ON-LINE SALES PORTAL

SOFTWARE REQUIREMENT SPECIFICATIONS DOCUMENT (SRS)

PRADEEP DOGGA [14CS10013]
SOHAN PATRO [14CS30044]

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1   Introduction

The following subsections of the Software Requirement Specifications (SRS) document provide an overview of the entire SRS.

1.1   Purpose

The Software Requirements Specification (SRS) will provide a detailed description of the requirements for the Online Sales Portal (OSP). This SRS will allow for a complete understanding of what is to be expected of the OSP to be constructed i.e., features of the system, the interfaces of the system, what the system will do, the constraints under which it must operate and how the system will react to external stimuli. The clear understanding of the OSP and its' functionality will allow for the correct software to be developed for the end user and for the development and maintenance of the future stages of the project. This SRS provides the foundation of the project from this SRS, the OSP can be designed, constructed, tested and maintained.

This SRS will be used by the software engineers for its' construction and by the end users for their transactions. The end users will be able to use this SRS as a "test" to see if the software engineers will be constructing the system to their expectations. If it is not to their expectations, the end users can specify how it is not to their liking and the software engineers can change the SRS to fit their needs.

1.2   Scope Of Project

This online portal system will serve as a one stop store for people who can buy and sell on the same platform. The system can be divided into the following three subsystems :

- First sub-system : Selling Item.

- Second sub-system : Buying Item.

- Third sub-system : Managing the system.

The first and second sub-system comprise the transactions between sellers and buyers. The third sub-system is the main one; it helps the system to remain updated, maintained and also manage the customers. There are three types of end users in the system :

- Seller : For the first sub-system.

- Buyer : For the second sub-system.

- Manager : For the third sub-system.

More specifically, this system will be designed to allow the manager to manage and communicate with customers to help better transactions through E-mail. The system uses MySQL database to maintain the records of the users and their transactions.

1.3 Glossary

Term	Definition
SRS	Software Requirement Specification : A document that describes all of the functions of a proposed system and the constraints under which it must operate.
OSP	Online Sales Portal : The proposed sytem to be designed to provide a one-stop store for the users to buy and sell at the same platform.
Buyer	A customer who has an intention to use the system to buy an item
Seller	A customer who has an intention to use the system to sell an item
Manager	Person who takes the responsibility to manage the customers and transactions
Database	Collection of all the information monitored by the system.
IEEE	Institute of Electrical and Electronic Engineers
End user	All the buyers , sellers and manager

1.4 Document Conventions

This SRS document is prepared using Texmaker 4.0.4 in LaTeX. It has used bold property for section headings and subsection headings. UML diagrams have been created as per UML 2.0 standards. The standard IEEE template is the template used to organise the appearance of the document.

1.5 Intended Audience

- Software Developer.

- Manager

- Customers

1.6 References

[IEEE]The applicable IEEE standards were approved by IEEE-SA Standards Board in its' 1998 edition. [IEEE Std 830-1998]

2 Overall Description

2.1 Product Perspective

The Online Sales Portal is a new self-contained software product produced in order to overcome the problems that have occurred due to the current manual system. The newly introduced system will provide an easy access to the system and it will contain user friendly functions with attractive interfaces. The system will give better options for the problem of handling large scale of physical file system, for the errors occurring in calculations and all the other required tasks that has been specified by the client. The final outcome of this project will increase the efficiency of almost all the tasks done by conventional manual methods.

