

# System Request – Art Gallery Management

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## INTRODUCTION

Art gallery Management and Theory of Arts presents to users a chance to see an online art show at an online art exhibition. This system brings the user subtleties of all art presentations held previously and the impending show. The system also creates a space for availing courses online. Art gallery management system can lead to an error-free, dependable, secure, and quick management system. Every system, big or little, faces difficulties in handling information such as "type," "arts," "payment," "add to cart," and so on. This system will give its user an easy access to use its every feature. Customers can likewise enroll on the system, and they can peruse fine arts, which are organized in various classifications deductively. Every customer has the privilege to buy fine art utilizing the incorporated installment door and they can also access the courses provided by the system.

## MOTIVATION

The term "Art Gallery Management and Theory of Arts" refers to software that enables art galleries to accept and manage bookings submitted over the internet. Many of these, like ordering art online, allow customers to create accounts with them to make regular ordering easier. A customer will look for a preferred art which is usually categorized by art type, and order from a menu of available arts with delivery. Payment can be made in a variety of ways, including credit card, cash- on- delivery. Our main goal is to create a hospitable environment for users where they can place orders without any distress. In our system, customers have access to a variety of artwork alternatives from which to choose their art. The customer will also be able to see the payment details. And again, most importantly, customers will be able to see events and exhibitions in the view exhibition & events module. For the sellers, they can login to the

system easily and advertise their arts. They can create different categories for their products, interact with their customers, add courses.

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## Project Usage

“Art Gallery Management and Theory of Arts” is a website that enables users to go through various Arts and peripherals from many local and international artists. Here “User” is not only the customer, but also the seller. One can easily create account/login by fulfilling the requirements to enroll themselves as customer/artist. A customer can browse through our digital art gallery and book their preferable product items. They can also view different exhibition and events that are incorporated in our system by the admin. We also offer different courses on art related stuff which can unleash one’s inner creative spirit. And a seller can showcase their Arts on our gallery, and they can sell those. They can also offer courses if they are well enough to do so.

The main purpose of this project is to create an ease of browsing and shopping arts/paintings and other relatable items. Since the Covid outbreak people seemed to have inclined heavily towards online shopping and our website is giving the exact service that they are looking for. One can easily sit and browse arts and purchase items from our website from anywhere in the country. Also, this is a great initiative from the perspective of the local artists, since most of the times, their creativity has been ignored and they can’t really make a living out of their hobby, this website will enable them to create a livelihood out of their creativity and it will also encourage them to boost up their morale and to create even more powerful arts. People will also get to meet various international artists in the different events and exhibitions held by the system from time to time.

## System Request:

**Project sponsor:** Paul Allen, Managing director, Dunder Mifflin Paper Company.

- **Business need:**

This approach is intended for people who remain enthusiastic about art and artworks. This system will be valuable for the artist who can sell their drawings and the visitors can

purchase them. There will be an area where individuals may sign up for monthly or package-based courses on their own. Additionally, students will receive a certificate at the end of the course.

#### ○ Business requirements:

Admin, sellers, and customers will be using this system.

- Sellers and customers both must create their profiles in order to enter the system
- Admin panel can view booking details and payment details by customers.
- Admin can add arts, exhibitions, events, and art courses for the customer.
- Admin can modify and remove arts, customer details and exhibitions and events.
- Sellers can view payment and booking details
- Sellers can add arts and courses and can manage feedback.
- Customers can see detailed view of the arts and buy them by adding to the cart, they can see also see the offered courses and subscribe.
- Customers will be able to see events and exhibition in the view exhibitions and events module
- Customers can book products and cancel their booking if they need to.
- Customers can view payment details and give feedback.

#### ○ Business value:

Estimated **tangible values** to the company include:

- We will take an 15-20% commission from the artists on every painting/artwork order they receive through our platform. The commission will be decided considering the numbers and kinds of orders. We also take a delivery charge from the customers.

- We will be taking a 20-30% commission from the artists who will be conducting various Art related courses through our platform.
- approximately 4,00,000 BDT from the commissions from the Artists will be taken.
- For the maintenance of the system, there will be approximately 50,000 BDT yearly reduction.

**Intangible values** to the company include:

- Sellers and customers can easily communicate with each other which results in establishing a good communication process.
- As purchasing and selling artworks through the online art gallery is very efficient, people will be more attracted to order artworks and paintings online.
- Customers can observe the pricing and quality of the crafts before purchasing which makes the system very reliable.
- Physical set-ups are not required so the operational cost is low.
- New forms of art can be easily introduced through this system.
- Our system will help artists to take a step towards a more efficient technology-based system.
- Our system will contain appealing images of the artworks and illustrations which will tempt the customers to order them online.
- Artists will be able to gain recognition by showing and selling their works on our platform and they will be able to earn money.
- Since the pandemic started, purchasing products online has increased a lot and the online market is thriving on success ever since. There's been a 70-80% increase in online shopping since the outbreak of COVID-19 and people got comfortable with it.
- We will expand our business by creating more employment opportunities.
- Through our system, customers can take their time and order what they want more precisely and there will be very little chance of miscommunication.
- Many small and newcomers can promote themselves through our platform.

- **Special Issues or Constraints**

- Regular launches of new arts.
- This system will be available on holidays and occasions.

## Requirement Analysis:

### Functional Requirements:

#### **1. Account Management:**

- 1.1. Individuals will be able to create an account as a seller or customer in our system.
- 1.2. Users will be able to log in with their email and password.
- 1.3. The system will record the user's data.

#### **2. Customer Account:**

- 2.1. Users will be able to see the popular and trending arts in the system.
- 2.2. Users can see the available products and can add them to the carts.
- 2.3. Users can view their shopping cart and confirm the purchase order.
- 2.4. Customers can pay through two methods: Cash on delivery or online payment.
- 2.5. Customers can edit their profiles.
- 2.6. Customers can remove items from their shopping cart.
- 2.7. Customers can share their feedback.

#### **3. Admin:**

- 3.1. Admin can add and remove users.
- 3.2. Admin can add and remove products.

- 3.3. Admin can view the orders and payment details.
- 3.4. Admin can add and modify events and exhibitions
- 3.5. Admin can add monthly based art related courses for the customers

#### **4. Seller:**

- 4.1. Seller can add and remove products.
- 4.2. Seller can add and remove courses.
- 4.3. Seller can view booking details, payment details and manage feedbacks.

#### **5. System:**

- 5.1. The system will be able to show the availability of arts and courses.
- 5.2. System will have different online payment options. For example - Bkash, Nogod, Rocket etc. as well as Cash on Delivery system.
- 5.3. The system will have a section for users to submit any kind of feedback, inquiries or complaints.
- 5.4. Customers can communicate through our system.
- 5.5. System will verify the user's account and payment procedure before every purchase.
- 5.6. System will be able to provide promo codes and discounts to the customers depending on the number of orders.

## Non-functional Requirements:

### **1. Operational:**

- 1.1. The system should be able to run on any smartphones, tablets and similar devices as well as computers.
- 1.2. The system should be accessible by any internet browser like Chrome, Safari, Opera etc.
- 1.3. The system should be supported by devices with operating systems like windows, android and iOS.
- 1.4. The system must be efficient and easily accessible for the customers for better service and reliability.

### **2. Performance:**

- 2.1. We must make sure that the system doesn't feel slow. So, we must make the animation as smooth as possible.
- 2.2. System must make sure that there is no lag while scrolling and no unnecessary pop-ups and all the buttons are clickable.
- 2.3. We should make all the files as small as possible so that it doesn't take much time to load the sites.

### **3. Security:**

- 3.1. Personal information of the customers should be protected by the system.
- 3.2. System should not allow multiple accounts for one person.
- 3.3. System should ensure strong passwords and recommend random strong passwords while the customer creates an account.
- 3.4. Systems should often be updated for better security.
- 3.5. The Customer's profile should not be accessible by anyone except for the owner himself.

#### **4. Cultural and political:**

- 4.1. Users can change their language from English to Bangla or any other preferred language.
- 4.2. This system should protect the user's personal information.
- 4.3. This system should not promote any illegal activities that might harm any individuals' belief.

#### **5. Maintainability:**

- 5.1. New version of the system will be automatically rolled out to all the users once final testing is done.
- 5.2. The system will be ready to use within a minute after getting a new update.
- 5.3. Git will be used to keep track of every modification to the code and to maintain source code.

