A Project Report On

WRIST WATCH

Submitted in partial fulfillment of the requirement for the award of the degree

Master of Computer Applications
(MCA)

Academic Year 2025 – 26

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Marwadi Chandarana Group

NAAC A+

Faculty of Computer Applications (FoCA)

Certificate

This is to certify that the project work entitled

WRIST WATCH

submitted in partial fulfillment of the requirement for
the award of the degree of
Master of Computer Applications (MCA)
of the

Marwadi University

is a result of the bonafide work carried out by
Thobhani Hina N. (92400584099)
Ajani Anjali S. (92400584100)
during the academic year 2025-26

Faculty Guide

HOD

Dean

DECLARATION

We hereby declare that this project work entitled **WRIST WATCH** is a record done by us.

We also declare that the matter embodied in this project is genuine work done by us and has not been submitted whether to this University or to any other University / Institute for the fulfillment of the requirement of any course of study.

Place: Rajkot
Date:

Thobhani Hina N. (92400584099)	Signature:___________
Ajani Anjali S. (92400584100)	Signature:___________

ACKNOWLEDGEMENT

It is indeed a great pleasure to express our thanks and gratitude to all those who helped us. No serious and lasting achievement or success one can ever achieve without the help of friendly guidance and co-operation of so many people involved in the work.

We are very thankful to our guide **Prof. Gehna Sachdeva,** the person who makes us to follow the right steps during our project work. We express our deep sense of gratitude to for her guidance, suggestions and expertise at every stage. A part from that her valuable and expertise suggestion during documentation of our report indeed help us a lot.

Thanks to our friend and colleague who have been a source of inspiration and motivation that helped to us during our project work.

We are heartily thankful to the Dean of our department **Dr. R. Sridaran** sir and HoD **Dr. Sunil Bajeja** sir for giving us an opportunity to work over this project and for their end-less and great support to all other people who directly or indirectly supported and help us to fulfil our task.

Thobhani Hina N. (92400584099) Signature:___________
Ajani Anjali S. (92400584100) Signature:___________

CONTENTS

Table Index

Figure Index

CHAPTER 1

INTRODUCTION OF PROJECT DESCRIPTION

The Online Watch Shop is a modern and user-friendly web application designed to provide a seamless shopping experience for watch enthusiasts. It allows users to browse, compare, and purchase a wide variety of watches from different brands. The system is structured into two main components: the Admin Panel and the Customer Interface.

The system is built using **MERN (MongoDB, Express.js, React.js, and Node.js)** for the backend, ensuring smooth operation, secure transactions, and real-time inventory management. The Customer Interface offers an intuitive shopping experience, while the Admin Panel allows shop owners to manage products, track orders, and analyze sales.

This system is designed to enhance customer experience, optimize sales processes, and ensure secure online transactions. It includes features such as product search and filtering, a secure checkout process, and order tracking. Additionally, security measures are integrated to protect users' payment information and personal data.

Project Name	Wrist Watch
Project Duration	3.5 months
Documentation Tool	Microsoft Word
Operating System	Microsoft windows 11
Front End Tools	React Js
Back End Tools	NodeJS, ExpressJS, MongoDB
Browser	Firefox, Google Chrome

CHAPTER 2

PREAMBLE

2.1 Modules Description

E-Commerce has revolutionized modern shopping by making it faster and easier to access products.Wrist Watch aims to offer a seamless online shopping experience using scalable full-stack technology. It bridges the gap between user satisfaction and admin efficiency, blending product browsing, secure checkout, and real-time inventory management.

Client/User Module

- Users can access and browse products without logging in.
- Features include viewing product details, filtering by price.
- Authentication is required to:
  - Add products to the cart.
  - Place an order.
  - View and manage order history.
  - Update delivery address.
- After login, users can:
  - Manage their profile.
  - Track placed orders.
  - Access personalized features (e.g., saved address, cart).

