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## **Online Bidding and Shopping System**

In partial fulfilment of the requirements for the degree of  
**Bachelor of Science in Information Technology**

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Department of Computer Sciences  
Bahria University, Lahore Campus

June 2022



# Certificate



We accept the work contained in the report titled

## **Online Bidding and Shopping System**

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as a confirmation to the required standard for the partial fulfilment of the degree of  
Bachelor of Science in Computer Science.

Approved by:

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(Signature)

June 14, 2022

## DECLARATION

We hereby declare that this project report is based on our original work except for citations and quotations which have been duly acknowledged. We also declare that it has not been previously and concurrently submitted for any other degree or award at Bahria University or other institutions.

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Specially dedicated to  
my beloved grandmother, mother and father  
(Hamza Ayyub)  
my beloved grandmother, mother and father  
(Syed Muhammad Amad Bukhari)

## ACKNOWLEDGEMENTS

We are highly grateful to Almighty ALLAH, the omnipotent, the most compassionate who beloved us with His blessing and His Beloved Prophet HAZRAT MUHAMMAD (P.B.U.H) who made it compulsory for every Muslim to get Knowledge from cradle to grave.

We feel highly privilege in taking this opportunity to express our heartiest gratitude to my respective project supervisor **Mr. Asghar Ali Shah**, Department of computer science, Bahria University Lahore, for his dexterous supervision, inspiring and impetuous guidance, valuable suggestions, technical help and mostly his scolding to complete this research study as well as for writing this dissertation.

No acknowledgement could ever adequately express to our Beloving Parents who helped us out in each difficulty, whose love and trust enabled us not to complete this project without any problem. We really dell this acknowledgement is incomplete without mentioning the contribution of our brothers and Sisters who always prayed for our success.

We express our profound gratitude to our dear friends who were always here with us for help and support.

Hamza Ayyub  
Syed Muhammad Amad Bukhari

## Online Bidding and Shopping System

### ABSTRACT

The aim of our project is to define the online and bidding shopping system along its attributes. Our project comprises of an integrated platform of both auction and fixed selling price products that include new or old ones. It provides you a place where you can buy the best product at most reasonable price. **EasyBuy** is the name of our website which is very attractive towards a customer. Basic goal of our website is to provide standard products at an affordable price and to make our website interactive which will help customers to have an immersive experience while using and purchasing the product on our website. The user will be able to negotiate for a product through a trusted platform. Additionally, it defines the attributes associated with online shopping system and make a comparison of both online and store shopping system. It elaborates the pros and cons of both systems. Online shopping system is easily accessible through the electronic or digital devices. It will offer a media platform to catch a bigger audience.

This Project will make it more convenient and better for buyer to purchase a thing as per their need. Buyer can bid on their favourite seller product and try to get the highest paid. The system will fairly select the highest bidder using auction functionality, making it easier for the owner to find customers. It also removes the requirement of using lengthy pages working.

Simultaneously our project also provides an online shopping platform where people can buy the best product at reasonable price from anywhere in the world. Our project makes it easier to buy or sell the products.

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## CHAPTER 1

### INTRODUCTION

#### 1.1 Background:

Many years ago, bids were held in auction houses, with the announcer delegating the bidding, and this method required bidders to be physically present, so it results into many limitations. This online platform enables to carried out the auction from anywhere in the world through online platform [1]. The online auction platform is completely different from the other auction. It eliminates the need of deciding for auction thus result into the cost reduction. It also saves time of the people. People does not need to contact the bidders for auction process [2]. It also saves time of both buyer and supplier. A person can negotiate for the product easily from anywhere in the world. Through online auction accessibility can increase which is not possible in the past. As we can see that in the past only those people can attend the auctions that were present there at that time. Thus, many people cannot participate in the auction due to their unavailability at that time.

Simultaneously people prefer to go for the online shopping platform where they can buy their products by sitting at home. It proved helpful in the hour of need where people have no time to go out and buy the product. In these situations, people prefer to buy from the online shopping platforms. User can buy the best product at a reasonable price [3].

#### 1.2 Problem Statement:

The main issue with the online purchasing system is the purchaser's loss of credibility in the vendor and their items due to the lack of personal inspection. Despite the numerous advantages attached with the online system there are some disadvantages also. People prefer to evaluate the product before buying it and that is not possible with online option. People can only see the pictures and reviews regarding the product but cannot ensure about the quality of the product. Thus, there is always an uncertainty regarding the product. This uncertainty effects the online shopping system in a negative manner. Those people who prefer to buy product after its evaluation will

prefer to buy from the offline markets rather than from the online platform so they can ensure the quality of the products.

### **1.3 Aims and Objectives:**

The objectives of our project can define through the following points:

- To make it easier for the users to buy the product whenever they need.
- To help the seller to sell its products at best price.
- Provide a vast range of products.
- People can buy easily from home (No need to go out).
- To arrange an online auction system [6].
- To attract the buyer and bidders for the sellers and make profit for the website.
- To notify the bidders regarding the new bids that they participate in.
- To provide an integrated platform of both buying and selling of the new and old product as well as for auction.

### **1.4 Scope of Project:**

This online system will allow the people to not only buy or sell the products, but they can also put their products in an auction. It contains all kinds of products such as households, furniture, and vehicle etc. This project will help the people to buy the things from anywhere in the world. They do not need to arrange an auction. It will provide users with a social media platform where they can upload pictures and description of the product so the people can get most the details regarding the product. This project will meet the user functional requirements. It will be user friendly application where the buyer can share their reviews regarding the product or their experience regarding the online shopping [4].

### **1.5 Novelty**

Similar project has been done in Bahria University Lahore Campus, but our project offers both fixed and bidding items (such as new products). The MERN STACK software environment was used to complete our project. Another module contains the PayPal payment option as well as an online customer care panel where customers and administrators may have a live chat if they have any issues. Using the Google Map API, the customer may pick the shipping address from a google map. Customers may do research and pick products based on reviews, prices, and categories. Bcrypt.js was also used to encrypt passwords in the database. Using the Google Chart service, we displayed sales and category statistics in the admin dashboard.

## CHAPTER 2

### SYSTEM REQUIREMENTS SPECIFICATION

#### 2.1 Literature Review:

Retailing in the twenty-first century entails selling in stores as well as online, through catalogues, call centres, interactive television, and mobile devices. A specific consumer in a specific situation should be matched with a specific retailer format. As electronic channels have become more prevalent, it has benefited both consumers and sellers by cutting transaction costs. Participating in the market has transaction expenses [5].

People's views of efficiency, economic worth, and other factors influence their decisions. The characteristics of delight and escapism have a big impact on the e-experience stores value.

Customer support, website design, fulfilment/reliability, confidentiality, and website design are all important. Among the four aspects of electronic retail identified by Wolfinbarger and Gilly They discovered that contentment, loyalty, and attitude toward the website are all linked to fulfilment/reliability and customer service.

#### 2.2 Software Requirements Specifications:

Our System is intended for the following users:

##### 2.2.1 Admin Panel:

- Manage User and Seller accounts
- Add Items
- View Items
- Search Items
- View Items details
- Delete Items
- View User and Seller details
- Record of higher bid on an item



- View Bids

### **2.2.2 Seller panel:**

- Create Account/Signup
- Login
- Edit Account
- View Account
- Add Item
- View Other Seller Products
- Search
- View Item Detail
- Create a Bid
- View the Bid Process
- Negotiation with Buyer

### **2.2.3 User Panel:**

- Create Account/Signup
- Login
- Edit Account
- View Account
- View All Items
- Search
- Give Feedback
- Add to Cart
- View Auction Item Details
- Bid on an Item
- View Seller's Details
- Make Payment

## **2.3 Operational Environment:**

As we are developing an integrated platform comprising of both auction and fixed price selling that will be having the latest framework so we need a

laptop with a minimum of 8GB RAM and with SSD because the platform we use SSD would be more efficient than hard disk.

#### 2.4 Software Environment:

<b>Tools</b>	<b>Reasons for Using</b>
VS Code	IDE for Web Development
Brower	For Testing UI and Debugging
Postman	For Testing API
MongoDB Compass	For Database Management
Soket.IO	For Customer Support
Draw.io	For Making Diagram

Table 1: Software Requirement Tools

<b>Technologies</b>	<b>Reasons for Using</b>
React.js	For Front-end
Node.js and Express.js	For Back-end
Mongo DB	For Database
Redux	For State Management

Table 2: Technologies

#### 2.5 Hardware Environment:

There is no specific hardware required to access this product, as the website does not directly interact with the hardware. The following is a list of required hardware for using the web application:

A computer is a personal computer running Windows, Linux, or Mac OS. To access the application, you must have at least a web browser installed.

## CHAPTER 3

### DESIGN AND METHODOLOGY

#### 3.1 Application Architecture:

Our React application is based on three-tier architecture. The presentation layer, which is instantly available by End-Users, is followed by the company logic layer, which performs the business logic, and the digital storage layer.

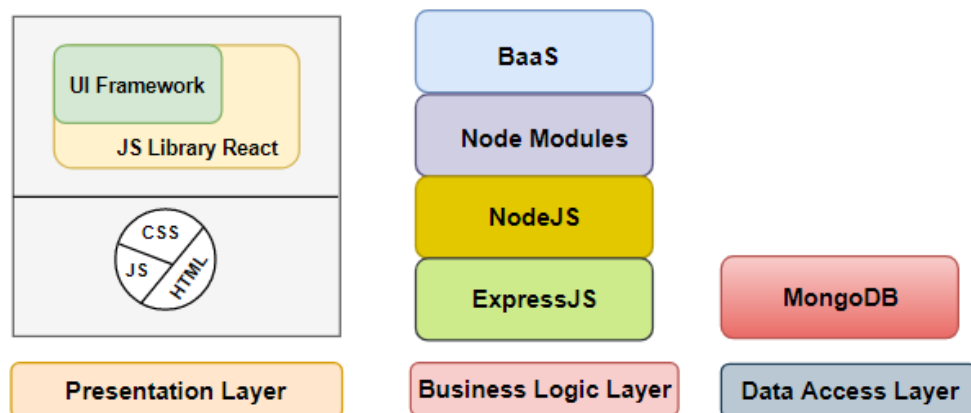


Figure 1: Application Diagram

#### 3.2 Assumptions and Dependencies:

- Users must have internet access in their devices or Desktop. So that status of availability could be updated on real time using database.
- Another one is admin should have access to the database from Website or Desktop application which is compatible to the website.
- Server component also have direct dependency of the website if server is down, it would affect the communication between database and website.

### **3.3 Design:**

Following are the artefacts which includes:

1. Use case diagram
2. Flow Carts
3. Sequence diagram
4. Collaborative diagram
5. Design class diagram
6. Data model

#### **3.3.1 Use Case Diagram:**

Use case from of the customer viewpoint, diagram demonstrates the requirements of the system. During specifications document production, use cases are used to explain the offerings accordingly. Operators are external entities that interact with the system. Actors include users such as the administrator, buyer, and vendor. This diagram shows us how we may use online buying and bidding systems, as well as the activities that each actor does. As illustrated in the diagrams.

### 3.3.1.1 Use Case Signup:

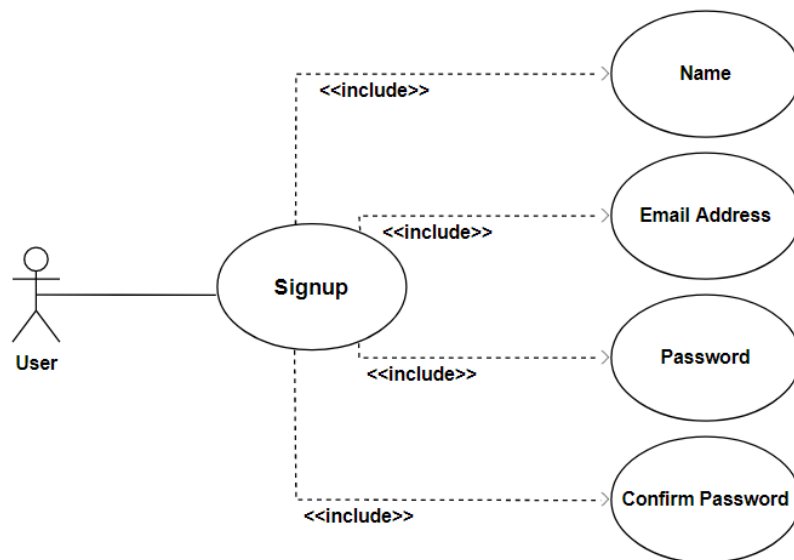


Figure 2: UC Signup

UC ID		
UC Name	User Signup	
Description	If the user of the website doesn't have an account, He/she can make an account.	
Primary Actor	User	
Secondary Actor		
Pre-Condition	Internet should be connected.	
Post-Condition	Creation of new User Account.	
Basic Flow	Actor Action	System Response
	Name, Email Address, Password, Confirm password.	Process the information and create a new record.

Table 3: User Signup

### 3.3.1.2 Use Case Login:

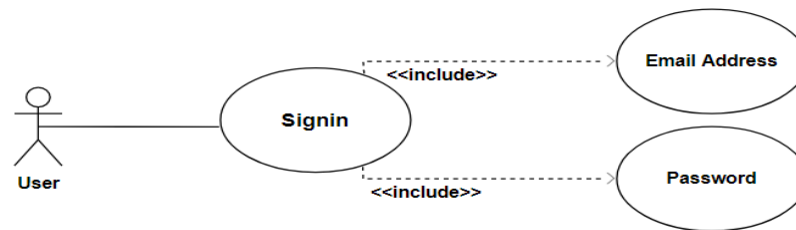


Figure 3: UC Login

UC ID		
UC Name	User Login	
Description	If user already has an account, He/she can login into their account using their Email address and password.	
Primary Actor	User	
Secondary Actor		
Pre-Condition	User should already have an existing account.	
Post-Condition	User can see the features that can be accessed by account holder.	
Basic Flow	Actor Action	System Response
	Email Address, Password.	Process the information and if information is correct then user is logged in.

