



**Daffodil International University**

**Department of Software Engineering**

**SE-431 Final Year Project/Thesis/Internship**

**Design & Development of an E-commerce Platform for Selling  
Garments Machine Accessories.**

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**This report represents us a partial fulfillment of the requirements for a Bachelor of  
Science in Software Engineering program.**

**Spring – 2023**

# Approval

## APPROVAL

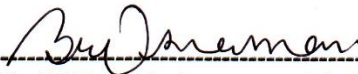
This thesis titled on “**Design & Development of an E-commerce Platform for Selling Garments Machine Accessories**”, submitted by MD Nuruzzaman Molla (ID: 182-35-361) to the Department of Software Engineering, Daffodil International University has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of Bachelor of Science in Software Engineering and approval as to its style and contents.

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## Declaration

I explained that this project was done by me under the supervision of **SK Fazlee Rabby**, Lecturer (Senior Scale), Department of Software Engineering, Daffodil International University. I also said that neither this project nor any part of it has been submitted anywhere or others for any degree award.



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## **Abstract**

This project provides garments related services. For the growing demand of garments sector, in this system can provide the fast service and best price for the customer. The project is developed using MERN Stack, so the customer will experience a fast and smooth environment.

This project is user friendly interface. Customer can buy product easily and contact us for any kind of help for the products related problem. In this system, the admin can easily maintain the system. He or she can easily add a new product, category, create order, manage order and also maintain the contact list. In this system, a user can sign up by them or log in with their email account. With the rise of DIY home sewing project customer gets a convenience shopping experience in this web application. Also, this web application is more secure because of the sensitive data encrypted with the use of hashing algorithm. The system has completed the validation, authentication, server-side validation and secure login privilege. This web application is user friendly and more secure from others.

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# CHAPTER 1

## INTRODUCTION

### 1.1 Introduction

As a viable business model, e-commerce is increasingly achieving results. Companies are increasingly developing websites that allow them to do business online. It makes sense to believe that purses online are an easy process and continues to increase.

"Garments Machine Accessories" is an e-commerce-based web application that allows Customers and sellers to transact with just a few clicks. The system allows business professionals to quickly manage customers and items, make sales, and cancel and track orders.

With a secure online transaction, customers can search and purchase products and later view their transaction history.

### 1.2 Motivation

The global market for sewing machine accessories and garment-related products is constantly growing. With the rise of DIY fashion and home sewing projects, there is an increasing demand for high-quality and affordable machine accessories and garments.

Focuses on garments machine accessories can be a great opportunity to tap into a growing market, provide a convenient shopping experience for customers, and build a profitable business that can easily scale.

### **1.3 Project Overview**

"Garments Machine Accessories" is an e-commerce-based web application that allowed Customer and sellers to transact with just a few clicks. Customers can search and purchase products and later view their transaction history.

### **1.4 Project Purpose**

We developed an E-commerce" web application for all people that can make shopping easy, fun, and effective and can save time as well. There is a user account and an admin account. Customers can buy products through the account with a valid G-mail and a password. After the successful registration process, they can confirm their order. Users can make changes along with the orders in this section. In the admin account we have a registered admin.

[Have a fixed admin here.]

### **1.5 Background**

Based on some of e-commerce web application I want to create a user-friendly user interface. There both the admin and customers they have authority to choose their services securely. I tried to create this system, which can be reliable and above all user-friendly.

### **1.6 Benefits and Beneficiaries**

This system will be supportive for individuals who are continuously shopping online.

- Client interaction cost mindfulness.
- Customer dependability is savvy accessibility.

- Prevent client extortion.
- Easley Shopping.

## **1.7 Goals**

The "Garments Machine Accessories" system will ensure that the safe transactions through the internet. It composed of protocols that can protect people engaged in buying and selling goods and services online. Garments Machine Accessories will gain the customers trust by establishing E-Commerce security basics.

## **1.8 Stakeholders**

A stakeholder is somebody who can be affected or affected by an organization, methodology or extend. They can be inside or outside and they can be at senior or junior level.

Stakeholders of this system:

- Admin (Seller).
- Customer.

## **1.9 Project System Model**

In arrange to create the project “Garments Machine Accessories” (E-commerce web application) we have embraced Iterative enhancement model. This demonstrate expels the shortcoming of waterfall model. These models work exceptionally well when the extend incorporates a few autonomous units that don't depend on the other units to function. The two models beneath the incremental handle models are the iterative enhancement model

and the rapid application model. The iterative enhancement model takes after the waterfall model with the exemption that it permits a few emphases of the plan handle. After each cycle, there's an item discharged. The lessons learnt bolster into another cycle.

### 1.10 Timeline

Considering the brief time, I ought to get ready a plan arranges to total the project on time. It moreover implies communicating what must be wiped out a brief period of time.

Activities	Duration	Total
Requirement Gathering	Week-1,2	2
Analysis	Week-3,4,5	3
Planning	Week-6,7	2
Design	Week-8,9,10	3
Development	Week-11,12,13,14,15	5
Testing	Week-16,17,18	3
Documentation	Week-19,20,21,22	4
		Total- 22 week

# CHAPTER 2

## REQUIREMENT ENGINEERING

### 2.1 Requirement Engineering

Requirement engineering is, as its title recommends, the engineering discipline of building user needs and indicating software system. There's unit a few definitions of needs building; but, all of them share the concept that needs include looking for what people require from a system and understanding what their wants cruel in terms of style. Demand engineering is closely related with software system engineering, which centers extra on the strategy of coming up with the framework that clients require.

2.2 All User Requirements

2.3 System Requirements

2.4 Functional Requirements

2.5 Non-Functional Requirements

### 2.2 All User Requirements

- Admin can go to log in to enter the dashboard.
- Admin can manage all the products.
- Admin can manage the entire category.
- Admin can manage the order.
- Admin can give the order standing.
- Admin can update the products/category details.
- Customer can go to login.
- Customer can Views product
- Customer can choose category wise product.

- Customer can view the product details
- Customer can add the item to the cart.
- Customer can update the cart item.
- Customer can read all the cart product.
- Customer can view the total price
- Customer can place an order.
- Non register user can enter into the home page.
- Non register user can register themselves.

## **2.3 System Requirements**

2.3.1 Admin can go to log in to enter the dashboard.

➤First of all, the admin goes to input g-mail and password.

➤Click the login button.

➤Then enter the home page, click on the dashboard button and enter the dashboard if any error happening there then shows an invalid g-mail or password.

2.3.2 Admin can manage all the products.

➤Admin can manage all the stock.

➤System Update for user request.

➤View all the stock.

➤Click Add product button.

➤Fill up all product details.

➤ After including the item admin will alter, and erase the item and can see the most focuses of the stock.

2.3.3 Admin can manage the entire category.

➤ Admin clicks on the stock assortments button.

➤ Admin will include, update, and erase item assortments.

➤ Admin produces lesson as like as item assortments for sifting items and to looking for out the Category-wise product.

2.3.4 Admin can manage the order.

➤ Admin press on the order button.

➤ See the order extend, username, phone no, address, and e-mail.

➤ Admin also studied the order standing and extra order details.

2.3.5 Admin can give the order standing.

➤ Admin can be providing the order Approval.

➤ Admin press on the order details button.

➤ View all the order details and order Status.

2.3.6 Admin can update all the product/category details

➤ Admin press on the product button and enter the product list.

➤ After that press on the edit button and fill up the required box.

➤ Then finally press on the update button.

2.3.7 Customer can go to login

➤ Customer can go to login.

- Press on the login button.
- Enter the e-mail id and password.
- Press on the login button and enter the home page and cart product.

#### 2.3.8 Customer can view product

- Customer enters into the dashboard.
- Press on the Home/Products button.
- Select the merchandise name and press on.

#### 2.3.9 Customer can choose category wise product

- Customer enters into the dashboard.
- Press on the category button.
- View the class and press on the class and establish category wise product.

#### 2.3.10 Customer can view the product details

- Customer enters into the system
- Click on the Product details

#### 2.3.11 Customer can add the item to the cart

- Customer press on the product details button.
- Press on the add to cart item.
- Product added to the cart.

#### 2.3.12 Customers can update the cart item

- Press on the cart.



- View the cart product.
- Press the delete button to get erase the product from the cart.
- Press back to list button to feature additional product.

#### 2.3.13 Customer can read the all the cart product

- Customer press on the cart button.
- Press the increment/decrement button to feature add/delete product.

#### 2.3.14 Customer can view the total price

- Customer can add the product to the cart.
- Press on the cart and view the total cost of the cart product.

#### 2.3.15 Customer can place an orders

- Add products to the cart.
- See the cart item.
- Press on the checkout button and extra services all the desired information.
- Press the place order button and consider the order list.

#### 2.3.16 Non register user can enter into the home page

- Click and enter the link of the system within the browser.
- Enter the home page and consider all the Products.

#### 2.3.17 Non register user will register themselves

- Enter into the home page system.
- Press the register button.

- Fill up the all required information and press the register button.

## 2.4 Functional Requirement

A valuable request report characterizes the quality of a system or one in all its subsystems. It moreover depends on the sort of software system, anticipated users, additionally the fashion of the framework wherever the software system is employed.

Functional Requirements:

- Users ought to be required to validate their username and g-mail address for registration.
- Users must be permitted to see product details.
- Users must be permitted to add and remove items from their shopping carts.
- Admin must have the capacity to add, update, and remove items.
- Admin ought to have the capacity to add, modify, and delete brands, categories, and other items.
- Place order.
- Save and update Order Status.

Functional Requirements Module:

- Login module: utilized for user verification.
- Registration module: utilized for overseeing users of the system.
- Service module: utilized for service-related functions.
- Requester module: utilized for managing the information and points of interest of the requester.

- Supplier module: utilized for managing the information and subtle elements of the supplier.

## 2.5 Non-Functional Requirement

Non-functional requirement needs do not appear to be uncomplicated requests of the system or maybe it's related with usability, re-liableness, execution, etc.

- System can have login and completely diverse benefits for admin and client.
- Password are encrypted mistreatment secret field.
- Password are recovered.

## 2.6 Required Specification

### Customer

- Can view product, see product details.
- Can registration and login with email and password.
- Can add, edit, delete, view, confirm order.

### Admin

- Can login with email and password.
- Can add, edit, view, delete product.
- Can add, edit, view, delete user.
- Can add edit, view, delete, confirm order.
- Can update order status.
- Can give order report.