Admin Module

- Admins can access the site interface without logging in.
- Authentication is required to access admin functionalities.
- After login, admins can:
  - Add, edit, and delete product categories.
  - Perform CRUD operations on product listings.
  - View and manage all user orders.
  - Access a secure dashboard to monitor system activity and inventory.

CHAPTER 3

REVIEW OF LITERATURE

Online shopping has become very popular because it is easy and convenient. Many people now prefer buying things like wristwatches online. Studies show that clear product images, good descriptions, and customer reviews help users decide what to buy. Safe payment options and fast delivery also make customers happy. Mobile-friendly websites and social media ads help bring more buyers. To run a successful online watch shop, it is important to focus on user needs and smooth shopping experience.

Developed using the MERN stack (MongoDB, Express.js, React.js, Node.js), the system utilizes a NoSQL database (MongoDB) for efficient data management. Security features such as SSL encryption, secure payment gateways, and user authentication are integrated to ensure a safe and reliable shopping experience.

CHAPTER 4

TECHNICAL DESCRIPTION

This project is an online platform where users can browse, search, and buy wrist watch. It includes features like product listings, shopping cart, user login, payment gateway, and order tracking. Admins can manage products, view orders, and handle customer details.

4.1 Hardware Requirements:

Processer	Intel i3 or higher
RAM	4 GB or more
Hard Disk	Minimum 250 GB
Internet	Stable brodband connenction
Display	1024x768 resolution or higher

Table 4.1 Hardware Requirements

4.2 Software Requirements:

Operetaing System	Windows 10/11
Front-End	React.js,Tailwind CSS, Bootstrap
Back-End	Node.js with Express.js
Dataset	MongoDB
Browser	Chrome, Firefox
Devlopment Tools	Visual Studio Code

Table 4.2 Software Requirements

CHAPTER 5

SYSTEM DESIGN AND DEVELOPMENT

Algorithm

```
Step 1      Start

Step 2      Display Home Page with product listings and categories

Step 3      IF User is not logged in THEN
            ♦ Allow browsing, product viewing, and filter usage.
            ♦ IF user clicks "Add to Cart" or "Place Order" THEN
                ➢ Redirect to Login/Register.
                ➢ On success, continue.

Step 4      IF User is logged in THEN
            ♦ Allow full access to:
                ➢ Add to Cart
                ➢ View/Update Profile
                ➢ Place Orders
                ➢ View Order History

Step 5      On Checkout
            ♦ User selects address and payment option.
            ♦ System stores order data in database.
            ♦ Display confirmation.

Step 6      IF Admin is not logged in THEN
            ♦ Allow viewing the site.
            ♦ IF trying to manage product/order data THEN
                ➢ Redirect to Admin Login.

Step 7      IF Admin logs in THEN
            ♦ Display Admin Dashboard.
            ♦ Allow:
                ➢ Add/Edit/Delete Product
                ➢ Add/Edit/Delete Categories
                ➢ View All Orders

Step 8      Ensure all protected routes are secure with token-based
            authentication (JWT)
```