Table 4: User Login

### 3.3.1.3 Use Case Edit Account:

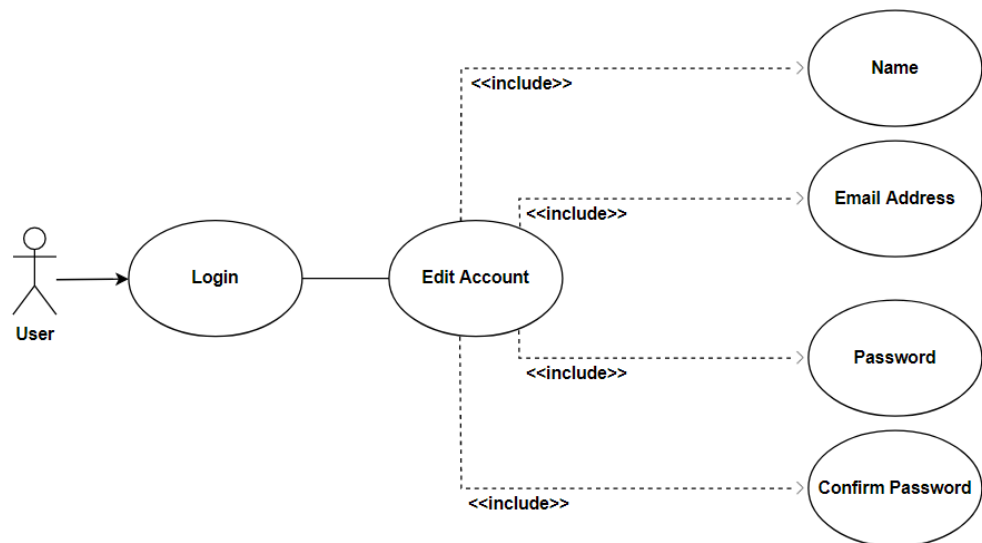


Figure 4: UC Edit Account

UC ID		
UC Name	Edit Account	
Description	User can Edit the account's information that He/she has created.	
Primary Actor	User	
Secondary Actor		
Pre-Condition	User must be Logged in.	
Post-Condition	Updated Account.	
Basic Flow	Actor Action	System Response
	Changes that User make in his account.	Information is updated.

Table 5: User Edit Account

### 3.3.1.4 Use Case Account Detail:

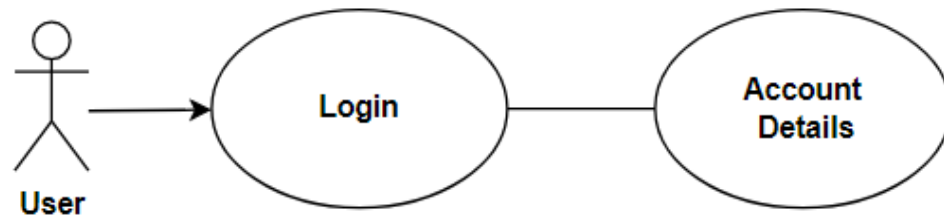


Figure 5: UC Account Detail

UC ID		
UC Name	View Account Detail	
Description	User can view the account detail to add, delete or to add anything further in it.	
Primary Actor	User	
Secondary Actor		
Pre-Condition	User must be Logged in.	
Post-Condition	User can see the features that can be accessed by account holder.	
Basic Flow	Actor Action	System Response
	Users click on details	Get information about the account that has been logged in.

Table 6: User Account Detail

### 3.3.1.5 Use Case View Items:

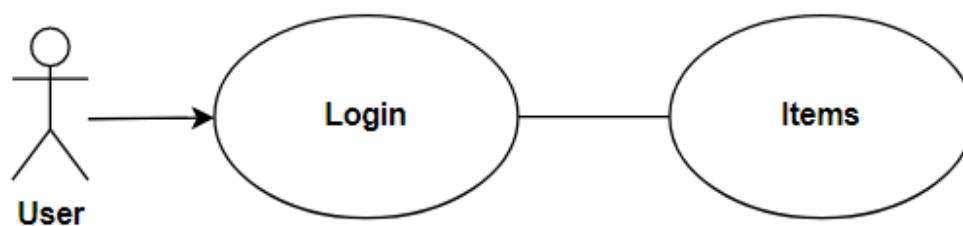


Figure 6: UC View Items



UC ID		
UC Name	View Items	
Description	Users can explore the website and can also view different Items available.	
Primary Actor	User	
Secondary Actor		
Pre-Condition	Internet should be connected, and Account should be Logged in.	
Post-Condition	All Items in all categories will be displayed.	
Basic Flow	Actor Action	System Response
	Users clicks on Item Button	List of all the Items.

Table 7: User View Items

### 3.3.1.6 Use Case Add to Cart:

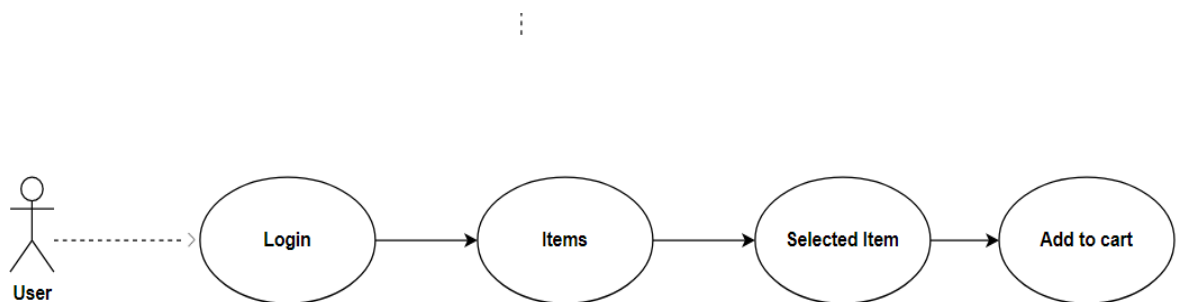


Figure 7: UC Add to Cart

UC ID		
UC Name	Add to Cart	
Description	User can choose the item of desire and can view its detail, to buy that product user can add the item to cart which will be helpful to checkout.	
Primary Actor	User	
Secondary Actor		
Pre-Condition	Internet should be connected; User must be logged in.	
Post-Condition	Item is added in the account of the logged in user.	
Basic Flow	Actor Action	System Response
	Click on Add to Cart Button.	Items is added to the Cart.

Table 8: User Add to Cart

### 3.3.1.7 Use Case Checkout:

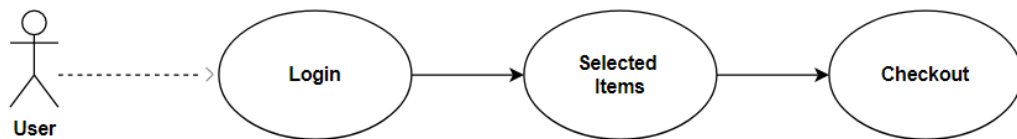


Figure 8: UC Checkout

UC ID		
UC Name	Checkout	
Description	After adding item to the cart user can proceed to checkout and enter requires detail to place an order.	
Primary Actor	User	
Secondary Actor		
Pre-Condition	Internet should be connected; Account should be Logged in.	
Post-Condition	User will be Checkout.	
Basic Flow	Actor Action	System Response
	Click on the Checkout Button.	User checkout the item.

Table 9: User Checkout

### 3.3.1.8 Use Case Bidding:

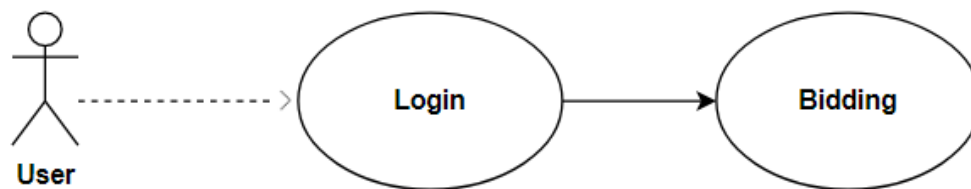


Figure 9: UC Bidding

UC ID		
UC Name	Bidding	
Description	User can also see the items available for bidding for a certain amount of time.	
Primary Actor	User	
Secondary Actor		
Pre-Condition	Internet should be connected; Account should be Logged in.	
Post-Condition	List of all the item available for bidding will be displayed.	
Basic Flow	Actor Action	System Response
	Click on the bidding items.	List of Bidding item will be displayed.

Table 10: User Bidding

### 3.3.1.9 Use Case Bid on Item:

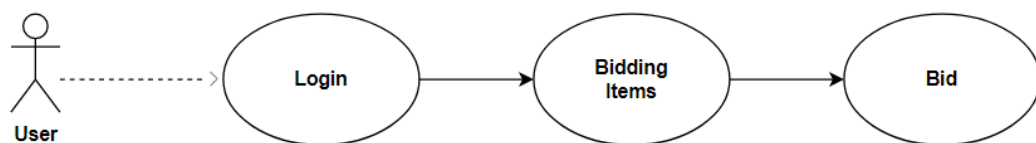


Figure 10: UC Bid on Item

UC ID		
UC Name	Bid on Item	
Description	If the user likes an item, He/she can place a bid on it.	
Primary Actor	User	
Secondary Actor		
Pre-Condition	Internet should be connected; Account should be Logged in.	
Post-Condition	Bid in placed on an item.	
Basic Flow	Actor Action	System Response
	After selecting an item, Clicks on bid button.	If user place a highest bid, it will be added into the database.

Table 11: User Bid on Item

### 3.3.1.10 Use Case View All Sellers:

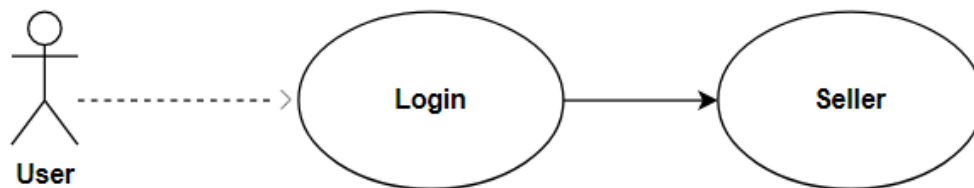


Figure 11: UC View All Sellers

UC ID		
UC Name	View Seller	
Description	User can View all Sellers.	
Primary Actor	User	
Secondary Actor		
Pre-Condition	Internet should be connected; Account should be Logged in.	
Post-Condition	All sellers will be displayed.	
Basic Flow	Actor Action	System Response
	Click on seller Button.	List of all sellers will be displayed.

Table 12: User View Sellers

### 3.3.1.11 Use Case Login for Seller:

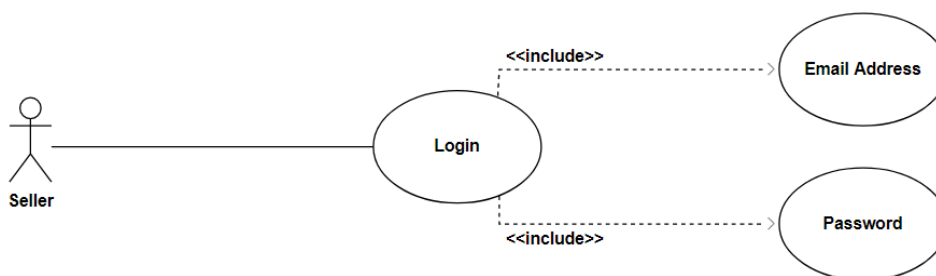


Figure 12: UC Login for Seller

UC ID		
UC Name	Seller Login	
Description	If seller has an account, He/she can login using his account.	
Primary Actor	Seller	
Secondary Actor		
Pre-Condition	Internet should be connected; Account should be Logged in.	
Post-Condition	Seller can see the features that can be accessed by account holder.	
Basic Flow	Actor Action	System Response
	Email Address and Password.	If the information is verified, then seller will be logged in.

Table 13: Login for Seller

### 3.3.1.12 Use Case Admin:

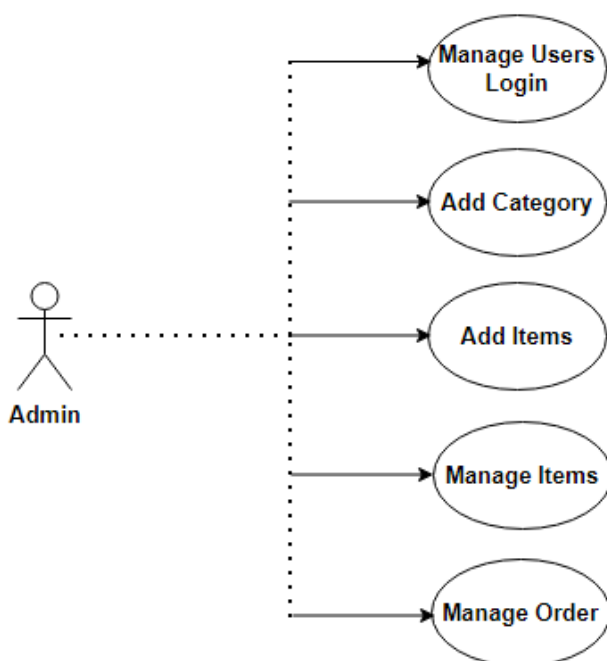


Figure 13: UC Admin

UC ID		
UC Name	Admin	
Description	Admin can manage all the information on the website or database	
Primary Actor	Admin	
Secondary Actor		
Pre-Condition	Internet should be connected; Account must be logged in.	
Post-Condition	Managing the admin panel.	
Basic Flow	Actor Action	System Response
	Manage Users Login, Add Category, Add Items, Manage Items, Managing Orders.	Process the information and Perform to the given commands.