## 2.7 Software & Hardware

Software	Development Tools	Server specifications
<b>Technologies:</b> <b>HTML, CSS,</b> ( <b>Bootstrap</b> as the CSS framework), <b>React-</b> A JavaScript library for building User interfaces, <b>Node.js</b> - Express Framework	<b>Vscode,</b> (Code Editor) <b>GitHub</b> (This is where the code is hosted), Web Browser for testing, Terminal for running commands	● <b>Mongo DB Atlas.</b>

# CHAPTER 3 SYSTEM DESIGN

## 3.1 Use Case Diagram

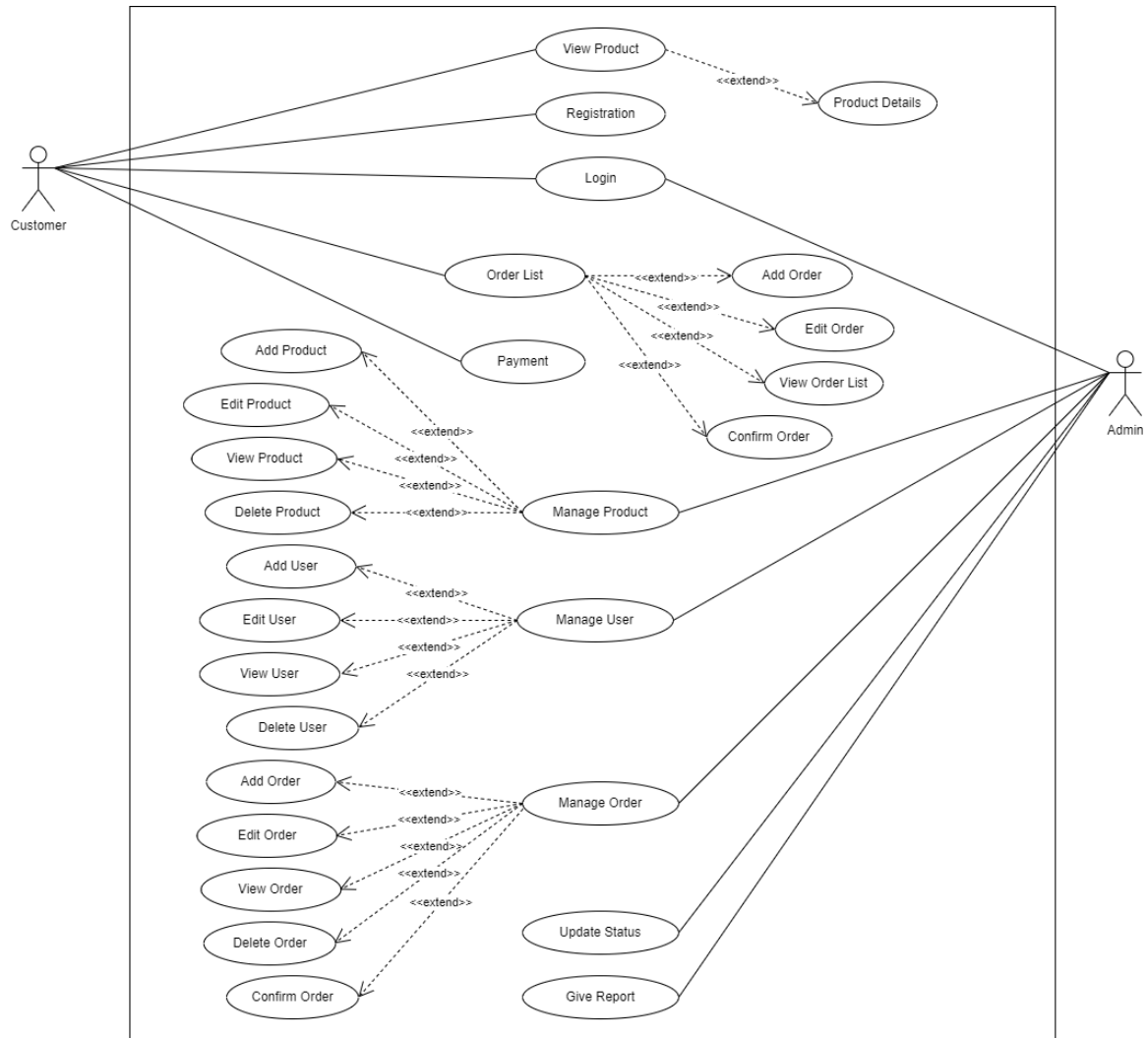


Fig: 3.1- Use case Diagram of the application.

### 3.1.1 Use Case Diagram for a customer

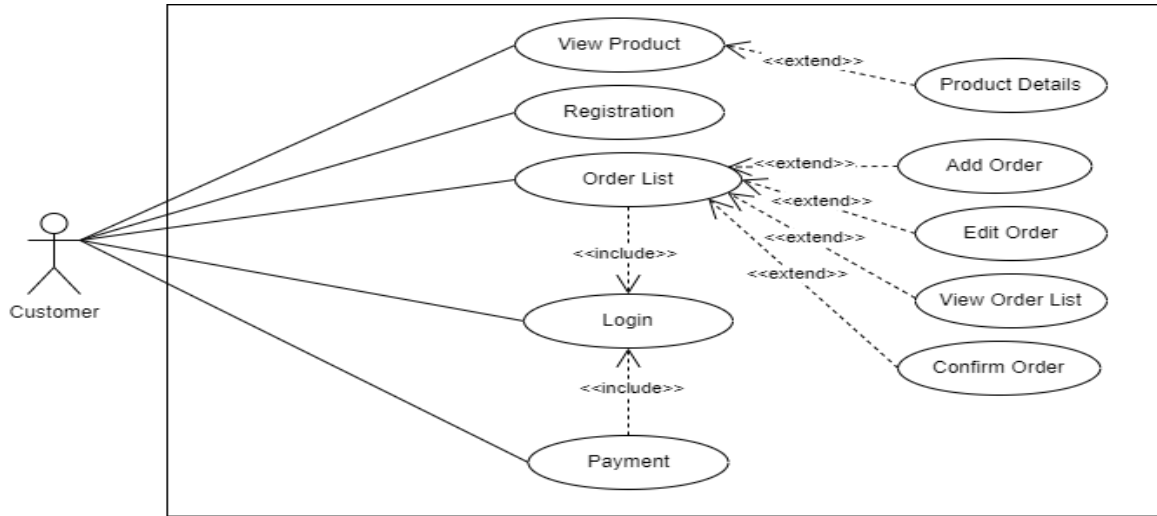


Fig. 3.1.1 - Use case Diagram for customer.

### 3.1.2 Use Case Diagram for an admin

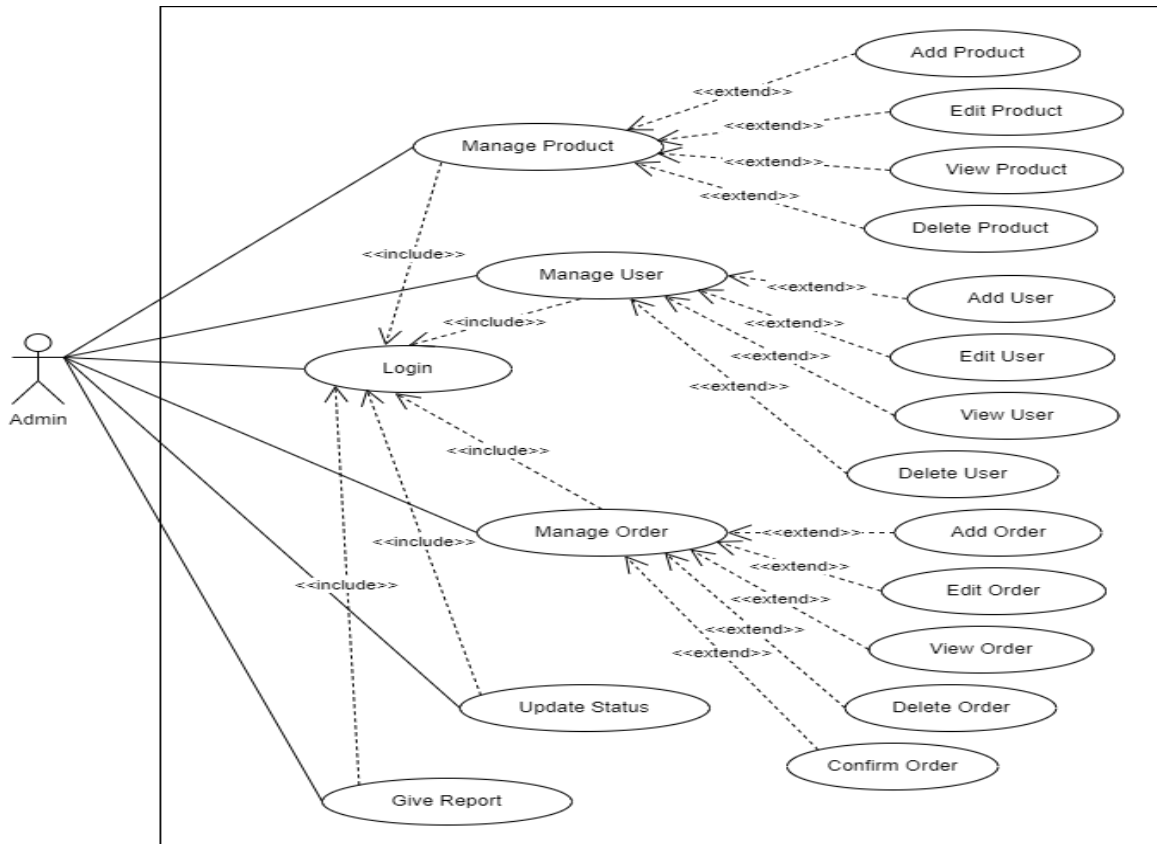


Fig. 3.1.2 - Use case Diagram for an admin.

## 3.2 Use Case Description

### Use case title – Login

<b>Title</b>	<b>Actor</b>	<b>Description</b>
Login	Admin and Customer	Clients will register themselves by exploitation registration page. Customer and Admin can get totally different login pages to induce access into the system. Customers have to be compelled to offer an email address and password, the system can match it with the Customer role id and so offer access to individual Customer and the admin home page and conjointly read profiles.