Step 9 Maintain session state using Context API for Cart & Auth

Step 10 Allow Logout from both user and admin

Step 11 End

Flowchart

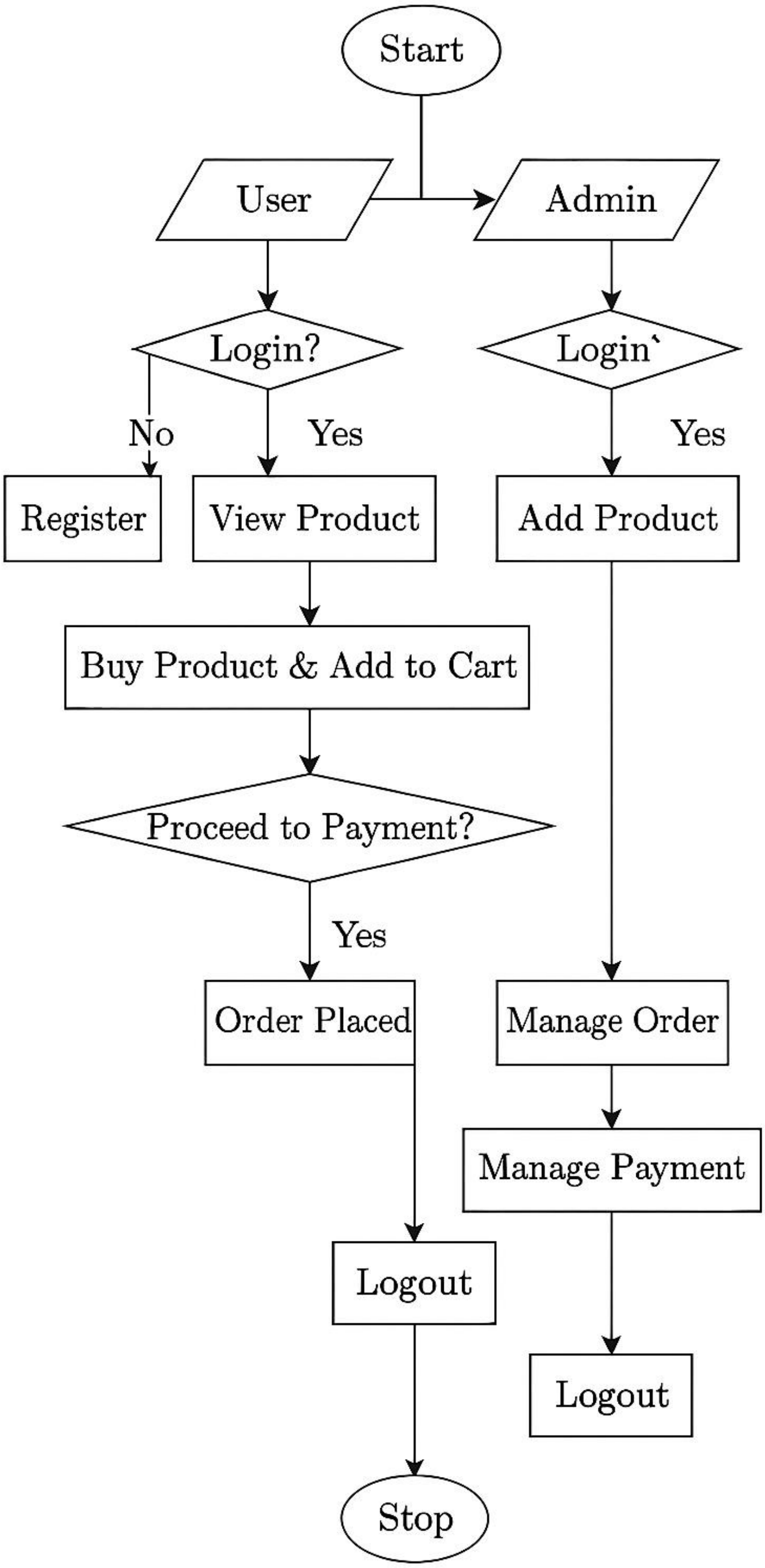


Figure 5.1 Flowchart

DFD (0 LEVEL)

