can register to the site.After logging into the application,the user can make use of the functionalities.

Use case name	Login
xRef	Section 4.1.1
Trigger	none
Precondition	The user must register in the site with a valid NITC email id.
Basic Path	1.The user enters the email id and password 2.Click Login Option 3.If both email id and password are valid the user can login. 4.If they're not valid user has an option "forgot password" to reset password.If still the problem persists,the user has to contact the administrator.
Alternative Path	None
Post condition	None

4.2 Sign-up use case

4.2.1 Description and Priority

The NITCians with a valid email id can sign-up with the *Buy 'n Sell* application to do their transactions.

Use case name	Sign-up

xRef	Section 4.2.1
Trigger	none
Precondition	The User must have a valid NITC email id.
Basic Path	1.Click Sign-up Option. 2.Enter the details required. 3.Provide a password 4.Click sign-up button. 5.Confirmation dialogue will popup.
Alternative Path	None
Post condition	None

4.3 Selling items (bid) use case

4.3.1 Description and Priority

The NITCians who are registered on the site can login and make use of the functionalities.The description of the item to be sold is to be uploaded with its image.The administrator will review the item and approve/disapprove for the bid.

Use case name	Selling items (bid)
xRef	Section 4.3.1
Trigger	none
Precondition	The user must be a registered with their NITC email id before they sell.
Basic Path	1.Select the option sell. 2.Enter the details about the selling item. 3.Provide the bid time and minimum price. 4.Upload a photo of the item. 5.Submit using the submit button. 6.It will be added to the approval list

Alternative Path	None
Post condition	Confirmation message

4.4 Selling items (Open-Sale) use case

4.4.1 Description and Priority

The NITCians who are registered on the site can login and make use of the functionalities.The description of the item to be sold is to be uploaded with its image.The administrator will review the item and approve/disapprove for open-sale.

Use case name	Selling items(open-sale)
xRef	Section 4.4.1
Trigger	none
Precondition	The user must be registered with their NITC email id before they sell.
Basic Path	1.Select the option sell(open-sale). 2.Enter the details about the sell item. 3.Upload a photo of the item. 4.Submit using the submit button. 5.It will be added to the approval list. 6.Seller should confirm the item sale and item will be removed from the open-sale.
Alternative Path	None
Post condition	None

4.5 Buying items (bid) use case

4.5.1 Description and Priority

The NITCians with a valid email id can login to the site and bid the items they want.The bidder with the highest bid will be allowed to buy the item.The winner of the bid and the seller will be notified via email.

Use case name	Buying items (bid)
xRef	Section 4.5.1
Trigger	none
Precondition	The user must be logged in with a valid NITC email id.
Basic Path	1.Select the option *Buy(Auction)*. 2.The list of items in the auction will be displayed with highest bid value and the time remaining. 3.The user can bid for any item multiple number of times. 4.The winner and seller both will be notified at the end of the bid. 5.Both will receive a confirmation email from the site. 6.User can also view item in the upcoming list and the time of auction.
Alternative Path	None
Post condition	Confirmation message

4.6 Buying items(Open-Sale) use case

4.6.1 Description and Priority

NITCians with a valid email id can login to the site and select the option buy in open-sale category. If any user needs the details of an item he can select the option **'*Details'*.

Use case name	Buying items(open-sale)

xRef	Section 4.6.1
Trigger	none
Precondition	The user must be logged in with a valid NITC email id.
Basic Path	1.Select the option *Buy (open-sale)*. 2.The list of items for the sale will be displayed. 3.User can select the option '*Details'*. 4.The Contact details of the seller will be displayed .
Alternative Path	None
Post condition	None

4.7 Administrator use case

4.7.1   Description and Priority

The administrator should be logged in to use his functionalities. The main functions of the administrator is to approve/disapprove a user's request to sell an item. He is also responsible for the maintenance of the site.

Use case name	Administrator use case
xRef	Section 4.7.1
Trigger	none
Precondition	The administrator must be logged in.
Basic Path	1. Approve new items for sale. 2. Resolve complaints regarding users or products. 3. Maintaining the website.
Alternative Path	None
Post condition	None

4.8 Account Recovery use case

4.8.1   Description and Priority

If any user forgets the password, he/she can change the password of the account using the '*Forgot password'* option in the login page. He/She will receive an email with an OTP. After the verification,the user will be allowed to reset the password.

Use case name	Account Recovery use case
xRef	Section 4.8.1
Trigger	none
Precondition	An NITCian with a verified account.
Basic Path	1.Select the option "Forgot password". 2.Give the valid NITC email id. 3.Verification email with an OTP will be send to the NITC email id. 4.Enter the OTP and select *Verify* button. 5.User will be redirected to the password reset page on successful verification of OTP.
Alternative Path	None
Post condition	Confirmation message. OTP to email.

5.Other Nonfunctional Requirements

5.1 Performance Requirements

- The database shall be able to accommodate a maximum of 6000 users.
- The software shall support multiple users at a time.

5.2 Safety and Security Requirements

- Any user who uses the system shall have a Login ID and Password.
- Users trying to sell illicit items will be identified by the administrator and necessary actions will be taken.
- Specific logs of the bids made for an item will be recorded along with the user id of the bidder.

5.3 Software Quality Attributes

5.3.1 Portability Requirement

- The application can be used on any computer with Windows, Linux or MAC operating systems.

5.3.2 Usability

- The graphical user interface of *Buy 'n Sell* system is to be designed with usability as the first priority.
- The system shall be presented and organized in a manner that is both visually appealing and easy for the user to navigate.

5.3.3 Maintainability

● Any modification (insert, delete, update) to the database shall be synchronized and done only by the administrator.

5.3.4 Reliability

● The system shall be available all the time.
● All data storage for user variables will be committed to the database at the time of entry.