2.2 Product Features

1. Upload an item for sale

2. Search for an item

3. Request to buy an item

4. Negotiate on selling price

5. Online bill payment

6. Manage customers

7. Manage categories of items

8. Review quality of items

9. Help negotiations

10. Perform audit

2.3 Functional Requirements Specifications

This sections outlines all the use cases for each of the actors : seller, buyer and manager. It includes the primary use cases and the secondary use cases are included in the primary use cases.
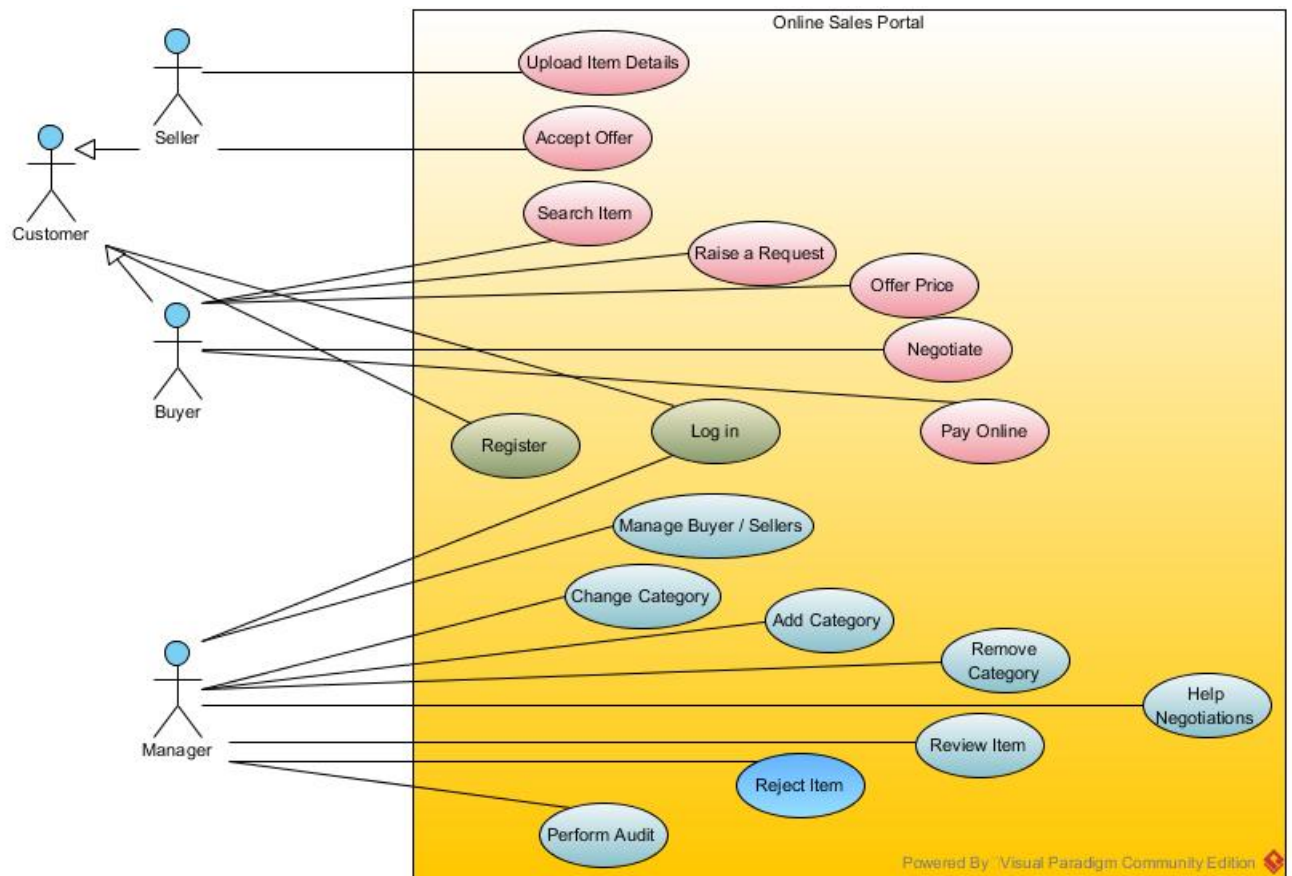
Figure 1: **Use Case Diagram - version 1**

Use Case	Upload Item Details
Function	Make an item available to purchase through system
Precondition	The seller must be logged in.
Successful end condition	An item is added into the item record of the system for purchase
Failed end condition	No item is uploaded to the item record of the system
Primary Actor	Seller
Secondary Actor	None
Main Flow	1.The seller uploads all the details of item. 2. Clicks on the upload button.
Extensions	1. Seller cancels upload. 2. Incomplete details are filled, hence uploading fails.

Use Case	Buy Item
Function	Purchase an item through system
Precondition	The buyer must be logged in.
Successful end condition	The item is purchased by paying bill online and it is removed from the system.
Failed end condition	The item is not purchased.
Primary Actor	Buyer
Secondary Actor	Seller and Manager
Included Cases	Search Item, Raise a Request
Extended Cases	Offer Price, Negotiate, Pay Online.
Main Flow	1.The buyer searches for an item. 2.Buyer raises a request to the seller. 3.Buyer has optional negotiation with the seller. 4. Buyer offer accepted by the seller. 5. Buyer pays bill online.
Extensions	1. No seller found for an item. 2. Request raised by the buyer but offer not accepted by the seller.

Use Case	Register
Function	Creates an account in the system for a customer.
Successful end condition	An account is created for the customer as a seller or a buyer.
Failed end condition	No account is created.
Primary Actor	Customer(Buyer/Seller)
Secondary Actor	None
Main Flow	1.The customer uploads the required details. 2. Clicks on the register button.
Extensions	1. Customer cancels registration. 2. Incomplete details are filled, hence registration fails.

Use Case	Login
Function	Login to the system.
Precondition	The customer must be registered.
Successful end condition	logs in to the system and ready to use the system.
Failed end condition	The customer is not logged in.
Primary Actor	Customer , Manager
Secondary Actor	None
Main Flow	1.The customer or manager enters the unique id and password. 2.Clicks login button.
Extensions	Invalid credentials are entered and notification is displayed.

Use Case	Add Category
Function	Adds a category for items in the system.
Precondition	Manager must be logged in.
Successful end condition	A new category is added to the system.
Failed end condition	No category is added to the system..
Primary Actor	Manager
Secondary Actor	None
Main Flow	1.The manager enters a category name. 2.Clicks Add Category button.
Extensions	None

Use Case	Remove Category
Function	Removes a category for items in the system.
Precondition	Manager must be logged in.
Successful end condition	The category is removed from the system.
Failed end condition	No category is removed from the system..
Primary Actor	Manager
Secondary Actor	None
Main Flow	1.The manager selects a category. 2.Clicks Remove Category button.
Extensions	None

Use Case	Change Category
Function	Change category of an item in the system.
Precondition	Manager must be logged in.
Successful end condition	The category of the item is changed.
Failed end condition	Item retains the category.
Primary Actor	Manager
Secondary Actor	None
Main Flow	1.The manager enters a category name. 2.Clicks Change Category button.
Extensions	Entered category is not present in the system and manager is notified.