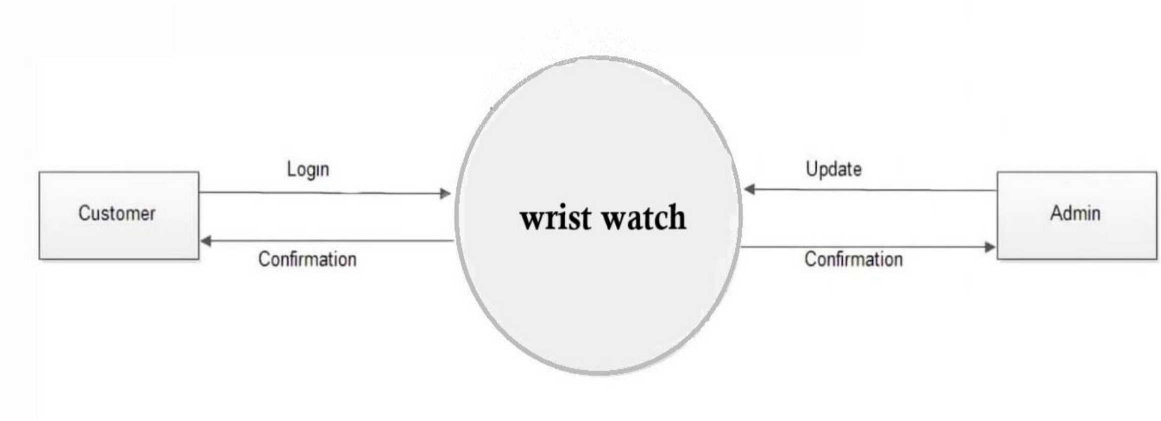


Figure 5.2 DFD (0 LEVEL)

DFD (1 LEVEL)

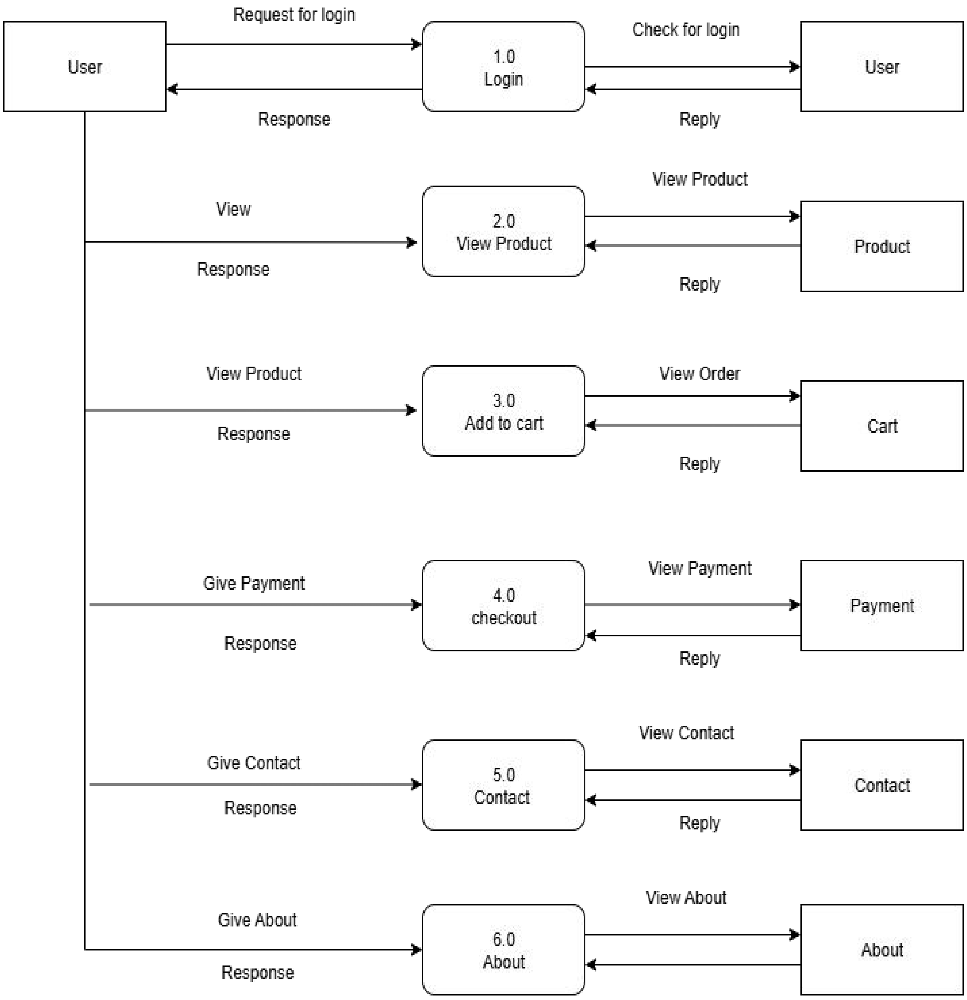


Figure 5.3 DFD (1 LEVEL)

