# Title of the Project: Online Art Gallery

## Group Name: Outliers

## Group Members:

| Student ID | Student Name |
|---|---|
| 18341001 | MOHAMMAD SAKIB HOSSAIN |
| 18201108 | CHINMOY MAJUMDER |
| 18301171 | S.M NAZMUL HASSAN |

## Introduction

This project has been initiated to let people easily see or have a vision of different kinds of art and buy their favorite one. The artists will also get help from this service. Here, artists will be able to upload different kinds of arts and select the pricing. This project keeps track of ID access, so not more than one person cannot login into the system with same identity. This ensures a safe environment for both artist and customer.

## Motivation

We felt there is lack of digital platform for the art enthusiasts. In this time of lockdown, the artist are going through a difficult time and also the art lover also feeling bored as they can't get their hands on to new artistic masterpiece. So we thought of creating an online platforms for the art lovers where they can buy and sell their masterpieces and we also get benefits from their transactions.

## System Description

| System request for Online Art Gallery | |
|---|---|
| Project sponsor | - Mohammad Sakib Hossain<br>- Chinmoy Majumder<br>- S.M Nazmul Hassan |
| Business need | - Reaching online customers<br>- Creating a business place for Art Lovers<br>- Increasing sales<br>- Getting customer feedback<br>- Reducing shop cost<br>- Efficient inventory management<br>- Providing more detailed information |
| Business requirements | Using the web, customers can see different arts that are uploaded by artist and able to search for different types of arts. Customer can order arts and those orders will be delivered to the customer's doorstep. The functionality that the system should have is listed below:<br>- Provide online access to arts.<br>- Upload Arts which includes setting Price, Description and etc<br>- Can pay online or cash on delivery while purchasing arts.<br>- Include online user support through chatbox<br>- Provide search bar for searching arts.<br>- Track Orders |
| Business Values | We expect that the sales of arts would be increased because more people would be able to reach us staying at home. Moreover our outlet space can be shorten which would reduce our cost. This system would also allow us to work with less manpower. We can serve everyone utilizing less employees ,within a short span of time which would be enrich customers satisfaction level.<br>Conservative estimates of tangible value to the system:<br>- Increase of sales 200,000 |

| | |
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| | - Reduced shop cost 80,000<br>- Reduced operation cost up to 50,000<br>Conservatives estimates of intangible value to the system:<br>- Increased customer satisfaction<br>- Reduction of time in management |
| Special Constraints | - We want the system as soon as possible. As there is a pandemic going on the online sales are very import. The system should be delivered before 14th February,2021 |

# Requirement analysis

## Functional and non-Functional Requirements:

## Functional Requirements:

## 1.Onilne Art Gallery System:

1.1 User will be able to login and log out.
1.2 System will verify the login information when a user tries to login.
1.3 Users can update their profile where they will require name, age, sex, blood group, any special physical condition etc.
1.4 System will show error message for wrong login information.
1.5 Admin can delete inactive users.
1.6 Users will be notified for new update.
1.7 Users can contact with the admin through chat box.
1.8 Users can complain any kind of problems
1.9 Artist can add or remove their art
1.10 Artist can put different prices on their art
1.11 Every Artist will have unique page
1.12 Users can easily buy and pay via payment method
1.13 There will be options on payment method
1.14 There will be delivery man
1.15 Delivery man will confirm the payment

## Non-Functional Requirements:

### 1.Operational:

1.1 The system can run over any operating system.
1.2 The system will use GPS and Google Maps to send location to the deliveryman.
1.3 Customers can also locate the riders.

### 2.Performance:

2.1 It will be able to handle many requests at a time.
2.2 The system will be reliable and fast
2.3 The rate of failure occurrence will be very low.

### 3.Security:

3.1 Other users cannot see one's personal data

3.2 Admin should be able to arts before appearing in the system.

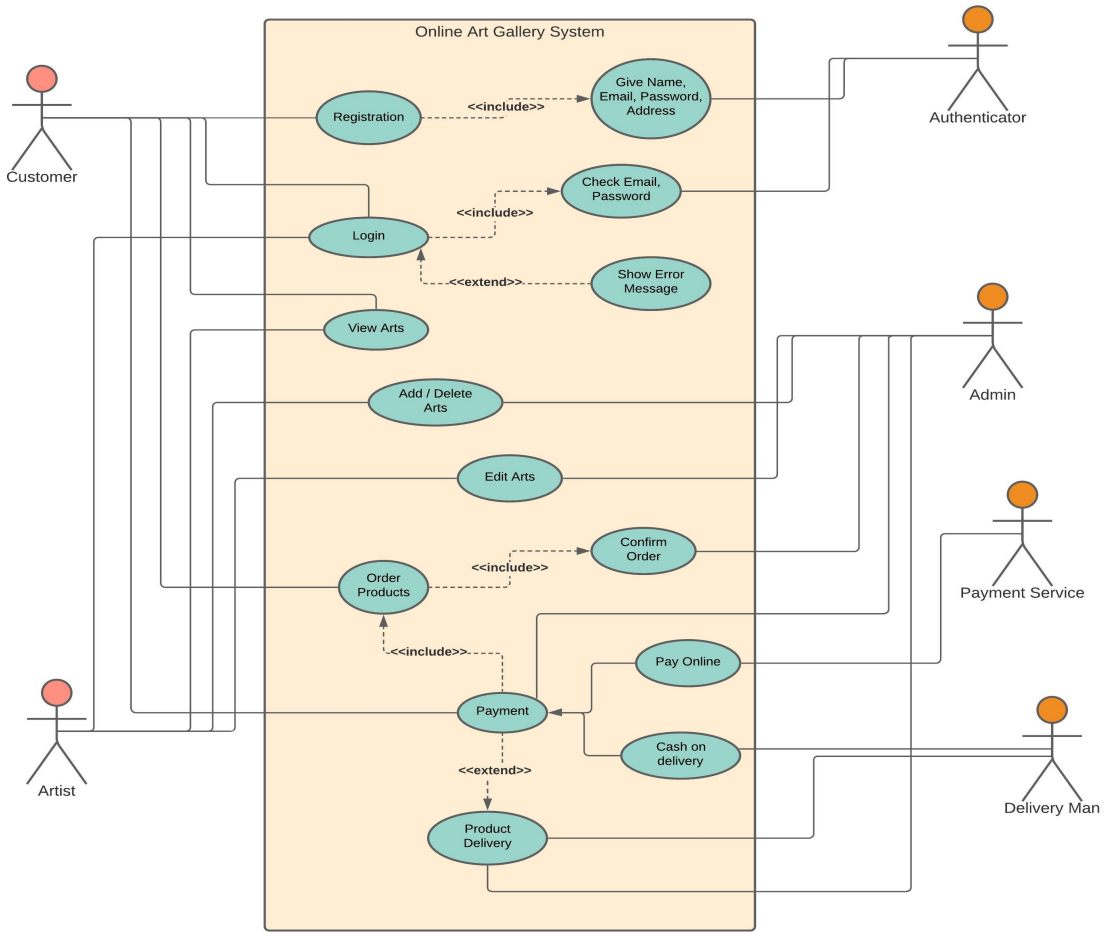
3.3 Admin should be able to add/edit/remove products.