Table 14: Use Case Admin

### 3.3.1.13 Use Case Seller:

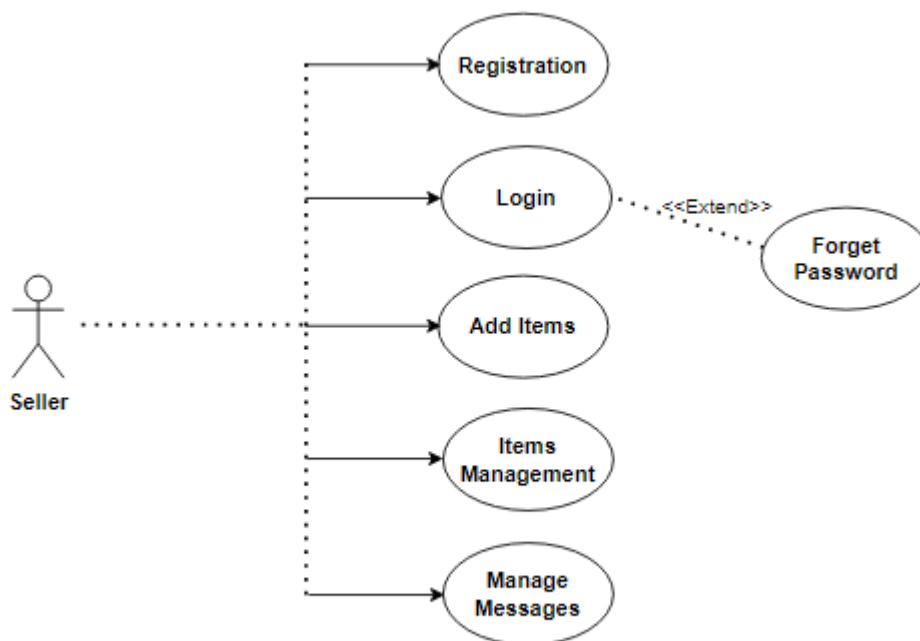


Figure 14: UC Seller



UC ID		
UC Name	Seller	
Description	Seller can do various thing if logged in.	
Primary Actor	Seller	
Secondary Actor		
Pre-Condition	Internet should be connected; Account must be logged in.	
Post-Condition	Managing seller account.	
Basic Flow	Actor Action	System Response
	Managing seller account.	Process the information and Perform to the given commands.

Table 15: Use Case Seller

### 3.3.1.14 Use Case Buyer:

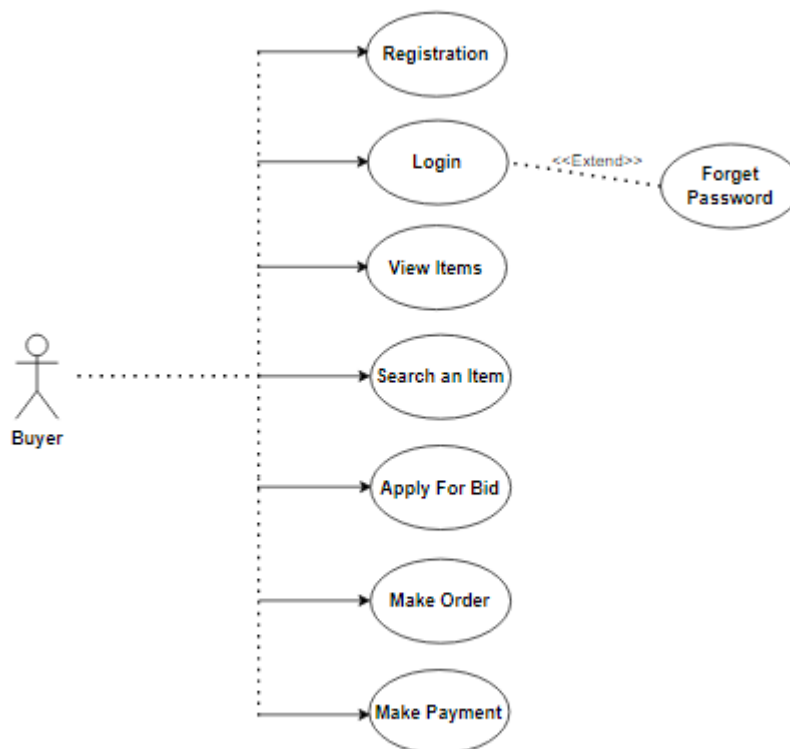


Figure 15: UC Buyer

UC ID		
UC Name	Buyer or User	
Description	Buyer can do various things include view and buying an item.	
Primary Actor	Buyer or User	
Secondary Actor		
Pre-Condition	Internet should be connected; Account must be logged in.	
Post-Condition	Placing an order or bid.	
Basic Flow	Actor Action	System Response
	Buyer or User can Placing an order or bid.	Completion of an order.

Table 16: Use Case User/Buyer

### 3.3.2 Flow Chart:

A flowchart is a diagram that shows how a process works. A flowchart can also be defined as a diagrammatic representation of the system.

#### 3.3.2.1 User Registration Process:

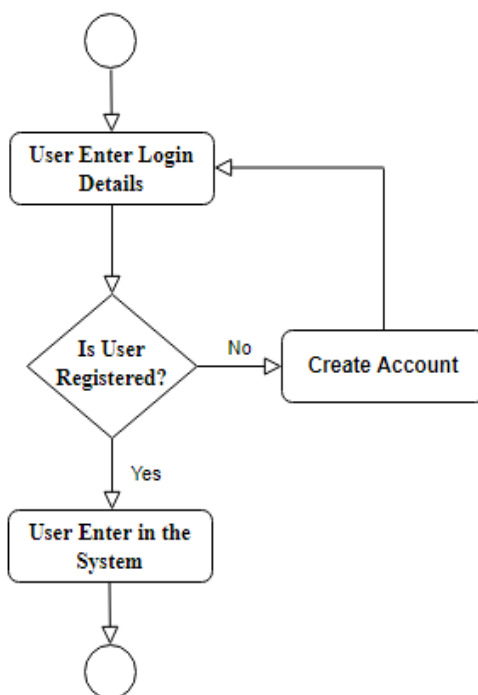


Figure 16: User Registration Process

### 3.3.2.2 Bidding Process:

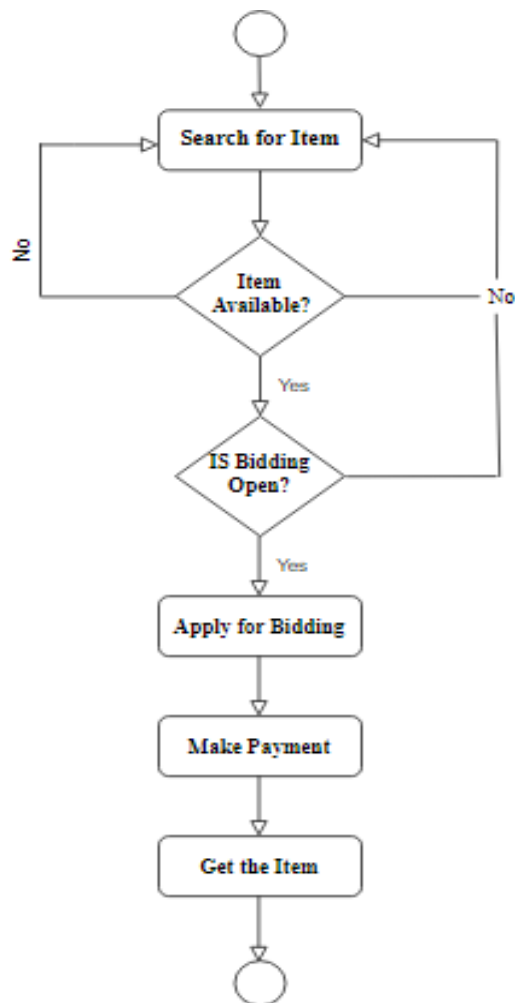


Figure 17: Bidding Process

### 3.3.3 Sequence Diagram:

A sequence diagram is a form of activity diagram that depicts how and in what order many items communicate. They demonstrate how the individual aspects of a platform connect with each other to fulfil a task, and also the order in which components interact when a specific use case is conducted.

### 3.3.3.1 User:

#### 3.3.3.1.1 Signup:

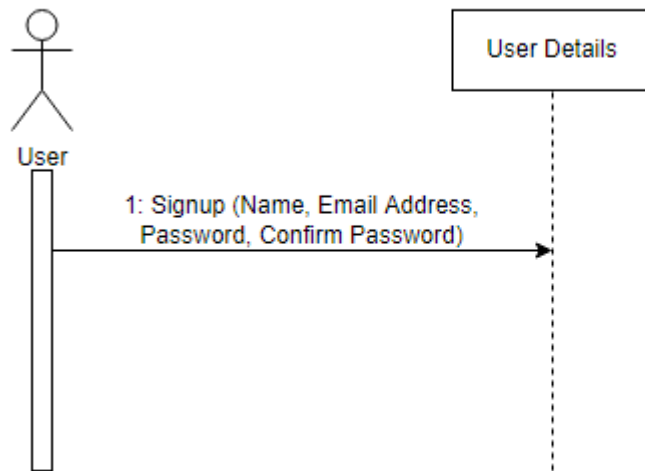


Figure 18: Signup

#### 3.3.3.1.2 Login:

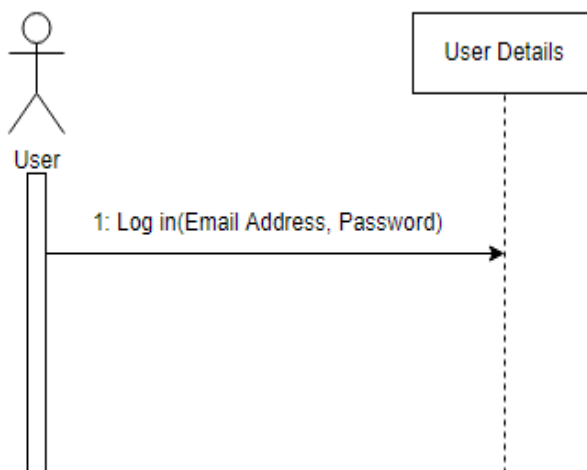


Figure 19: Login

### 3.3.3.1.3 Edit Account:

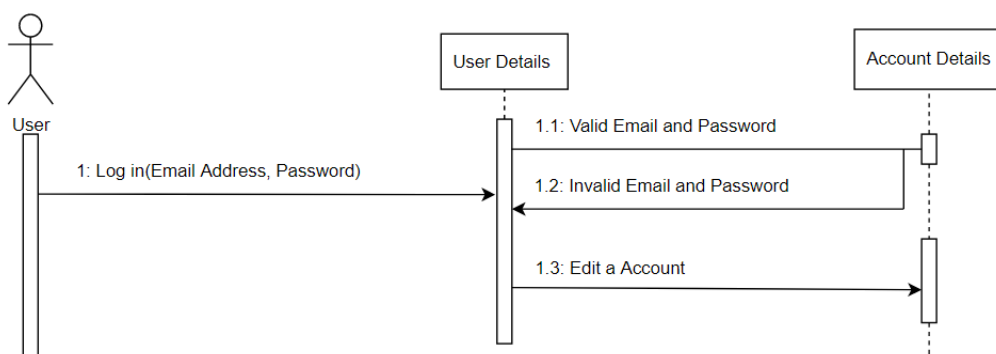


Figure 20: Edit Account

### 3.3.3.1.4 View Account:

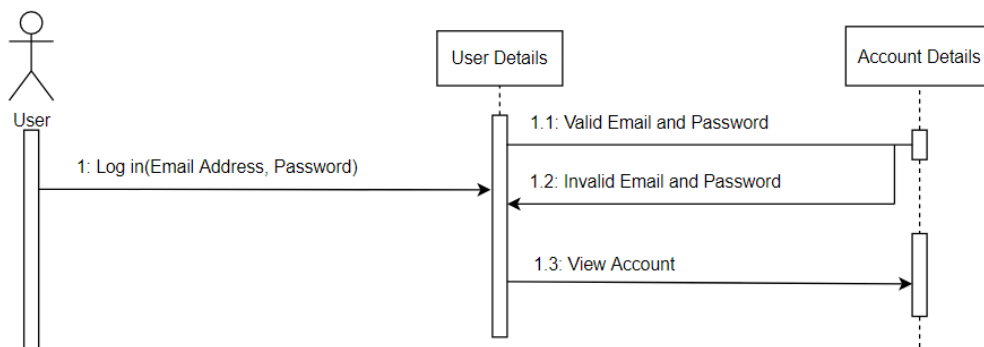


Figure 21: View Account

### 3.3.3.1.5 View All Items:

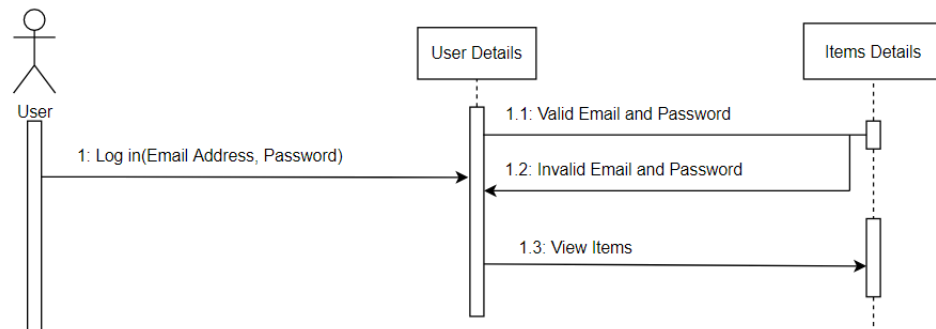


Figure 22: View All Items

### 3.3.3.1.6 Search:

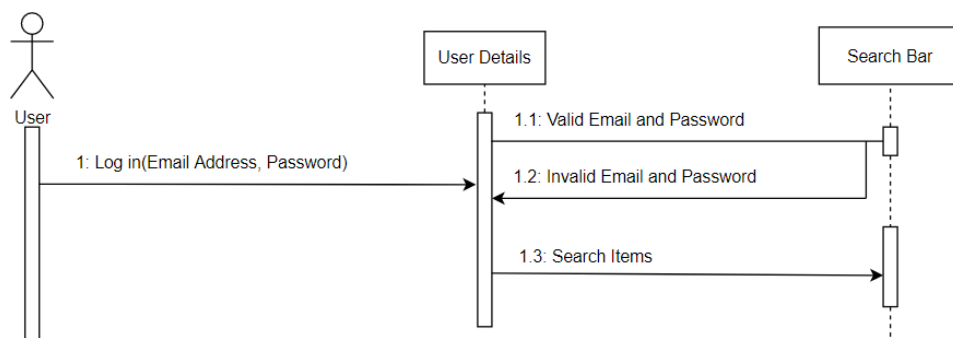
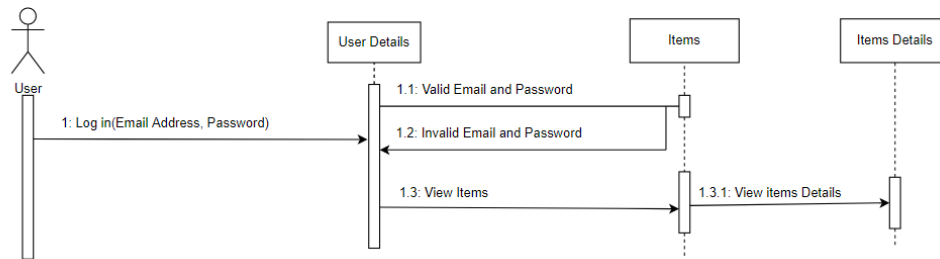