### Use case title – Admin Activities

<b>Title</b>	<b>Actor</b>	<b>Description</b>
Admin Activities	Admin	Admin login and enter into the dashboard. Manage all the Item sorts, Order and also update status, give report, and confirm order to the client of order.

### Use case title – Order Management

<b>Title</b>	<b>Actor</b>	<b>Description</b>
View Item with Order Management	Admin, Register Customer, New Customer	Registered client login and add the product to the order list similarly as they will cancel order the item from the order list. Read the order list and place an order. New Customer solely will see the home page and items and their details. Admin manages all the connected field of it conjointly manage the order.

### 3.3 Activity Diagram

#### 3.3.1 Activity Diagram for Login & Registration

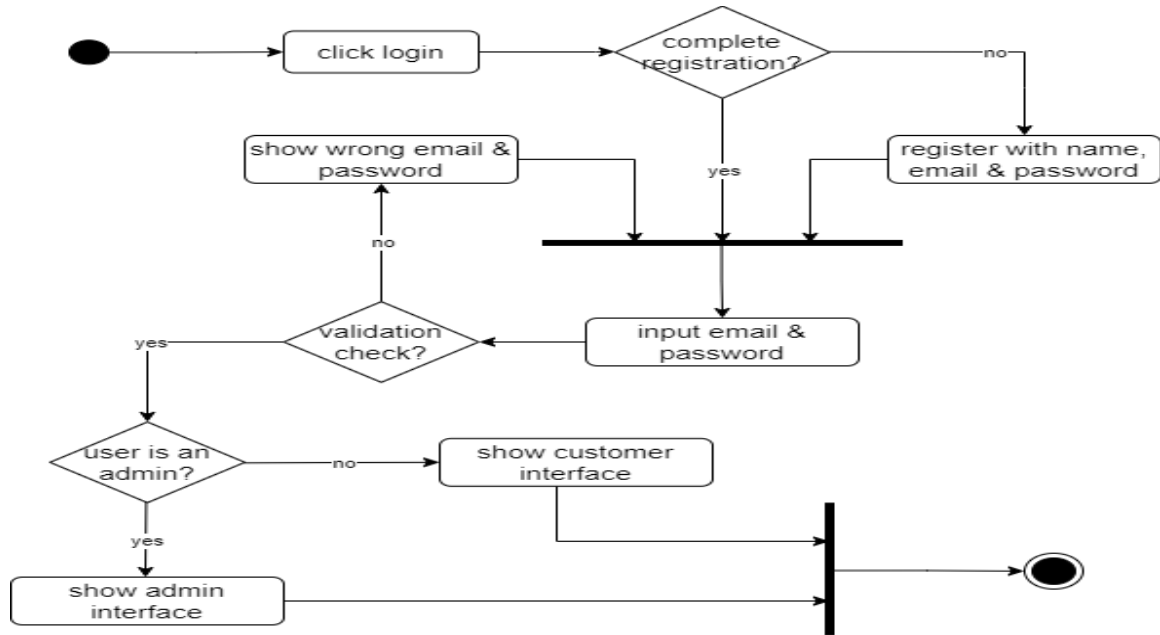


Fig 3.3.1- Activity diagram for Login & Registration

#### 3.3.2 Activity Diagram for Customer to View Home Page

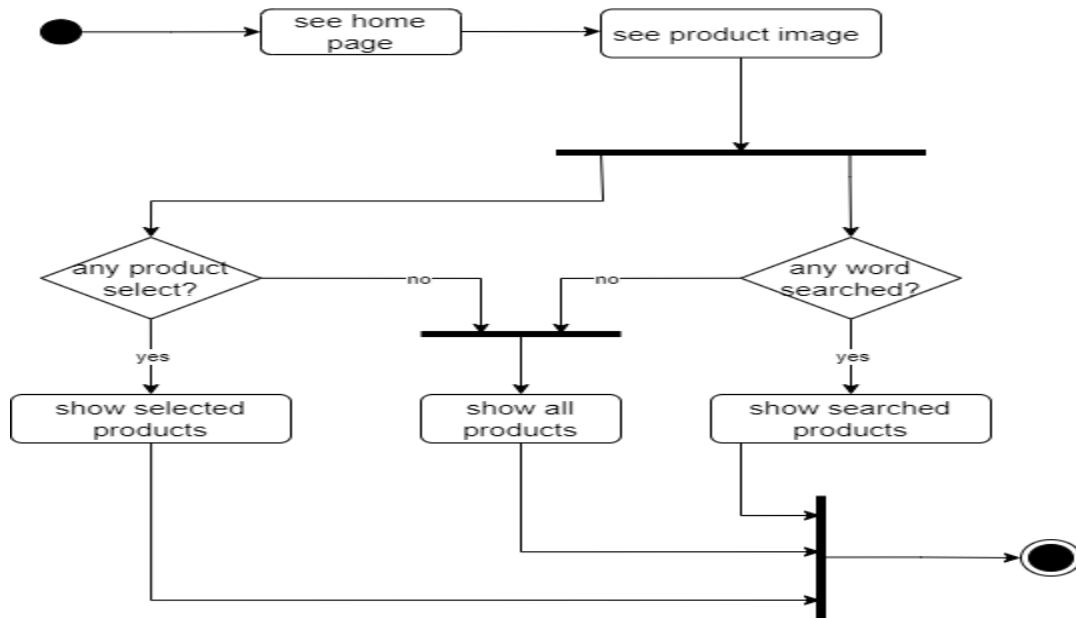