### 4.Cultural and Political:

4.1 Our system will not consist of any arts that contains or express any kind bad political activities.

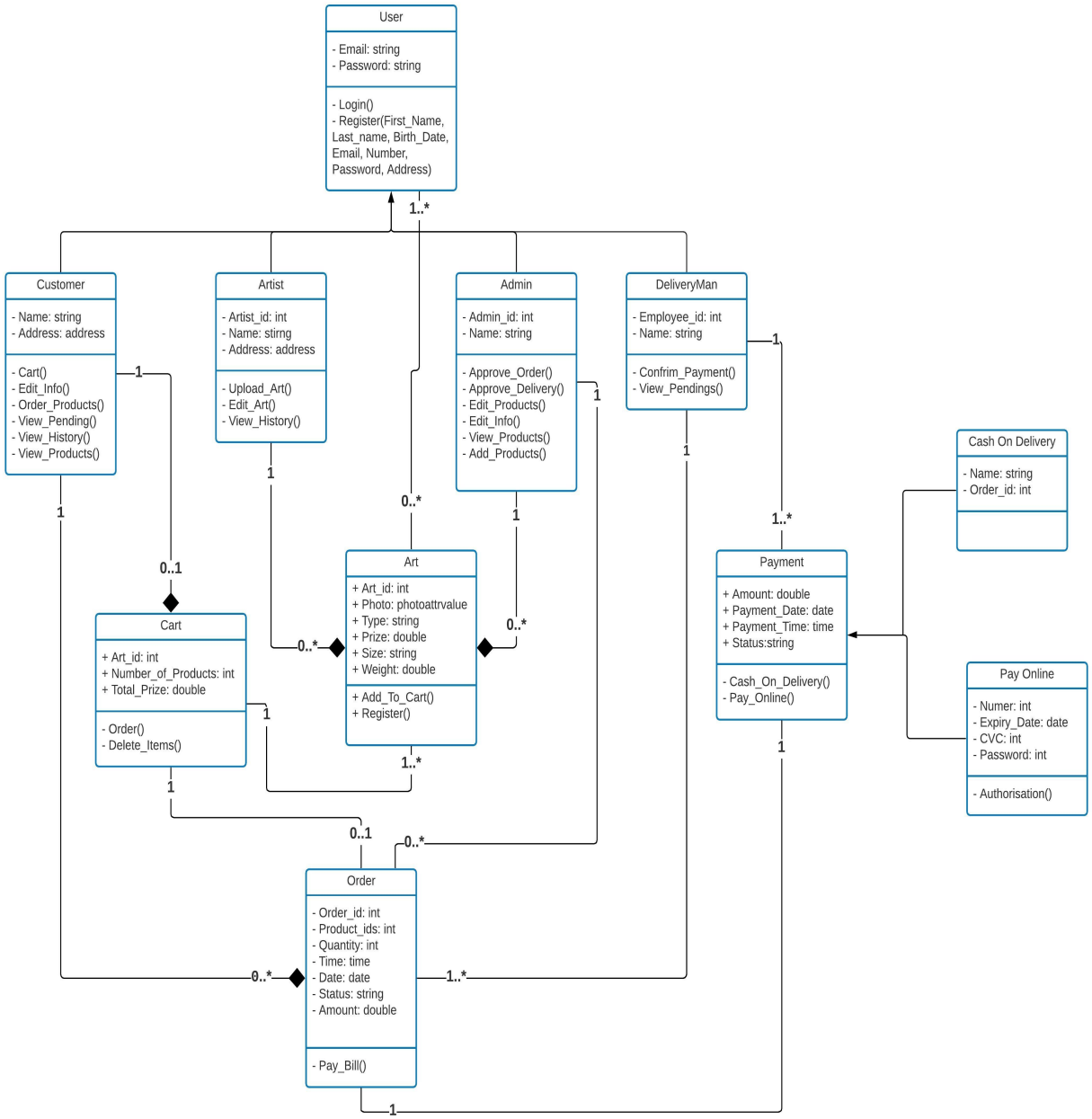
## Design diagram

**Use Case Diagram**



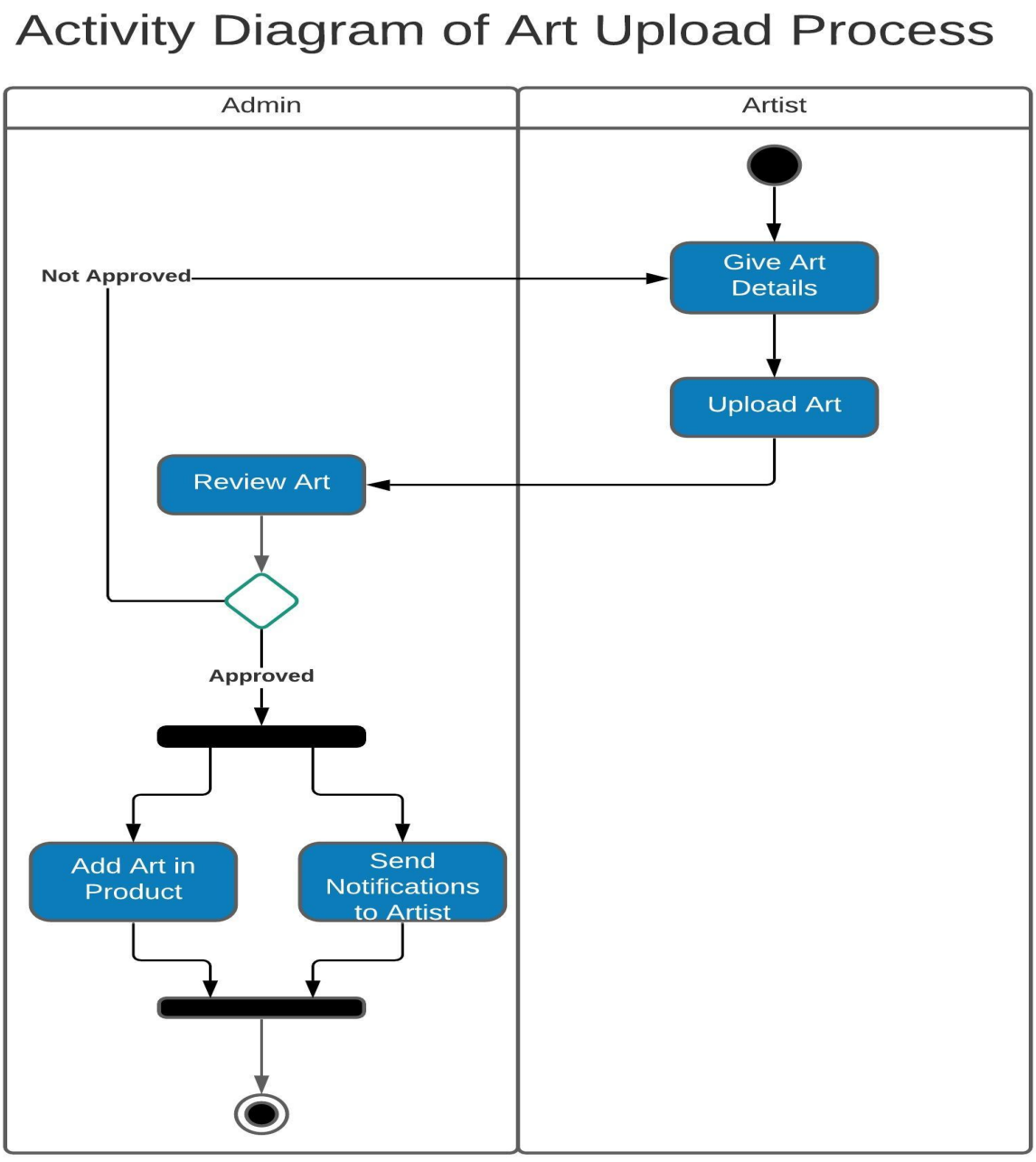

Different actors interacts with our Online Art Gallery system. In which manner they interact and operate the system is showed in this Use Case Diagram. Customer can see products, make orders and do Payments where Admins have to approve the order and delivery. Payment Service is for authentication and transaction purposes of online payment. Artists can upload their Arts, edit and sell them where Admins have to approve the arts and can edit those. Delivery man can see pending deliveries and deliver them and can send confirmation after payment and order is received by clients.