Figure 23: Search

### 3.3.3.1.7 Items Detail:



&lt;

Figure 24: Items Detail

### 3.3.3.1.8 Add to Cart:

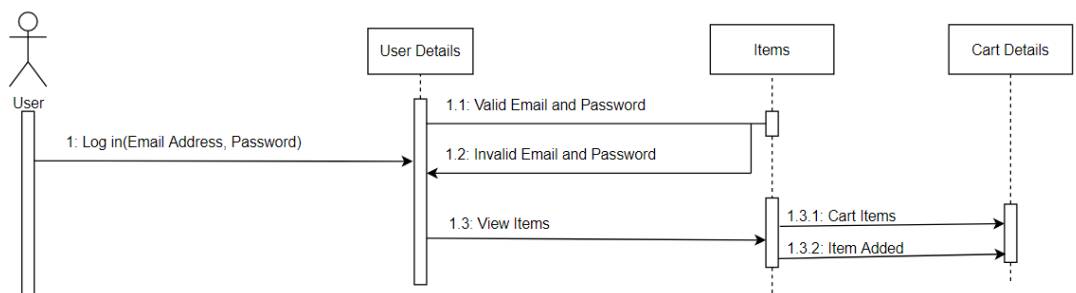


Figure 25: Add to Cart

**3.3.3.1.9 Checkout:**

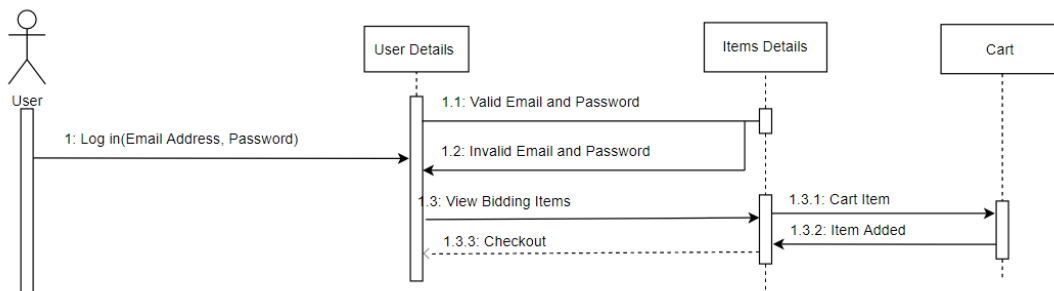


Figure 26: Checkout

**3.3.3.1.10 Bid on an Item:**

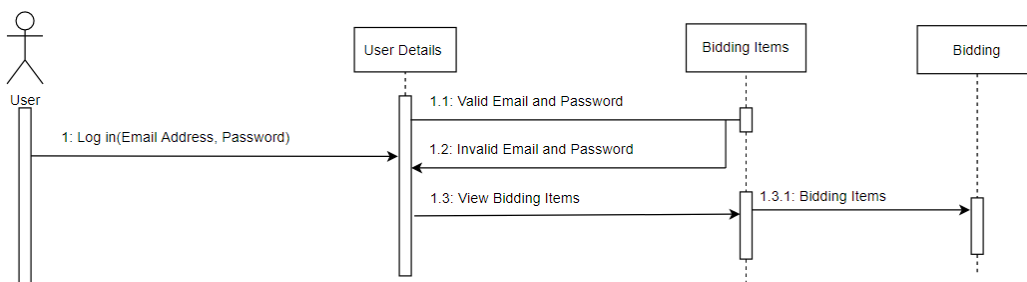


Figure 27: Bid on an Item



### 3.3.3.2 Seller:

#### 3.3.3.2.1 Signup:

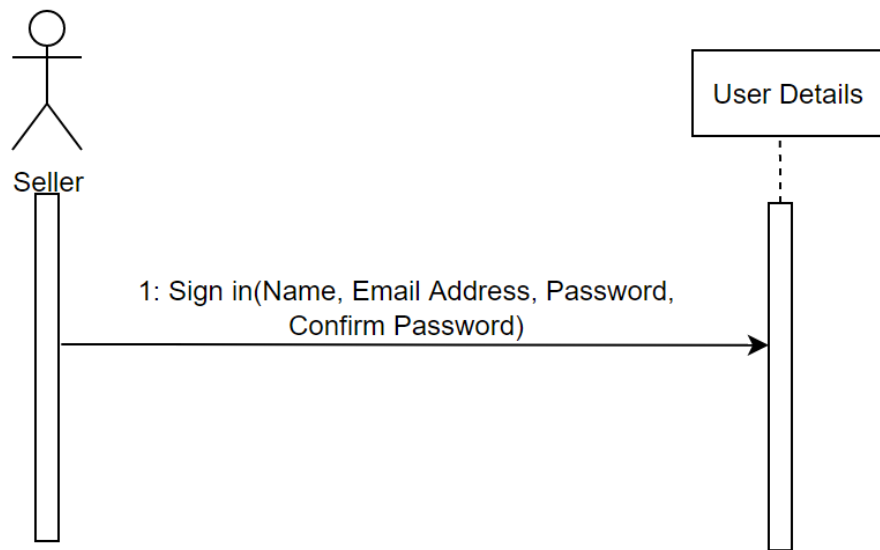


Figure 28: Seller Signup

#### 3.3.3.2.2 Login:

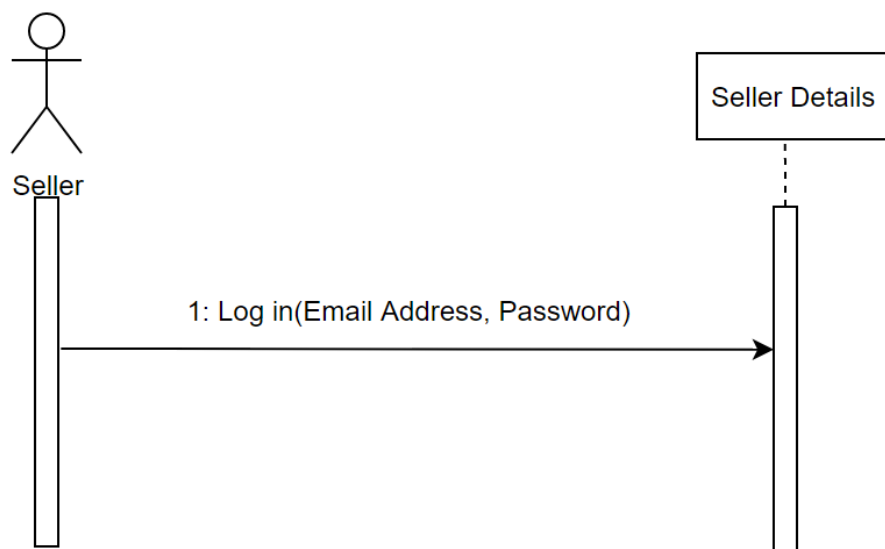


Figure 29: Seller Login

### 3.3.3.2.3 Edit Account:

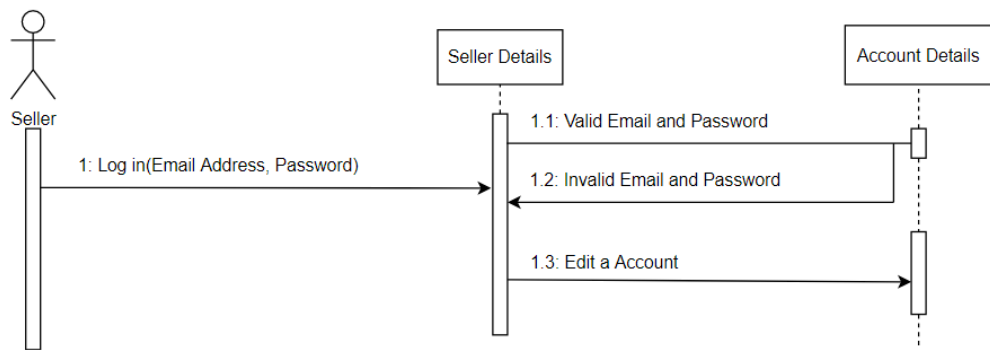


Figure 30: Seller Edit Account

### 3.3.3.2.4 View Account:

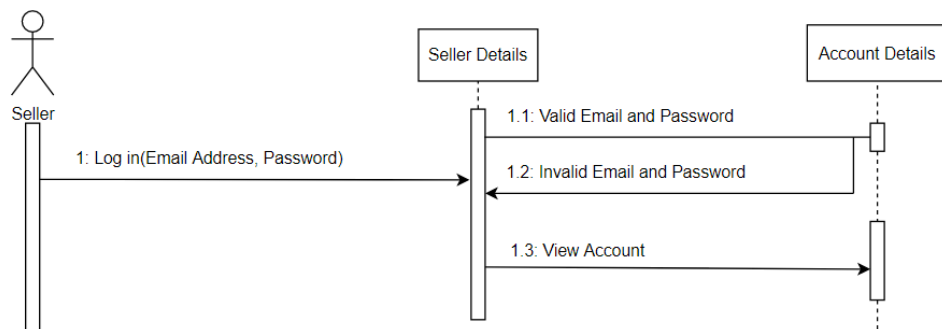
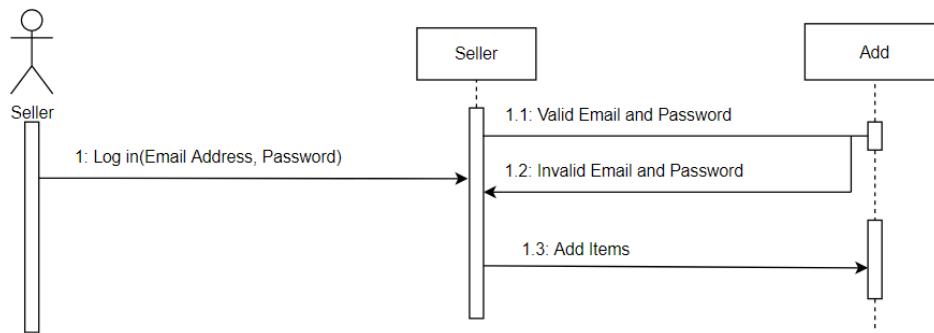


Figure 31: Seller View Account

### 3.3.3.2.5 Add Items:



&lt;

