



# **Mini Project Report**

## **On**

### **MBCART E-Commerce Website**

BY: -

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In partial fulfilment of the requirement of the degree of  
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**Under the Supervision of:**

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# ACKNOWLEDGEMENT

It gives me great pleasure in presenting this project report. Its justification will never sound good if I do not express my vote of thanks to our Jayawant Institute of Management College. I would also like to thank our **HOD Mrs. Shweta Padale** for her timely support in this completion of this project. I am thankful for their valuable guidance to every stage of the project. Finally, I would thank all others, who gave their extended support to complete this project.

## **DECLARATION**

I hereby declare that the information presented in the document titled "MBCART an Ecommerce Website: Features, Implementation, and Conclusion" is based on factual and accurate data available up to my knowledge cutoff date of 2024. The content is a representation of the features, implementation details, and conclusions of the described system as provided in the context of the given project.

I acknowledge that technology and related systems may have evolved since my knowledge cutoff date, and therefore, the actual functionalities and features of the Project may have changed or advanced beyond what is described in this document.

Vivek Milind Patil

FYMCA

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# 1. Introduction

An E-commerce website requires appropriate strategy of successful design and implementation. Everything is required to plan from scratch to end of website. The e-commerce sector is seen the exponential growth thus a new option will easily part of this regatta of commercial website. The e-commerce website will feature the online shopping facility of various electronic products under a single web space. The proposed web application will allow business personnel to make their total business using it and increase their reachability thousands of times more than today they have, over the internet. The product management in the system will be done in the form of categories. The safety of information is the main requirement of the system and will be handling according to that. To formulate this project first task is to do is cost estimation. For probabilistic assessment of the project cost estimation is required. Cost estimation covers the accurate estimations of cost and effort required for the project.

## 1.1 Existing System

The current system involves traditional shopping at physical stores or supermarkets, requiring customers to visit in person and navigate through various shelves. Shop owners must stock, display, and manage product transfers, which is labor-intensive, time-consuming, and space-demanding. This method poses challenges such as the need for significant manual labor, time, and space for processing operations. The inefficiency is exacerbated by the Covid-19 pandemic, which has disrupted transportation, enforced social distancing, and discouraged people from leaving their homes. Businesses have struggled with these constraints, and while some have adapted by using social media platforms for sales, these platforms are primarily for marketing and do not offer robust customer and order management solutions. This leads to time-consuming direct messaging and difficulty in distinguishing between genuine sellers and scammers.

## 1.2 Need for System

Traditionally, customers are used to buying the products at the real, in other words, factual shops or supermarkets. It needs the customers to show up in the shops in person, and walk around different shopping shelves, and it also needs the owners of shops to stock, exhibit, and transfer the products required by customers. It takes labour, time and space to process these operations.

Furthermore, the spread of the Covid-19 pandemic has caused a lot of changes in our lifestyle, people fearing to get outside their homes, transportation almost shut down and social distancing becoming all the more important. Big to small scale business that relied on the traditional incur a lot of consequence due to the lockdown issues. Some tend to more towards using social media platforms like Facebook to sell their product. However, the social media platforms have been beneficial for marketing purposes alone but leaves the whole task of customer and massive order management via direct messaging (DM), which takes a lot of time to respond to all customers. In addition, everyone tends to use social media, posing a great challenge to differentiate between scammers and legit sellers.

## 1.3 Operating Environment

### Hardware Requirements

- CPU: intel i3 +
- Ram: 4GB +

### Software Requirements

- Operating System: Windows 10+
- Text Editor: VS Code

### Technology

- Frontend: HTML, CSS, BOOTSTRAP,  
JAVASCRIPT
- Backend: RazorPay API, Django



## 2. Proposed System

### 1.1 Scope of the Work

Every project is done to achieve a set of goals with some conditions keeping in mind that it should be easy to use, feasible and user friendly. It may help in effective and efficient order management. It is very possible to observe the customer potentials and purchase patterns because all the ordering history is store in the database. It is efficient managing all the operations of an online store within a single platform. The proposed project would cover:

#### **Customer Side**

- Customer can view/search products without login.
- Customer can also add/remove product to cart.
- When customer try to purchase product, then he/she must login to system.
- After creating account and login to system, he/she can place order.
- If customer click on place order button, then their payment will be done and their order will be placed.
- Customer can check their ordered details by clicking on  
Profile → orders button.

- Customer can see the order status (Confirmed, Shipped, Out for Delivery, Delivered) for each order.
- Customer can receive email of the order confirmation.
- Customer can Send any queries to admin from profile panel.

### **Administrator Side**

- Admin can provide username, email, password and your account will be created.
- After login, there is a dashboard where admin can see how many customers is registered, how many products are there for sale, how many orders placed.
- Admin can add/delete/view/edit the products.
- Admin can view/edit/delete customer details.
- Admin can view/delete orders.
- Admin can change status of order (order is pending, confirmed, out for delivery, delivered)
- Admin can view the feedbacks sent by customers

Additionally, if customer places order and admin deleted that user, then their orders will automatically be deleted. Suppose one (1) customer places four

(4) products order and admin deleted two (2) product from website, then that two-product order will also be deleted and other two will be there. Also, if user click on purchase button without having products in their cart, then website will ask to add product in cart first.

## 2.2 Objectives of the System

The main objective of the study is to develop an electronic commerce system.

The system aims to achieve the following objectives:

- To design an online e-commerce website.
- To provides a solution to reduce and optimize the expenses of customer order management
- To create an avenue where people can shop for electronic products online.
- To develop a database to store information on electronic products and services.

## 2.3 User Requirements

### Customer Requirements:

#### 1. Product Browsing:

- Ability to view and search for products without logging in.
- Detailed product descriptions and images available for all listed items.

#### 2. Shopping Cart:

- Option to add or remove products from the cart.
- View the cart contents at any time before proceeding to checkout.

#### 3. Account Management:

- Create a new account with basic details (username, email, password).
- Secure login and logout functionality.

#### 4. Order Placement:

- Place orders only after logging into the account.
- Receive email confirmations upon successful order placement.
- View and track order status through their profile (e.g., Confirmed, Shipped, Out for Delivery, Delivered).
- Option to check past order details and history.

#### 5. Customer Support:

- Ability to send queries or feedback to the admin directly from their profile panel.

#### Administrator Requirements:

##### 1. Dashboard:

- A comprehensive dashboard displaying key metrics (number of registered customers, available products, and placed orders).

##### 2. Product Management:

- Add, edit, view, or delete product listings.
- Manage product categories for better organization.

##### 3. Customer Management:

- View, edit, or delete customer details.
- Manage customer accounts and address any issues or queries.

##### 4. Order Management:

- View all orders and their statuses.
- Update order statuses (e.g., Pending, Confirmed, Shipped, Out for Delivery, Delivered).
- Automatically handle orders if a product or customer is deleted from the system.