# Class Diagram



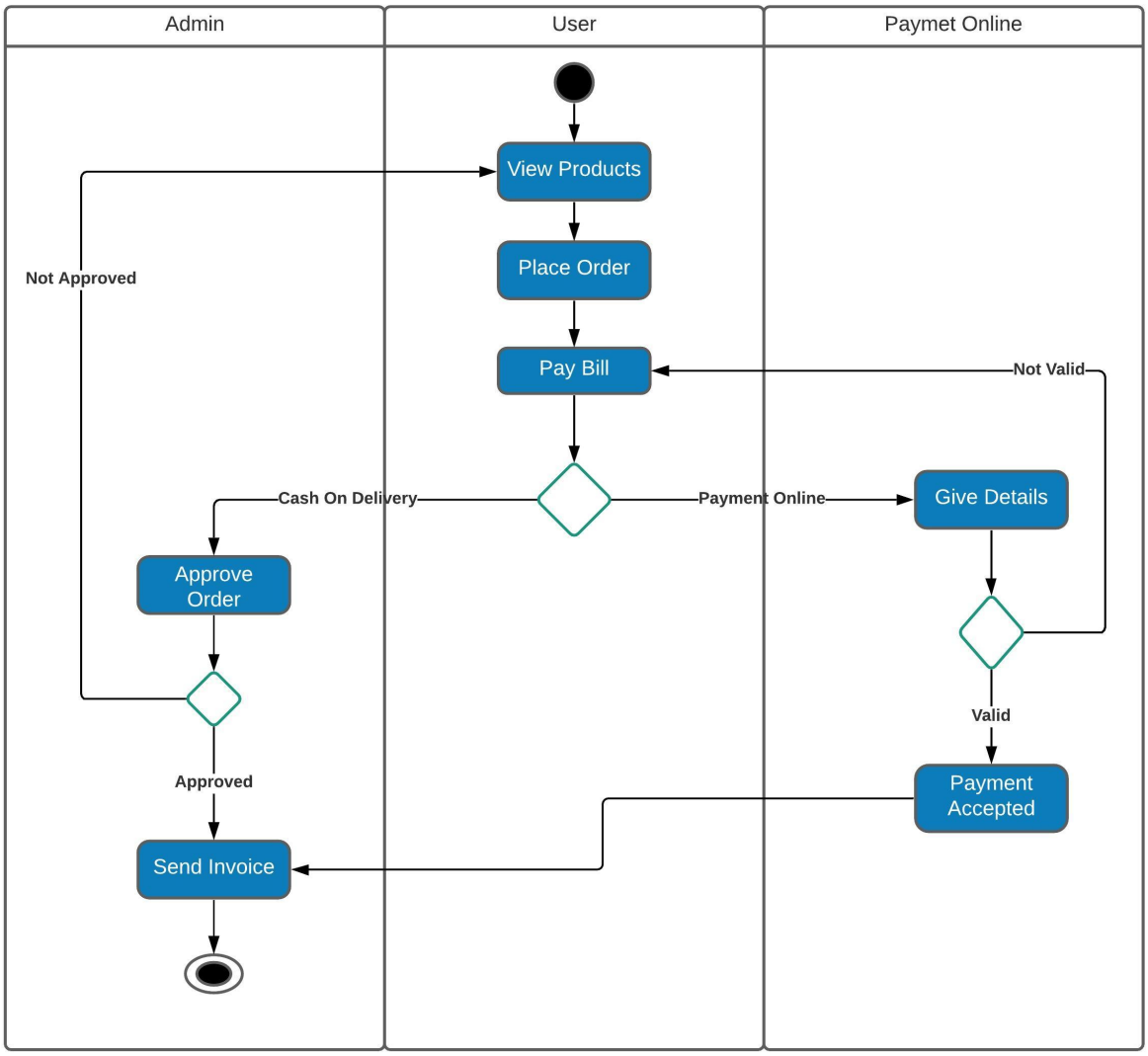

How different classes are associated with each other and are going to be designed while programming is described in class diagram. For instance, Customer class is a child of user so it inherits all the public variable and methods and can use them. Customer class has 6 methods which it uses to perform action by the help of other connected classes.

## Activity Diagrams



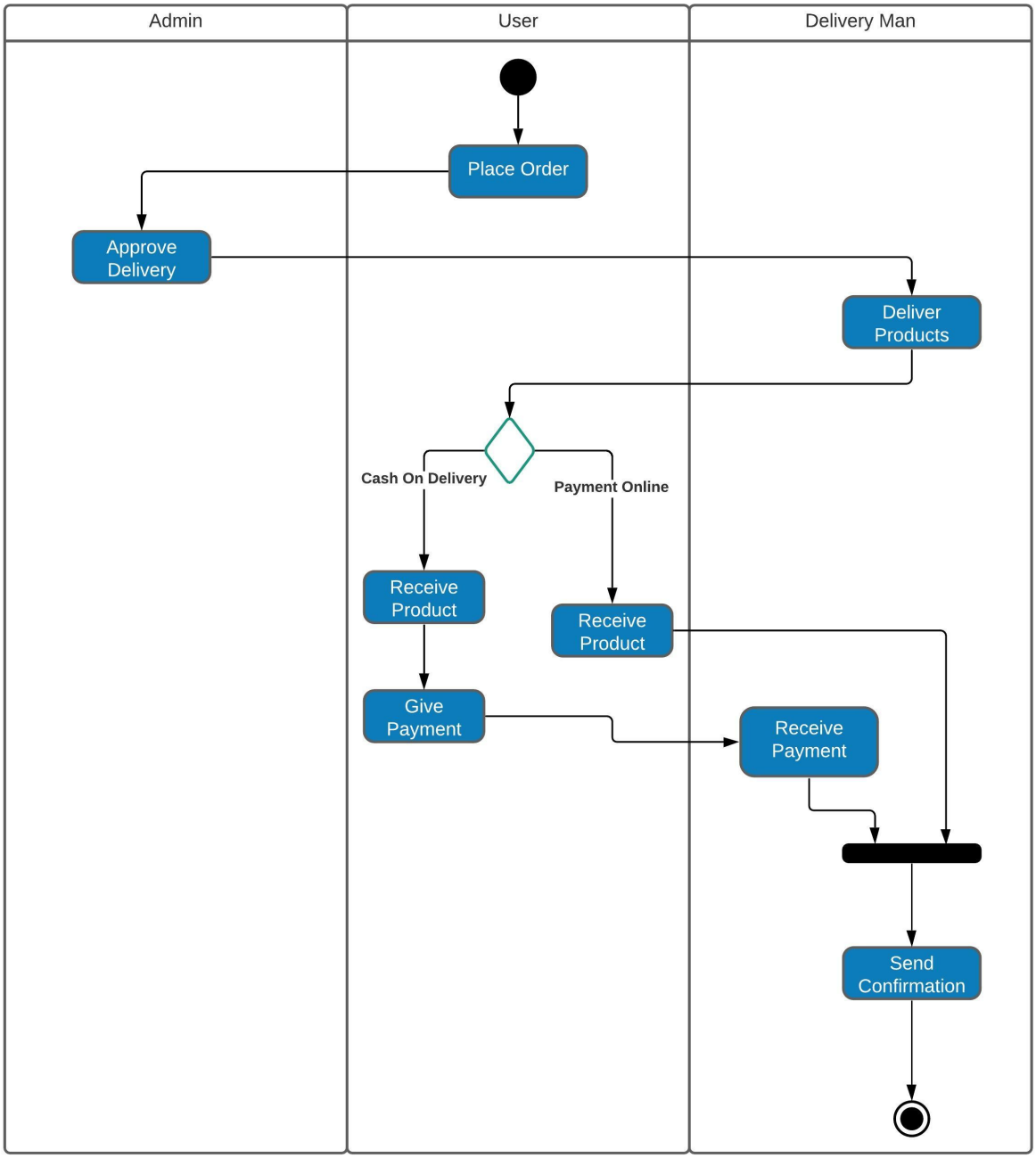

In online Art Gallery System, how art upload process works and when actors participate in the process is shown by the swim lane in the activity diagram.