#### **6. Usability:**

- 6.1. Options of items will be shown properly on the top of the system for the users.
- 6.2. Admin can organize their products into different categories to make ordering items easy for the customers.
- 6.3. This system will have an adjustable font size and layout for the users.
- 6.4. The structure of the system will be standard and coherent. Users can easily distinguish the features.
- 6.5. All the links and important announcements will be highlighted accordingly.
- 6.6. The core of usability is clarity. So, simplicity, consistency and good information architecture should be adapted.



## Use Case Diagram:

The Use case diagram describes the system's actions from the point of view of a user without specifying the structure of the system. The following two diagrams are showing the major actions of each primary and secondary actor and their interactions with the system.

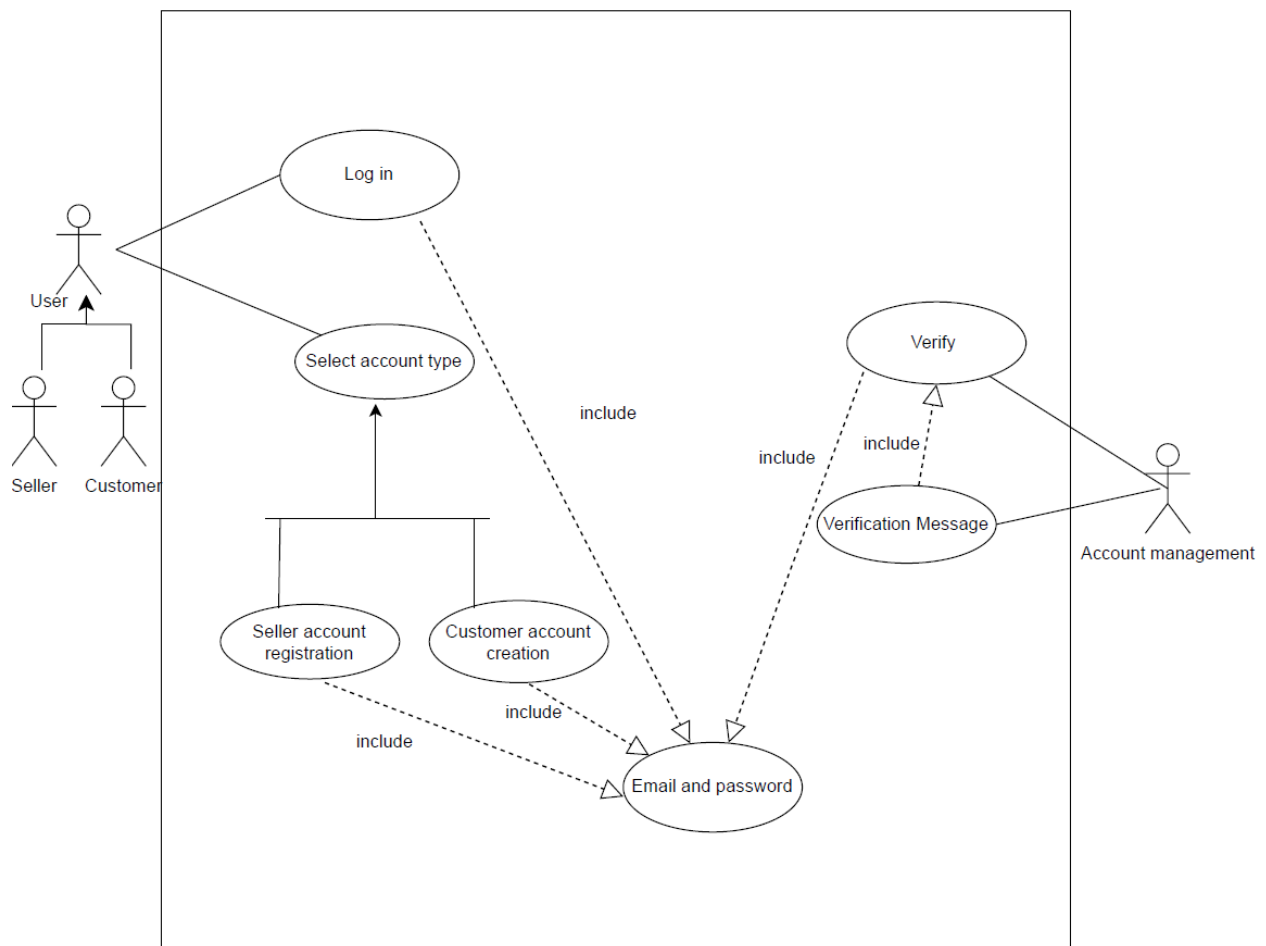


Figure 1: Use Case Diagram - 1



## Activity Diagram:

Activity diagram is a flowchart for illustrating the flow of a system's activities. Four diagrams below depict the main activities of our system. First one shows the flow of account management activity. Second one shows the activities of seller account, third one shows the activities of Customer account and the last one shows the activity of admin.