Class Diagram

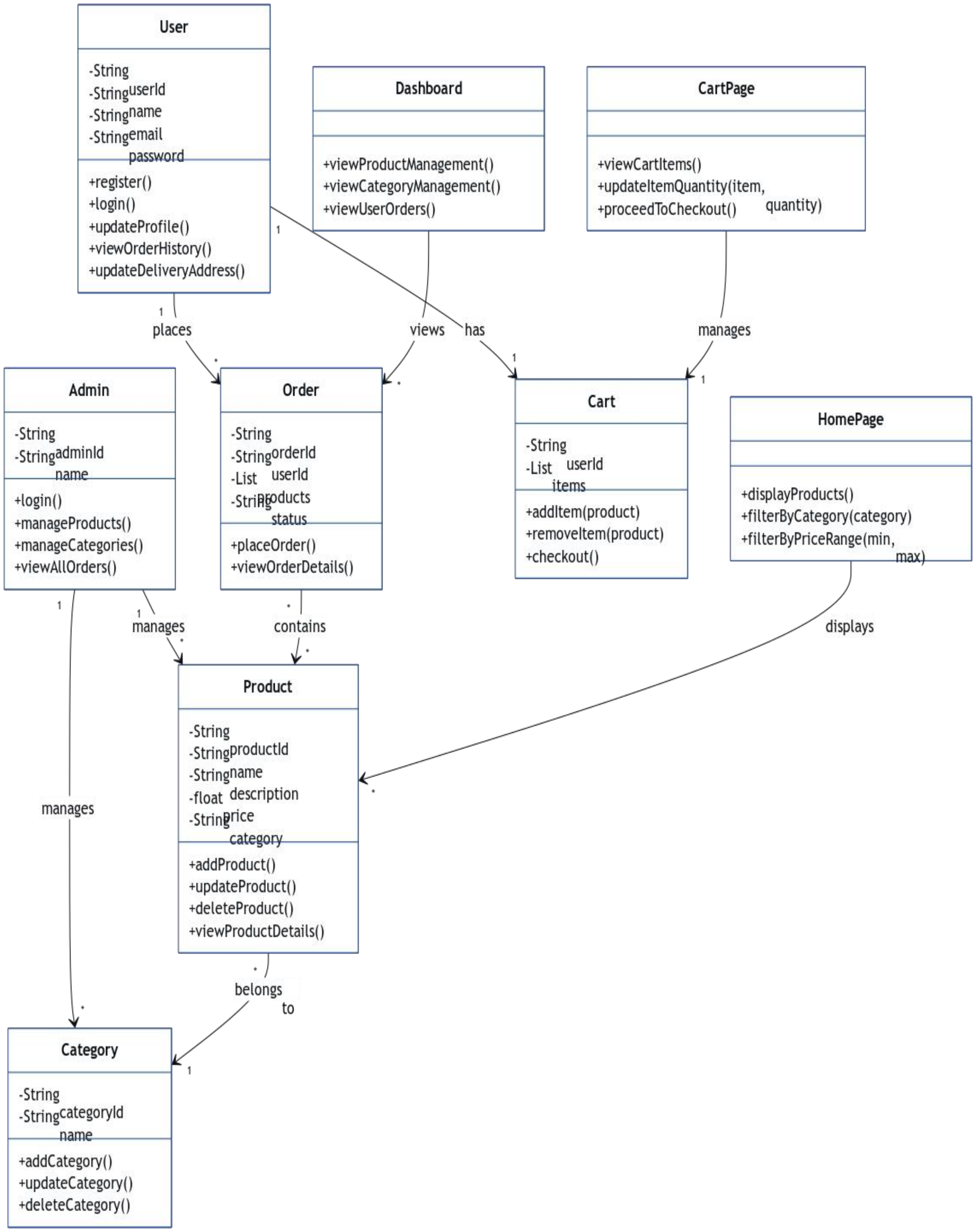


Figure 5.4 Class Diagram

Use Case Diagram