Use Case	Review Item
Function	Checks the quality of an item.
Precondition	Manager must be logged in.
Successful end condition	Item is reviewed.
Primary Actor	Manager
Secondary Actor	None
Main Flow	1.The manager checks the quality of item. 2.If the item is of poor quality it is rejected and removed.
Extensions	Item is not of poor quality and it is made available for purchase.

2.4 User Characteristics

The user is expected to be internet literate and to be able to fill forms and also enter login credentials. The user is expected to have a valid email address.

2.5 Data Flow Diagrams

2.5.1 For Selling item
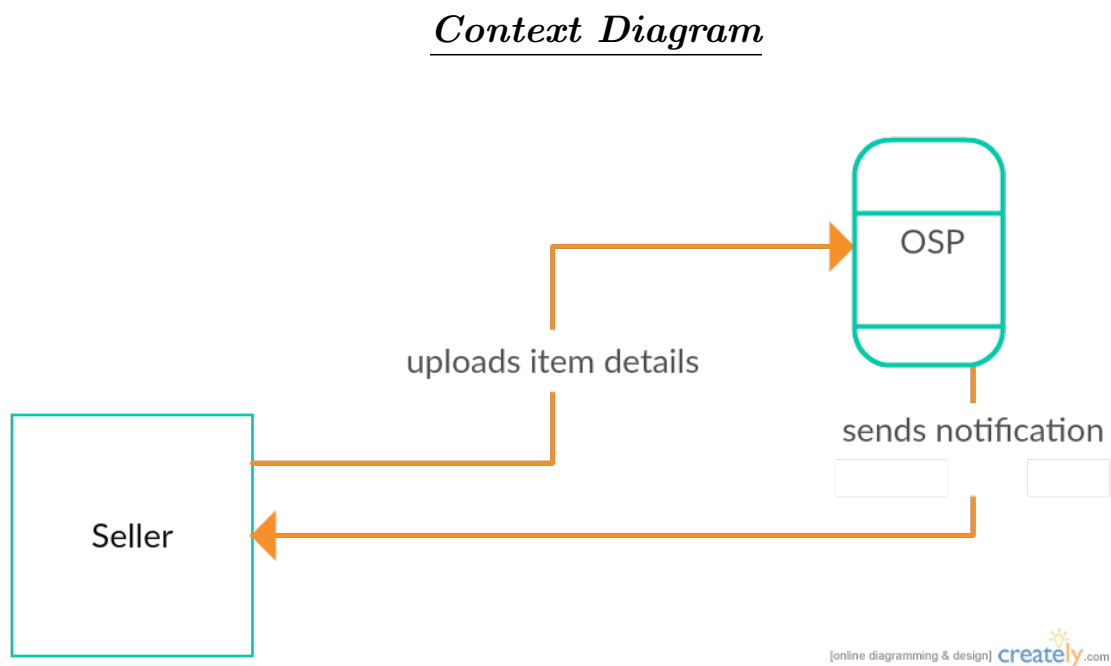
Context Diagram

Figure 2: **Context diagram for Selling an Item**

The context diagram roughly shows the members(or entities) involved in the process of selling of an item. It shows that the seller uploads the details of the item for sale into the portal. Finally the portal sends the success notification to the seller. It shows the overall details in the process and the level 1 dfd (shown below) goes further deeper into the process.
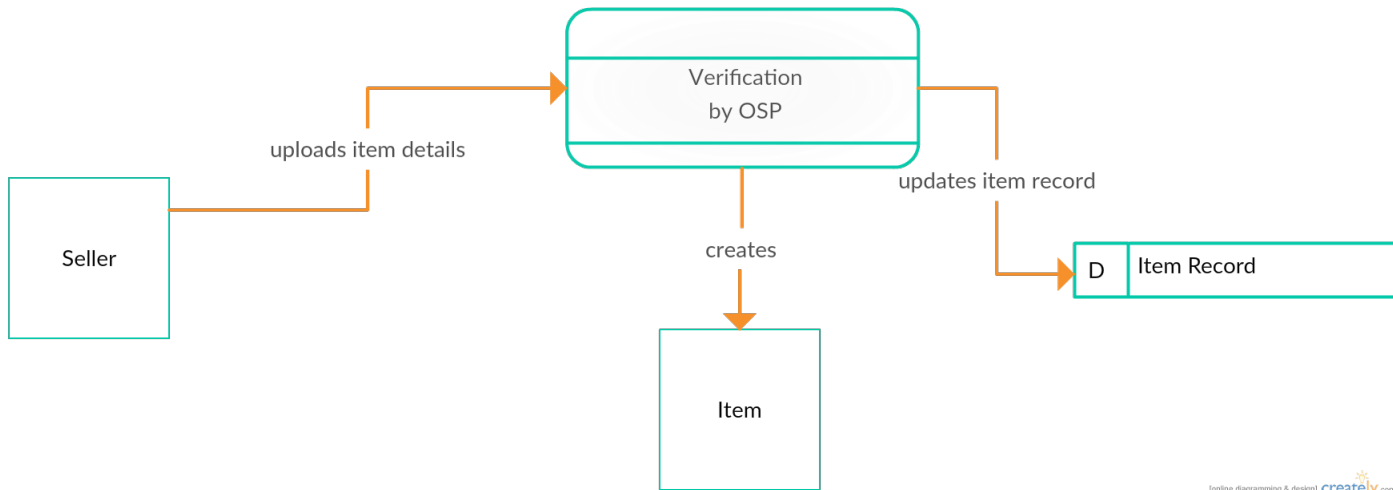
Level 1 DFD

Figure 3: **Level 1 DFD for Selling an Item**

The Level 1 data flow diagram more clearly displays the process involved in and the data flow throughout the process of selling an item.