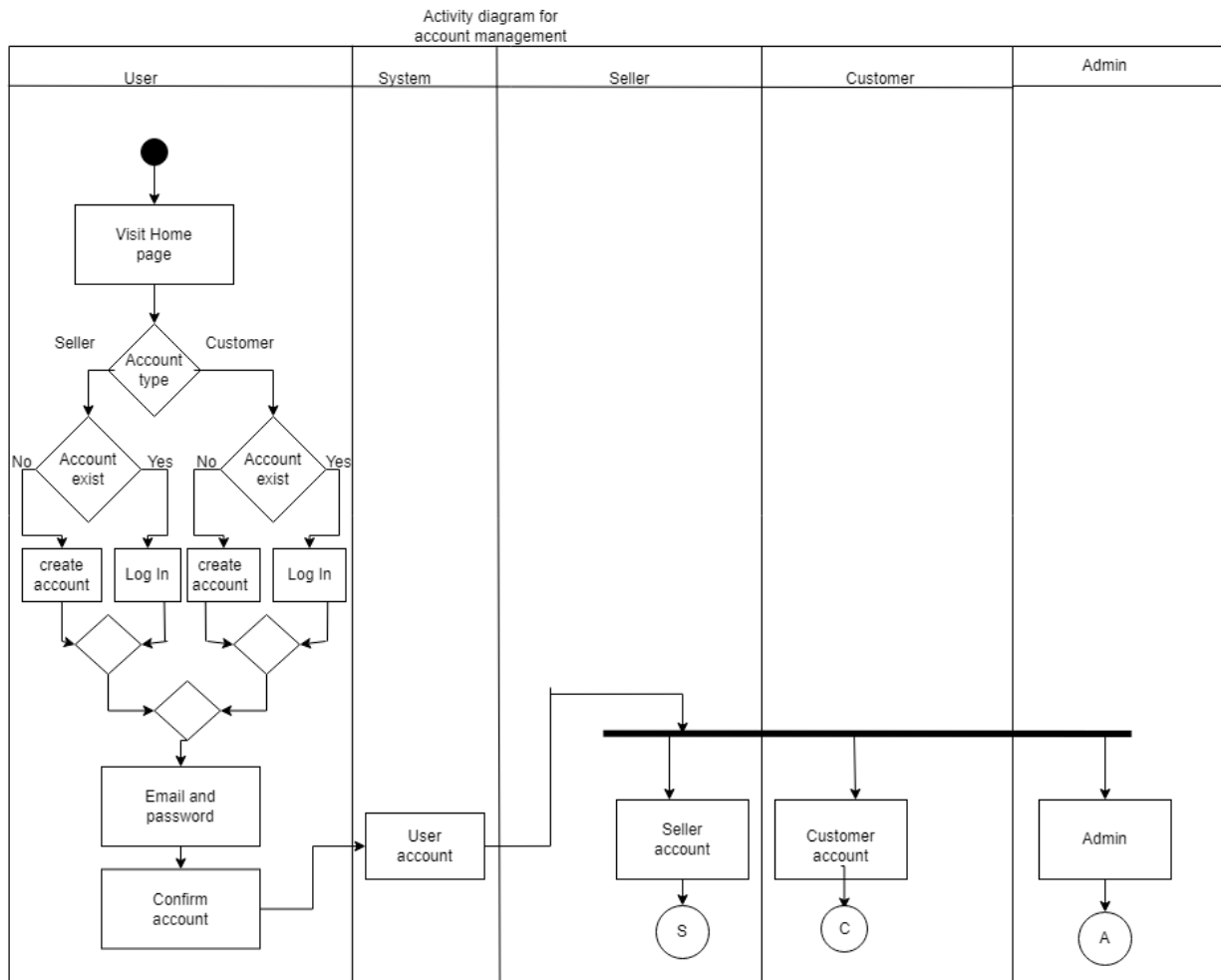


Figure 3: Activity Diagram for Account Management

Activity diagram for  
Seller's account

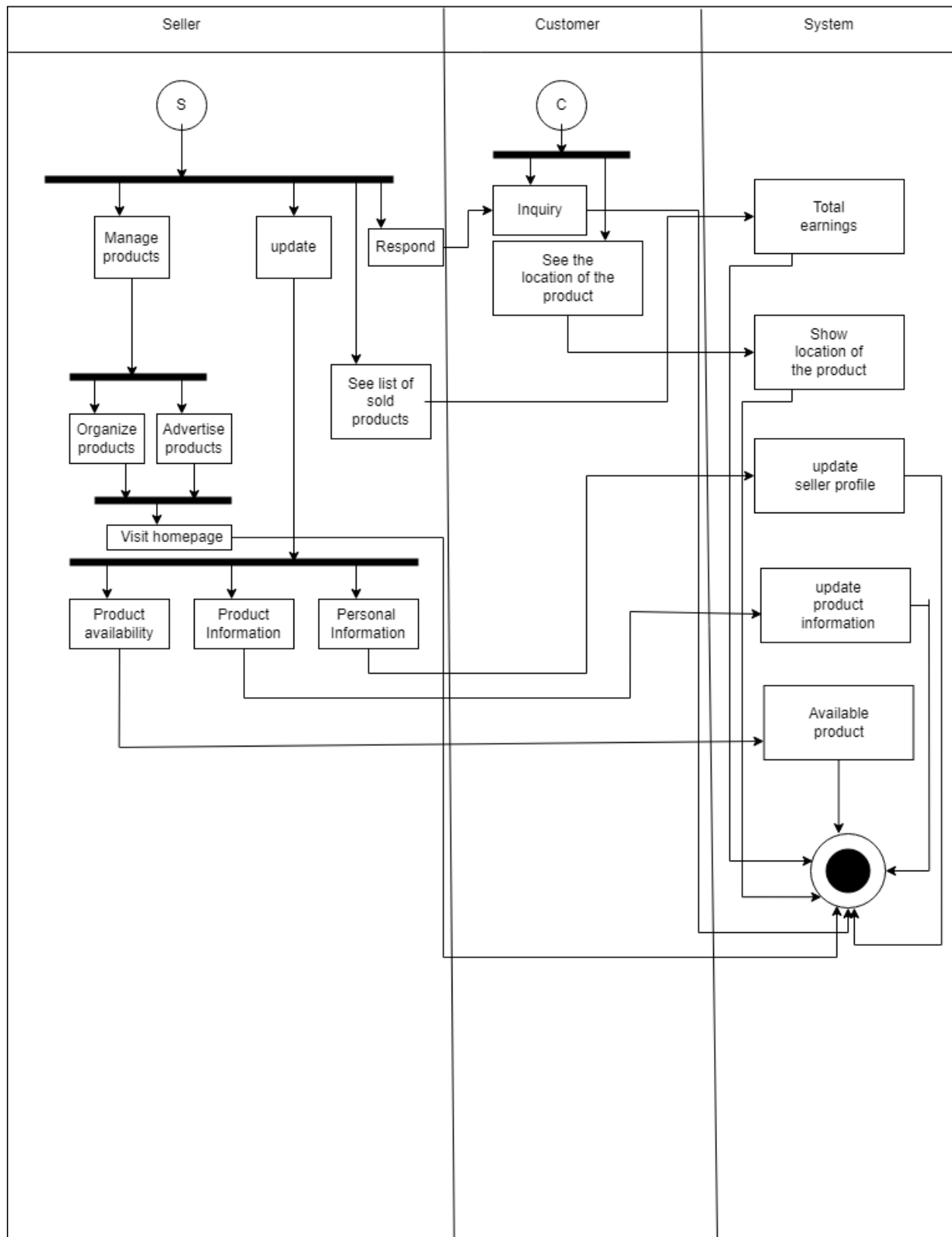


Figure 4: Activity Diagram for Seller's Account

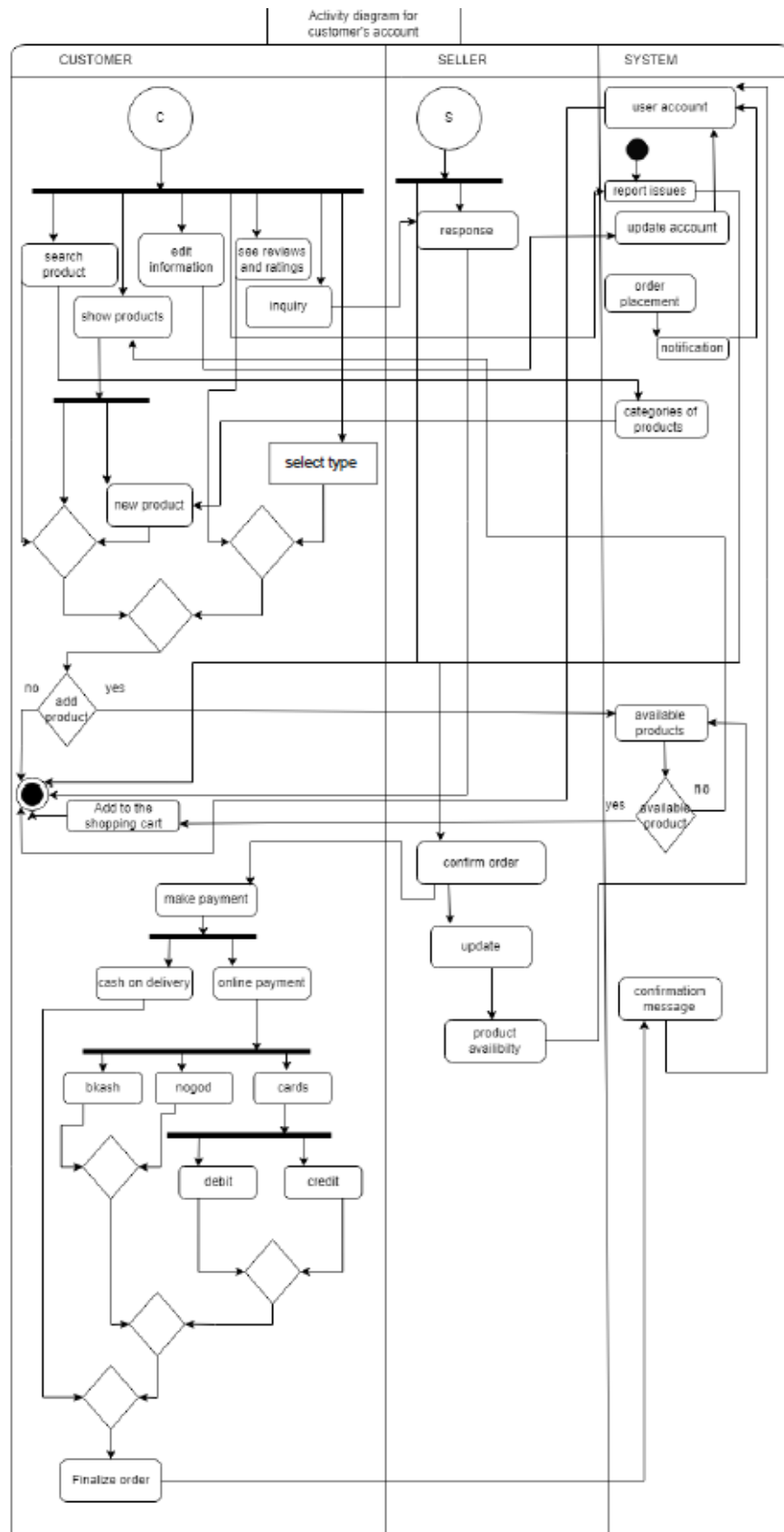


Figure 5: Activity Diagram for Customer's Account

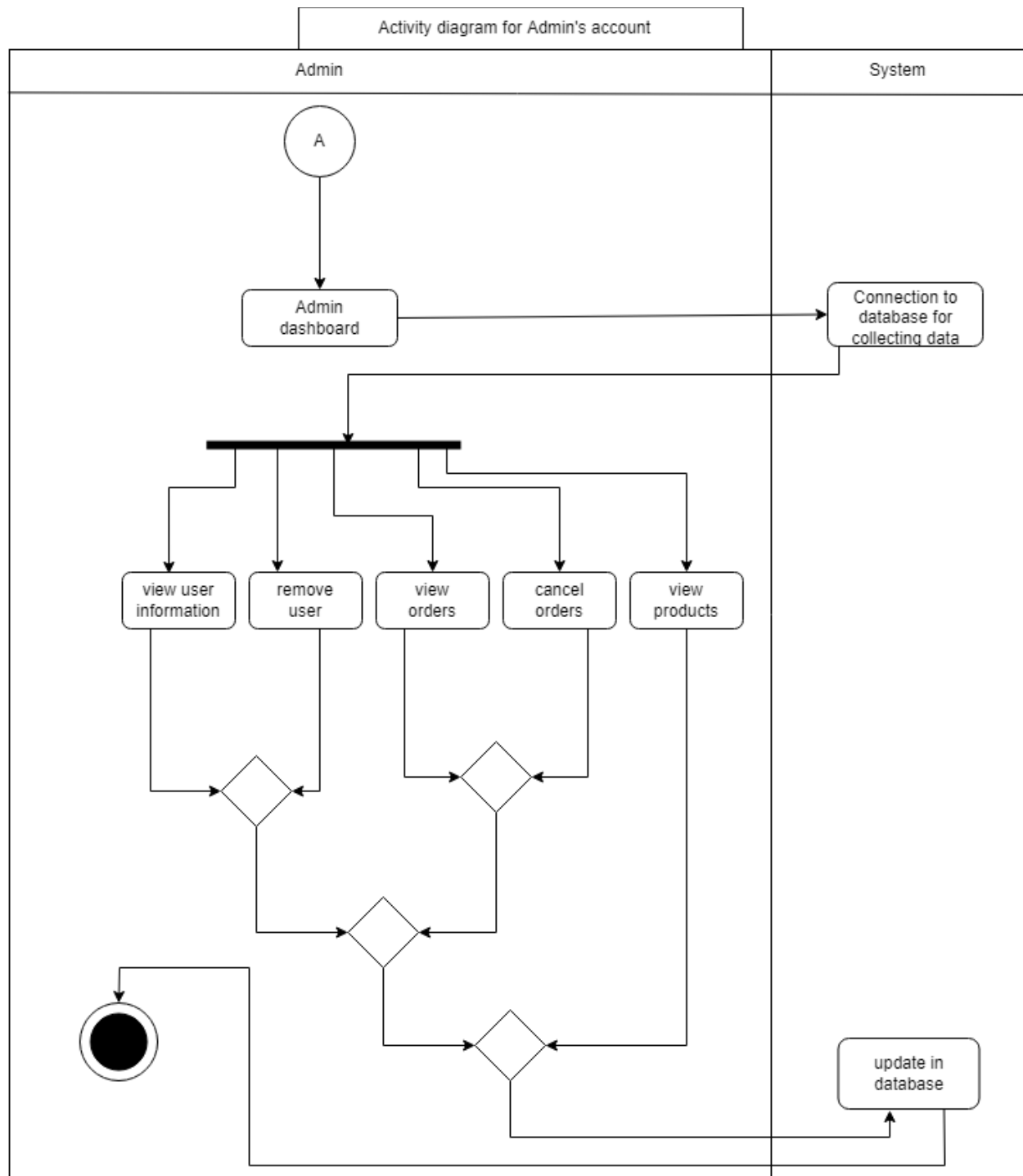


Figure 6: Activity Diagram for Admin Account

## Sequence Diagram:

Sequence diagrams show the sequence of messages that pass between objects for a particular use-case over time. The diagrams below display how the objects send messages to each other and respond to them. The following diagrams are for Account handling, Seller activity, Customer activity and Admin activity.