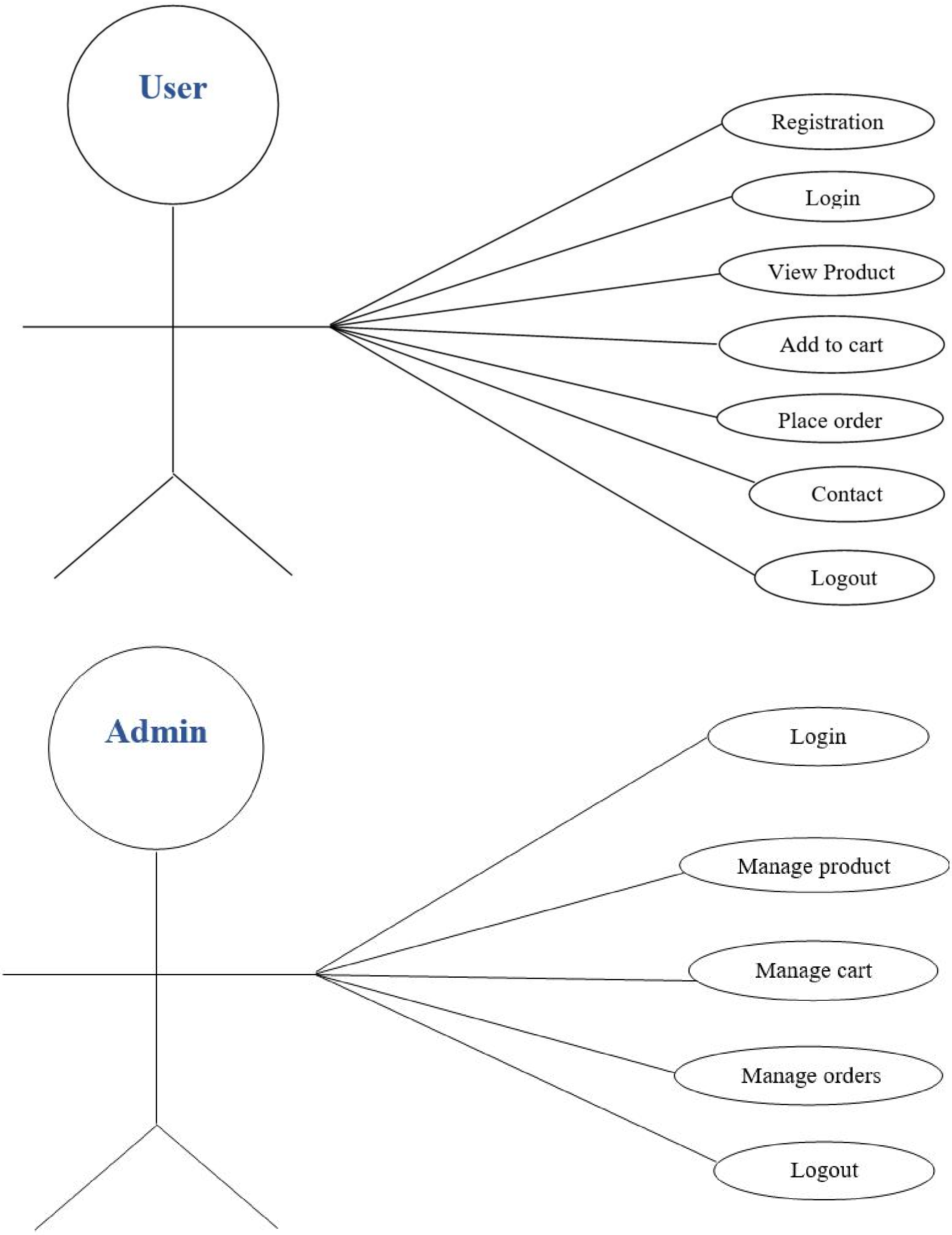


Figure 5.5 Use Case Diagram

Sequence Diagram