Fig 3.3.2- Activity diagram for Customer to View Home Page



### 3.3.3 Activity Diagram for Customer to See Chart

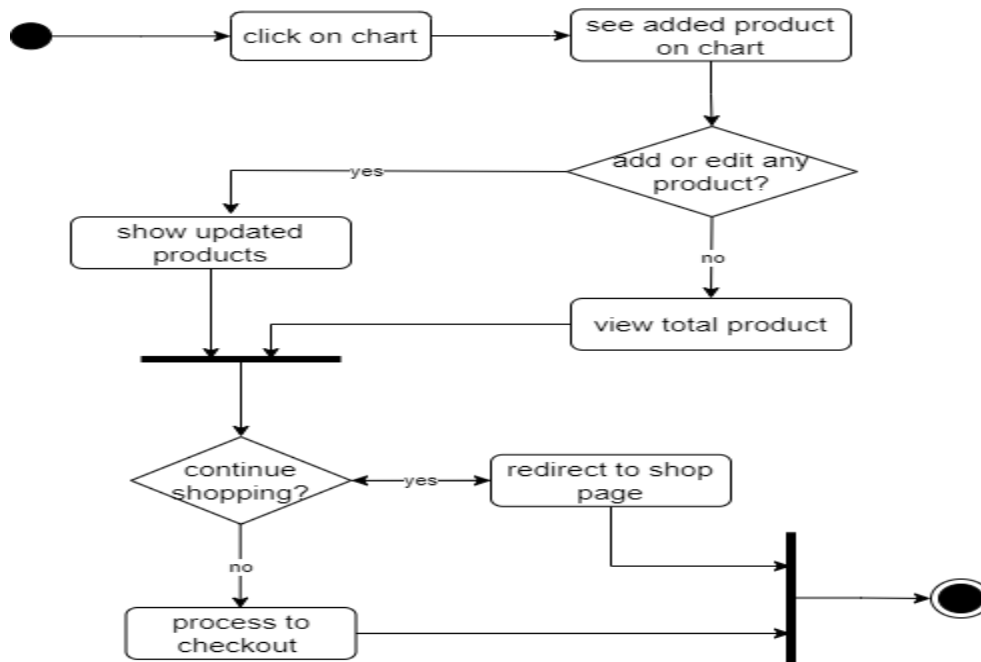


Fig 3.3.3- Activity diagram for Customer to See Chart

### 3.3.4 Activity Diagram for Customer for Payment

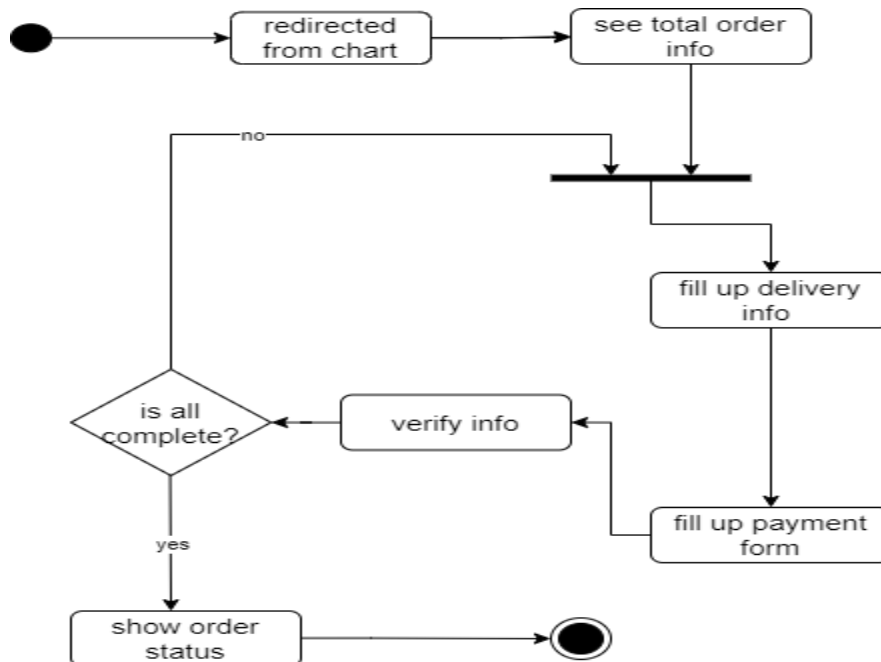


Fig 3.3.4- Activity diagram for Customer for Payment

### 3.3.5 Activity Diagram for Viewing Dashboard (Admin)

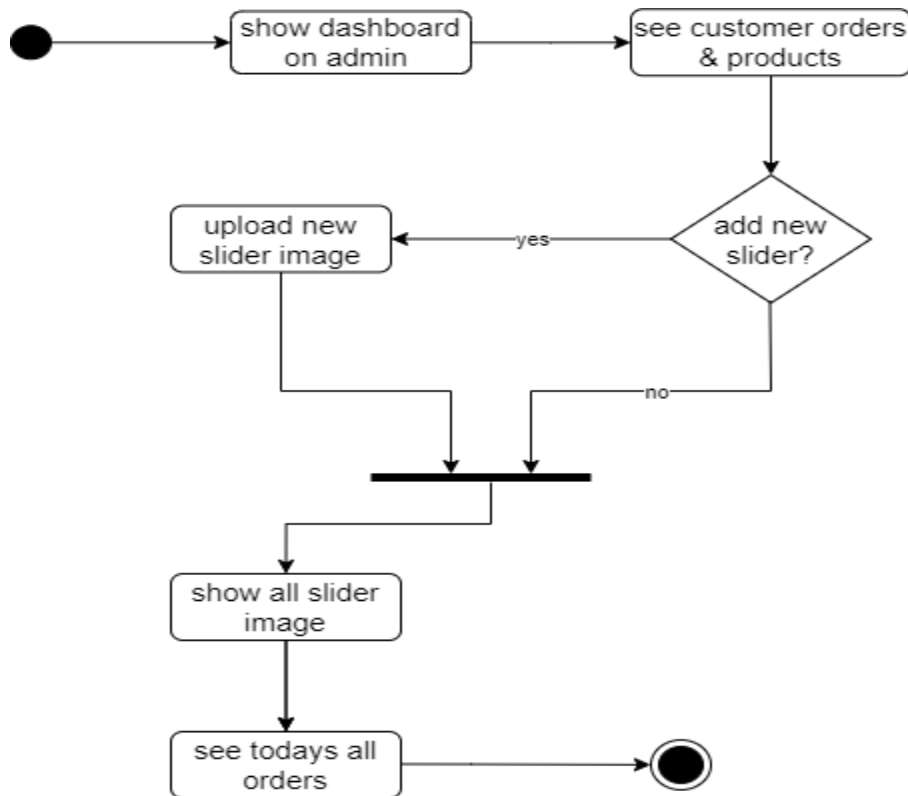


Fig 3.3.5- Activity diagram for Viewing Dashboard (Admin)

### 3.3.6 Activity Diagram for interacting with products (Admin)

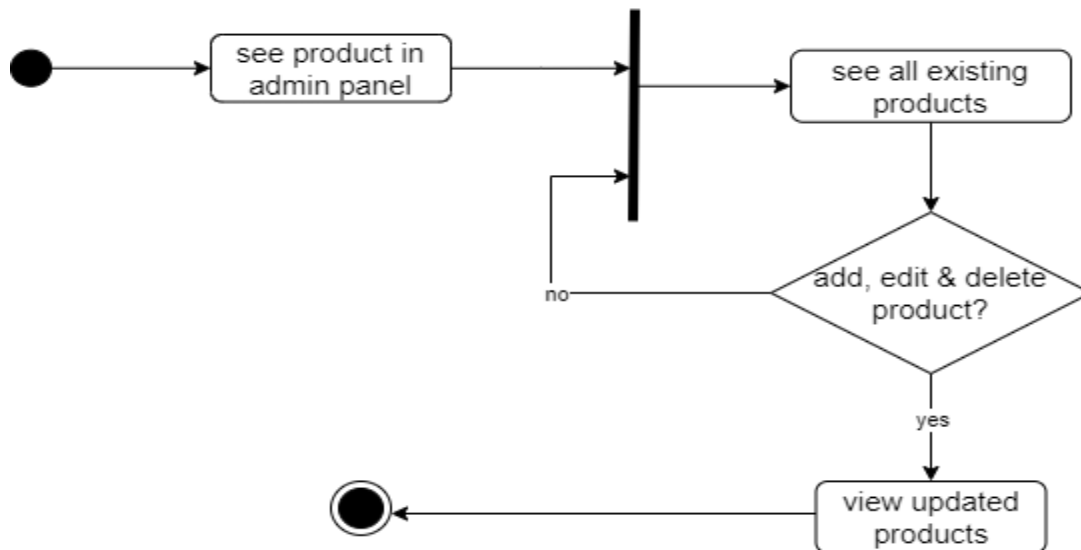


Fig 3.3.6- Activity diagram for interacting with products (Admin)

### 3.3.7 Activity Diagram to interact with orders (Admin)

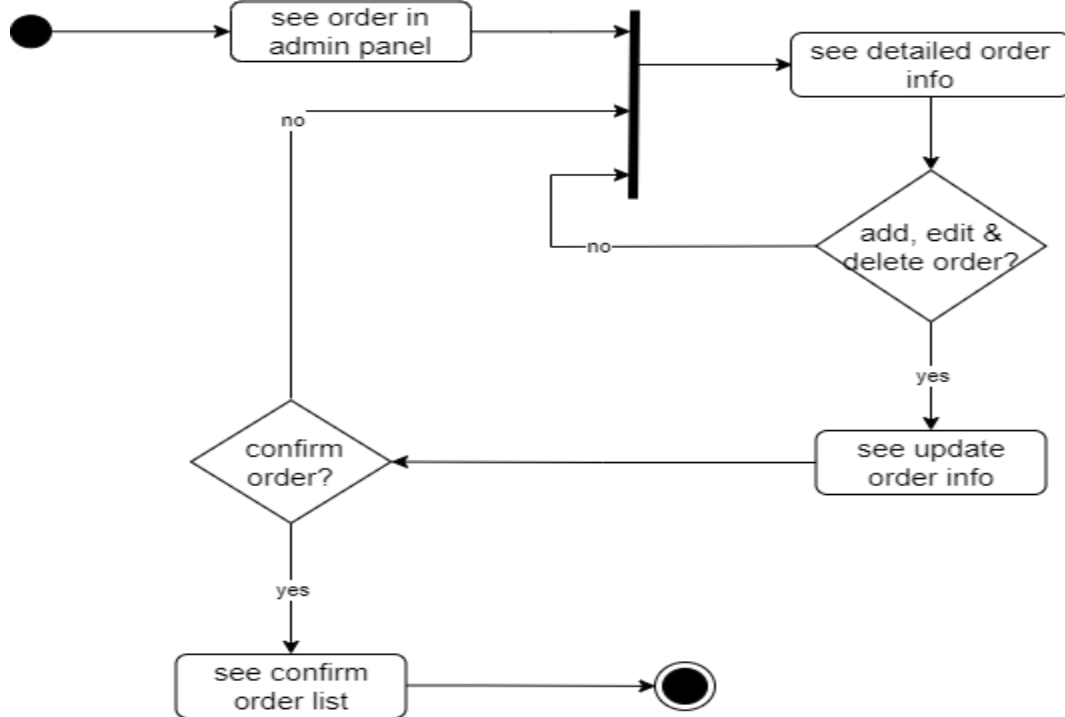


Fig 3.3.7- Activity diagram to interact with orders (Admin)

### 3.3.8 Activity Diagram to interact with users (Admin)

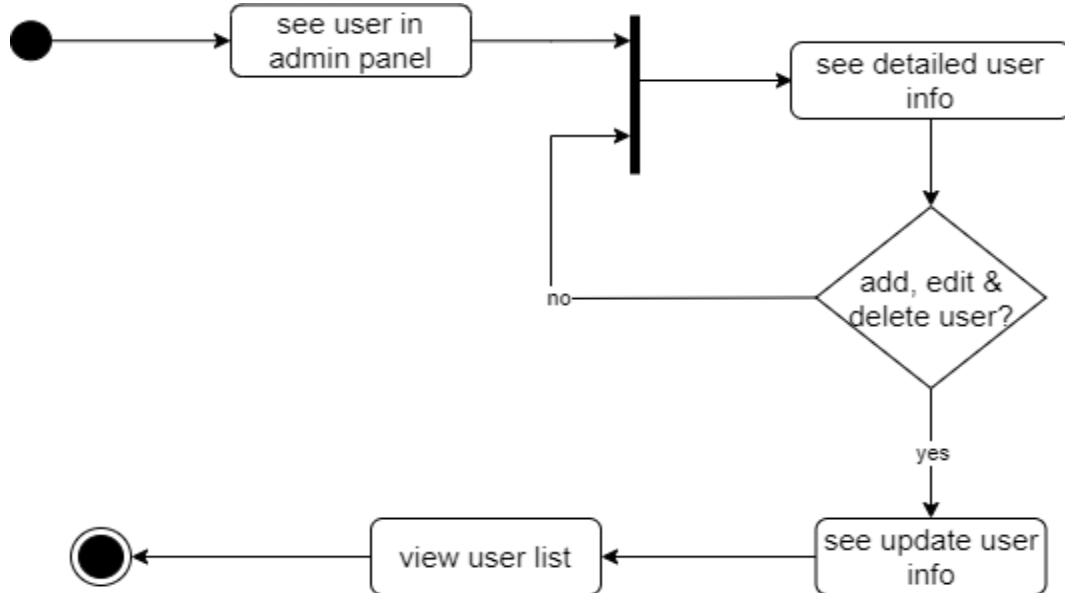


Fig 3.3.8- Activity diagram to interact with users (Admin)