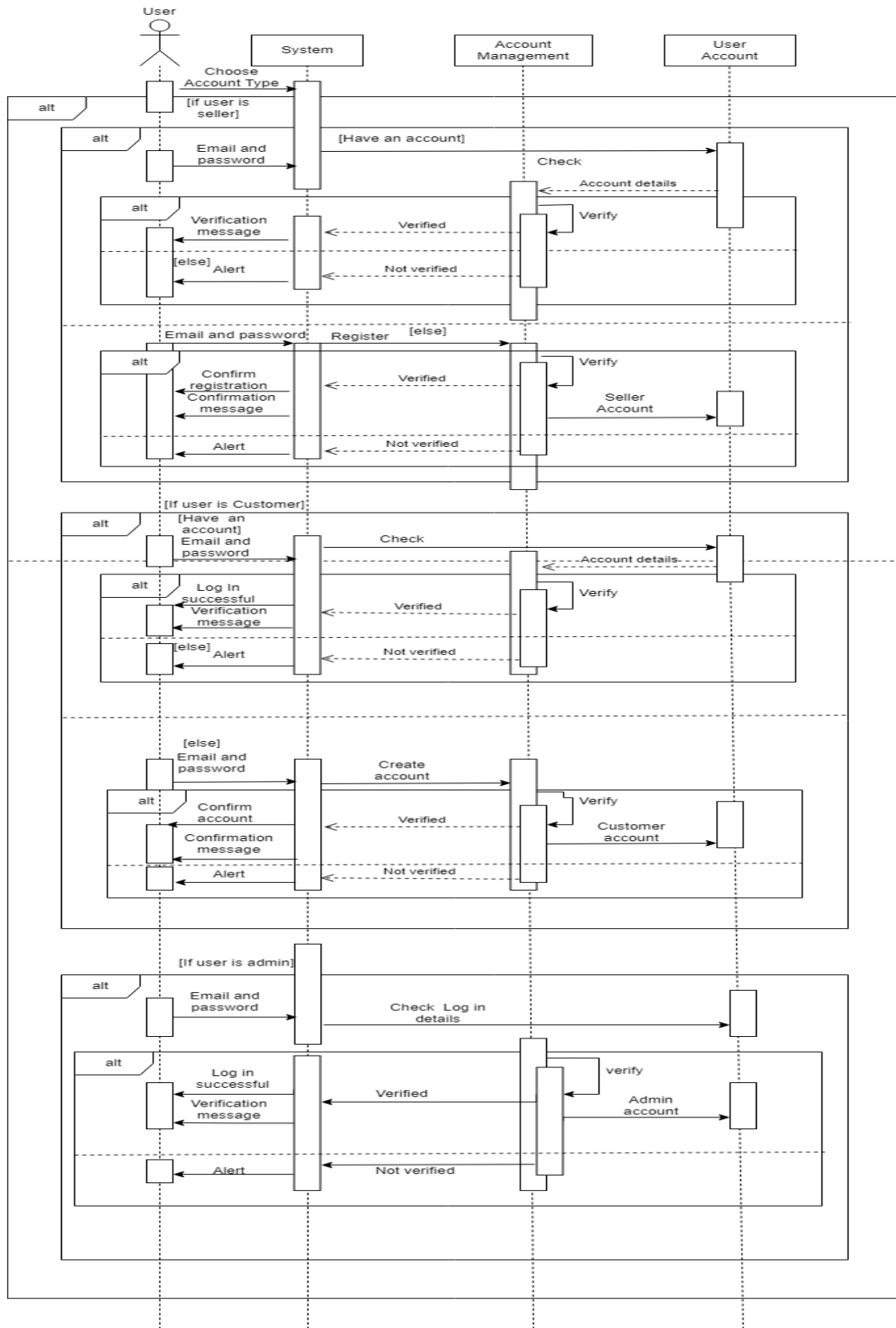


Figure 7: Sequence Diagram - 1



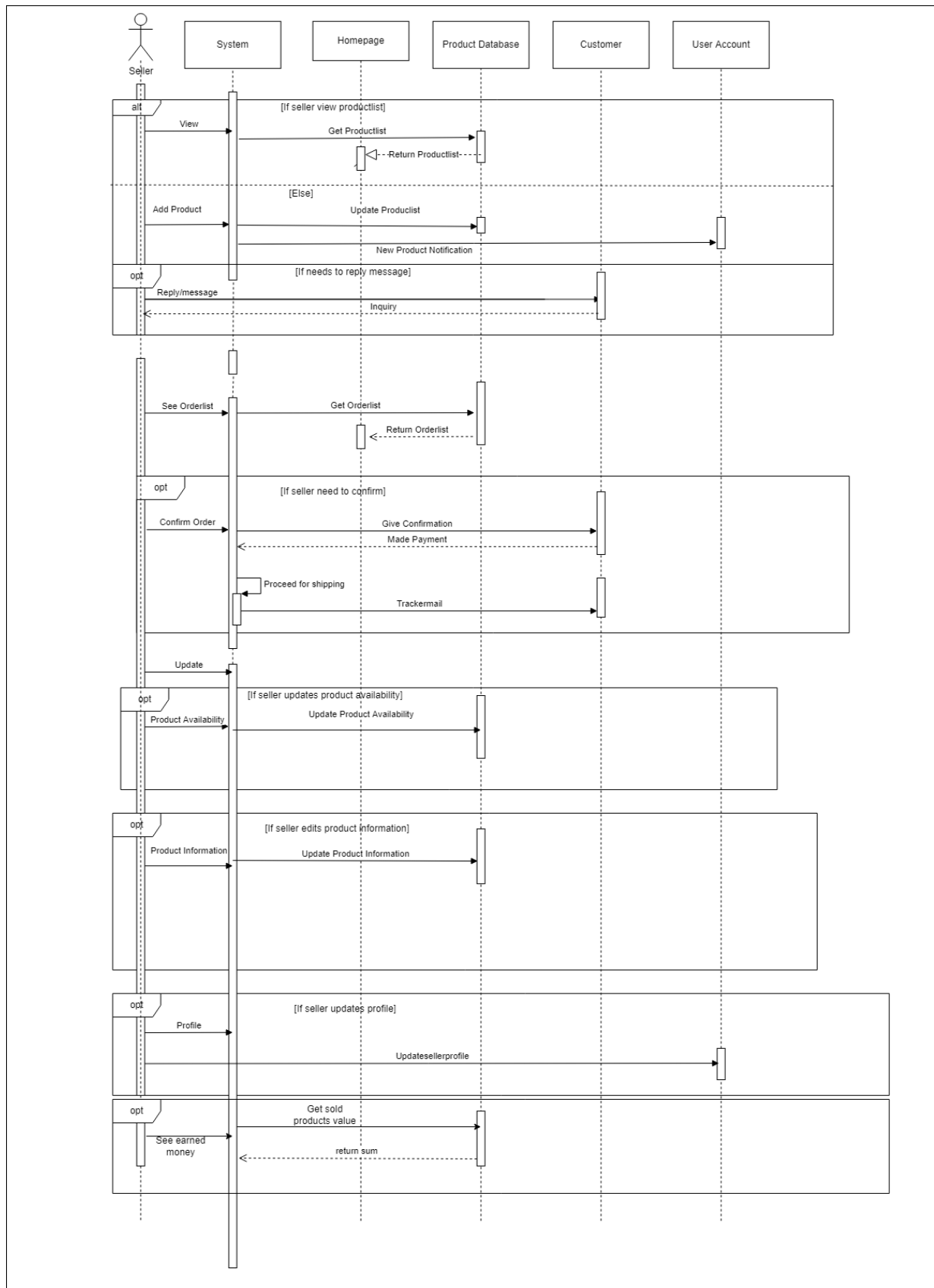


Figure 8: Sequence Diagram - 2

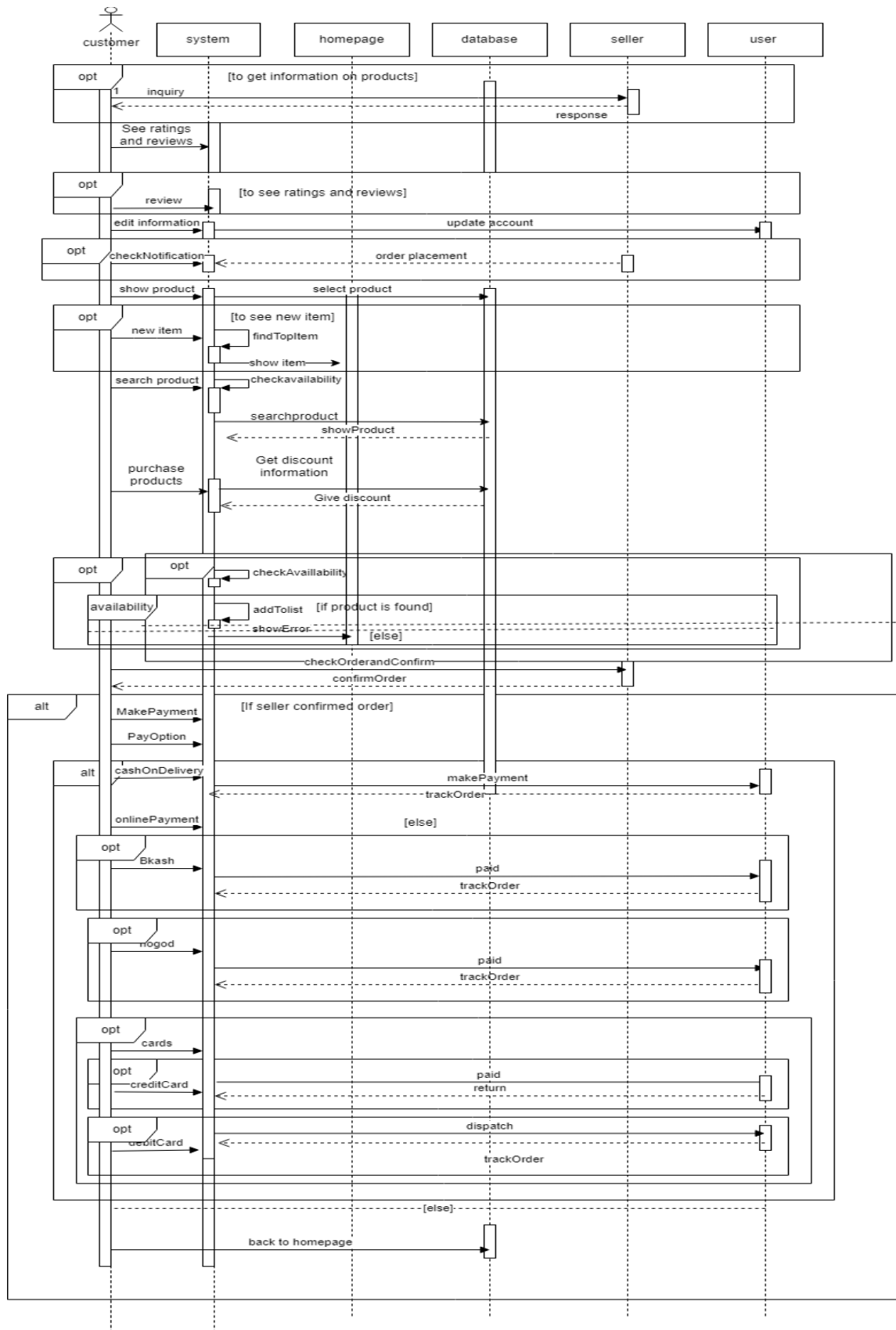


Figure 9: Sequence Diagram - 3

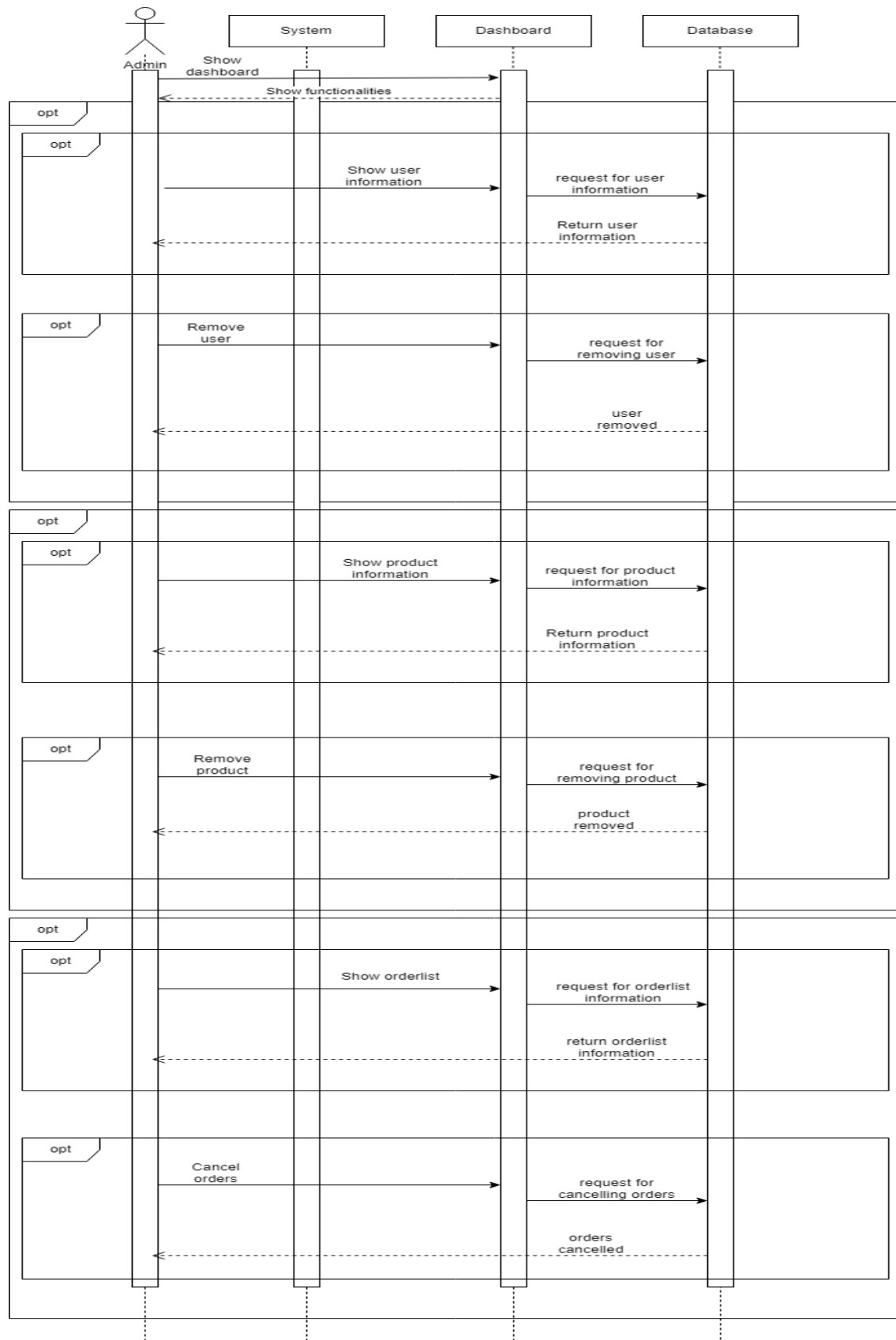


Figure 10: Sequence Diagram - 4

## Data Flow Diagram:

Data Flow Diagram is a graphical representation of data flow through a computer system and depicts how information flows through a system. Two diagrams below show a context diagram and level-1 diagram of important features of our system. It shows how information of accounts is managed, how seller, customer and activity take place.