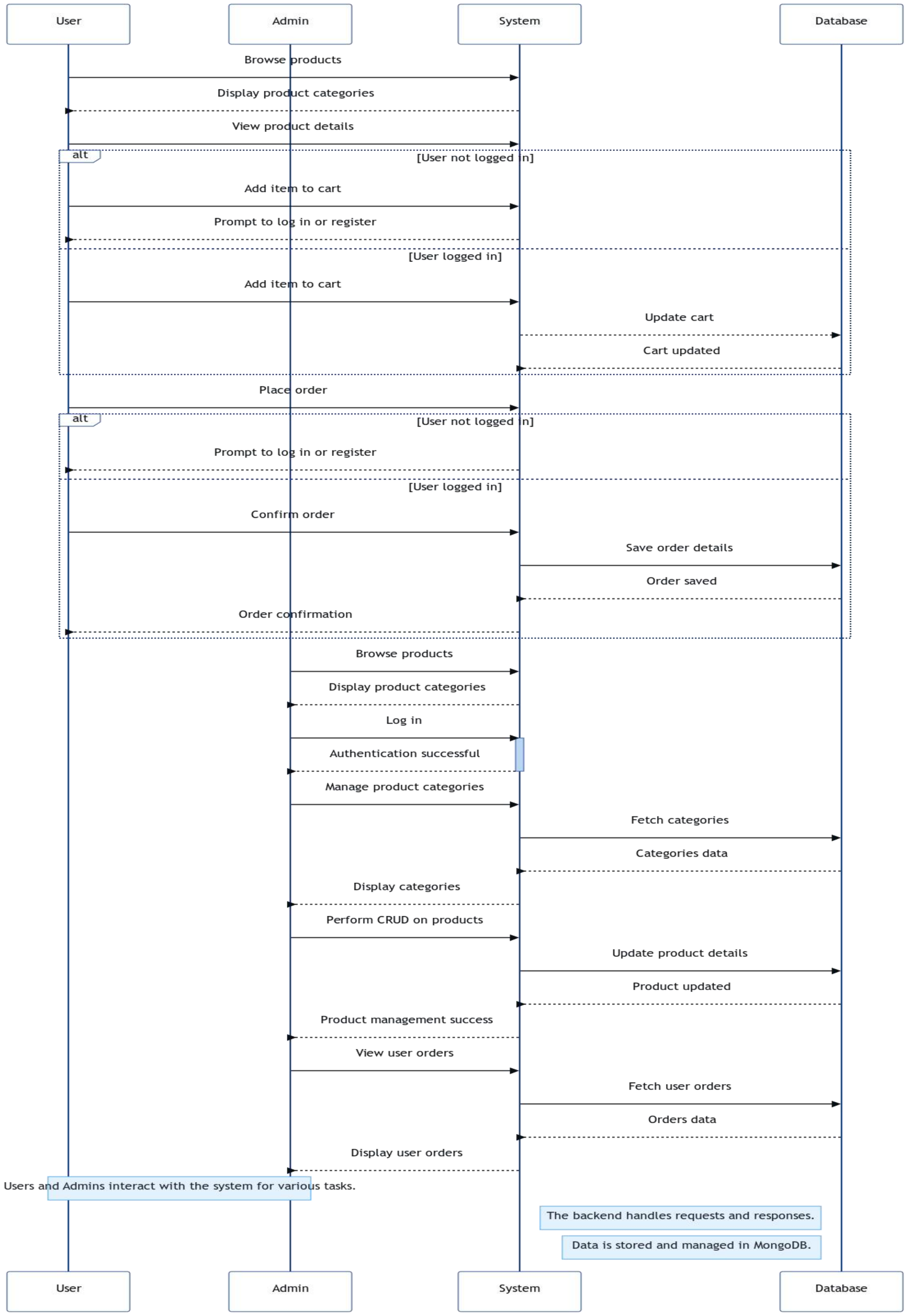


Figure 5.6 Sequence Diagram

Activity Diagram (User)