##### 5. Feedback Management:

- View and respond to feedback and queries submitted by customers.

## 2.3 Technology Proposed for Project

The e-commerce website project developed using Django utilized several technologies to create a functional and user-friendly online shopping platform. Some of the technologies used in the project are:

- Django - A popular web framework based on Python that provided various features and functionalities required for the development of the eCommerce website.
- Python - A high-level programming language used for building web applications and other software.
- HTML/CSS - Used for designing the website's user interface and styling.
- JavaScript - Used for implementing interactive features on the website, such as product image changing and shopping cart functionality.
- Bootstrap - A popular CSS framework used for developing responsive websites that are compatible with different devices and screen sizes.
- SQLite - A lightweight relational database management system used to store the website's data.
- Razorpay API - Used for integrating the payment gateway into the website, allowing customers to make secure online payments

## 3. Analysis & Design

### 3.1 Use Case Diagram

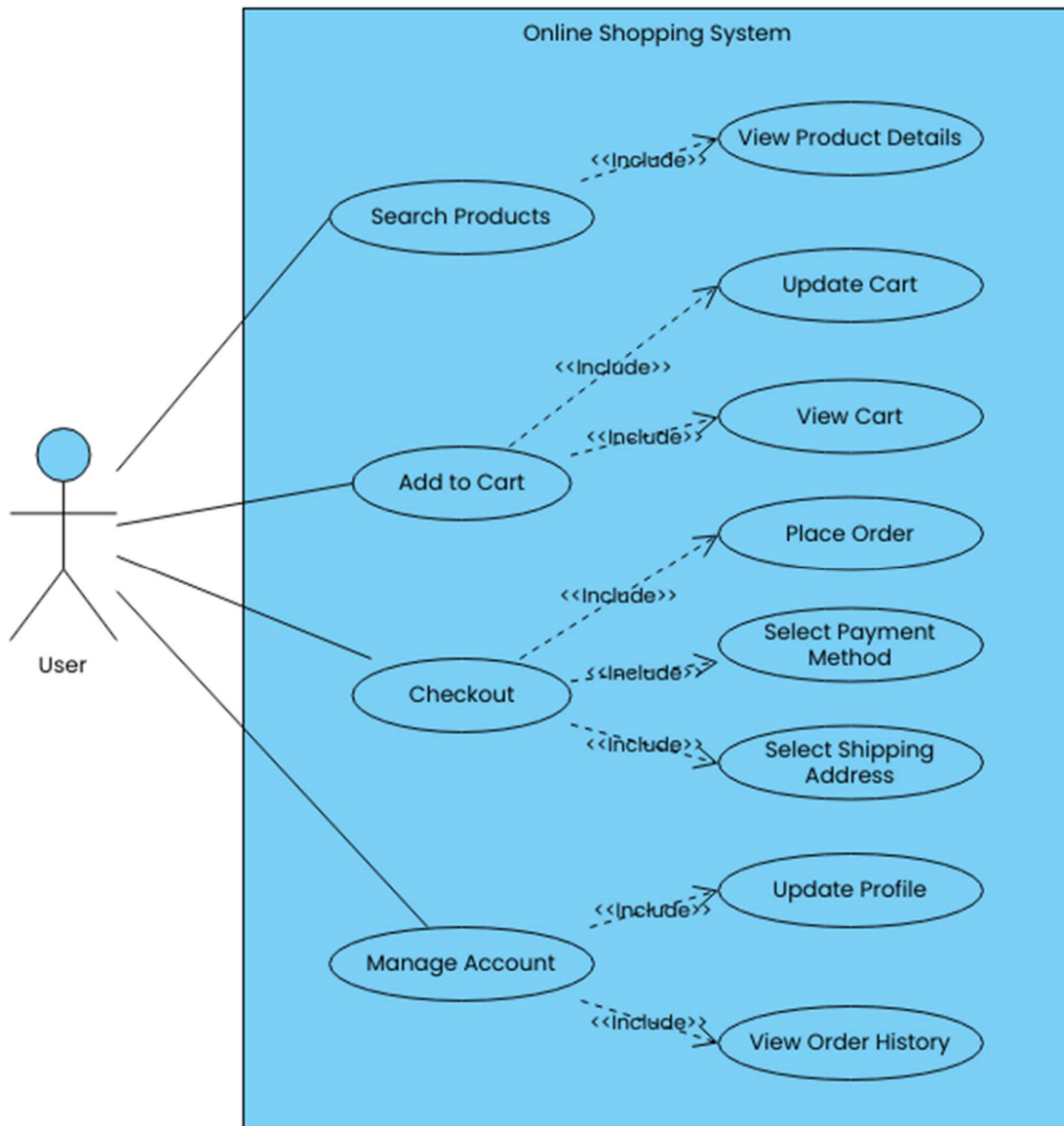
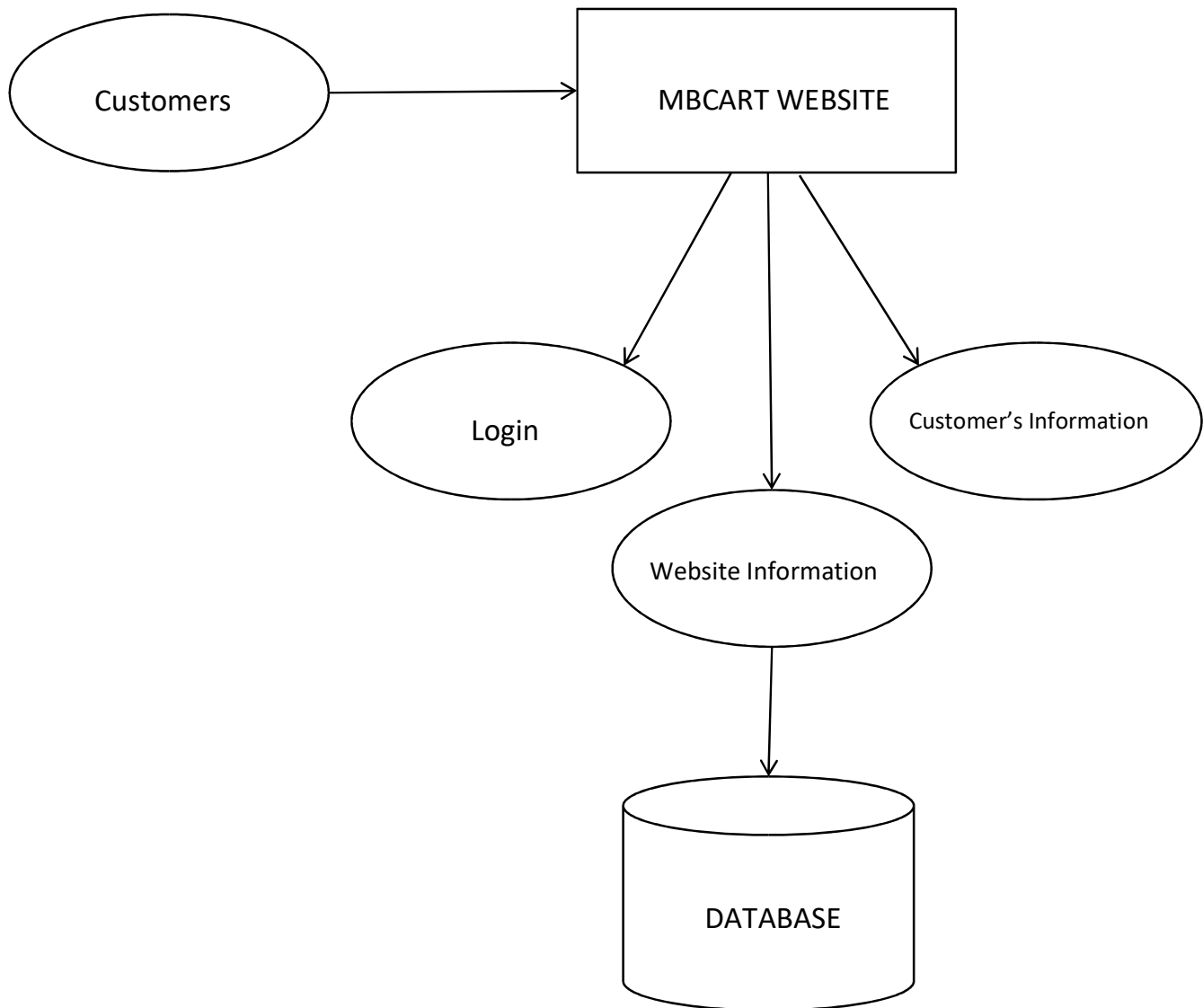