## Activity Diagram of Order Process



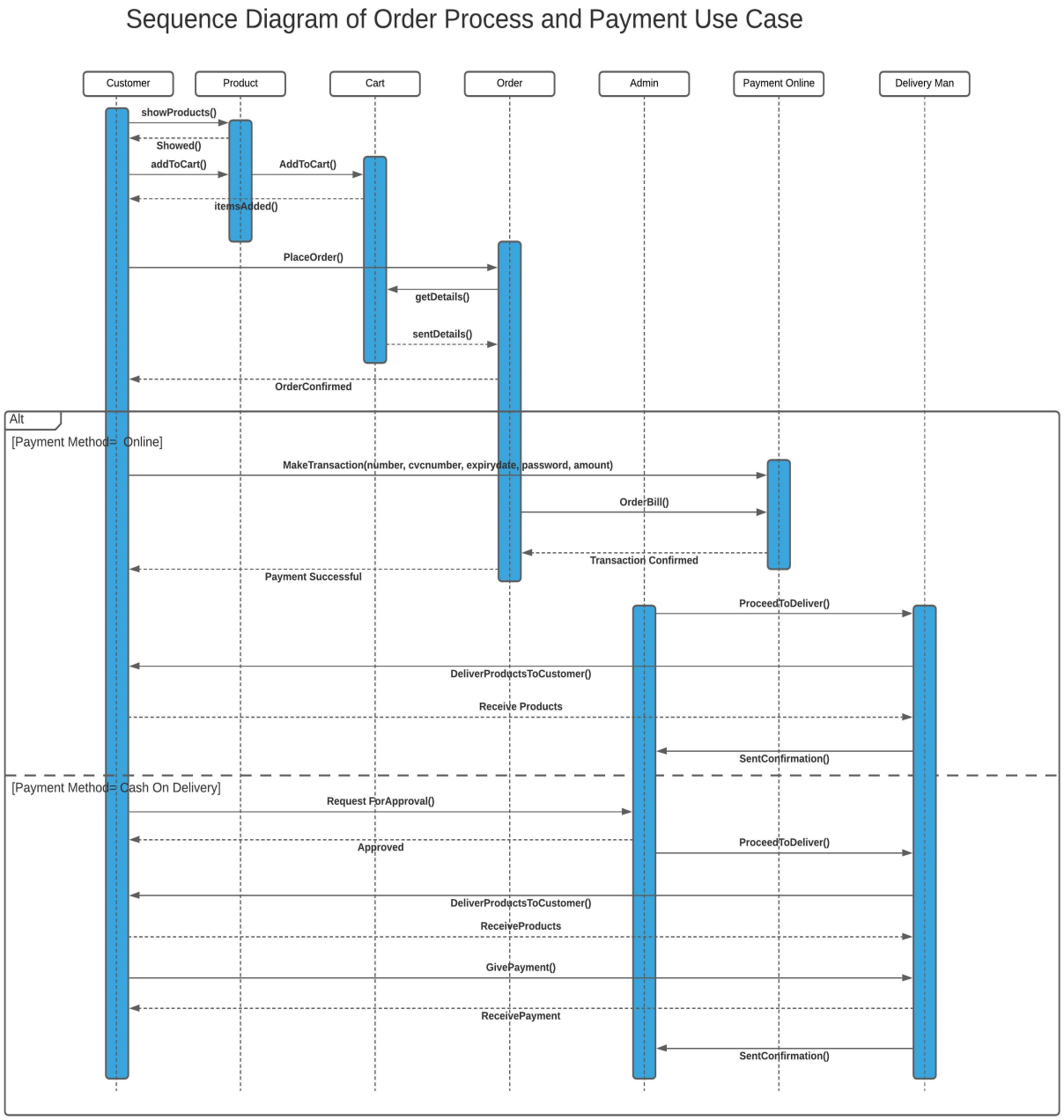

In the System, how art order process and bill payment process work and when actors participate with their action and their consequences in the process is shown by the swim lane in the activity diagram.