Figure 32: Seller Add Items

### 3.3.3.2.6 View Other Seller:

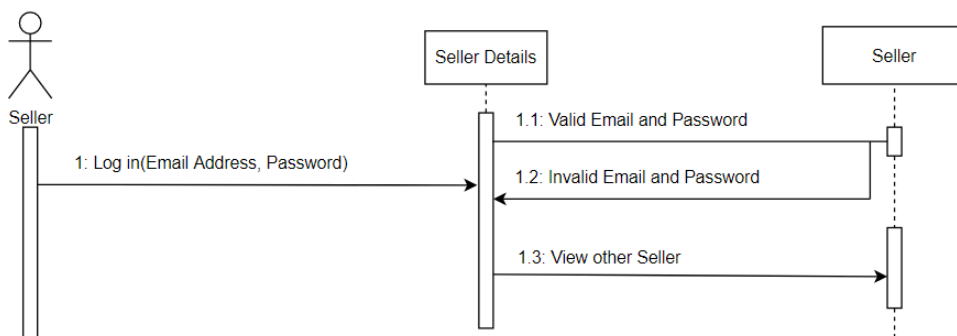


Figure 33: View Other Seller

### 3.3.3.2.7 Search:

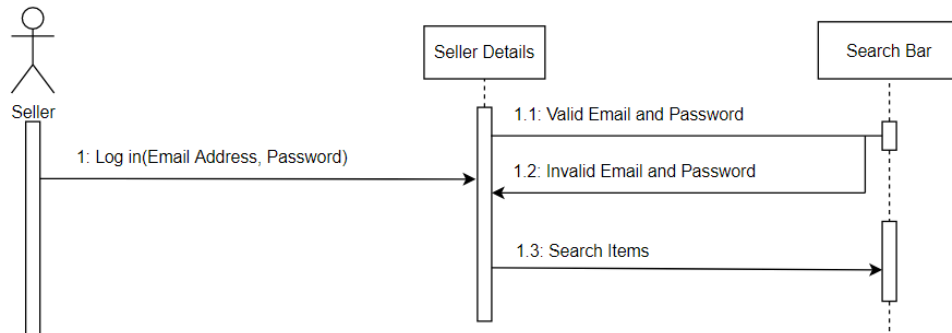


Figure 34: Seller Search

### 3.3.3.2.8 View Item Details:

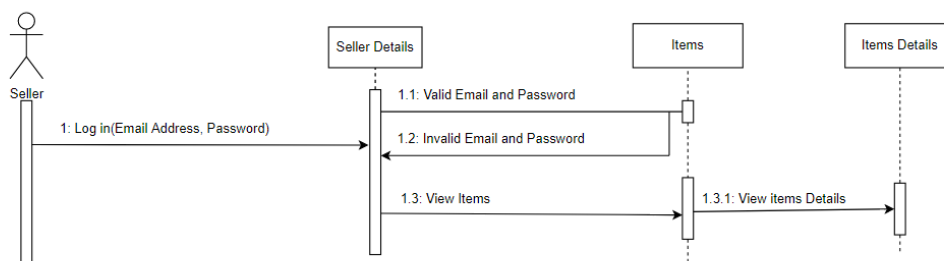


Figure 35: Seller View Item Details

### 3.3.3.2.9 Sequence Diagram of buyer for bidding:

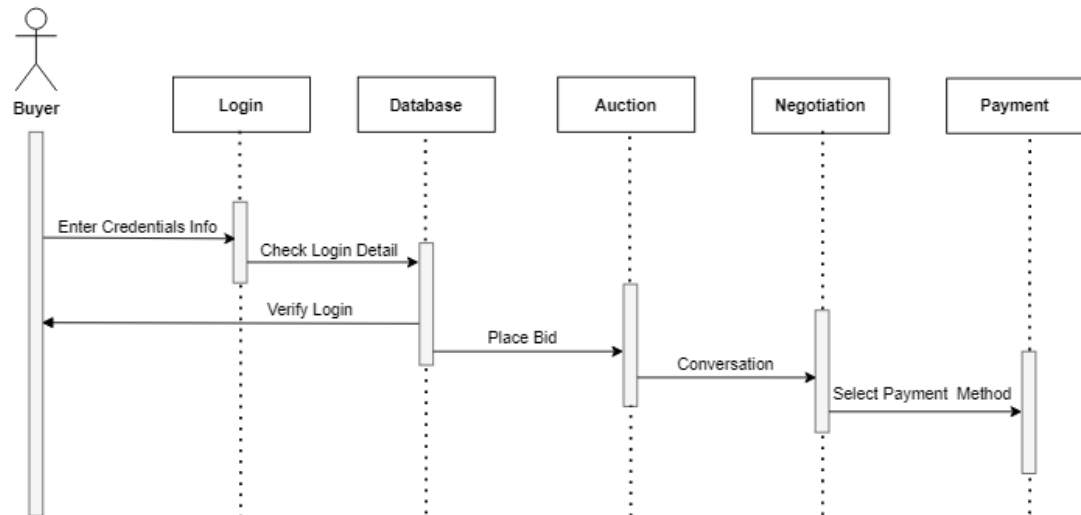


Figure 36: Sequence Diagram of buyer for bidding:

### 3.3.3.2.10 Sequence Diagram of Seller for bidding:

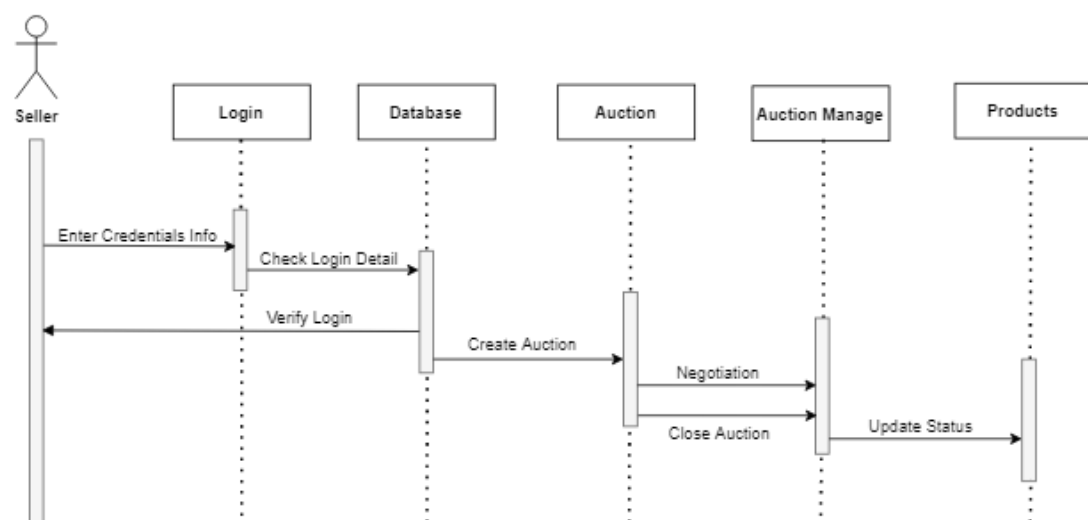


Figure 37: Sequence Diagram of Seller for bidding

### 3.3.4 Collaborative Diagram:

#### 3.3.4.1 User:

##### 3.3.4.1.1 Signup:

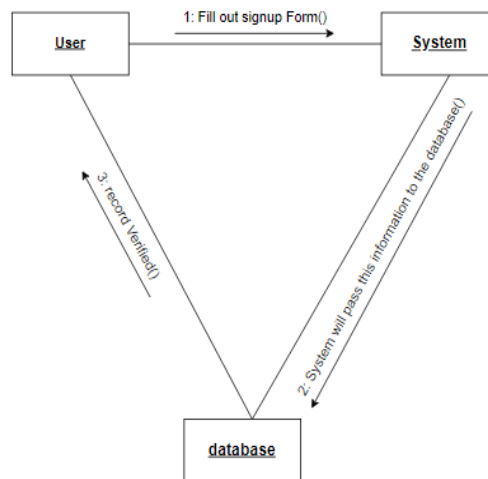


Figure 38: Collaborative Signup Diagram

##### 3.3.4.1.2 Login:

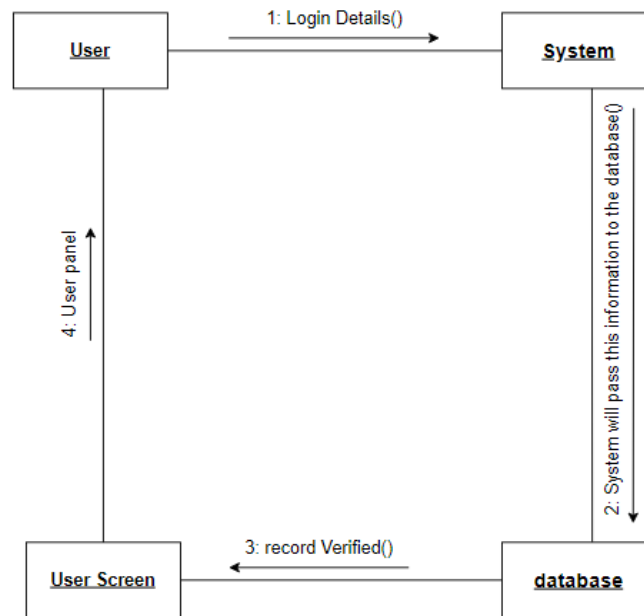


Figure 39: Collaborative Login Diagram

### 3.3.4.1.3 Edit Account:

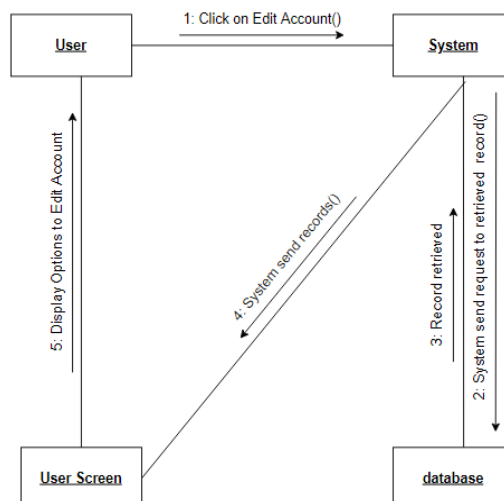


Figure 40: Collaborative Edit Account Diagram

### 3.3.4.1.4 View Accounts:

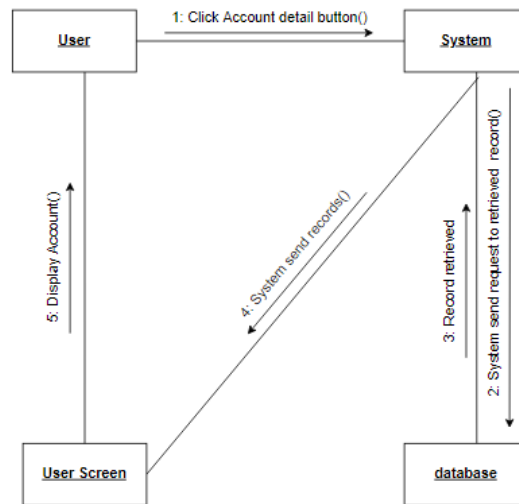


Figure 41: Collaborative View Account Diagram

### 3.3.4.1.5 View All Items:

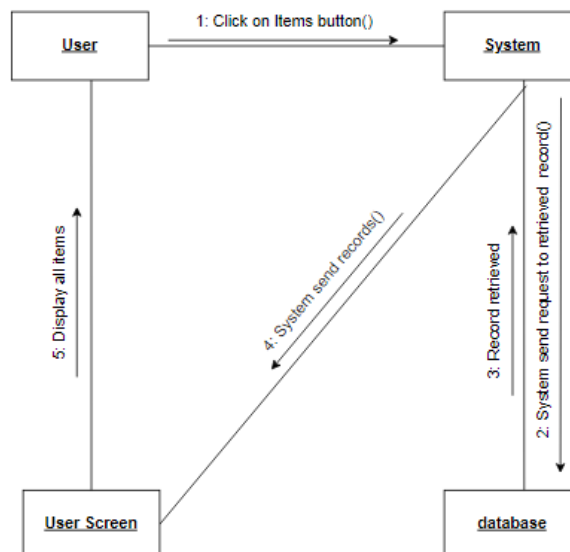


Figure 42: Collaborative View All Items Diagram



### 3.3.4.1.6 Search:

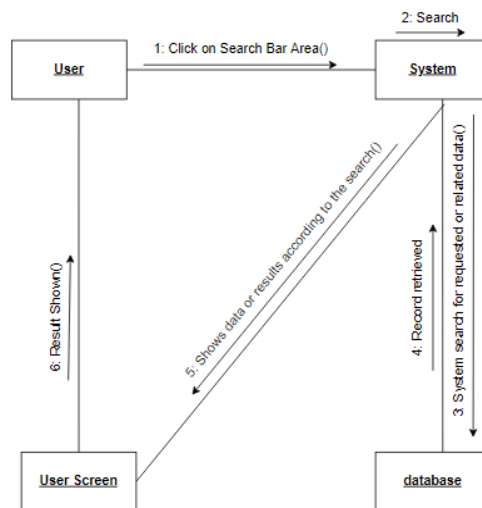


Figure 43: Collaborative Search Diagram

### 3.3.4.1.7 Add to Cart:

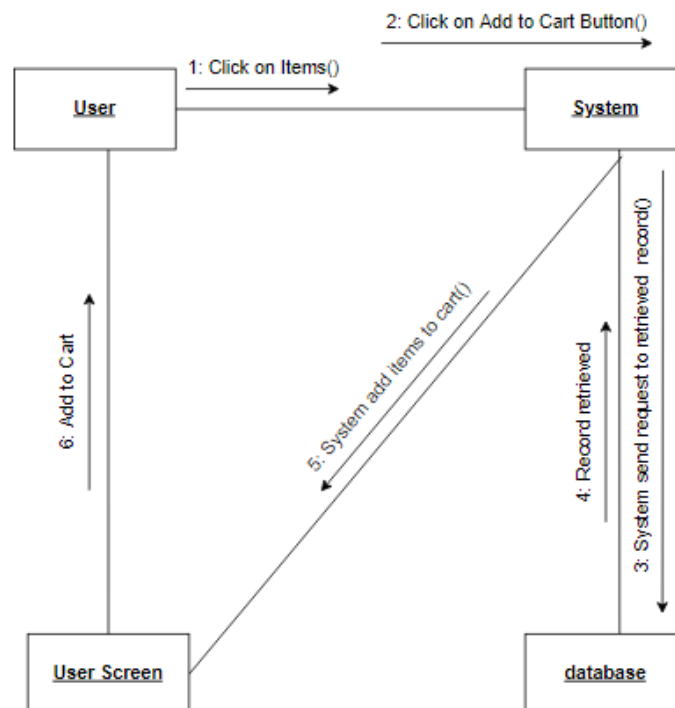


Figure 44: Collaborative Add to Cart Diagram

### 3.3.4.1.8 View Bidding Items Detail:

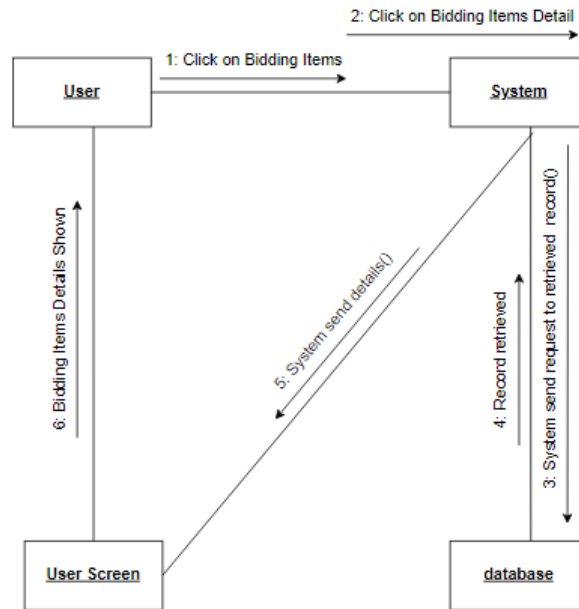


Figure 45: View Bidding Items Detail

### 3.3.4.1.9 Bid on Item:

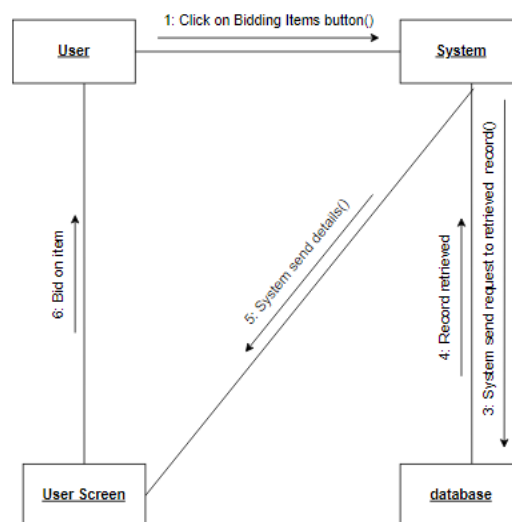


Figure 46: Bid on Item

### 3.3.4.2 Seller:

#### 3.3.4.2.1 Signup:

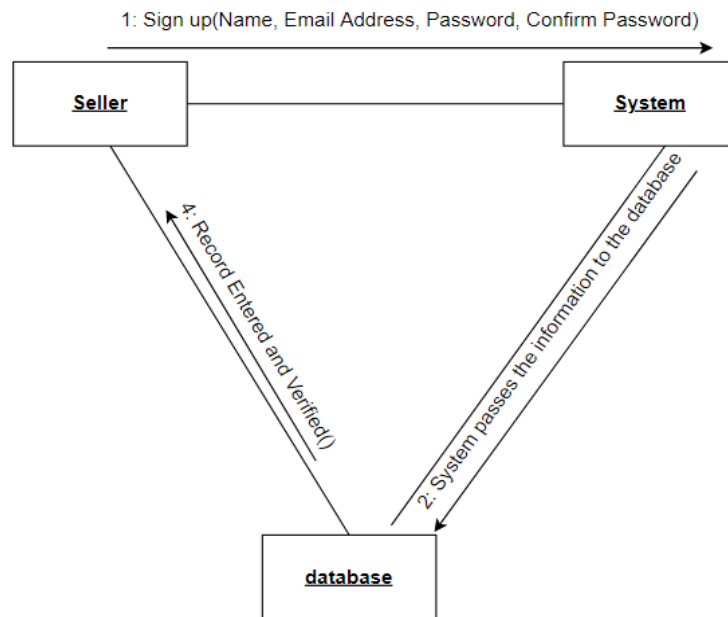


Figure 47: Seller Signup

#### 3.3.4.2.2 Login:

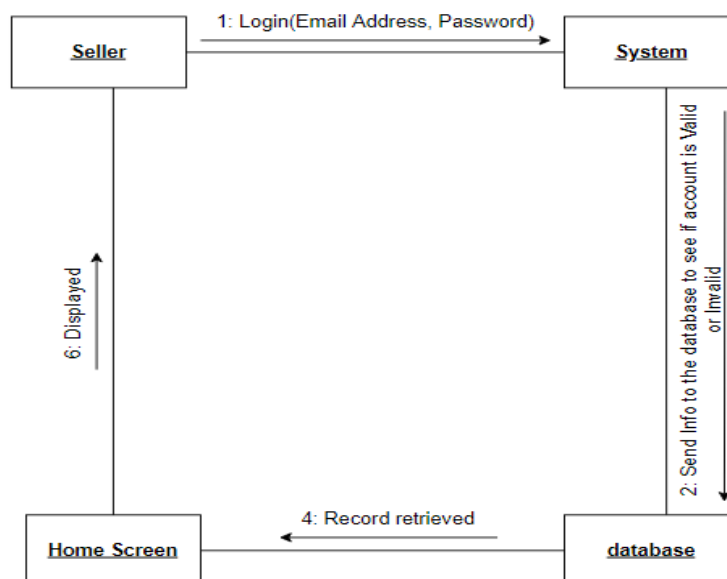


Figure 48: Collaborative Seller Login Diagram

### 3.3.4.2.3 Edit Account:

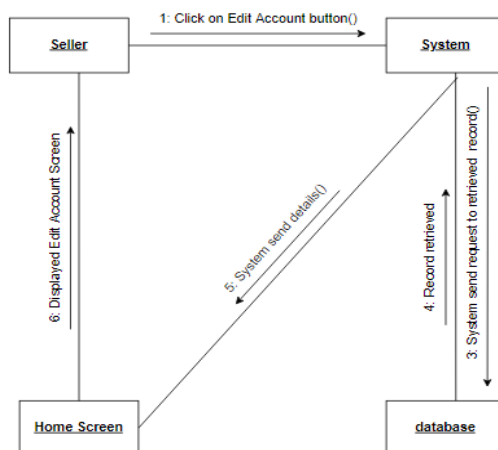


Figure 49: Seller Edit Account

### 3.3.4.2.4 View Other Seller Posts:

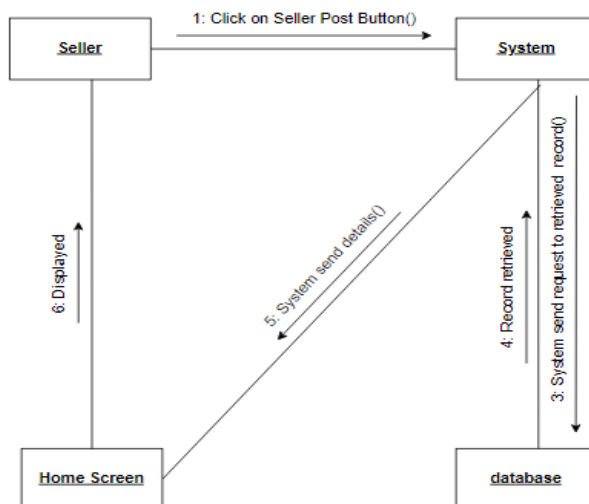


Figure 50: View Other Seller Posts

### 3.3.5 Class Diagram:

A class diagram describes architectural diagram that shows the categories, properties, behaviours, and relationships between components of a system. The other design aspects, such as sub - systems, packaging, and teamwork, explain clearly how the objects are organised and interact.

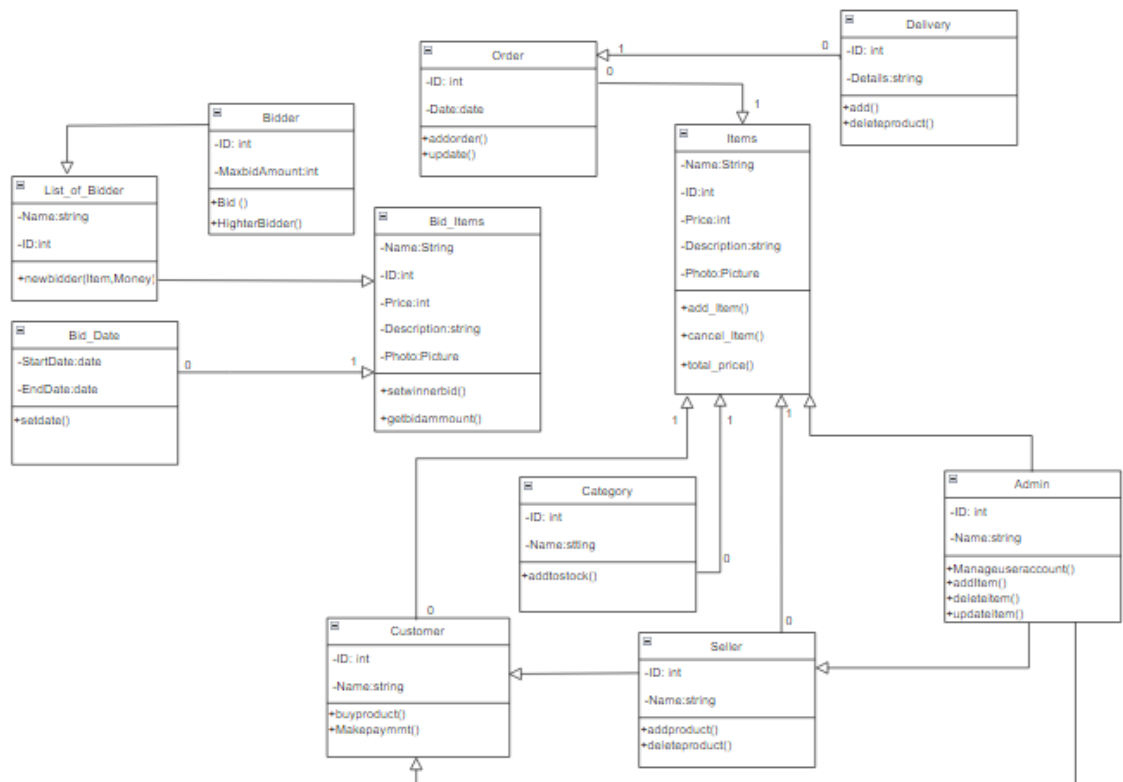


Figure 51: Class Diagram

### 3.3.6 Data Model:

The Data Model, which would be a subclass of the modelling technique, specifies the physical and logical structure of the system's data structure.

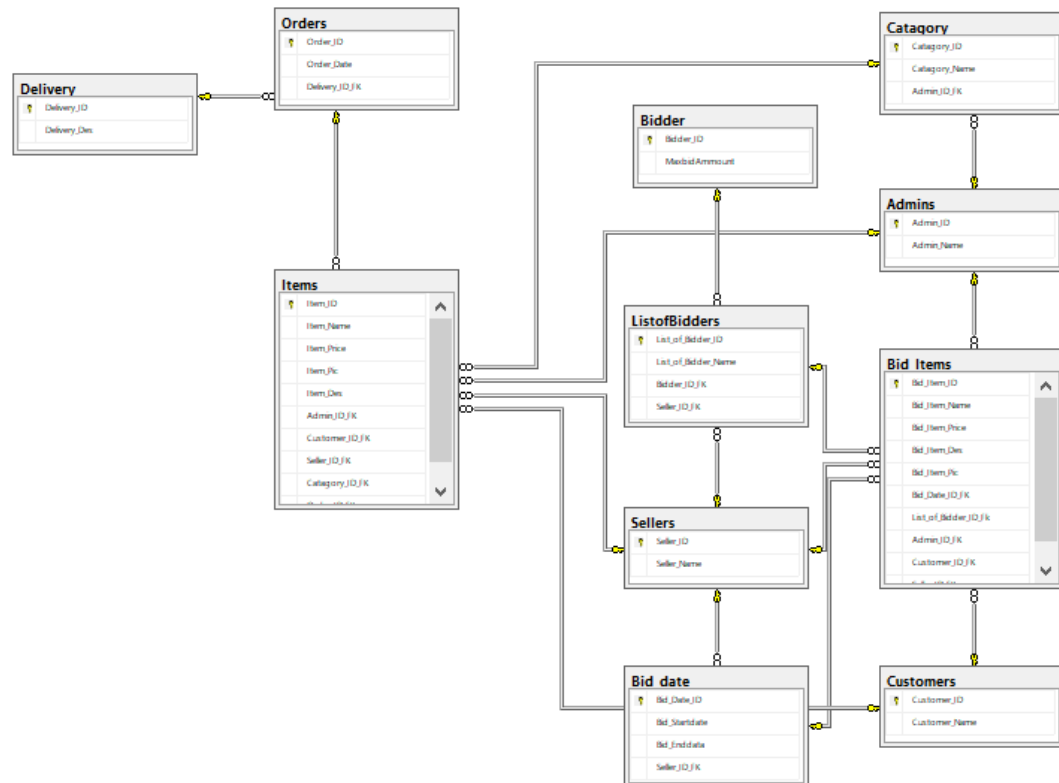


Figure 52: Data Model

### **3.4 Methodology:**

Methodology consists of broad principals and conditions from which few specific procedures or methods may be compelled to understand or answer many difficulties within a specific restriction or manner. A methodology is set of practice and not a practical formula. At the first methodology was based on waterfall model. With the passage of time developers create the methodology system in a synchronized manner. The model explains that prior we start working on actual software, we should do a detail feasibility requirement analysis and then convert this specification into model. Before the real system is implemented, the software as well as its functionality should be properly developed. The finished product then should go through the testing process so that any problem can be rectified. The simulation methodology provides the different ways to investigate or test the system through different parameters value and then observing the effect of these changing parameters [7].

In online auction system simulation involves changing the different parameters such as number of bidders allowed per each bid. The waterfall approach was effectively employed for several years, but its limits soon became apparent. The criteria and standards for a project really aren't usually fully understood at the start, but they become apparent as time passes. So, the design remains inconsistent till the implementation stage. These problems were solved through the agile methodologies that help the system to develop faster with greater flexibility [8].

### **3.5 Present Available Methodologies:**

Teams use agile approaches to decrease risk while delivering new features (including such Flaws, Cost of making and updating within the time).

Initially, developers were instructed to design systems in a sequential, step-by-step manner using waterfall technique. Waterfall methodology is one of the oldest models to adopt. According to the concept, a full feasibility needs analysis must be completed and transformed into a proposed system first before development on the actual software solution can begin. Before it can be implemented, the programme and all its features must be carefully planned [9].

The **prototype** approach allows designers to focus on a Beta product form of the actual product other producing the new step to step programme. Buyers may then try out the concept, rate it, and leave feedback.

The version goes through multiple rounds of modification depending on the data until the buyer is pleased. The benefit of the model method is its thorough analysis. Which identifies potential problems before real development starts.

In the online auction system simulation involved changing the different parameters like the number of bidders allowed per each bid or the maximum amount of the time allowed for each bid.

### 3.6 Choosing Suitable Methodology:

In our work, the waterfall method is particularly useful. It's a basic, linear strategy that organises developmental milestones into a sequence of cascades procedures.

The waterfall design approach is popular among organisations with minimal design skills since it is straightforward to understand. Each step must be completed before proceeding to the next [8].