At first, the seller uploads all the requisite details of the item to be on display for sale in the sales portal. Upon successful verification of all the required details of the item by the portal system, a separate unique entity as the item (with its unique id) is created, and the item is added into the item record of the portal which contains list of all the items currently present in the portal for sale.

2.5.2 For Buying item

<div align="center">

<u>Context Diagram</u>
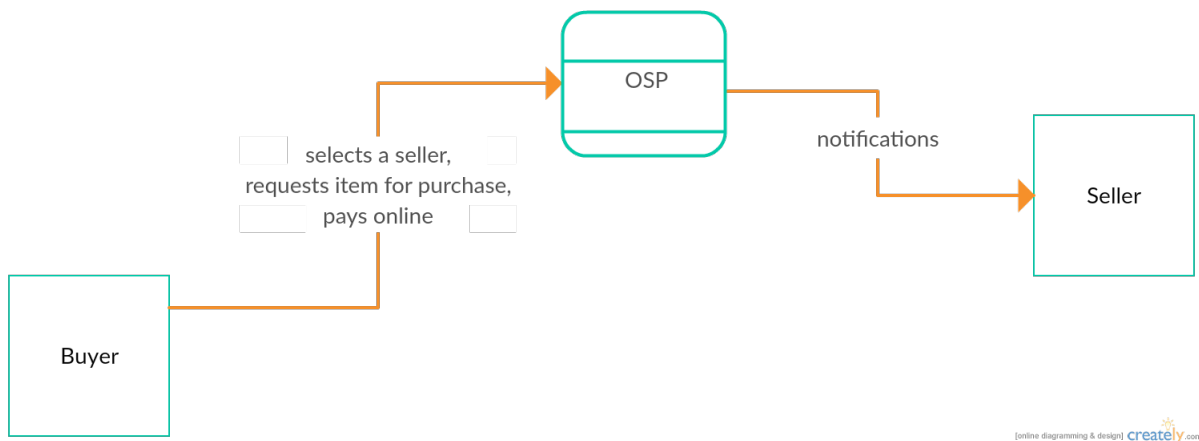
</div>

<div align="center">

Figure 4: **Context diagram for Buying an Item**

</div>

The context diagram for the process of buying an Item (from the portal) shows the portal , the external entities (the buyer and the seller, mainly) and the overall flow of data and interactions amongst them.

Here, the buyer, at first, searches for the item in the portal and selects a seller for it. Then through the portal, the buyer requests the seller for purchase. The portal notifies the seller about request of the buyer. Upon positive interactions between the buyer and the seller through the email notifications, the buyer pays the bill online in the portal.
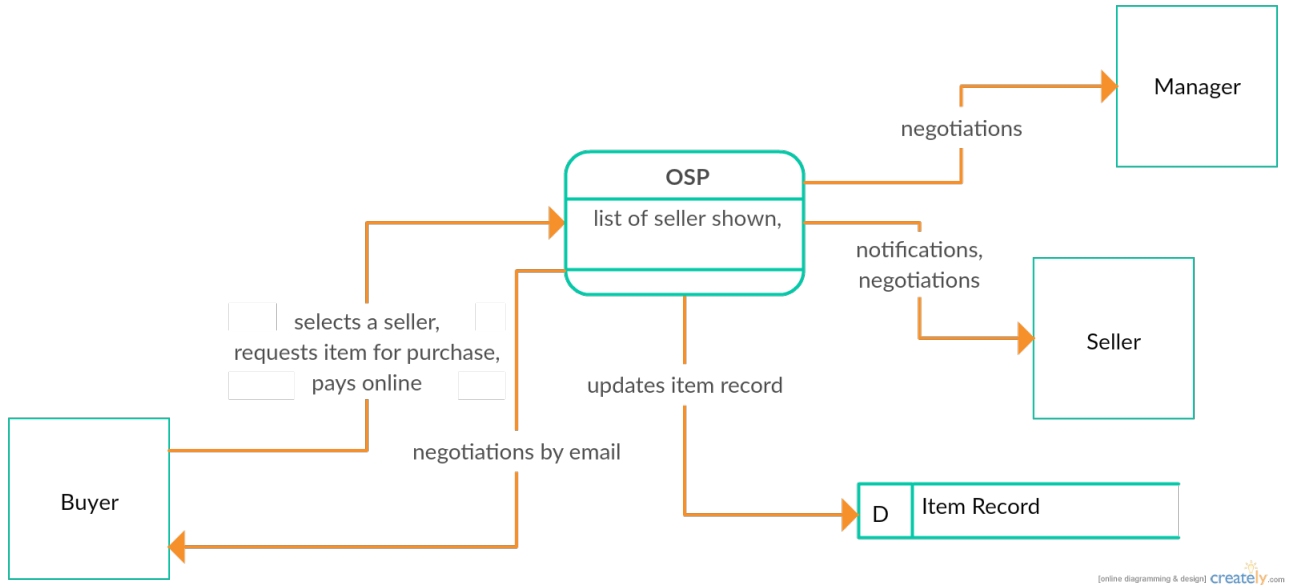
Level 1 DFD

Figure 5: **Level 1 DFD for Buying an Item**

The Level 1 data flow diagram more clearly displays the process involved in and the data flow throughout the process of buying an item from the portal.