### 3.4 Entity Relationship Diagram

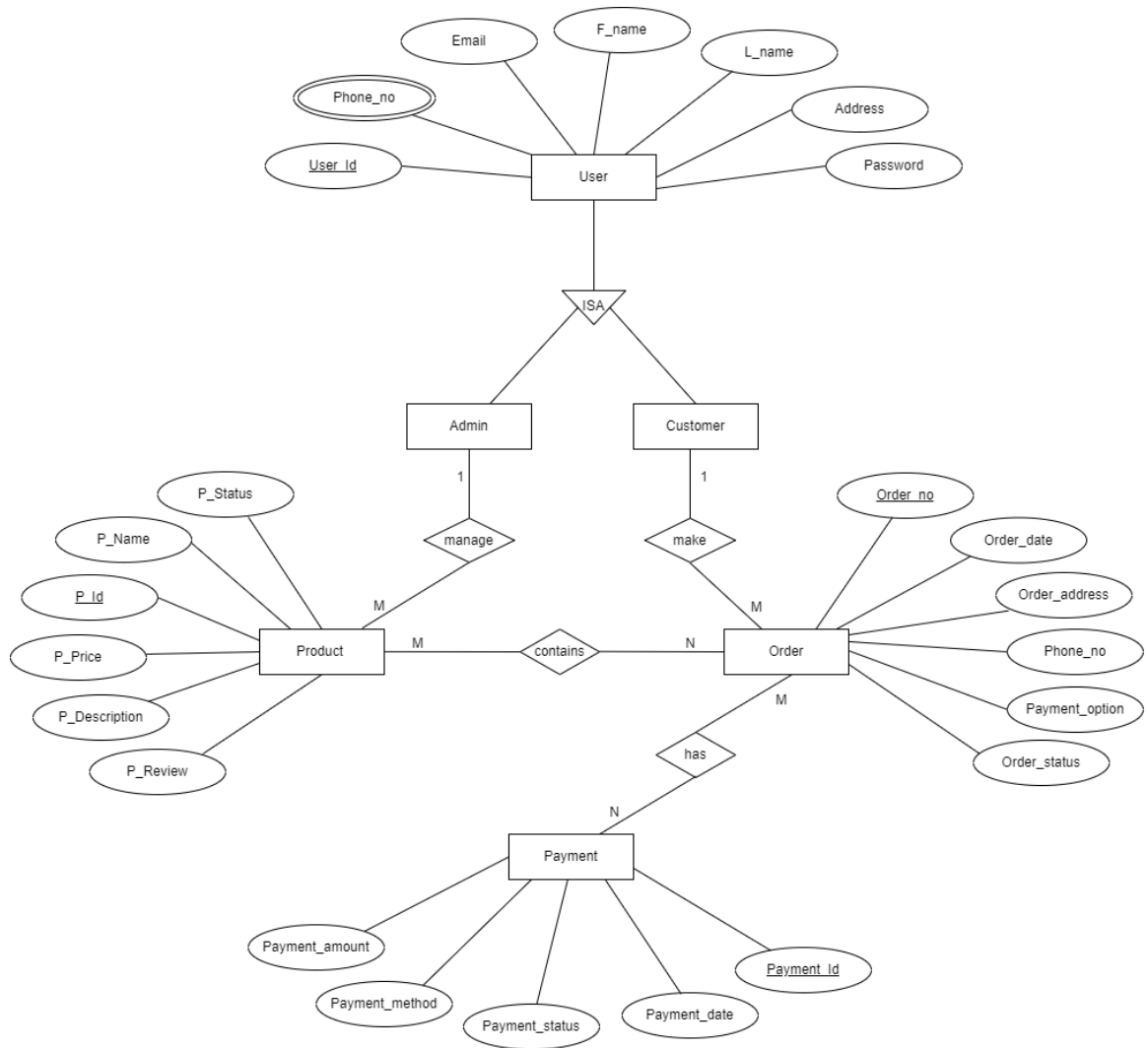


Fig 3.4 - Entity Relationship Diagram.

### 3.5 Class Diagram

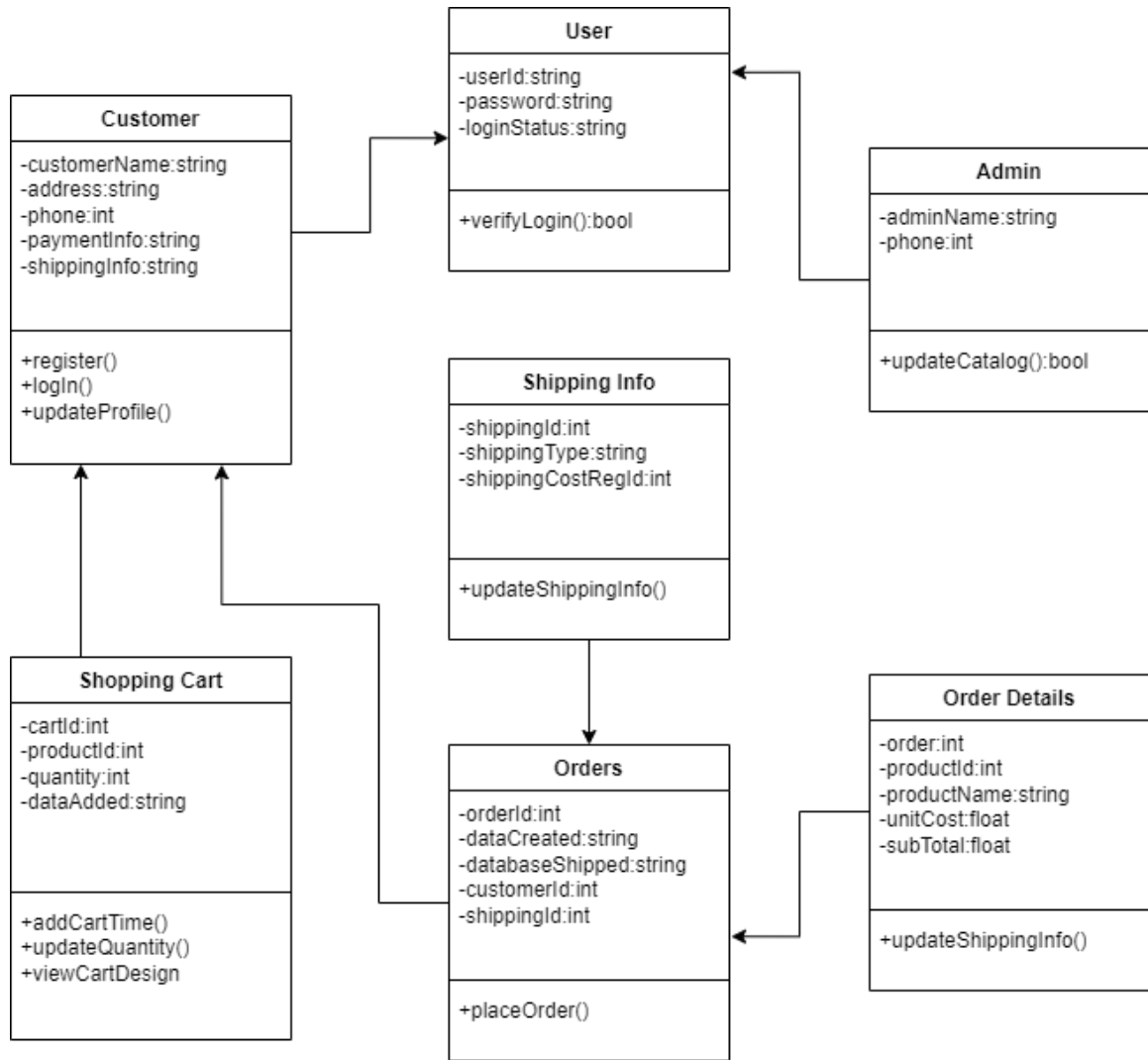


Fig 3.5 - Class Diagram.