Figure 1: Use Case Diagram



### 3.2 Data Flow Diagram



*Figure 2: Data Flow Diagram*

### 3.3. Flow Chart

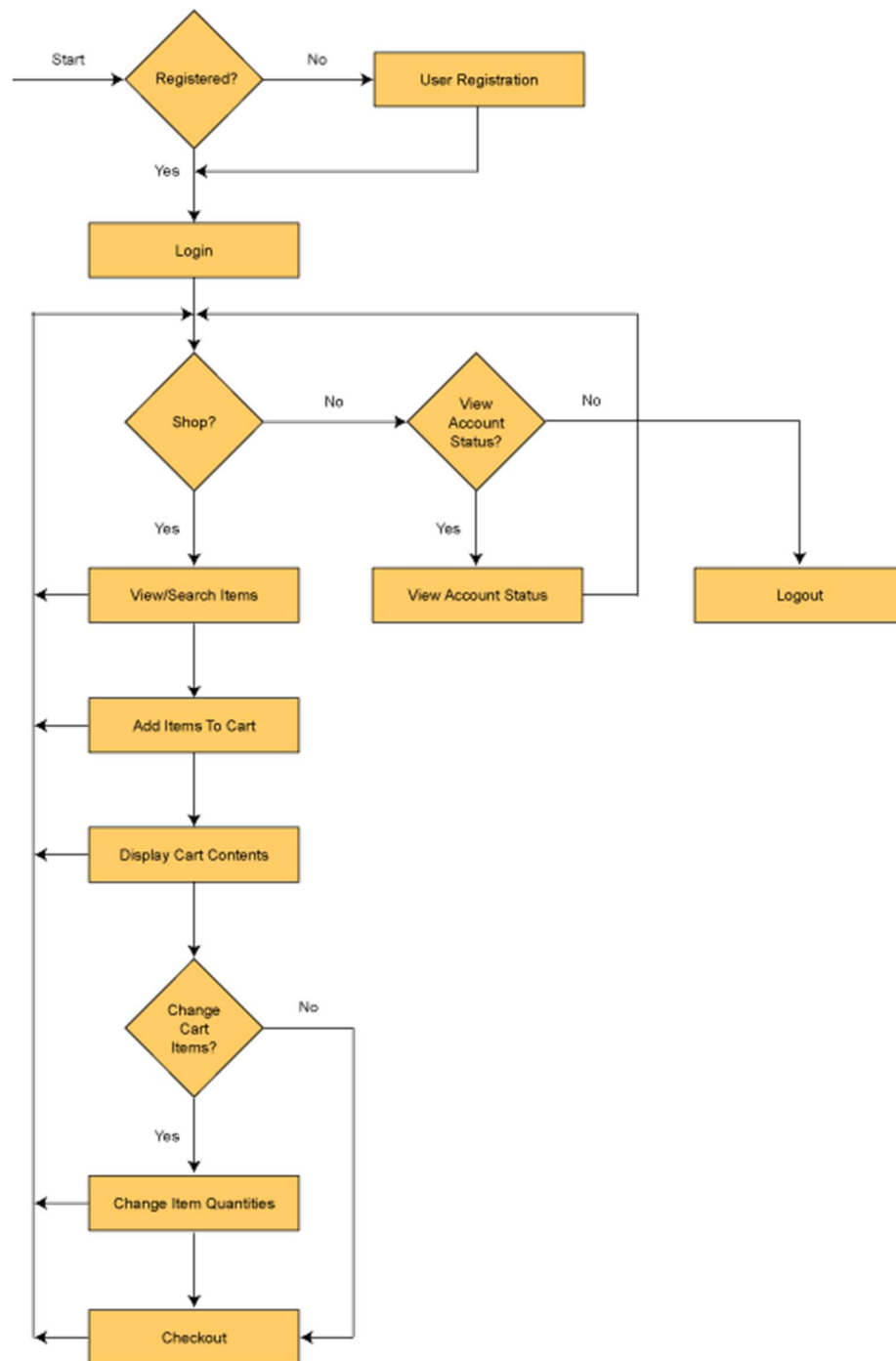


Figure 2: Customer shopping flow chat

### 3.4. Entity Relationship Diagram


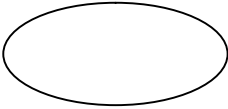
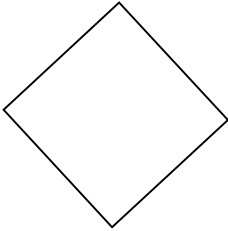
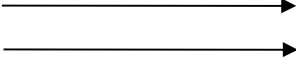
An ER-Diagram can express the overall logical structure of a database graphically. The Entity Relationship Diagram enable a software engineer to fully specify the data objects that are input from a system, the attributes that define the properties of these objects and the relationship between the objects.

- The ER model is one of the several semantic data models; the semantic aspect of the model lies in the attempt to represent meaning of the data.
- The ER model is extremely useful in mapping the meaning and interaction of real world enterprise into a conceptual schema.
- It is notable point that concept of ERD is totally different from DFD. The ER-Diagram is used to describe the logical organization of data.