The buyer first searches for the item in the portal and selects a seller for it from the list of sellers displayed in the portal. Then through the portal, the buyer requests the seller for purchase. The portal notifies the seller about request of the buyer. Some requisite negotiations may occur between the buyer and the seller. The manager can intervene between the conversations and help in the negotiations through the email. Upon positive interactions between the buyer and the seller through the email notifications, the buyer proceeds to pay the bill online in the portal and, owing to the removal of the item from the portal, the item record is updated.

3 Non-Functional Requirements

Non - Functional requirements define the needs in terms of performance, logical database requirements, design constraints, standards compliance, reliability, availability, security, maintainability, and portability.

3.1 Performance Requirements

The Online Sales Portal will be on a server with high speed internet capability. The software product developed assumes the availability and use of MySQL database. A graphics enabled web browser is required to use the system. The speed of loading of images of items in the portal, and the email interactions depends upon the speed of internet connection and the availability of users.

3.2 Operating Environment

- **Operating System** : All known operating systems such as microsoft windows (xp or higher), linux, mac . . . are supported.

- **Computer** : 512MB+ RAM , monitor with an appreciable resolution is sufficient (1024x768 or higher is recommended for better experience).

- **Web Browser** : All the popular web browsers such as chrome, mozilla firefox, safari, microsoft edge, opera . . . are supported.

3.3 Database Requirements

The logical database requirements include the retention of the following data elements. This list is not a complete list and is designed as a starting point for development.

- Customer :

    - Name.

    - City.

    - Telephone Number.

- E-mail

- IM ID (optional)

- Unique ID

- password

- Manager :

  - Name.

  - Gender.

  - Date-Of-Birth.

  - Address.

  - Telephone Number.

  - E-mail

  - IM ID

  - Biometric ID.

  - Unique ID

  - password

- Item :

  - Category.

  - City.

  - Photo.

  - Price.

  - Age (if not new).

  - Name of manufacturing company.
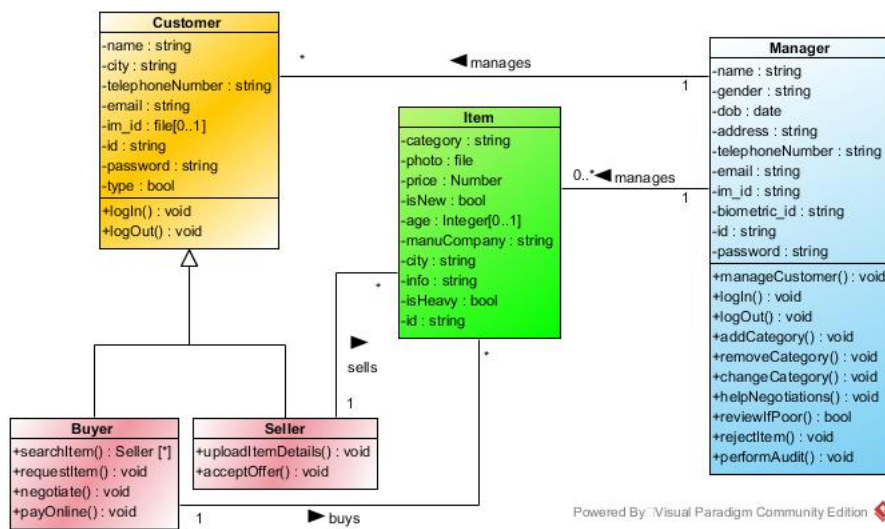
  - specific information.

Figure 6: **Class Diagram - version 1**

3.4   Security Requirements

The seller will have access to upload an item , receive and accept an offer from a buyer and also negotiate. The buyer will have access to browse items and request for purchase, negotiate and pay bill online. Manager will have access to change the category of items and manage the categories and also manage the customers, also helping negotiations. Only manager has access remove an item if the quality of the item is poor. All the actors mentioned above will only get access after logging into the system by passing the verification of credentials.

3.5   Design and Implementation Constraints

Software development crew provides their best effort in developing the system. In order to maintain the reliability and durability of system, some design and implementation constraints are applied. The portal is also compatible for mobile devices. System will need a minimum memory of 512MB. But it is recommended to have a memory of 1GB. Considering the client's budget we decided to create those interfaces in a simple realistic manner using affordable technology.

3.6   User Documentation

User manual provided to the client will give a clear idea in interacting with the system. It will be written in a simple understandable language concealing the inner complexity of the system. A hard copy of the user manual will be delivered to the client with the delivery of system.