# CHAPTER 4 USER MANUAL

## 4.1 User Interface for Registration

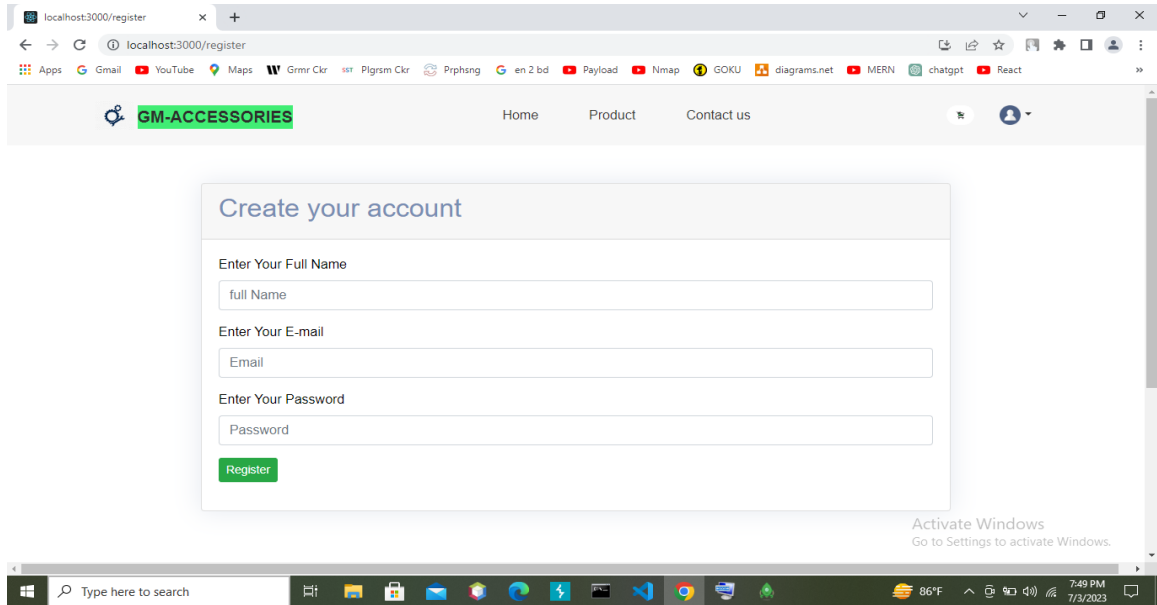


Fig: 4.1 – User Interface for Registration

## 4.2 User Interface for Log In

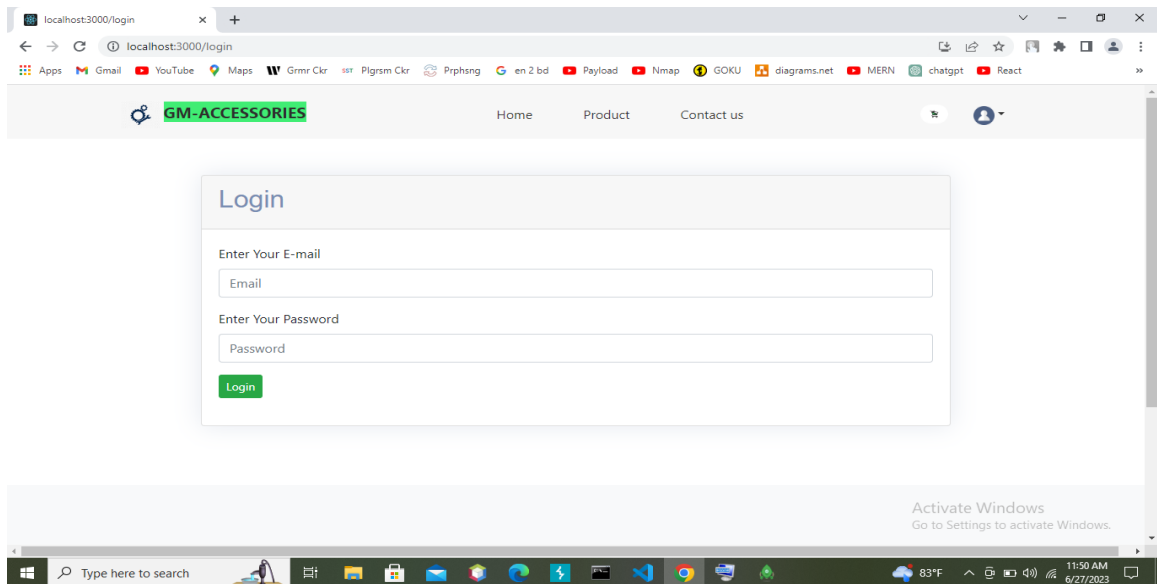


Fig: 4.2 – User Interface for Log In

### 4.3 User Interface for Dashboard

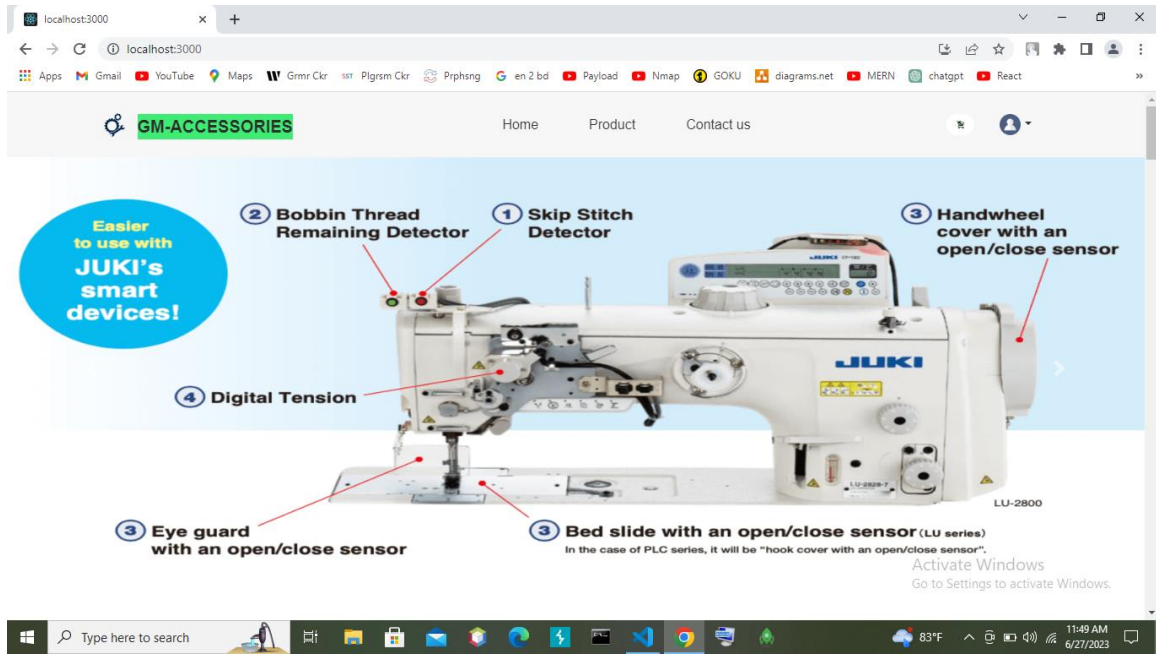


Fig: 4.3 – User Interface for Dashboard

### 4.4 User Interface for Product

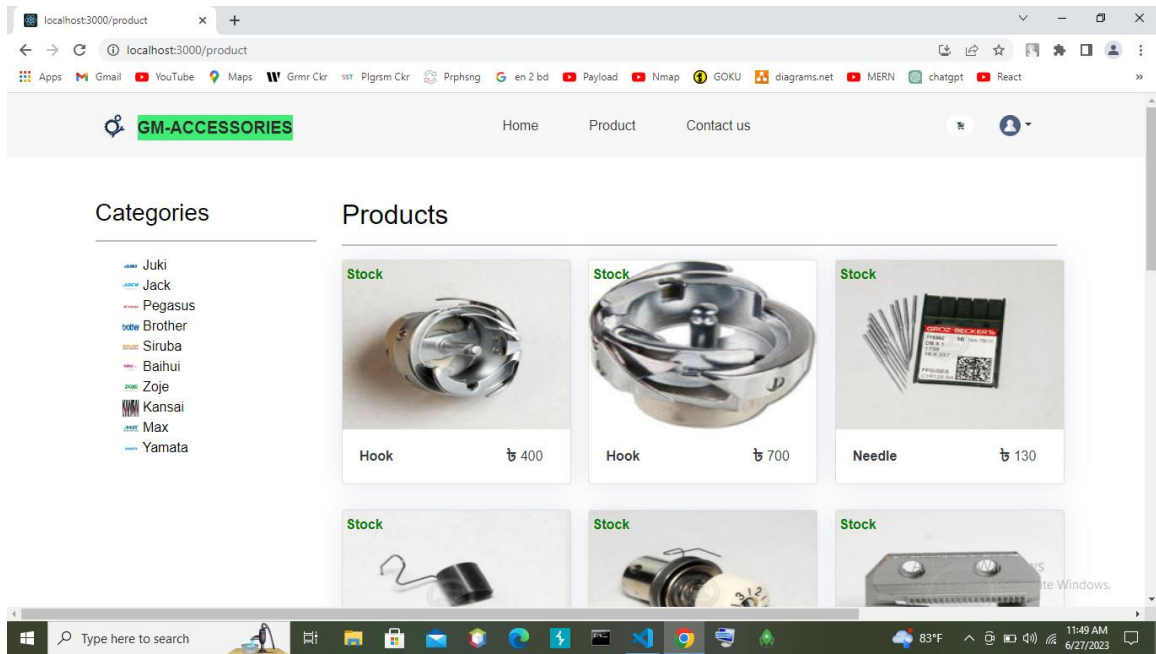


Fig: 4.4 – User Interface for Product

## 4.5 User Interface for Contact

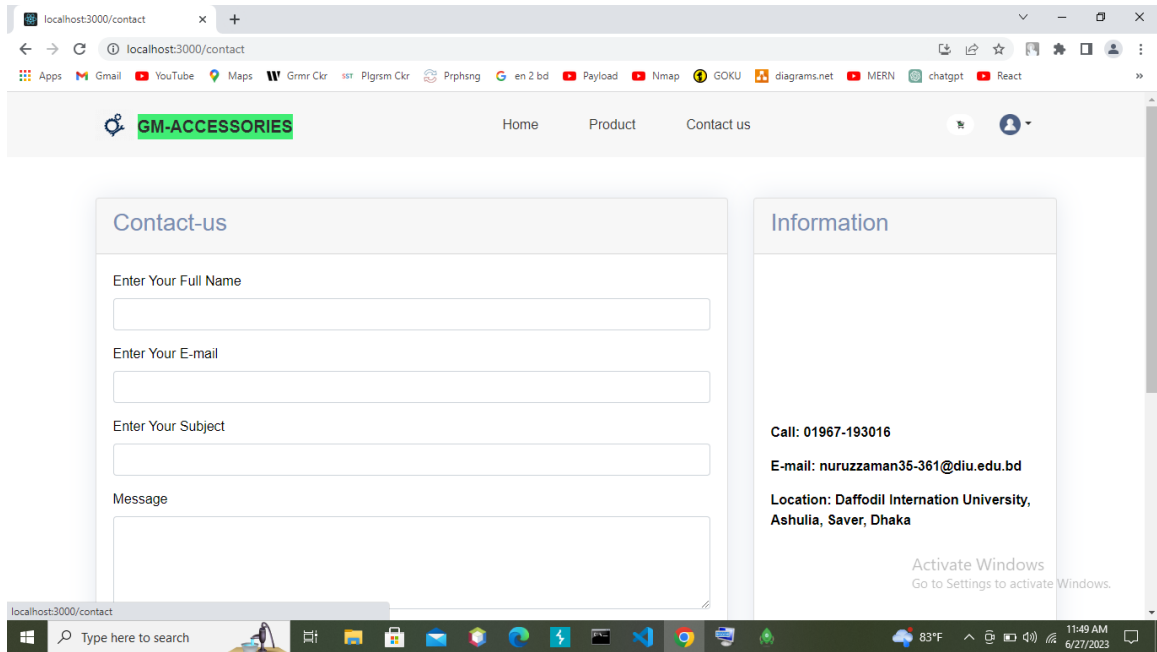


Fig: 4.5 – User Interface for Contact

## 4.6 User Interface for Cart List

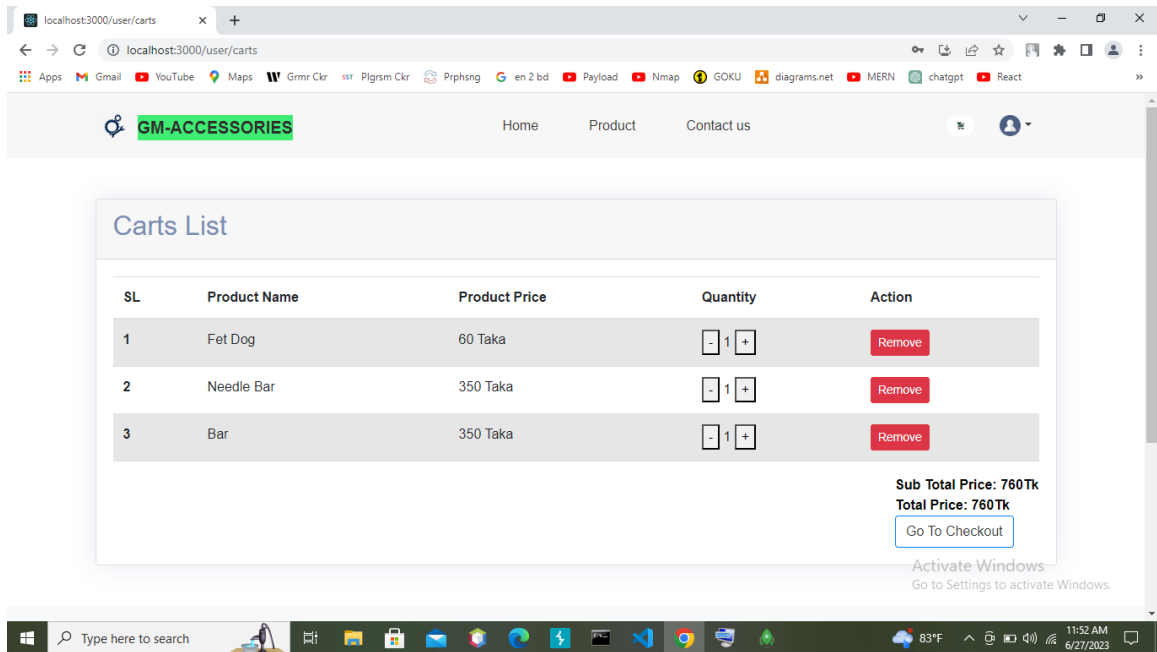


Fig: 4.6 – User Interface for Cart List



## 4.7 User Interface for Order List

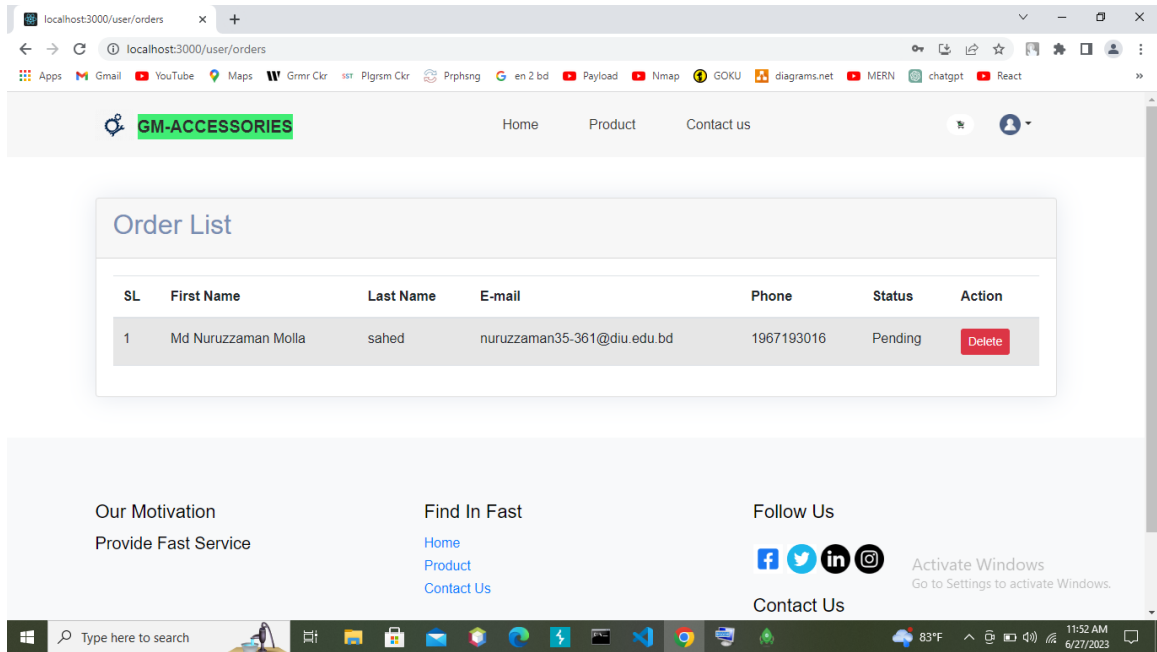


Fig: 4.7 – User Interface for Order List

## 4.8 Admin Interface for Log In

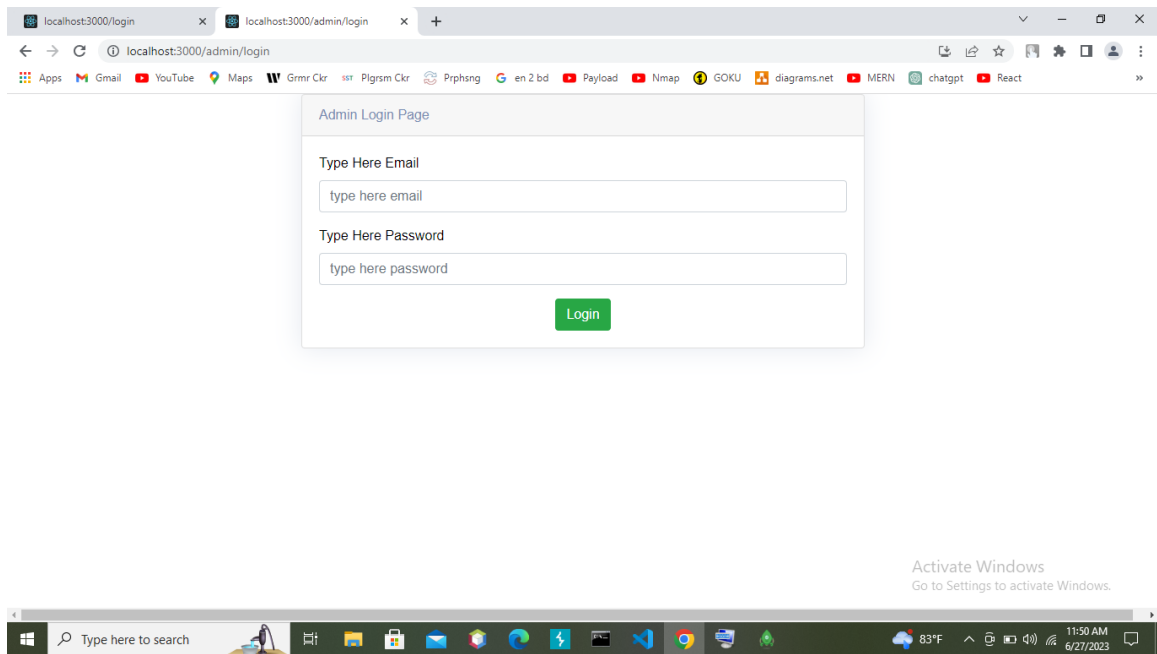


Fig: 4.8 – Admin Interface for Log In

## 4.9 Admin Interface for Dashboard

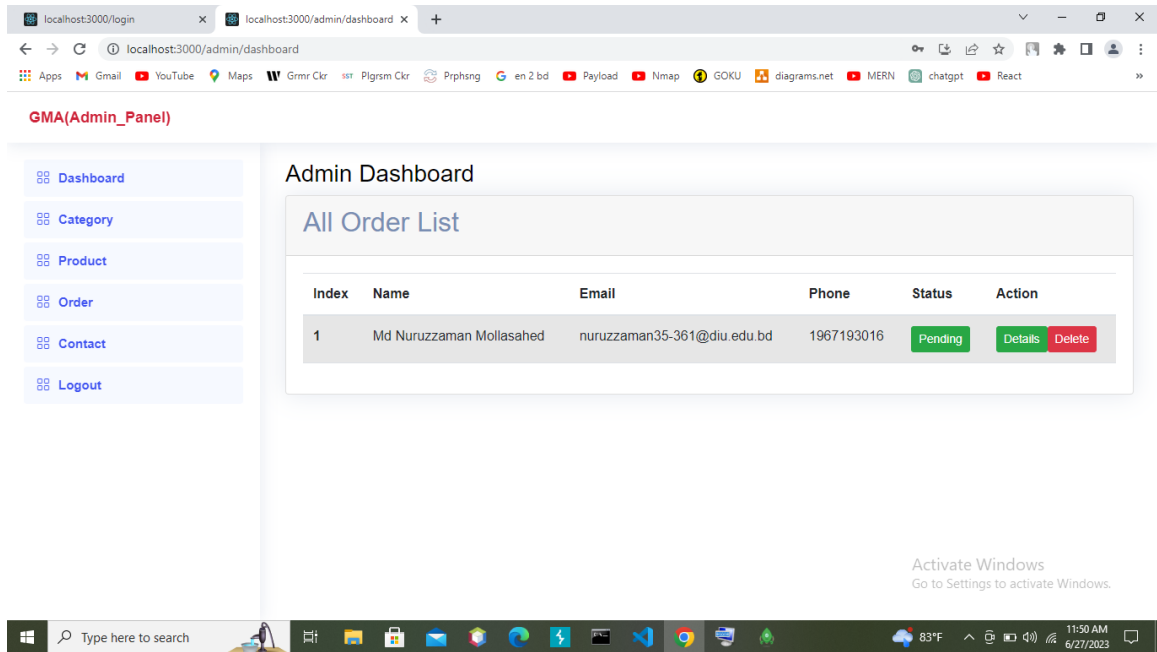


Fig: 4.9 – Admin Interface for Dashboard

## 4.10 Admin Interface for Category

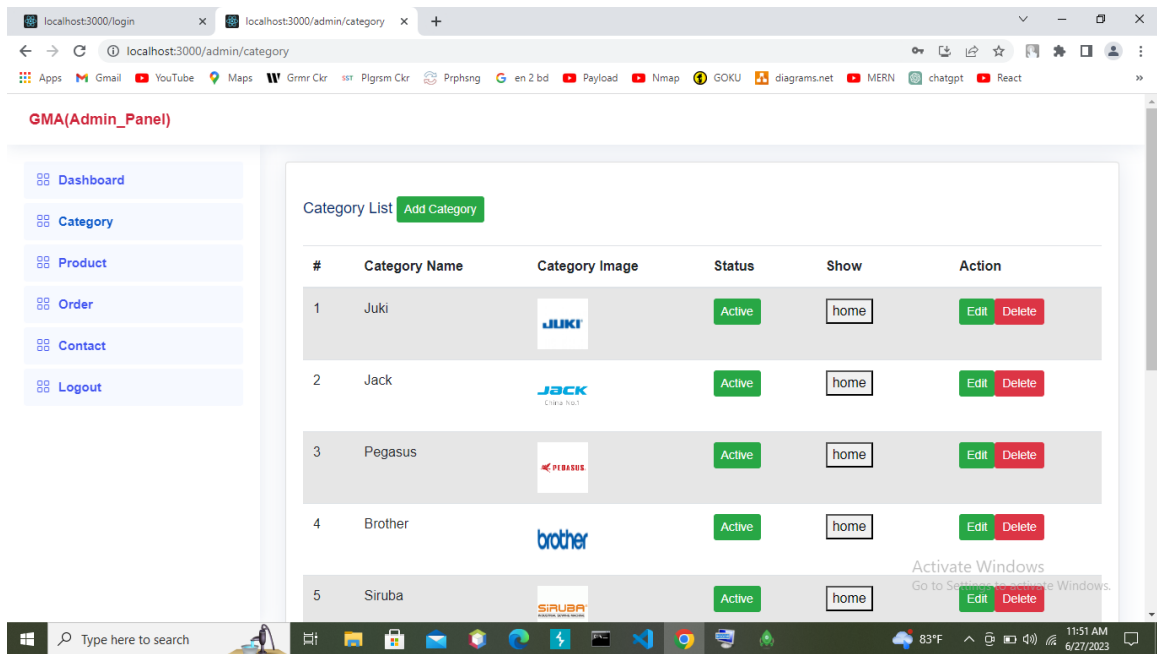