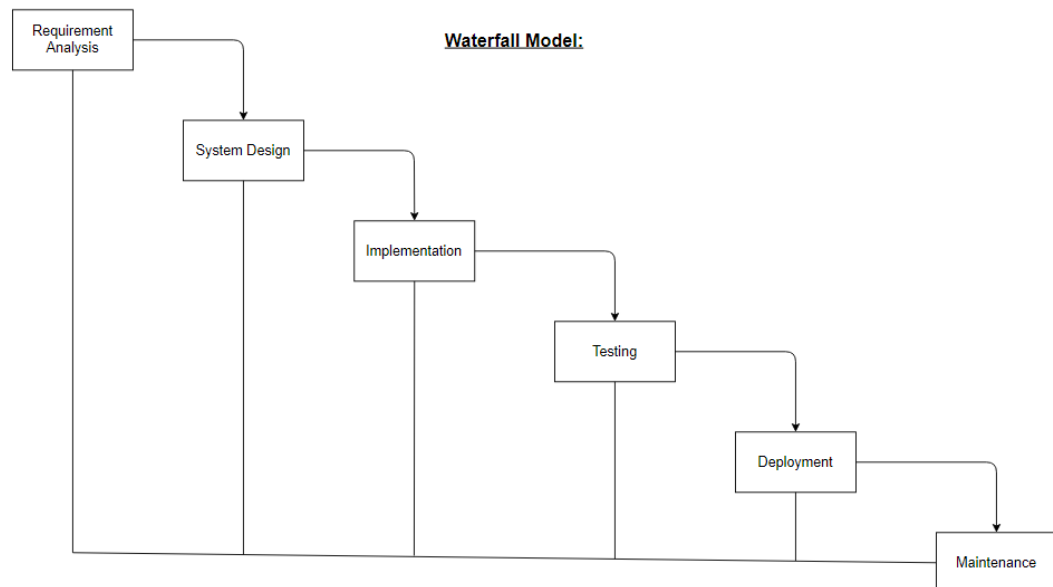


Figure 53: Waterfall Model



### **3.7 Model Complete System:**

The Very first Phase establishes the project plan and creates a large representation of the system by analysing the various learning systems and how they function, as well as managing users and data. In this phase of the project, an entity - relationship diagram model will be created.

## CHAPTER 4

### IMPLEMENTATION

#### **4.1 Project Development:**

This program's system implementation is essentially the evolution of the model designed even during design process. The development of software is not a single phase. It involves different phases. The phases that typically involves in a project are Planning, Designing, Implementation, Testing, Documentation, Deployment and Testing [10].

#### **4.2 Planning and Designing:**

This is the first phase in the project development process. Basically, we gathered requirements regarding the project after that an analysis is made for the requirements gathered. For example in auction system requirements and analysis are gathered from the buyers and sellers. Everything that is necessary for the auction system is clarified from the different user's opinions. The basic purpose of this step is to try our best to meet customer needs.

#### **4.3 Implementation:**

After the requirements analysis we will convert them into a structure of system. This level of implementation entails converting the framework into an application program. We will employ the computer language used to convert the system structure for our multi-purpose single platform project. For this task, we will utilise programming language like as. The use of these programming languages will help us to develop the online shopping and Bidding system. MySQL is the dbms utilised in this project. The application was created using a variety of programming languages.

#### **4.4 Testing:**

Before the actual execution of the system there is a prior testing session is done so we can identify the defects in the system and correct them before the actual execution of the system. This include executing the software and identifying any flaws that may develop, as well as taking corrective action. The method that we will use for testing will be the unit testing method which use the different components of the system for testing purposes such as the interfaces, data storage components. It is not only limited to the system components, but we will also test the different activities that are carried out in the system such as buying, selling and bidding etc.

#### **4.5 Documentation:**

This step includes writing reports and documenting all growth plans. The documentation contains all the relevant information regarding the process that is necessary for the maintenance in the future. Further the documentation is necessary for any update or upgrade in future. IF we talk about our project then it will include all the docu8mentation of activities relating to the online shopping and auction system.

#### **4.6 Deployment and Maintenance:**

This includes the presentation of the project and its final appearance to the Department of Computer Science. The tangible can be further customized according to their customer's requirements and then outperforming operations. This final process can help us to identify any remaining default or to add any additional requirements.

## CHAPTER 5

### USER MANUAL

#### Web Panel:

#### 5.1 Sign In:

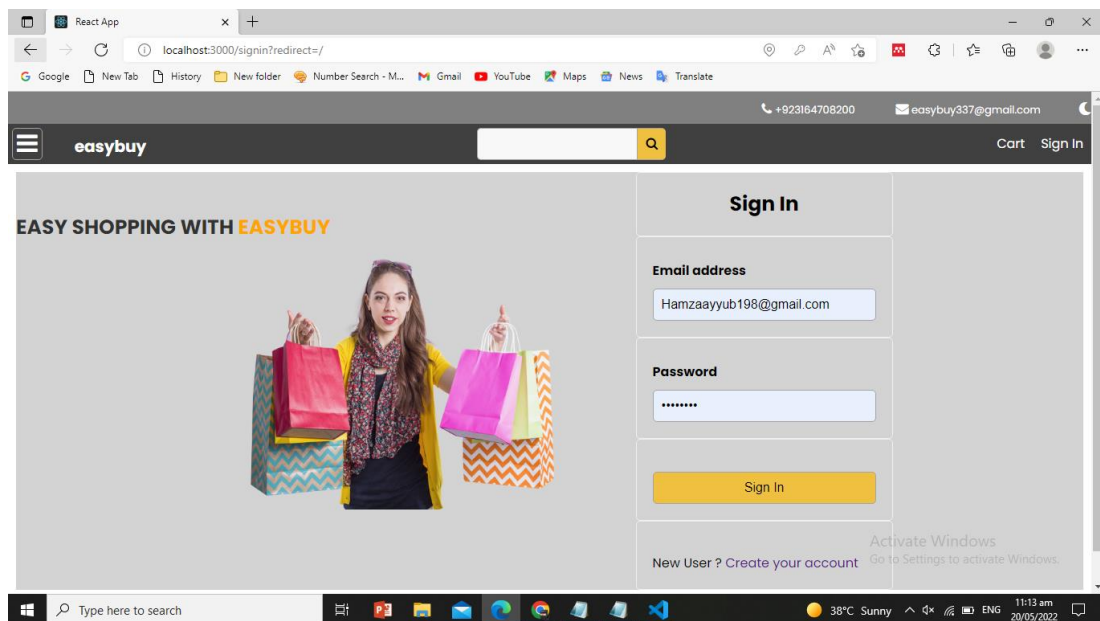


Figure 54: Web Panel Sign In

This is a user login page where the user can enter their email and password to login.

User can create an account if He/she requires one.

Login → Enter Email & Password

Table 17: User Manual Sign In

## 5.2 Sign up:

The screenshot shows a web browser window displaying the 'easybuy' registration page. The page title is 'Create Account'. On the left, there is a section titled 'REGISTER WITH EASYBUY' featuring an image of a woman in a red dress holding shopping bags. On the right, the registration form consists of the following fields:

- Name:** A text input field with the placeholder 'Enter name'.
- Email address:** A text input field with the placeholder 'Enter email'.
- Password:** A text input field with the placeholder 'Enter password'.
- Confirm Password:** A text input field with the placeholder 'Enter confirm password'.

Below the form is a yellow 'Register' button. The browser's address bar shows 'localhost:3000/register'. The Windows taskbar at the bottom indicates the time is 11:15 am on 20/05/2022.

Figure 55: Web Panel Login

User can enter all the details and credentials that are required for sign up to meet our website online shopping and bidding requirements. After entering all the details user can login and can place the items for online shopping and bidding purposes.

Signup → Enter Details Click the next step to complete signup.

Table 18: User Manual Login

## 5.3 User Profile:

The screenshot shows the 'User Profile' page on the 'easybuy' website. The page title is 'User Profile'. The user's name 'Akram' is displayed in the top right corner. The profile form includes the following fields:

- Name:** A text input field containing the value 'Akram'.
- Email:** A text input field containing the value 'Akram20@gmail.com'.
- Password:** A text input field with masked characters '.....'.
- confirm Password:** A text input field with the placeholder 'Enter confirm password'.

Below the form is a yellow 'Update' button. The browser's address bar shows 'localhost:3000/register'. The Windows taskbar at the bottom indicates the time is 11:15 am on 20/05/2022.

Figure 56: User Profile

It will contain all the details regarding the user. User can edit their details from the account.

Table 19:: User Manual (User Profile)

#### 5.4 User View All Categories:

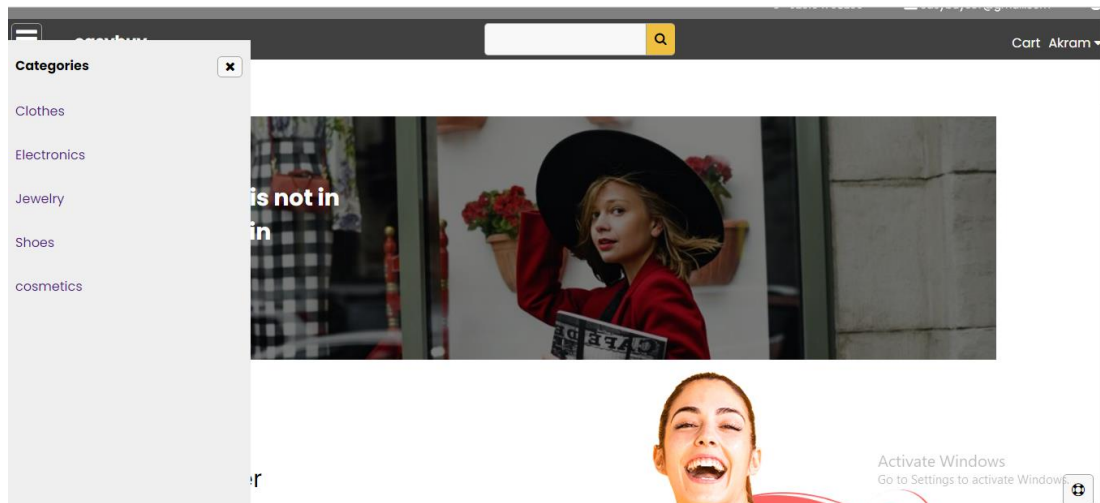


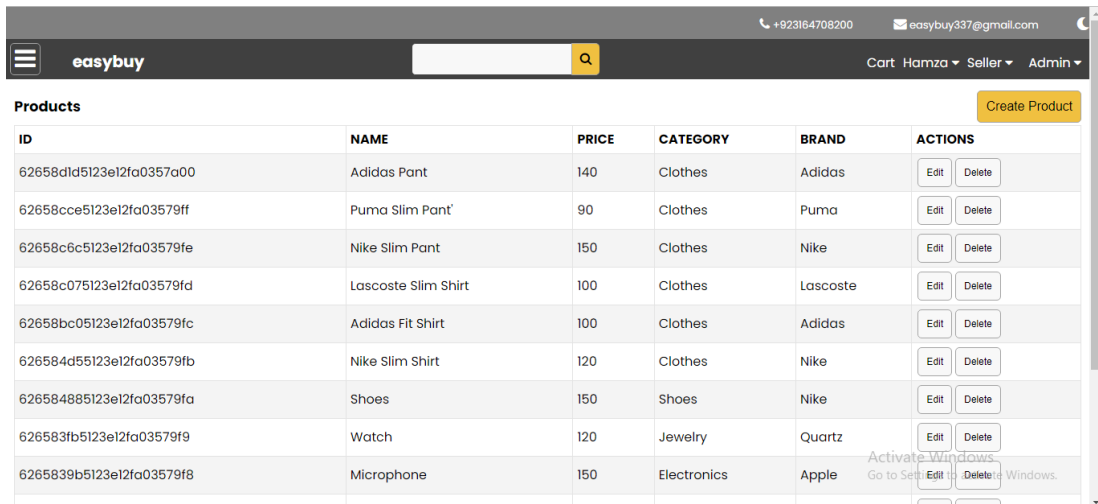
Figure 57: View Categories

There are different categories for online shopping items and auction or bidding system. User can click on the category of their need to view the items that are available under these categories. It can show all relevant items under that category. These categories can include.

To View Categories → Click on the Categories to view the items.

Table 20: User Manual to View Categories

## 5.5 Add an Item:



ID	NAME	PRICE	CATEGORY	BRAND	ACTIONS
62658ald5123e12fa0357a00	Adidas Pant	140	Clothes	Adidas	Edit Delete
62658cce5123e12fa03579ff	Puma Slim Pant	90	Clothes	Puma	Edit Delete
62658c6c5123e12fa03579fe	Nike Slim Pant	150	Clothes	Nike	Edit Delete
62658c075123e12fa03579fd	Lascoste Slim Shirt	100	Clothes	Lascoste	Edit Delete
62658bc05123e12fa03579fc	Adidas Fit Shirt	100	Clothes	Adidas	Edit Delete
626584d5123e12fa03579fb	Nike Slim Shirt	120	Clothes	Nike	Edit Delete
626584885123e12fa03579fa	Shoes	150	Shoes	Nike	Edit Delete
626583fb5123e12fa03579f9	Watch	120	Jewelry	Quartz	Edit Delete
6265839b5123e12fa03579f8	Microphone	150	Electronics	Apple	Edit Delete

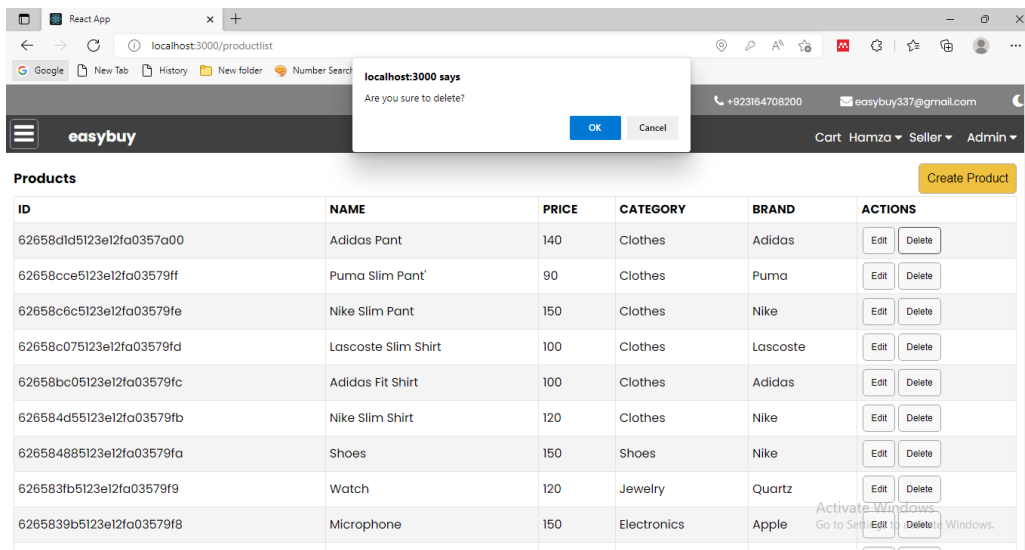
Figure 58: Add an Item

Seller can add a new product by entering all the relevant details regarding the product. And for bidding purposes bidders should enter the relevant details of the product and then a base or regular price. Bidders can also add the image of the item.