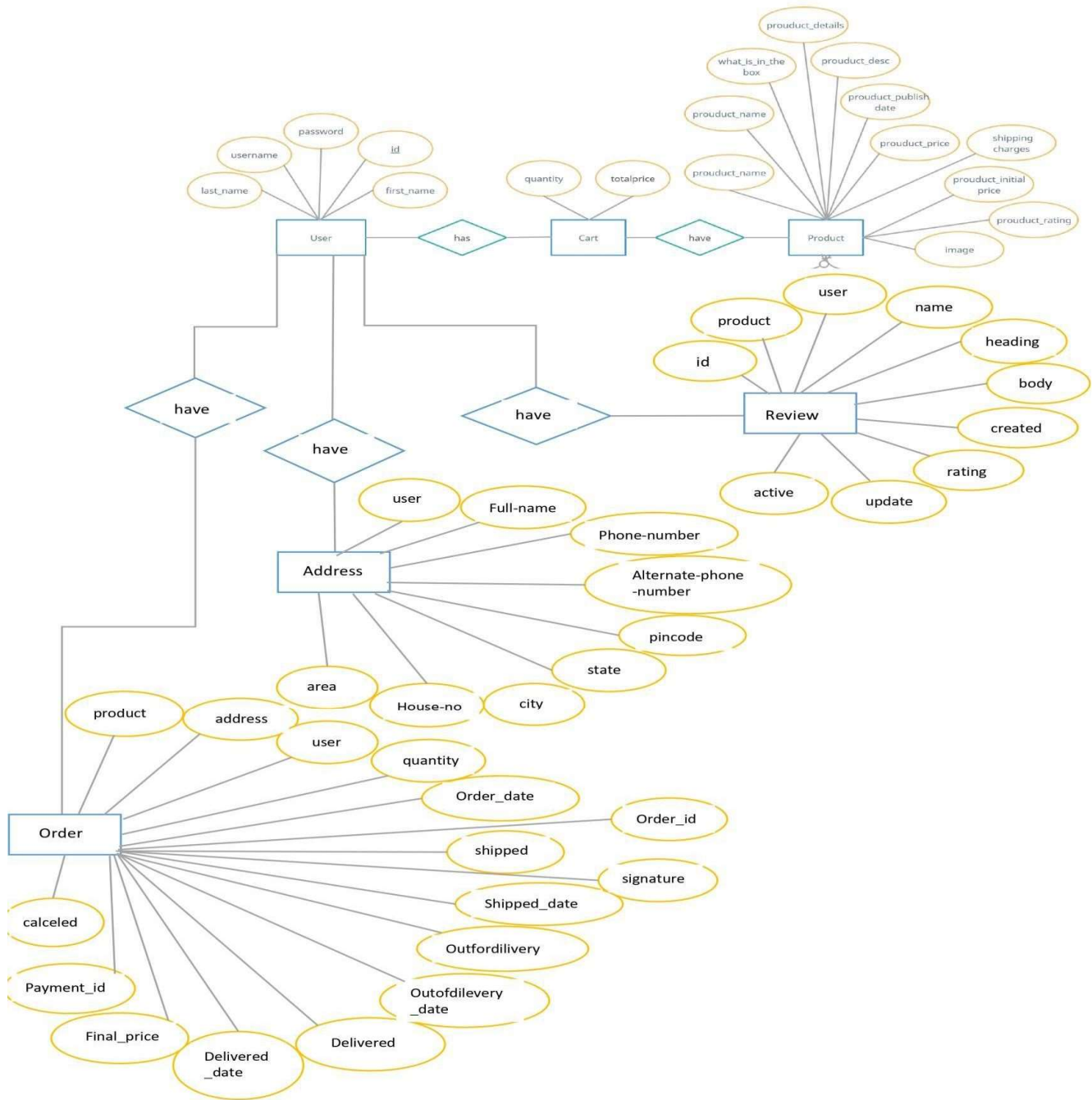
There are following four type of relationships diagram between entities given as follows:

- One to One
- One to Many
- Many to One
- Many to Many

## **Symbol used for ERD**

Symbol	Meaning
	Entity
	Attribute
	Relationship
	Links

## (ERD)



### 3.5. UI Interface Design

# Input Interfaces

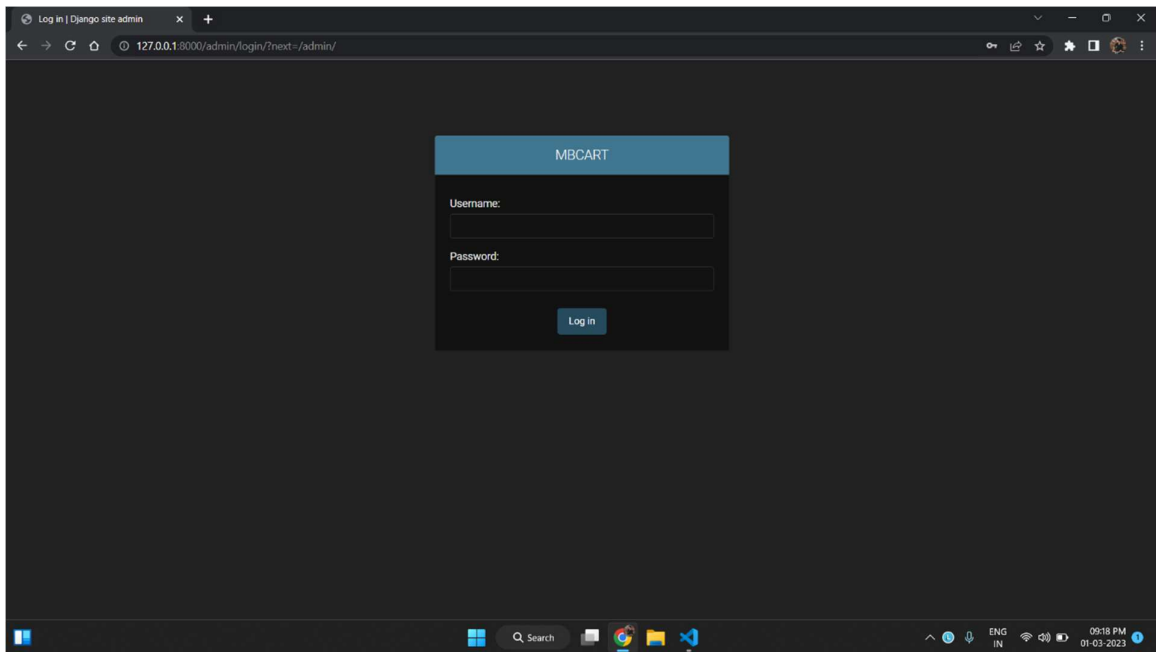


Figure 4: Admin Login

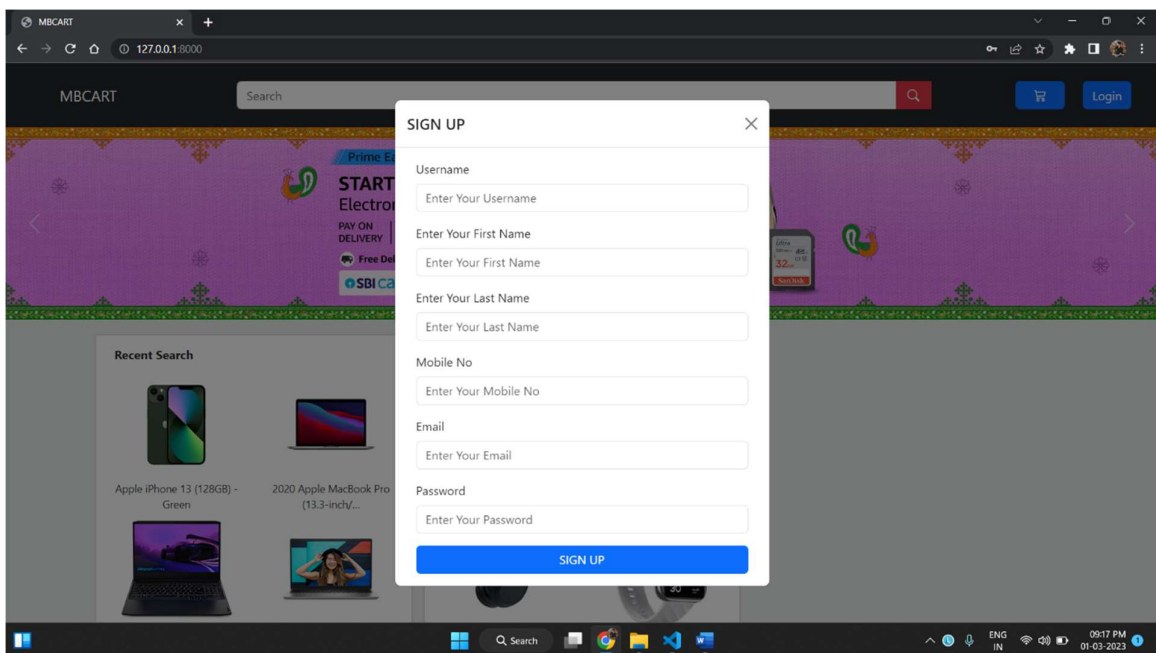


Figure 5: Customer Signup

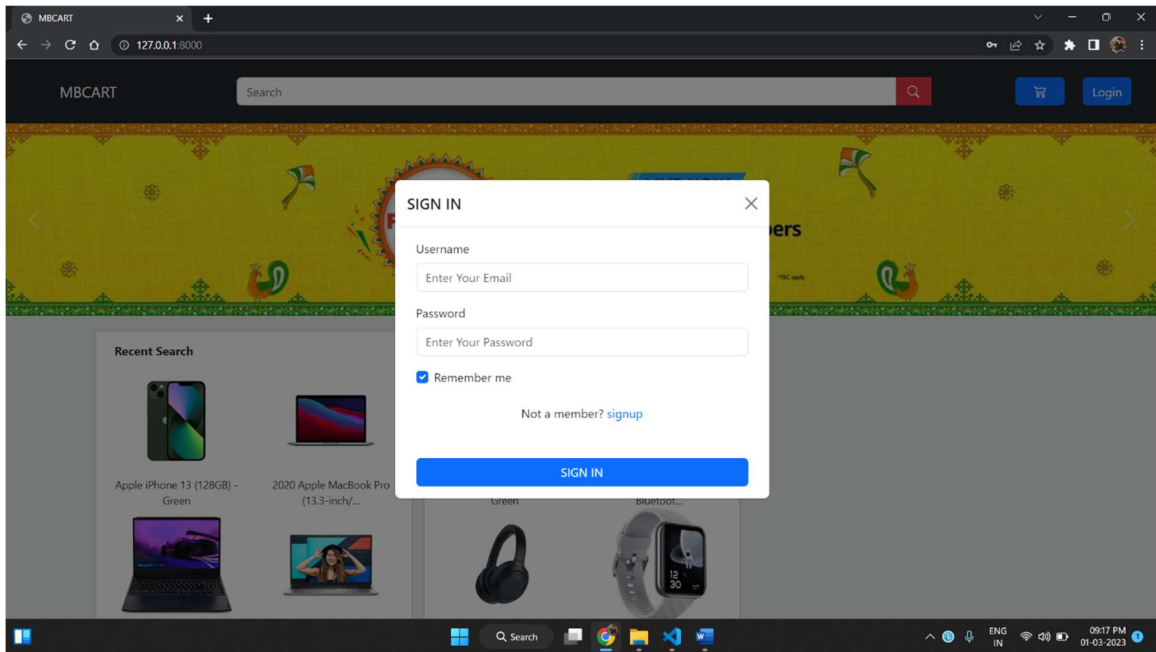


Figure 6: Customer Login

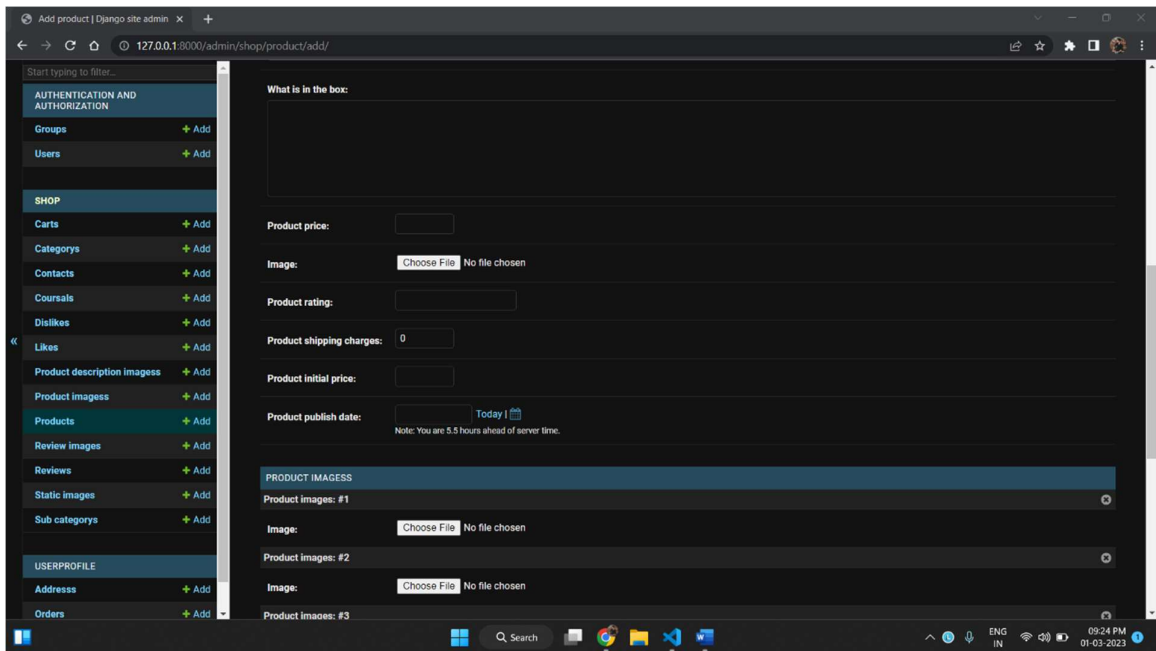


Figure 7: Admin Add Products

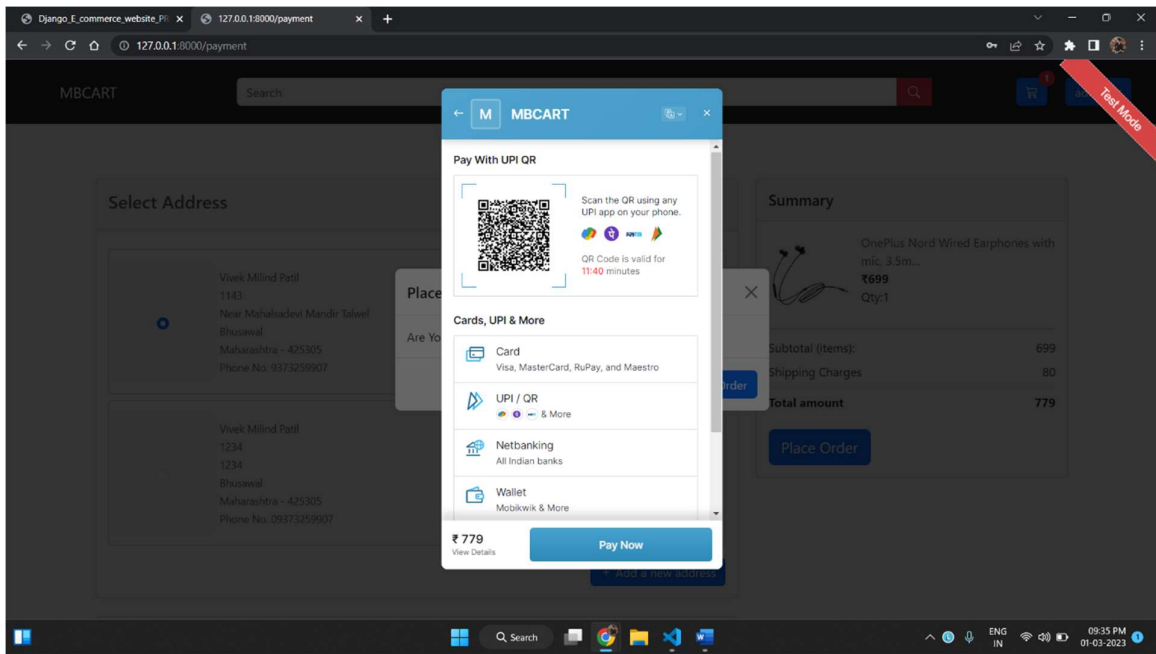


Figure 8: Customer add payment Details

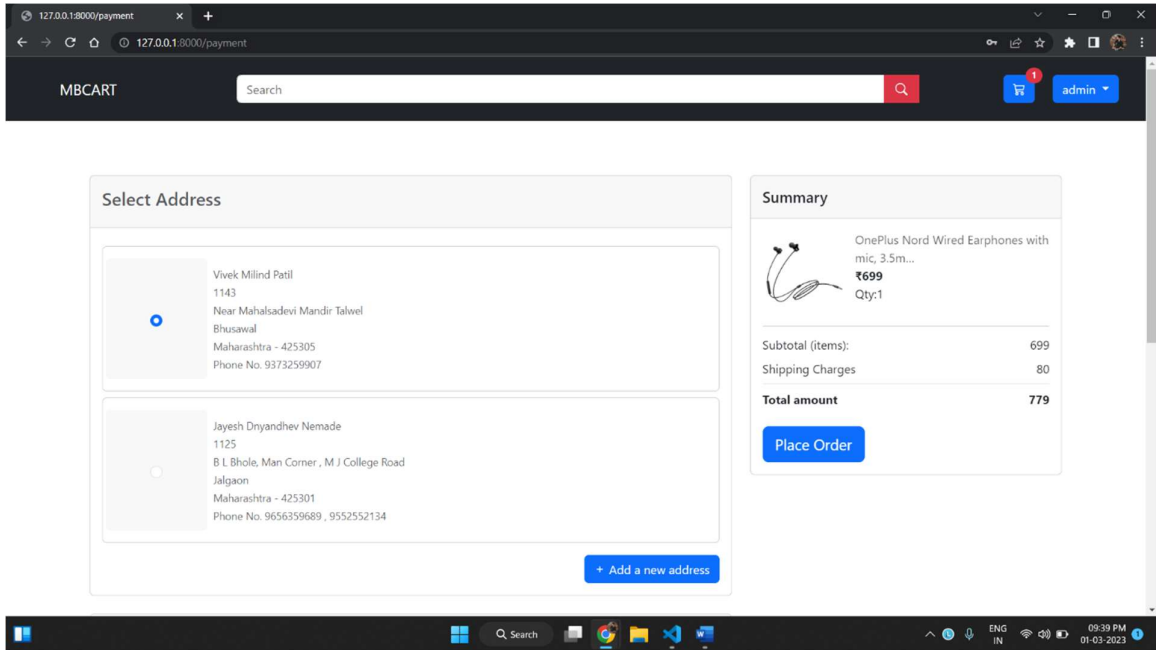


Figure 9: Customer add Shipment Details



MBICART

127.0.0.1:8000/profile/myaddresses/addAddress

Profile

My Orders

My Reviews

Manage Addresses

Contact

Back To Home

Log Out

### Add a New Address

Home Address Work Address

Full Name

Mobile Number

Alternate Mobile Number

State City

Pin Code House no, Building Name

Road Name, Area, Colony

Add Address

07:41 PM 28-02-2023

Figure 10: Customer add Addresses

MBICART

127.0.0.1:8000/profile/contact

Profile

My Orders

My Reviews

Manage Addresses

Contact

Back To Home

Log Out

Name

Enter Your Name

Email address

Enter Your Email

Phone number

Enter Your Phone Number

How may we help you?