Fig: 4.10 – Admin Interface for Category

## 4.11 Admin Interface for Product

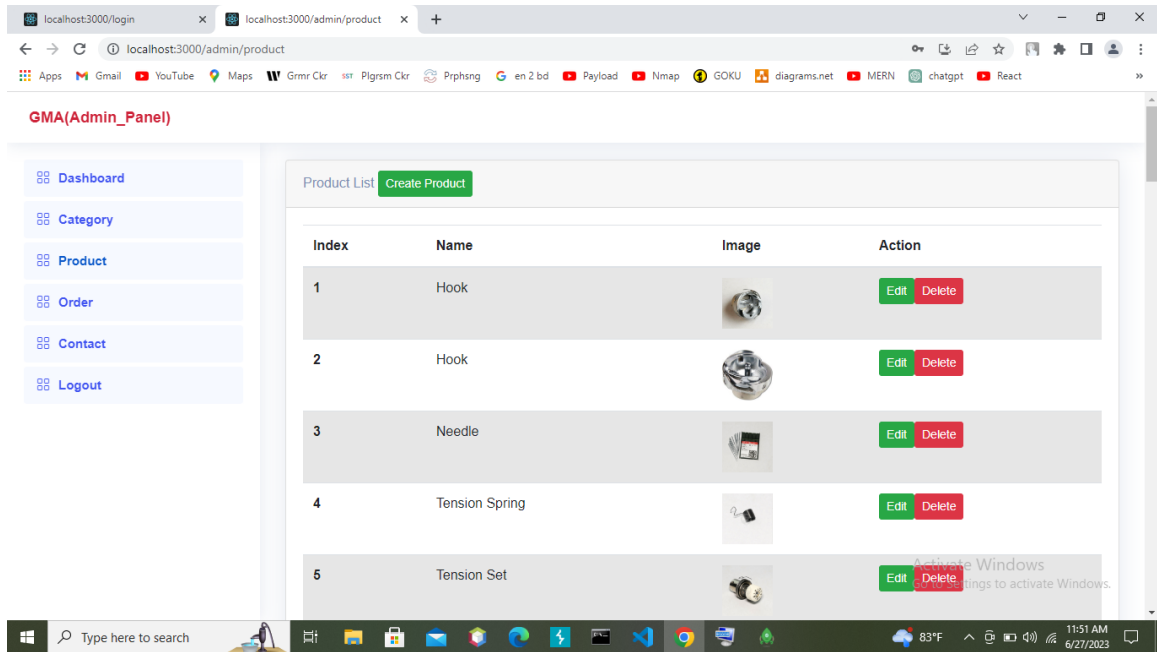


Fig: 4.11 – Admin Interface for Product

## 4.12 Admin Interface for Order

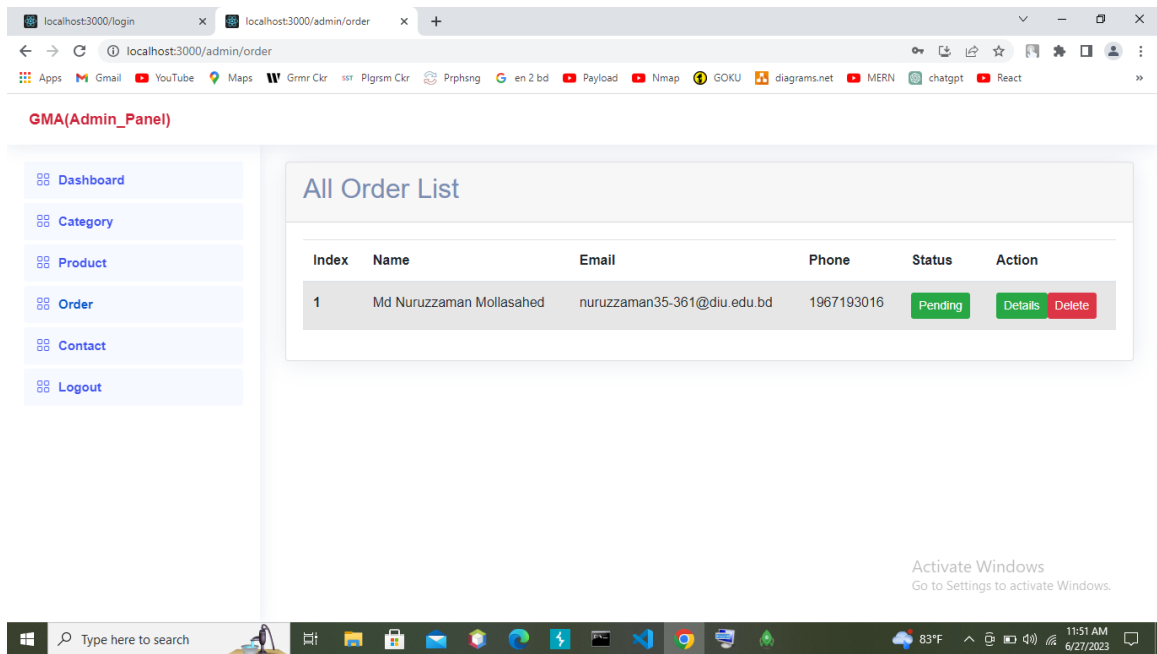
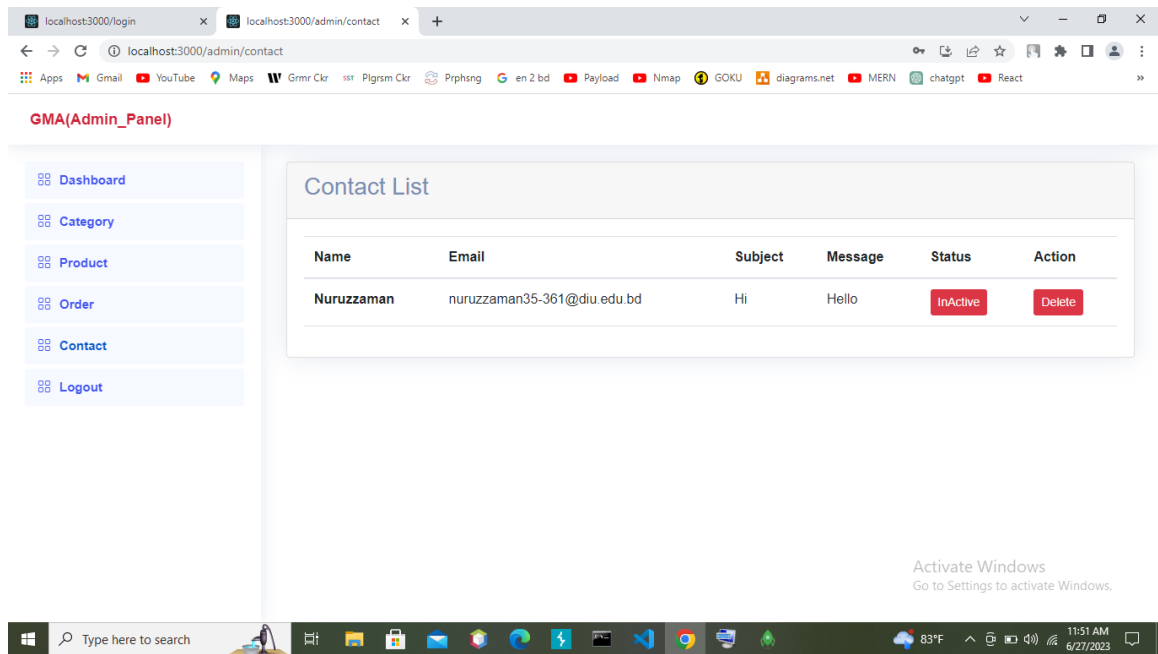


Fig: 4.12 – Admin Interface for Order

## 4.13 Admin Interface for Contact



The screenshot displays a web browser window with two tabs: 'localhost:3000/login' and 'localhost:3000/admin/contact'. The address bar shows 'localhost:3000/admin/contact'. The browser's taskbar includes various icons such as Gmail, YouTube, Maps, and several development tools. The main content area is titled 'GMA(Admin\_Panel)' and features a sidebar with navigation options: Dashboard, Category, Product, Order, Contact, and Logout. The 'Contact' option is selected. The main content area is titled 'Contact List' and contains a table with the following data:

Name	Email	Subject	Message	Status	Action
Nuruzzaman	nuruzzaman35-361@diu.edu.bd	Hi	Hello	InActive	Delete

An 'Activate Windows' watermark is visible in the bottom right corner of the browser window, with the text 'Go to Settings to activate Windows.' The Windows taskbar at the bottom shows the search bar, taskbar icons, system tray, and the date/time '11:51 AM 6/27/2023'.

Fig: 4.13 – Admin Interface for Contact

# CHAPTER 5

## REPORT LAYOUT

### 5.1 Summary

This project summarizes and clarifies and investigates the different impacts of our web forms. Based on the comes about Over, we will conclude that our improvement web application is secure and appropriate for utilize in any environment.

### 5.2 Limitation

The System has some Limitations:

There are so many attacks in system vulnerability but the system protects against some attacks.

### 5.3 Future Work

A lot of opportunity for improvement in this system project. Many capabilities, might be added to this system in the future.

The system will be the addition of:

- SSLCOMMERZ's approved payment system can be added.
- Use HTTPS protocol.
- Protect all the possibility of Attack Vectors.
- Live Chatting system for admin with the customer.

## References

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5. <https://github.com/nuruzzaman35-361/GM-Accessories.git>
- 6.