4   Interface Specifications

All the interfaces shown below are the rough sketch of the final product. Additional features will be added in the progess of development . These are provided to a provide a basic outline of the portal.
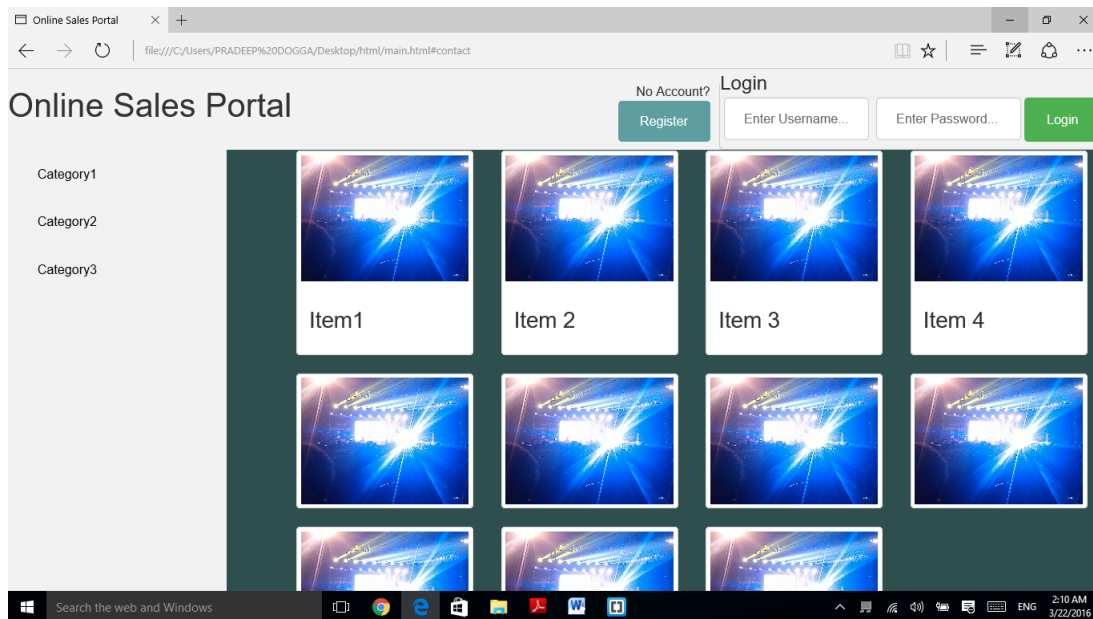
Figure 7: **Home Page**

This is the expected home page i.e., the first page displayed when the user enters the portal . It has register button in it as shown. It also has the login form. It shows some items and the categories. On clicking the register button the user can get registered and the screen looks in the way as shown in Figure 3. On entering correct credentials and pressing the login button the screen will be as shown in Figure 4.
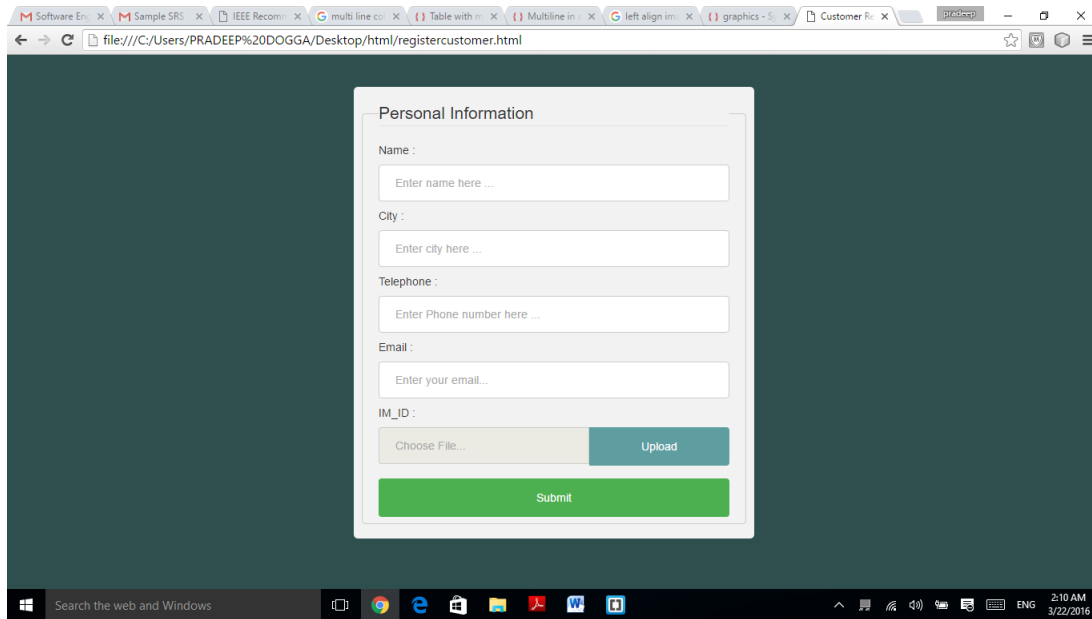
Figure 8: **Registration Page**

So as said in the Home Page as soon as the user clicks the register button this page is displayed. The user must enter all the fields and may or may not enter the IM ID field. Upon entering the details the user clicks the submit button to register himself into the portal and get his unique id and password to his email address through the system. These will be used in future to login to the system for all the transactions.