Submit

09:38 AM 02-03-2023

Figure 11: Customer can Contact Admin

## Interfaces :

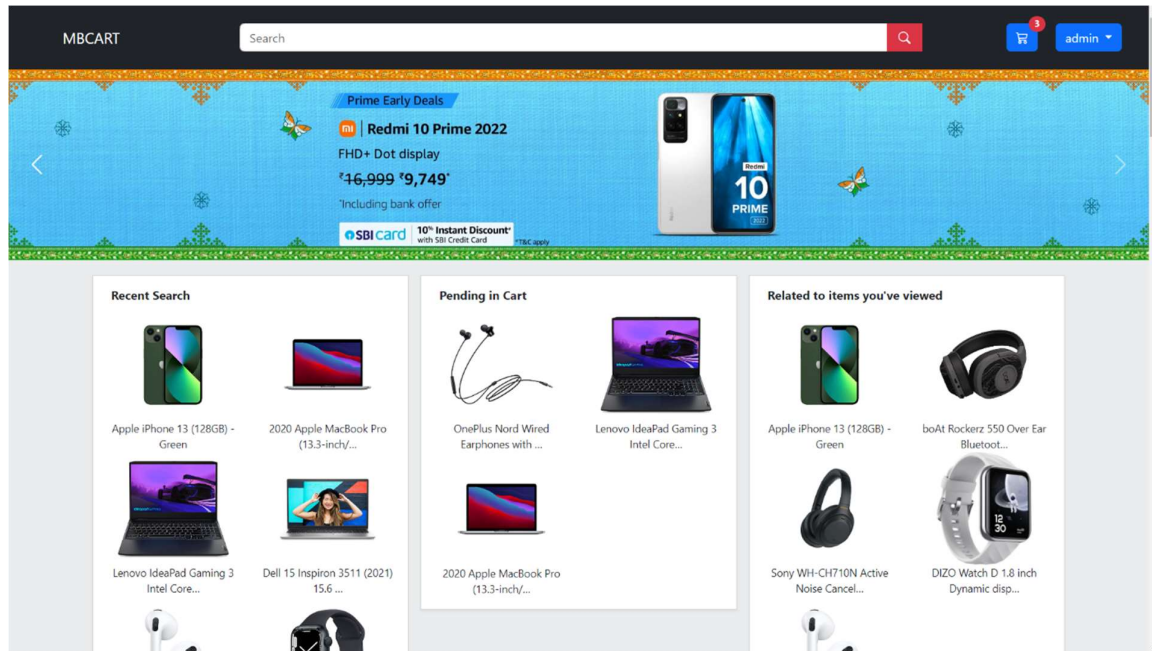
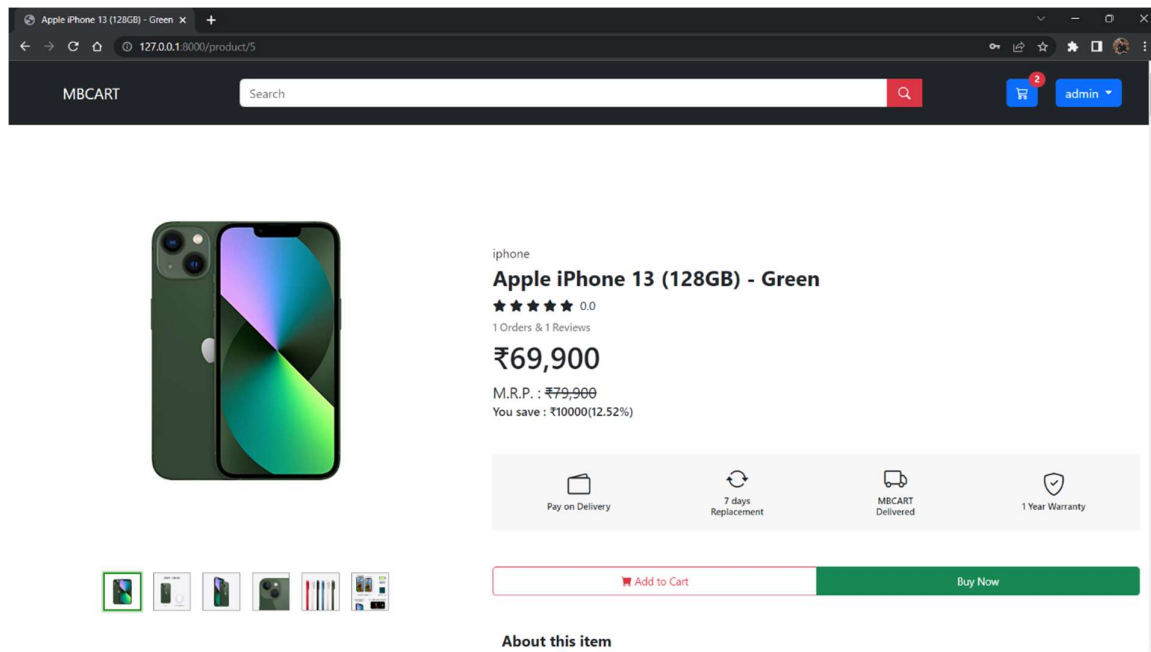


Figure 12: Homepage

*A Homepage consists of various products where user can navigate through them. A user can search products they want through the search bar. Homepage consists of some recently searched products, recently viewed products and the products which are pending in cart. A user can navigate through various categories shown on the homepage.*



*Figure 13: Product Description*

*A Product Description Page where a user can view a detailed information about the specific product including the price of product, the various images of product, the discount over the product, the rating of the product, some technical details of the product, the reviews written from various buyers and some recommended products.*