## Activity Diagram of Delivery Process



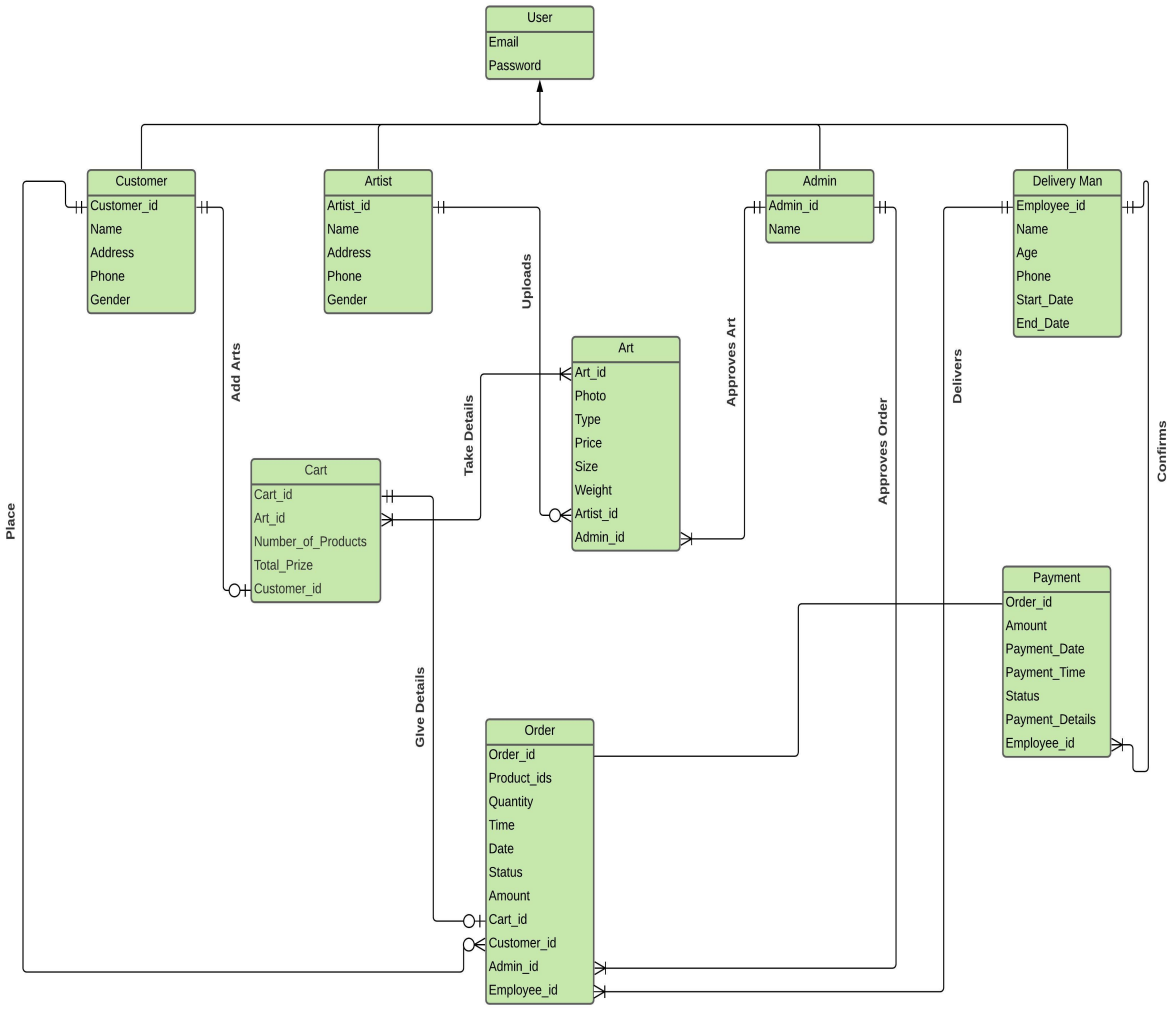

In online Art Gallery System, how product delivery process works and when actors participate in the process is shown by the swim lane in the activity diagram. For example here, the user place order and waits for the admin's approval for delivery of the product when admin approves the product, the delivery man carries the product to customer and the customer response accordingly in his swim lane boundary.