## Context Diagram

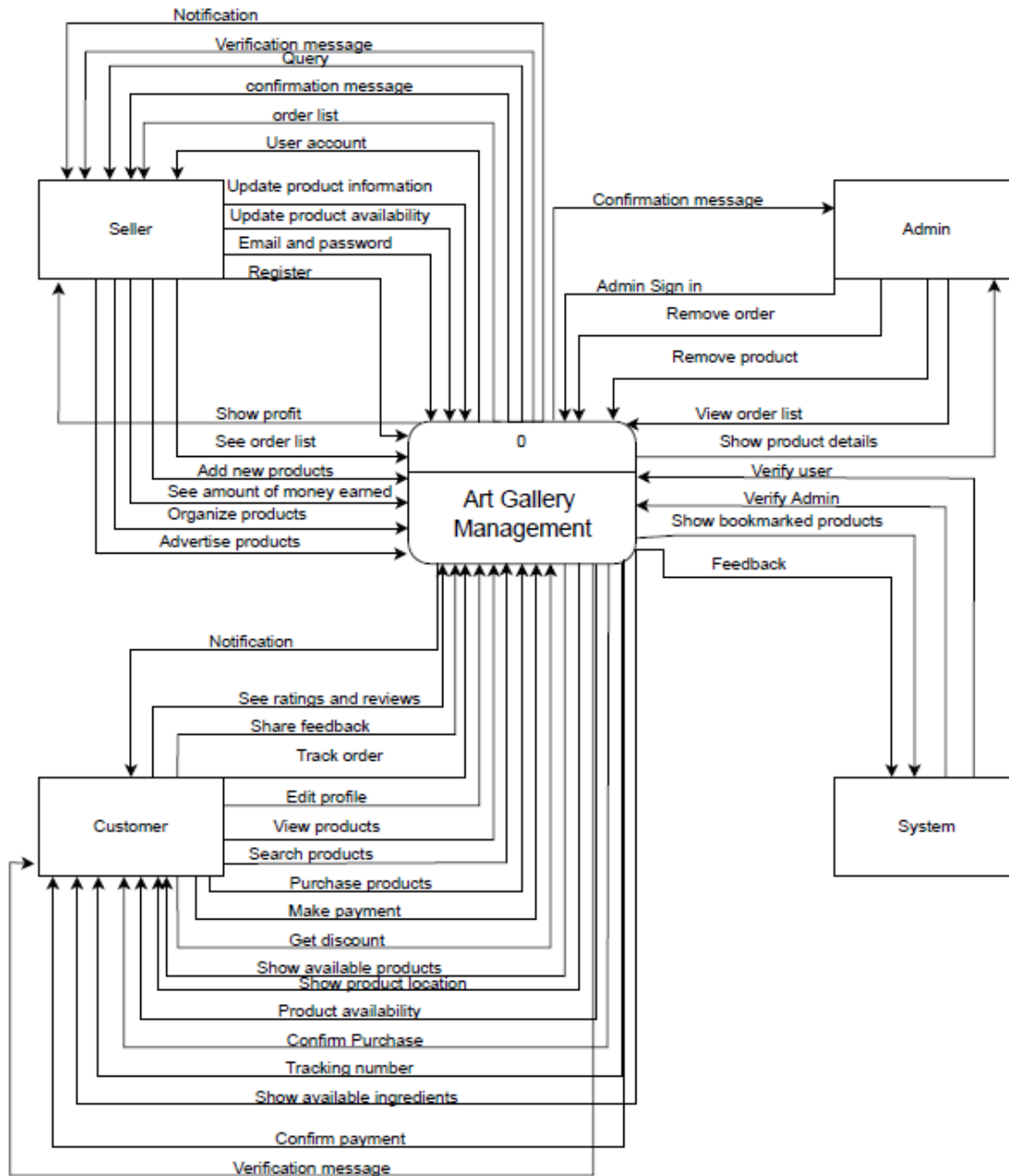


Figure 11: Data Flow Diagram: Level - 0

## Data flow diagram: Level 1

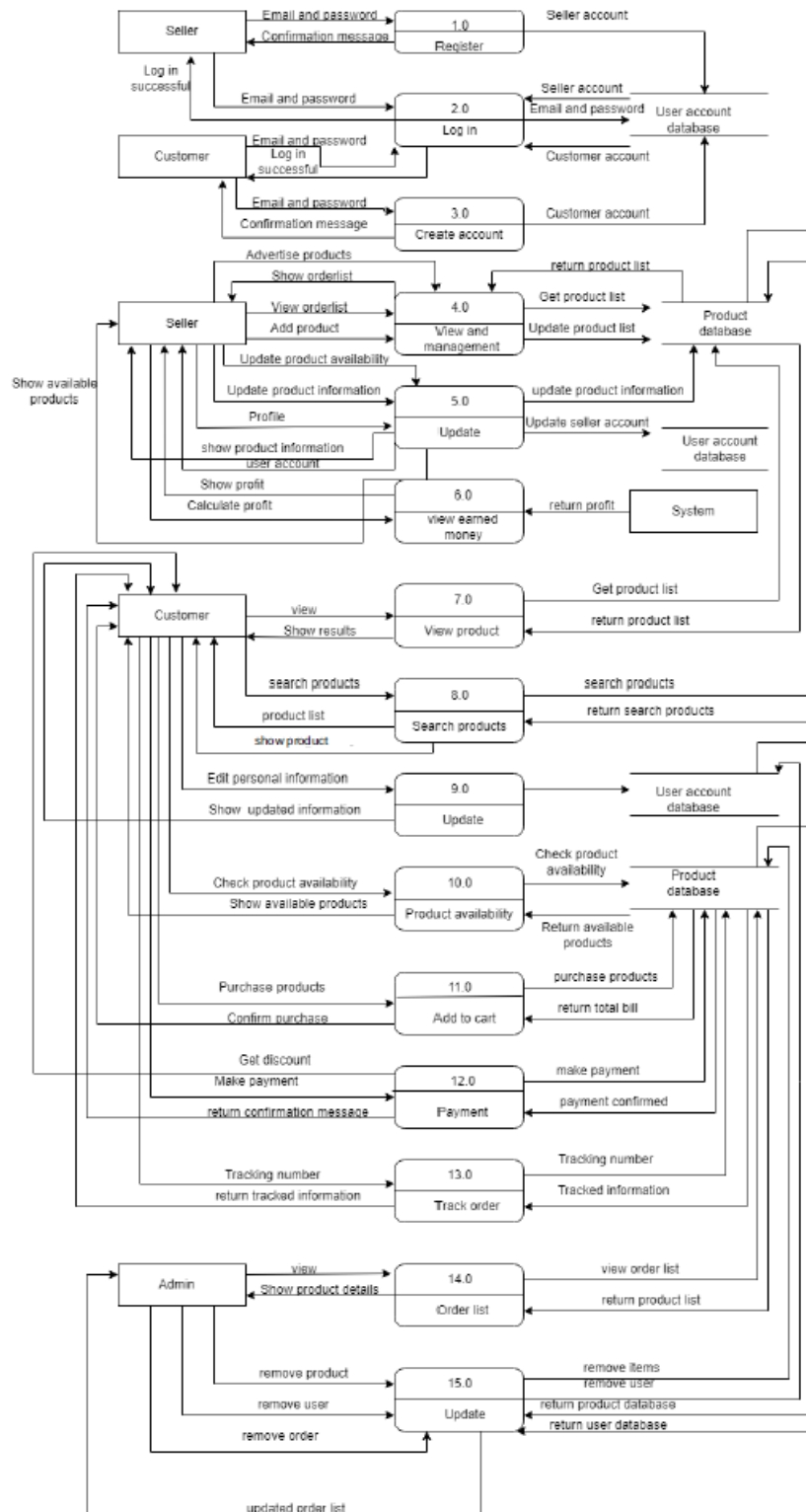


Figure 12: Data Flow Diagram: Level 1

## Windows Navigation Diagram:

A window navigation diagram defines the basic structure of the interface and how the user is expected to navigate between different interfaces. All the diagrams below give an overview of the systems interface based on the user. These diagrams show all the screens, forms and reports in the system which will be used.