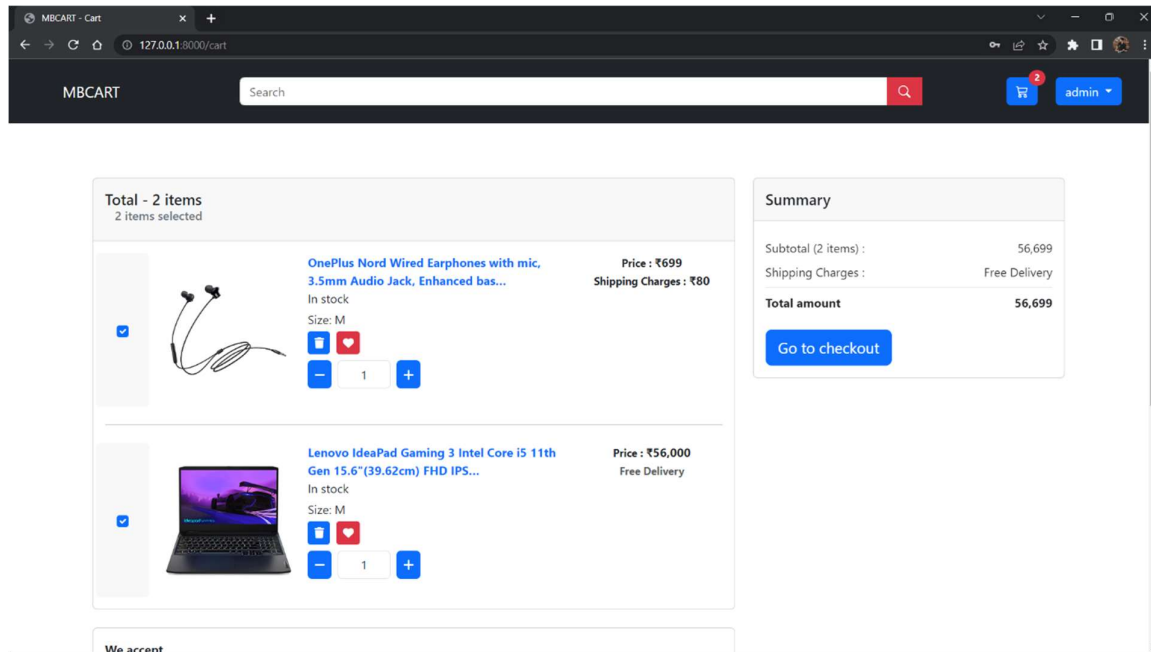
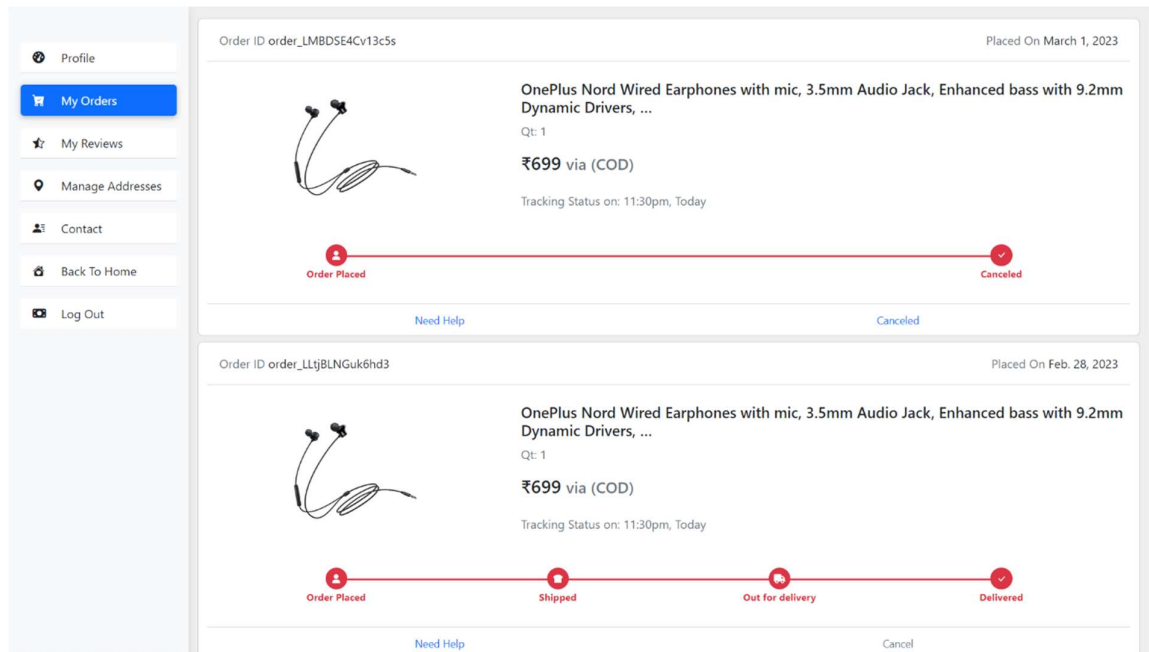


Figure 14: Cart

*A fully functional cart where a user can select products from cart that he wants to order. On the basis of the selected products the price has been shown. A user can increase or decrease the quantity of a product based on his/her needs. A user can remove a specific product form cart.*



*Figure 14: My Orders*

*The Orders page is an centralized hub where users can easily track and manage their past and current orders. This page provides a comprehensive overview of all the orders that your customers have placed with your store, including details such as order status, order date, order number, shipping information, and payment status.*

## 4. Limitations and Drawbacks

Designing web applications is characterized by some constraints and limitations. Developers are limited to a small set of graphical widgets for use in presenting a user interface. Web-based applications require high investment in software, as well as maintenance costs for the software and personnel for software administration. In this study, verification of credentials for membership cannot be done. Besides, there is a payment page although just for demo. Customers are advised to fill in pseudo details (DONT FILL YOUR ORIGINAL CARD DETAILS THERE). By the way, website do not save these details.

- Inability to physically touch the products before buying - This is a limitation of any eCommerce website as customers cannot physically see, touch or try out the products before purchasing. This may lead to a lack of confidence among customers, and they may hesitate to buy products online.
  
- Dependence on technology - The website's functionality depends on technology, including servers, databases, and the internet. Any issues with these technologies may result in downtime or other technical issues that could impact the website's performance.

- Security risks - eCommerce websites are vulnerable to security risks such as hacking, data breaches, and identity theft. It is essential to implement robust security measures to protect sensitive customer information and prevent unauthorized access.
- Logistics and shipping issues - The project's success also depends on timely and reliable logistics and shipping services. Any issues with logistics and shipping could result in delayed deliveries, which could negatively impact customer satisfaction and loyalty.
- Limited interaction with customers - In an eCommerce website, there is limited interaction between the customer and the seller. This may result in a lack of personalization and customer service, which could impact customer satisfaction and retention.

## 5. Proposed Enhancements

1. Enhanced Security Measures:
  - Implement advanced encryption protocols for data protection.
  - Regular security audits and updates to address vulnerabilities.
2. Performance Optimization:
  - Utilize Content Delivery Networks (CDNs) to reduce load times.
  - Optimize database queries and implement caching strategies.
3. Improved User Interface (UI):
  - Redesign the navigation to be more intuitive and user-friendly.
  - Introduce personalized recommendations based on user behavior.
4. Scalability Solutions:
  - Implement cloud-based hosting solutions to handle increased traffic.
  - Use scalable database systems to manage large inventories effectively.
5. Offline Capabilities:
  - Develop a mobile application with offline access to certain features.
  - Implement progressive web app functionalities for a better user experience with limited connectivity.



## 6. Conclusion

The project entitled **MBCART** was completed successfully. The system has been developed with much care and free of errors and at the same time it is efficient and less time consuming. The purpose of this project was to develop a web application for purchasing electronic items over Internet. This project enabled me gain valuable information and practical knowledge on several topics like designing web pages using html & CSS, usage of responsive templates, designing of full stack Django application, and management of database using SQLite3. The entire system is secured. Also, the project helped me understanding about the development phases of a project and software development life cycle. I learned how to test different features of a project. However, it was very challenging learning and developing an application using a new technology.

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5. [www.stackoverflow.com](http://www.stackoverflow.com)
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