# Sequence Diagram



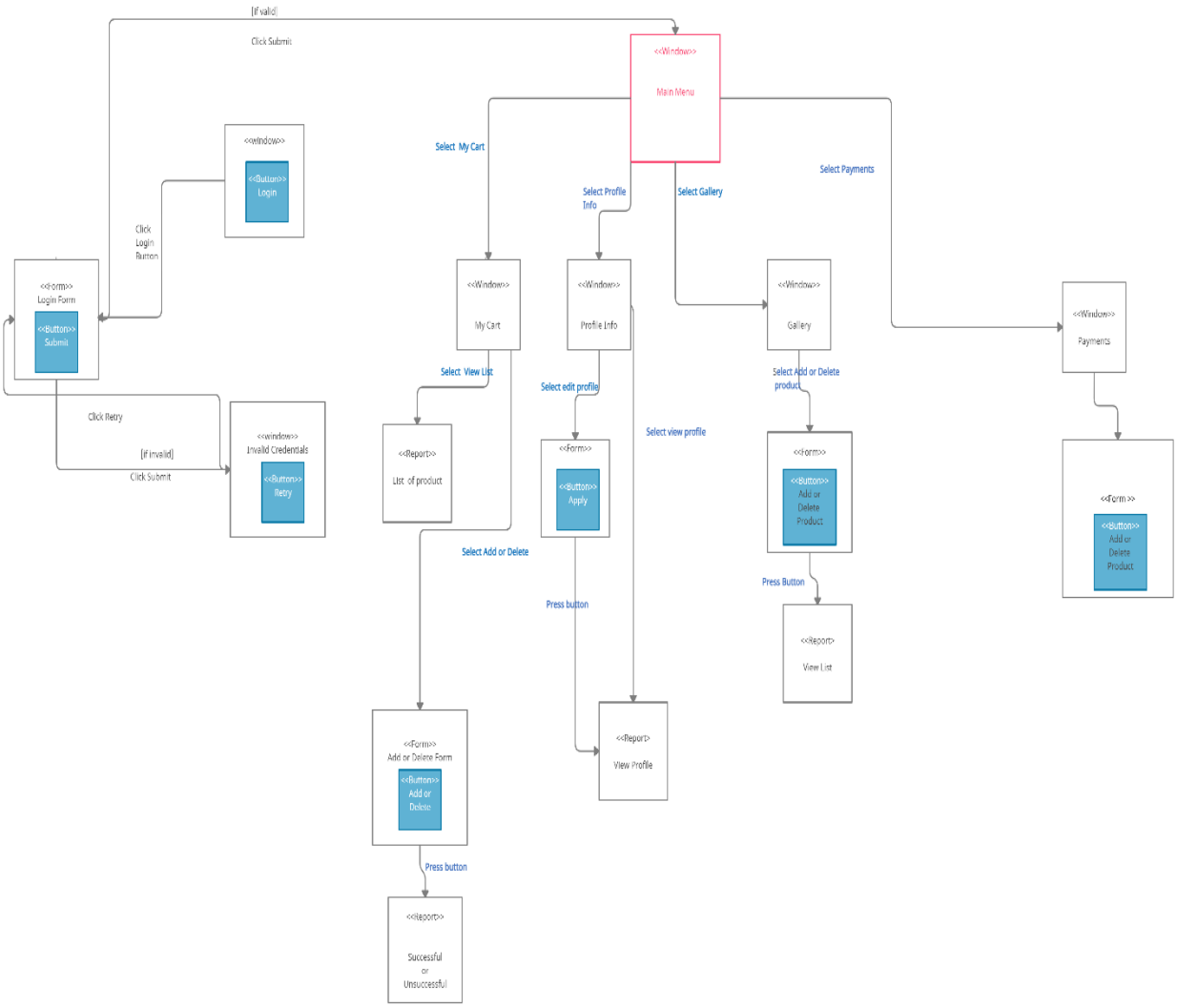

In the sequence diagram, how messages are transferred among objects and actors and how long they stay awake to participate in the process is also shown. For instance, customer sends request to product object to show arts and the product sends another message acknowledging the request. In these diagram customer always remains most of his life cycle awake as he had to response for his actions most of the time. However admin had to stay little time awake in his life cycle as he had very less messages to respond.

# ER Diagram



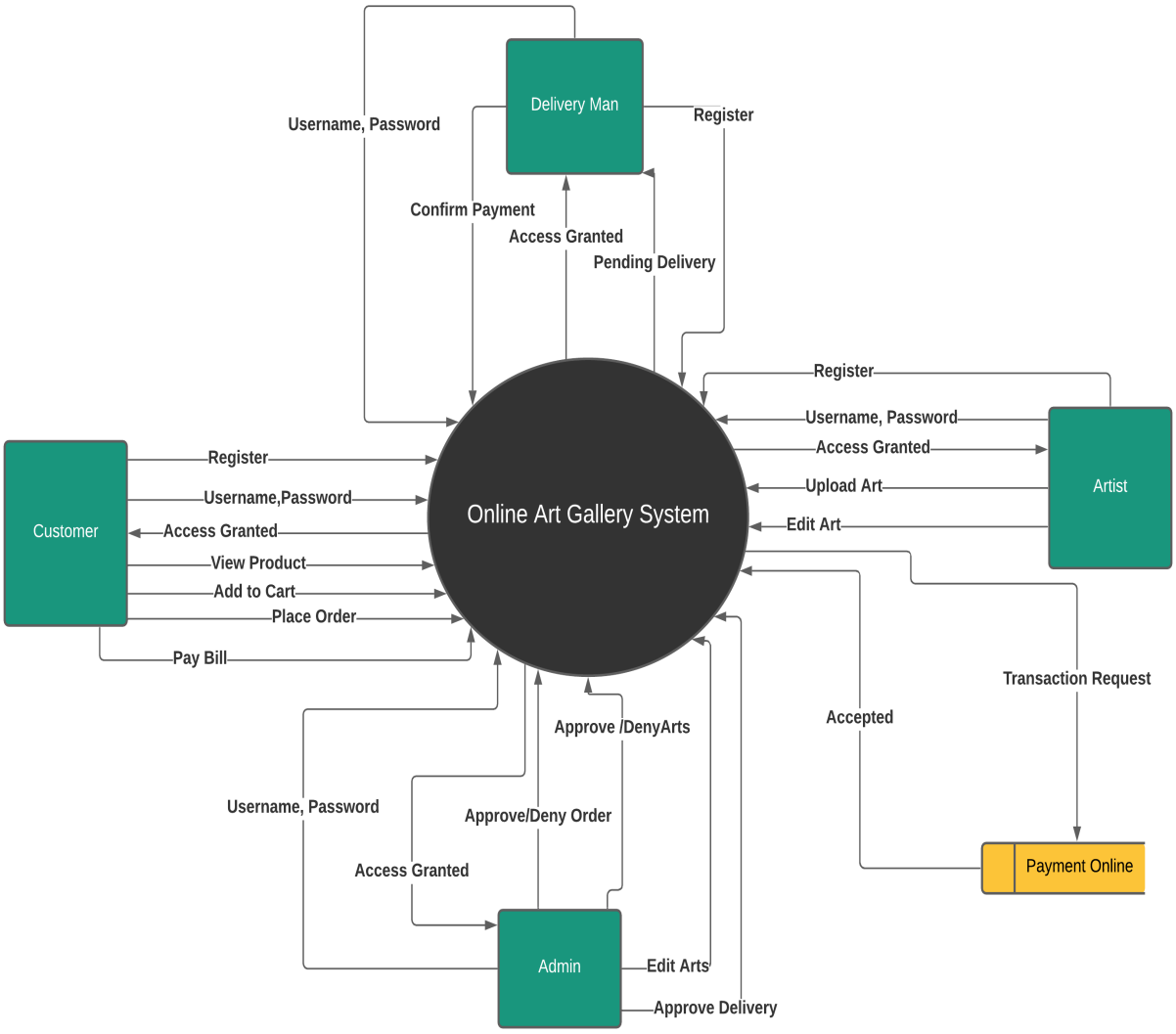

In ER Diagram, how the data of the system is organized, where to store which data and how the entities are connected is shown. For instance a Customer when do registration, they will give data that will be stored in the database. When a customer login into the system they will give email/username and password and if that match with the data in the database they will get access to her account. When an artist upload any art, the artist give details of that art and those data are stored in the art table. When a customer add arts to cart, then the data from the Art entity is taken and stored in the cart table. Similarly, when a customer place a order the order table store data and take details from the cart entity.