### Windows Navigation Diagram For Login and Signup

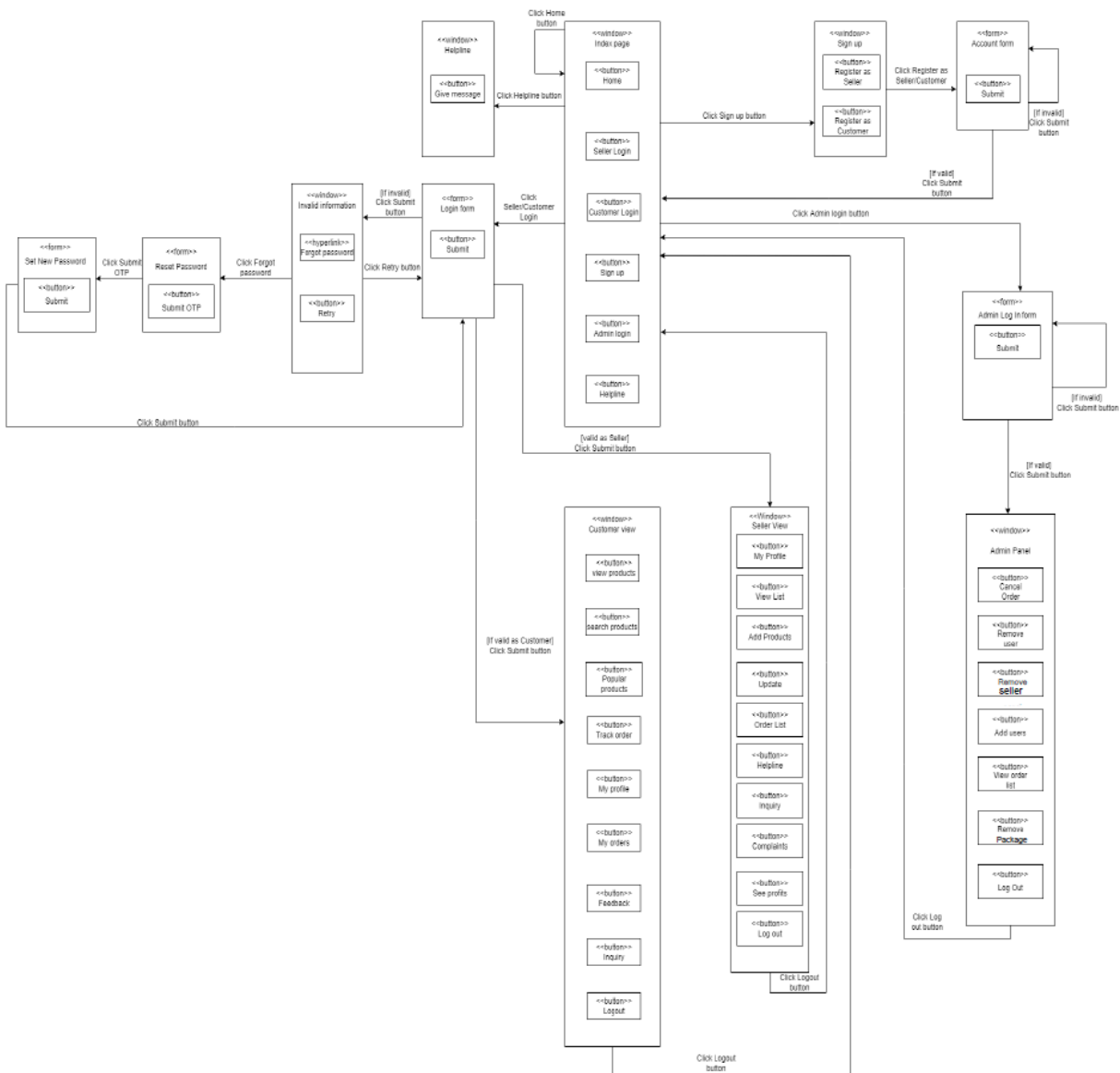


Figure 13: Windows Navigation Diagram for login and signup

## Windows Navigation System Diagram For Seller Account

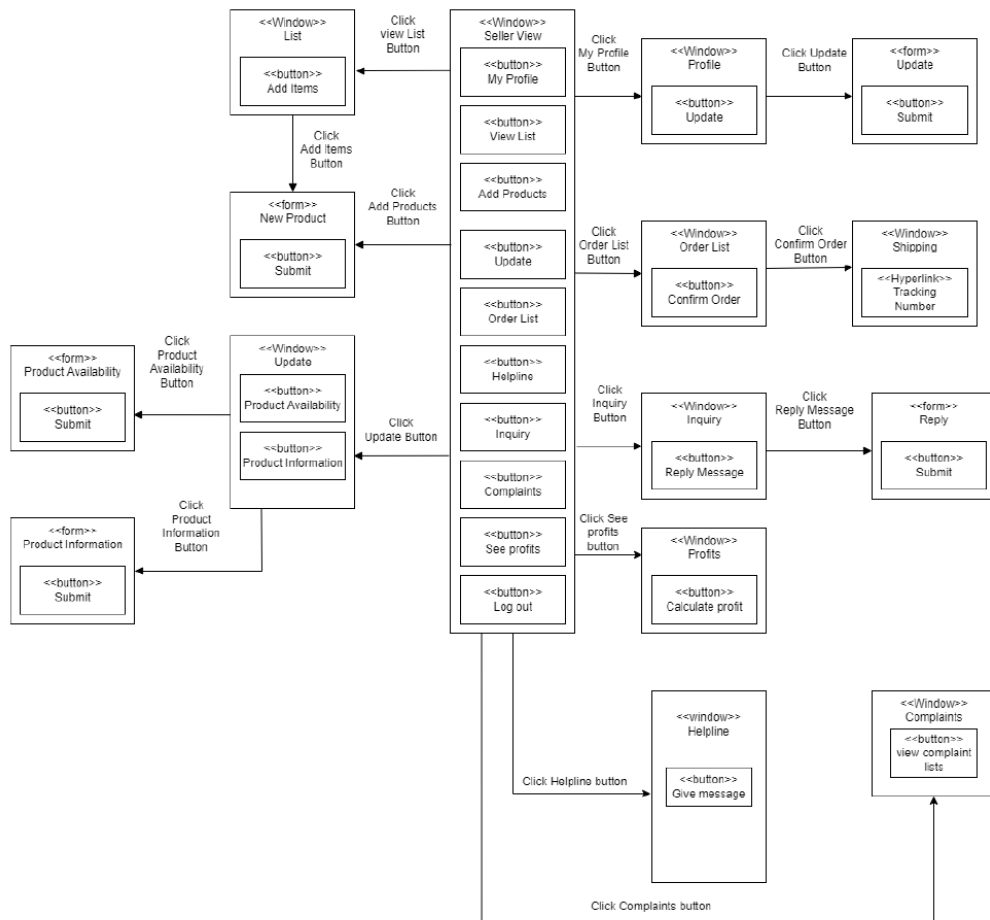


Figure 14: Windows Navigation Diagram for Seller Account



### Windows Navigation Diagram For Customer

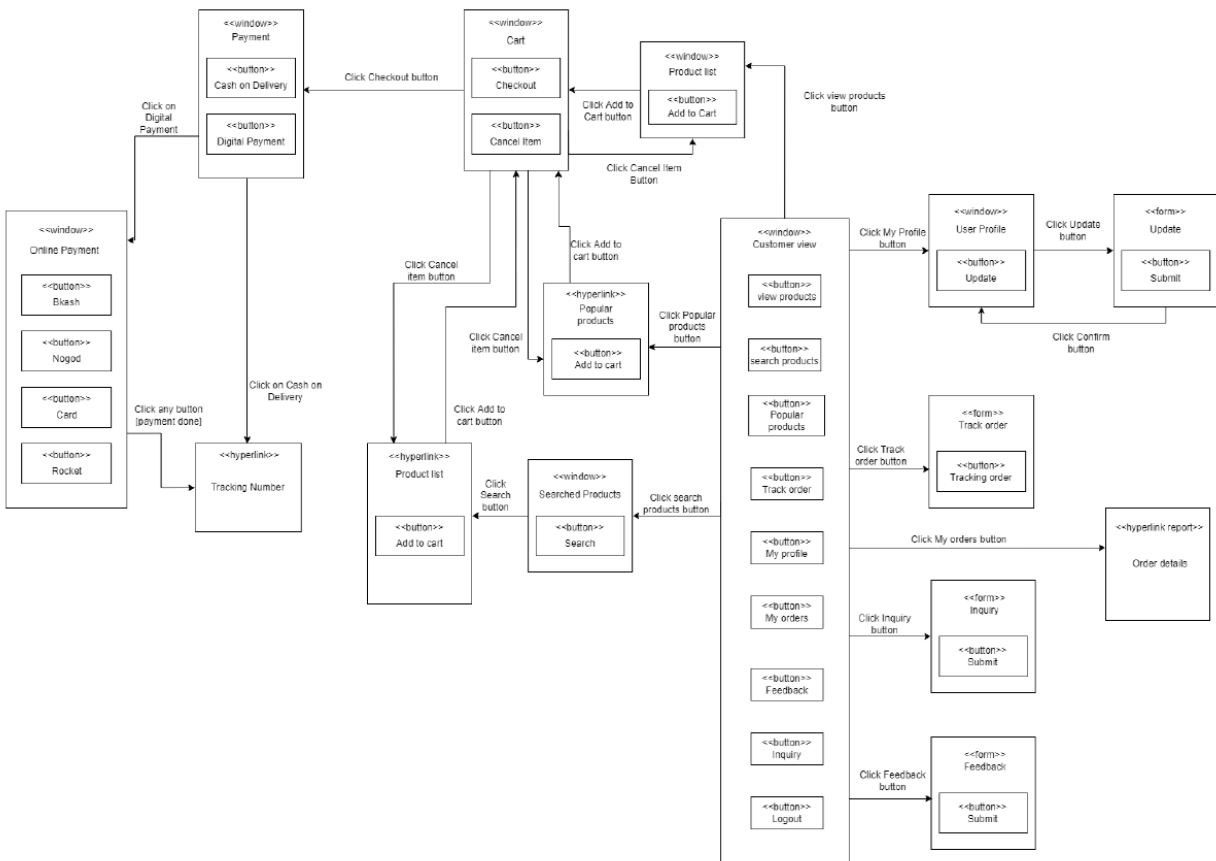


Figure 15: Windows Navigation Diagram for Customer Account

### Windows Navigation Diagram For Admin

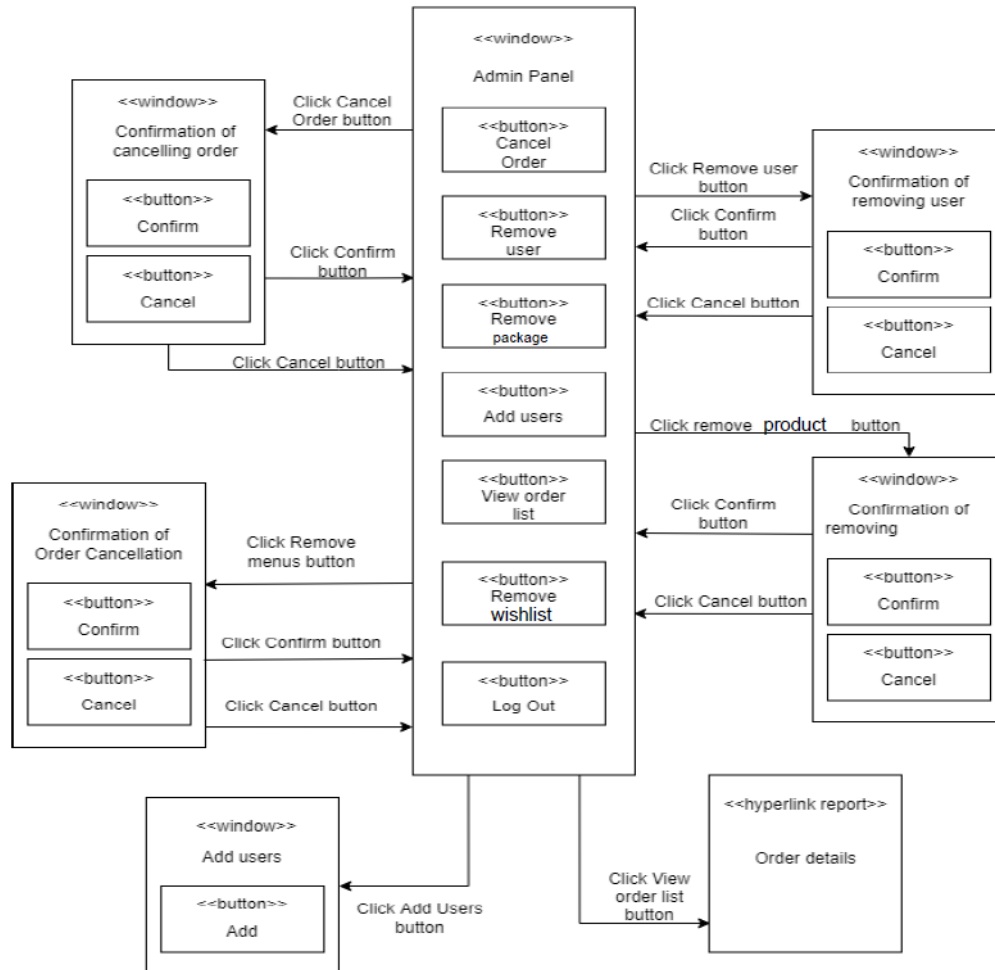


Figure 16: Windows Navigation Diagram for Admin Account

## Conclusion

An Art Gallery Management system is a perfect elective to third party nourishment aggregators or marketplaces. A nourishment commercial center may be a centralized center where numerous Artist and seller post their art items for clients to arrange from. The main goal of our system is to make art items ordering easier and comfortable for our clients. When a client visits our system, they can see all the recorded arts and courses. They can then order art specifically based on what they want. This can be advantageous to the clients since they can select arts from diverse artists in one put rather than introducing different apps for each category of arts. Our system dispenses with human-related mistakes and long conveyance times by permitting clients to put their orders in immediately, and then arrange their order as soon as possible. Our system also allows sellers to market their goods without any inconvenience.