To Add an Item → User should enter all the relevant details regarding the product and then Save it.

Table 21: User Manual to Add an Item

## 5.6 Remove an Item:



ID	NAME	PRICE	CATEGORY	BRAND	ACTIONS
62658ald5123e12fa0357a00	Adidas Pant	140	Clothes	Adidas	Edit Delete
62658cce5123e12fa03579ff	Puma Slim Pant	90	Clothes	Puma	Edit Delete
62658c6c5123e12fa03579fe	Nike Slim Pant	150	Clothes	Nike	Edit Delete
62658c075123e12fa03579fd	Lascoste Slim Shirt	100	Clothes	Lascoste	Edit Delete
62658bc05123e12fa03579fc	Adidas Fit Shirt	100	Clothes	Adidas	Edit Delete
626584d5123e12fa03579fb	Nike Slim Shirt	120	Clothes	Nike	Edit Delete
626584885123e12fa03579fa	Shoes	150	Shoes	Nike	Edit Delete
626583fb5123e12fa03579f9	Watch	120	Jewelry	Quartz	Edit Delete
6265839b5123e12fa03579f8	Microphone	150	Electronics	Apple	Edit Delete

Figure 59: Remove an Item

User can also remove an item from bidding category once the bidding has been done for that item.

Table 22: User Manual to Remove an Item

## 5.7 Dashboard:

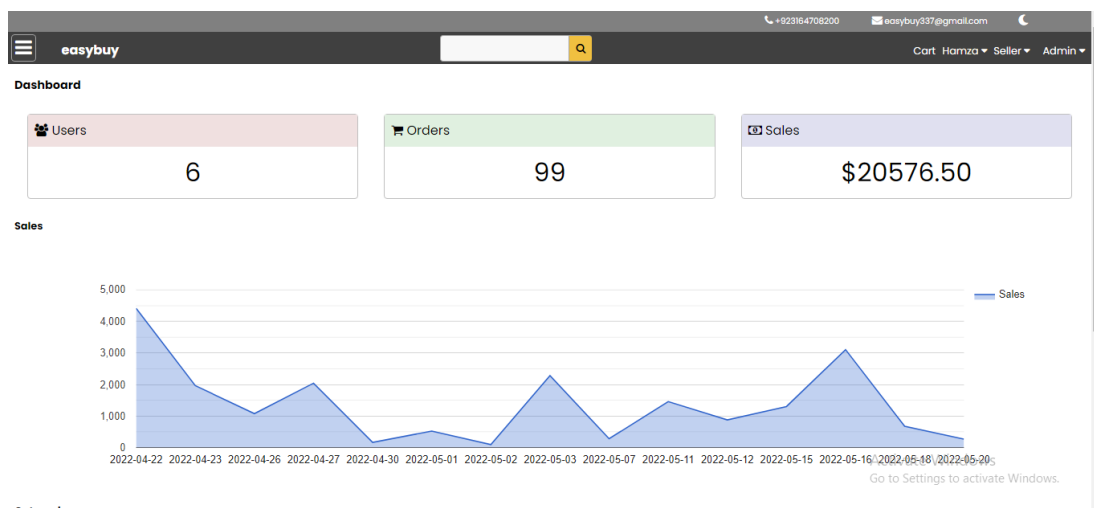


Figure 60: Web Panel Dashboard

Dashboard shows all the sales and orders that the customers placed. How many users access the website and visualization of the sales data.

Table 23: Dashboard



## 5.8 Customer Support:

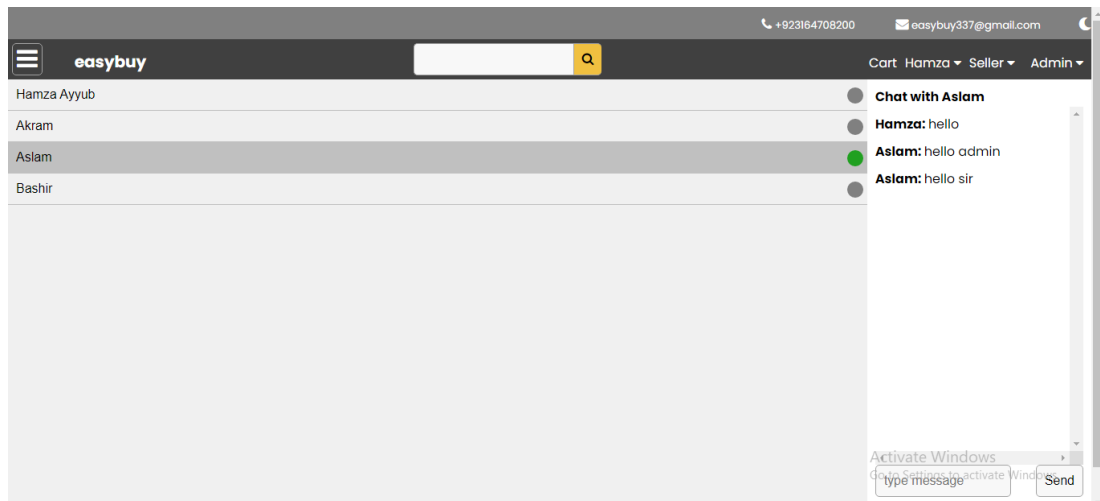


Figure 61: Web Panel Customer Support

User can ask about the issue using the Customer Support.

Table 24: Customer Support

## 5.9 Bid Products:

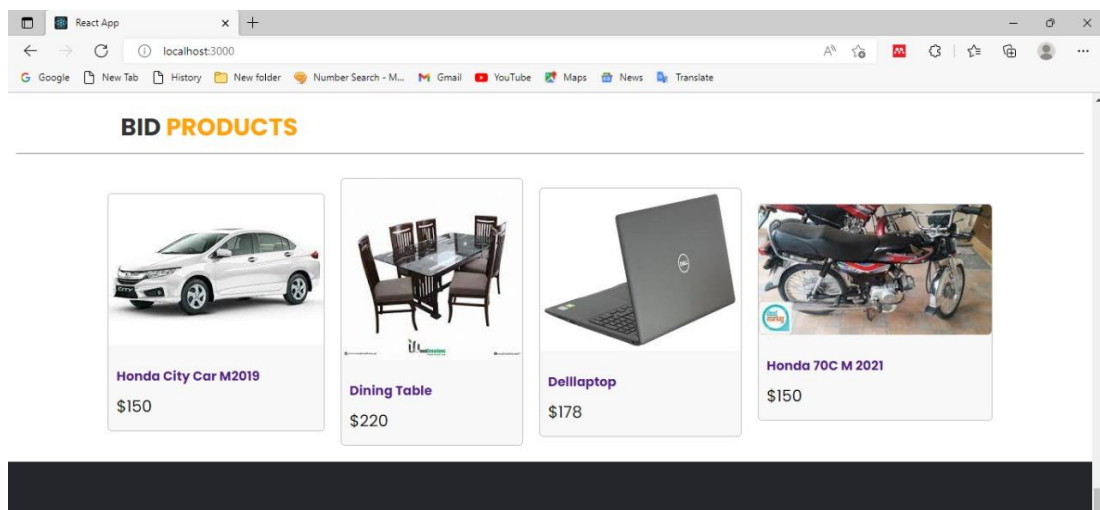


Figure 62: Bid Product

User can see Bidding products and also can place a bid on it.

Table 25: Bid Products

## 5.10 Create Bid Product:

ID	NAME	PRICE	Bid Start-Date	Bid End-Date	CATEGORY	BRAND	ACTIONS
628baaccb9e36747c842379f	Honda City Car M2019	150			vehicals	Honda	<a href="#">Edit</a> <a href="#">Delete</a>
628baaccb9e36747c84237a0	Dining Table	220			Home Accessries	Lacoste	<a href="#">Edit</a> <a href="#">Delete</a>
628baaccb9e36747c84237a1	Delllaptop	178			electronics	Dell	<a href="#">Edit</a> <a href="#">Delete</a>
628d3b57e0d8ec1bd892f02a	Honda 70C M 2021	150	25/05/22	30/05/22	Vehicals	honda	<a href="#">Edit</a> <a href="#">Delete</a>

Figure 63: Seller Creating Bidding Products

Seller can Edit, Delete and Create new Bidding Product.

Table 26: Creating New Bidding Products

## 5.11 Bid on Product:

Back to result

**Honda 70C M 2021**

0 reviews

Price: \$150

Description:  
4-stroke 72 cc OHC street motorcycle manufactured by Honda between 1970 and 1984, which replaced the similar C65 model

Price: \$150

Bid Start Date: 25/05/22

Bid End Date: 30/05/22

There is no bid for this product

**Enter Bid Amount**

Submit

Figure 64: Bidding on product

Users can place a bid on the bidding product.

Table 27: Bidding on product

## CHAPTER 6

### CONCLUSION AND RECOMMENDATIONS

#### **6.1 Conclusion:**

Internet has now become a borderless market. In such situation it is useful to have an integrated platform for both online shopping bidding purposes. It has several advantages but at the same time there are certain issues that can be a barrier for this system. The main purpose of building such website is have shopping and Auction at a single platform for better customer experience. The customers can visit the website and can choose their liked product and can view bidding items on the same platform.

## REFERENCES

- [1] Katona, Z. and Sarvary, M., 2010. The race for sponsored links: Bidding patterns for search advertising. *Marketing Science*, 29(2), pp.199-215.
- [2] Moreno, T., Poggi, N., Berral, J.L., Gavalda, R. and Torres, J., 2007. Policy-based autonomous bidding for overload management in eCommerce websites. *Proceedings of the Group Decision and Negotiation*, pp.14-1.
- [3] Horrigan, J.B., 2008. Online shopping.
- [4] Lissitsa, S. and Kol, O., 2016. Generation X vs. Generation Y—A decade of online shopping. *Journal of retailing and consumer services*, 31, pp.304-312.
- [5] Hasan, B., 2010. Exploring gender differences in online shopping attitude. *Computers in Human Behavior*, 26(4), pp.597-601.
- [6] Aljaf, B., 2016. Online Auction System.
- [7] Abrahamsson, P., Salo, O., Ronkainen, J. and Warsta, J., 2017. Agile software development methods: Review and analysis. *arXiv preprint arXiv:1709.08439*.
- [8] Bassil, Y., 2012. A simulation model for the waterfall software development life cycle. *arXiv preprint arXiv:1205.6904*.
- [9] Dima, A.M. and Maassen, M.A., 2018. From Waterfall to Agile software: Development models in the IT sector, 2006 to 2018. Impacts on company management. *Journal of International Studies*, 11(2), pp.315-326.
- [10] Kitchenham, B.A. and Taylor, N.R., 1985. Software project development cost estimation. *Journal of Systems and Software*, 5(4), pp.267-278.

## APPENDIX

easybuy

+923184708200 easybuy337@gmail.com Cart Akram

Happiness is not in Money  
but in Shopping

special offer

**SALE UPTO 50%**

Save 50% Windows  
Go to Settings to activate Windows

SHOP BY CATEGORY

upto 50% off  
**FOR WOMANS**  
shop now

upto 50% off  
**FOR MANS**  
shop now

LATEST PRODUCTS

Activate Windows  
Go to Settings to activate Windows

App.js - easybuy - Visual Studio Code

EXPLORE

- easybuy
  - frontend
    - src
      - App.js
      - BidproductScreens.js
      - Home.css
      - CountdownTimer.js
      - DateTimeDisplays.js
      - UtilityCounter.js
      - Header.css
      - Header.css

```

1 import React, { useEffect, useState } from 'react';
2 import { useDispatch } from 'react-redux';
3 import { useSelector } from 'react-redux';
4 import {
5   BrowserRouter as Router,
6   Link,
7   Routes,
8 } from 'react-router-dom';
9 import { signout } from './actions/userActions';
10 import CartScreen from './screens/CartScreen';
11 import HomeScreen from './screens/HomeScreen';
12 import OrderScreen from './screens/OrderScreen';
13 import PaymentMethodScreen from './screens/PaymentMethodScreen';
14 import PlaceOrderScreen from './screens/PlaceOrderScreen';
15 import ProductScreen from './screens/ProductScreen';
16 import RegisterScreen from './screens/RegisterScreen';
17 import ShippingAddressScreen from './screens/ShippingAddressScreen';
18 import SignInScreen from './screens/SignInScreen';
19 import OrderHistoryScreen from './screens/OrderHistoryScreen';
20 import ProfileScreen from './screens/ProfileScreen';
21 import PrivateRoute from './components/PrivateRoute';
22 import AdminRoute from './components/AdminRoute';
23 import ProductListScreen from './screens/ProductListScreen';
24 import ProductEditScreen from './screens/ProductEditScreen';
25 import OrderListScreen from './screens/OrderListScreen';
26 import UserListScreen from './screens/UserListScreen';
27 import UserEditScreen from './screens/UserEditScreen';
28 import SellerRoute from './components/SellerRoute';
29 import SearchBox from './components/SearchBox';
30 import SearchScreen from './screens/SearchScreen';
31 import { listProductCategories } from './actions/productsActions';
32 import LoadingBox from './components/LoadingBox';
33 import MessageBox from './components/MessageBox';
34 import MapScreen from './screens/MapScreen';
35 import DashboardScreen from './screens/DashboardScreen';
36 import SupportScreen from './screens/SupportScreen';
  
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

PS C:\Users\VIATZ\SONG\Desktop\easybuy>

Activate Windows  
Go to Settings to activate Windows.  
powershell

Ln 11, Col 47 Spaces: 2 UTF-8 LF (1) Babel JavaScript



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