# Windows Navigation Diagram



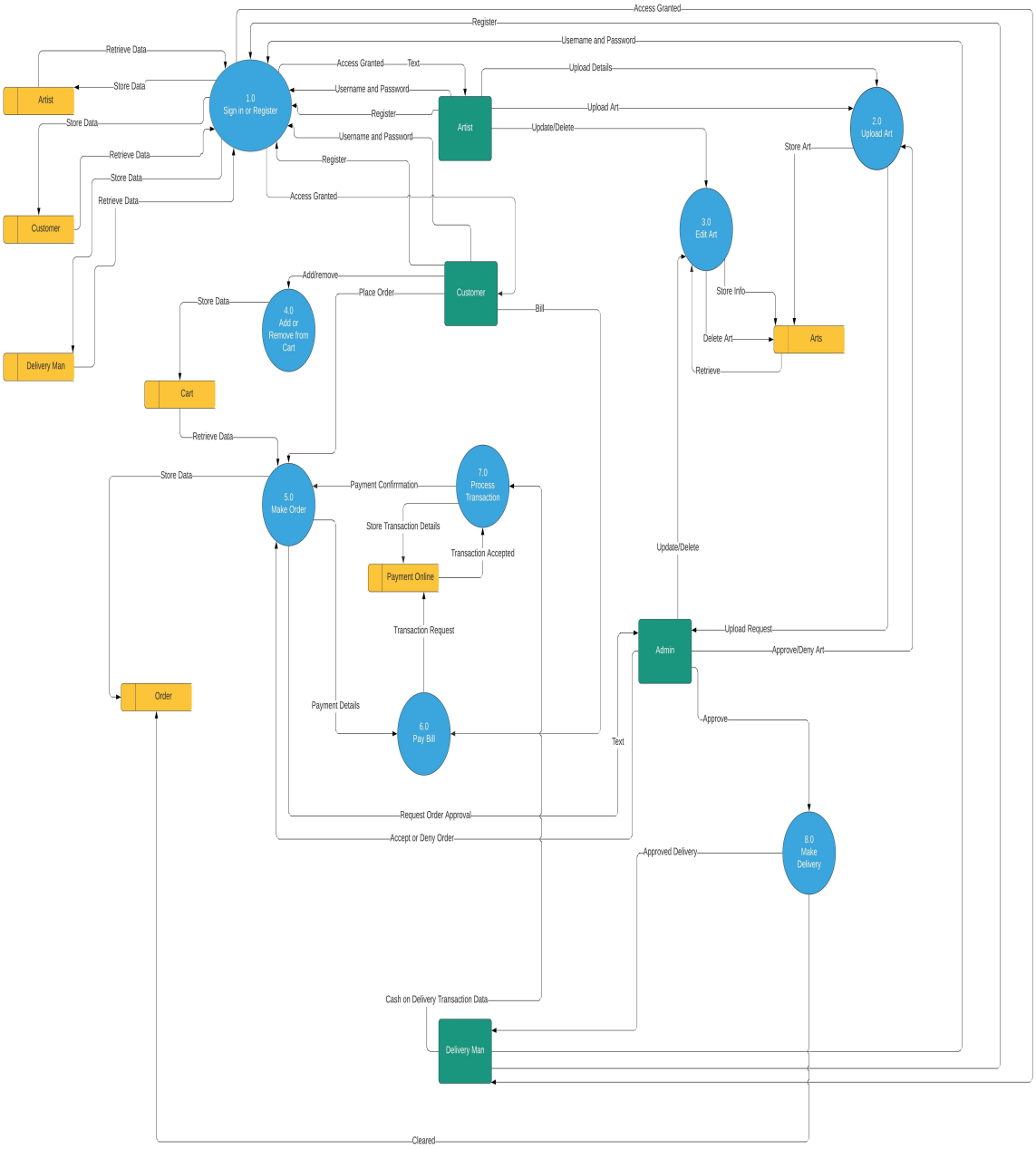

In Windows Navigation Diagram, the basic structure of the interface and the forms, reports and windows are connected is shown. For instance when a customer click the 'Select My Cart' button on main menu window it will take her to My Cart Window, then after clicking the 'Select View List' button it will take the user to a report where the user can see the products that are added in the cart. In the My Cart Window user can add or delete any product by clicking the 'Select Add or Delete' button, after clicking it will take the user to a Add or Delete Form, after clicking 'Press Button' it will take the user to a report. Similarly, by clicking the 'Select Gallery' button on main menu it will take the user to a Gallery window where the user can see different arts that uploaded by the artist. Moreover there is a login window, in which clicking the 'Login Button' it will take the user to a Login Form where the user will give login details, if data matches it will take the user to the Main Menu window or otherwise it will take the user to Invalid Credential window, and there it will show an error message.

# Data Flow Level 0 Diagram




In this level zero diagram, how data flows from entity to the compact single system and how the system uses external databases is shown. For instance, Customer gives username and password to login and if the information matches he gets access to his account. Moreover, the system uses Payment Gateway server for transactions and system sends data and gets appropriate response with data for that from the server.

# Data Flow Level-1 Diagram




In the Data flow level 1 diagram, the whole compact system is decomposed into a number of single processes and databases that it uses to store its internal data. For instance, customer gives its login details to “sign in or register process” and the process matches those data in the customer database. Customer gets access to his account only if the data matches. However, in the time of registration the process takes data and store it in the customer database.

## Conclusion

Online Art Gallery System can be an excellent platform for both artists and art lovers. In this time of pandemic we can implement the system and provide good services to both the artists and customers as well, this platform can be a huge success and in order to successfully build the system we need to follow the steps of system design and analysis.