The specification as to the user is buyer or a seller can be clarified by checking a requisite field which will be later included into the page , but not present now because of time constraints.
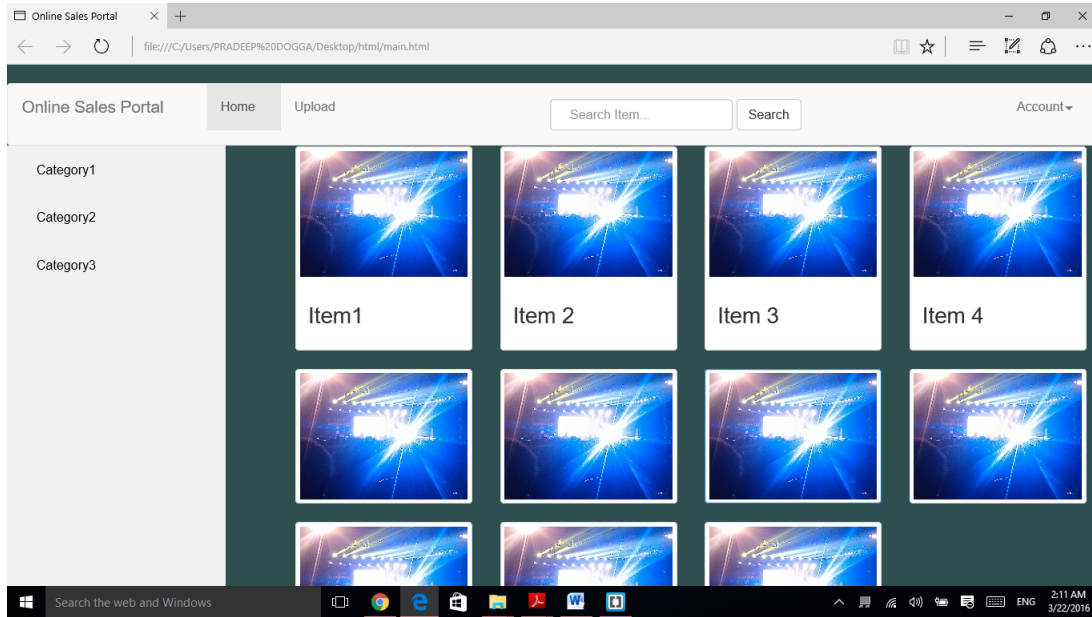
Figure 9: **Login Screen**

As specified in the Home Page as soon as the user enters the unique id and password clicks the login button this page is displayed if the credentials are right. If wrong credentials are entered then a notification will be made. Upon succesful login the page displayed is shown in Figure 4. The user can click on home button to return to login page after he navigates to any other page which is not yet designed in the specification. There is an upload button (only for seller). There is a search box (only for buyer). After entering the search item and clicking the search button the list of results are displayed in the page. There is a drop down menu called account illustrated in Figure 6. The details of the options are described in that figure. Upon clicking the upload button the figure 5 is shown on the screen.
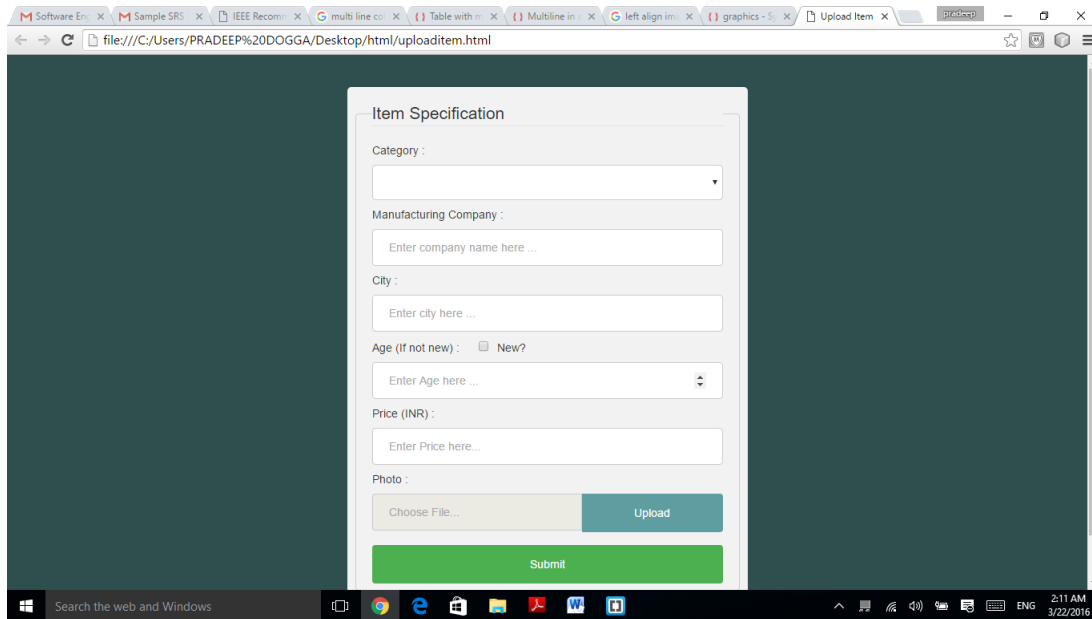
Figure 10: **Upload Item page**

This is the upload item page as said earlier appears on clicking the upload button in the login page. In this page the user has to enter all the specified details about the item . Invalid or incomplete details are notified to the user.

Upon successful entering of the details and on clicking the upload button, the item is created and is sent to the system for further transactions upon it and also it has to further get reviewd by the manager.
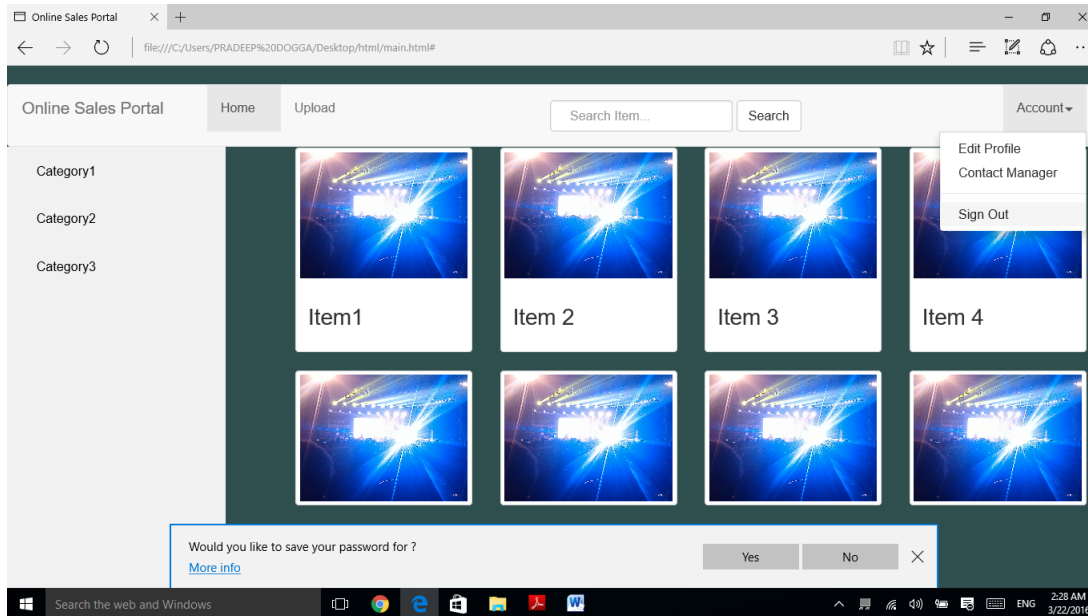
Figure 11: **Account Options**

On successful login , if the user chooses the drop down menu named 'Account' the menu is displayed. It has the following options in it :

- Edit Profile

- Contact Manager

- Sign Out

Upon selecting the edit profile option the user is directed to a page similar to registration page but with the previous details displayed and options to change the details and password and a save button to update the details.

Upon selecting the contact manager option the customer gets a chance to contact the manager by sending the manager a message.

Upon selecting the Sign Out option the user is logged out of the portal i.e., his session is terminated. The homepage is displayed after that.

For the buyer , upon clicking on an item, only that specific item with its complete details is shown and there will be buttons to choose to raise a request, negotiate and pay bill online. The functionality of negotiate and pay bill are conditional. That is they become active after raising request and pay bill online is activated after the offer is accepted.
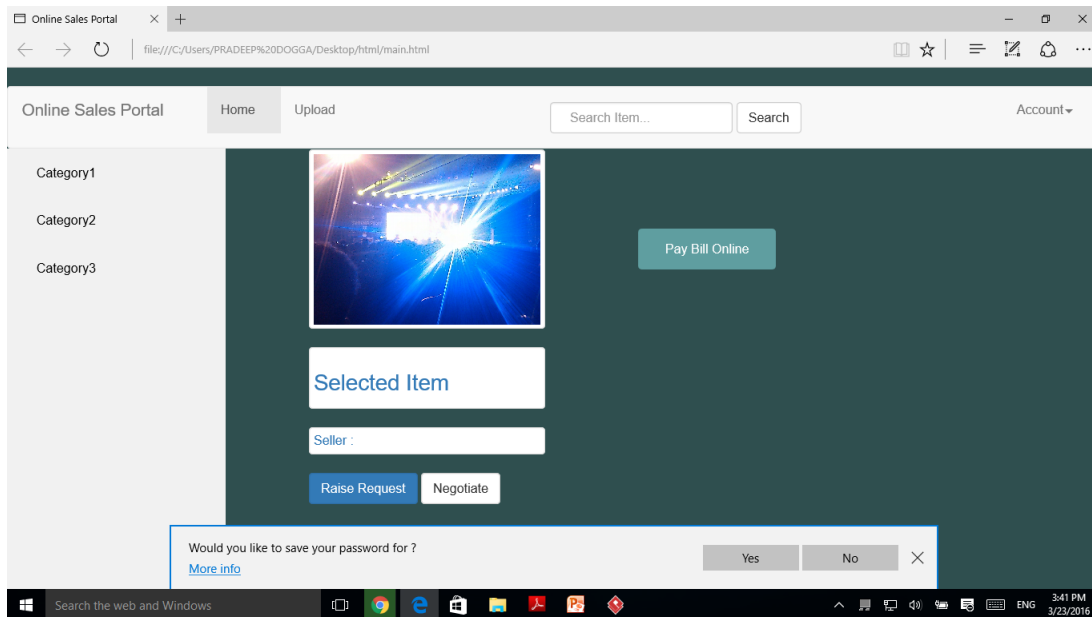
Figure 12: **Selected Item Page**

On successful login , when the buyer searches for an item and clicks on the item, the details page of the selected item appears. It shows the picture of the item with its category name below it in bigger fonts.

Below the category name displays the list of all the sellers who have uploaded that particular item for sale with their prices. The buyer must select the seller of his/her choice, and clicks on the "Raise Request" button.

It is after this that the "Negotiate" and the "Pay Bill Online" button get activated. He/she can then negotiate with the seller on the selling price by pressing the "Negotiate" button or directly proceed to purchase the item with the price the seller had decided for the item, by clicking on the "Pay Bill Online" button.