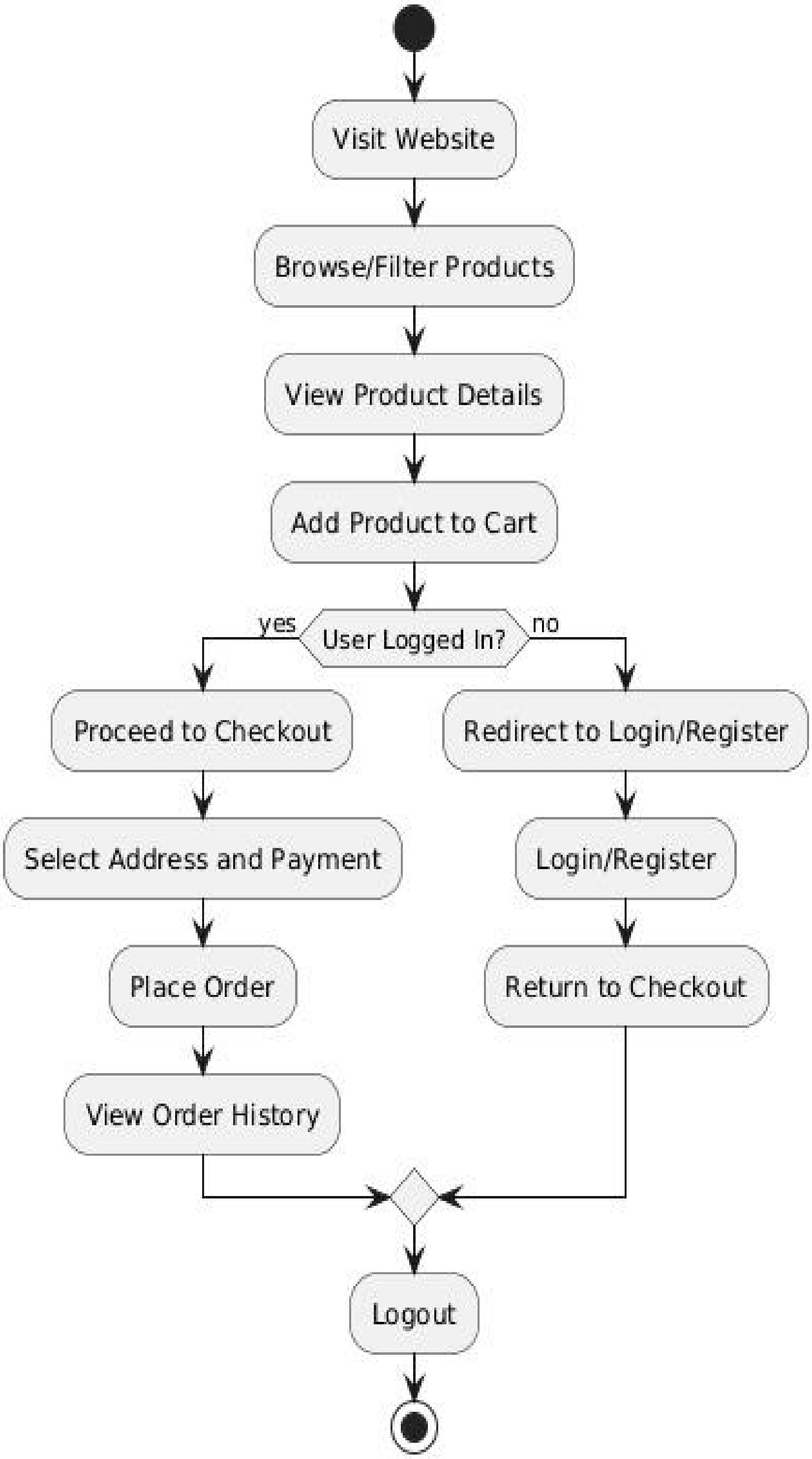


Figure 5.7 Activity Diagram (User)

Activity Diagram (Admin):

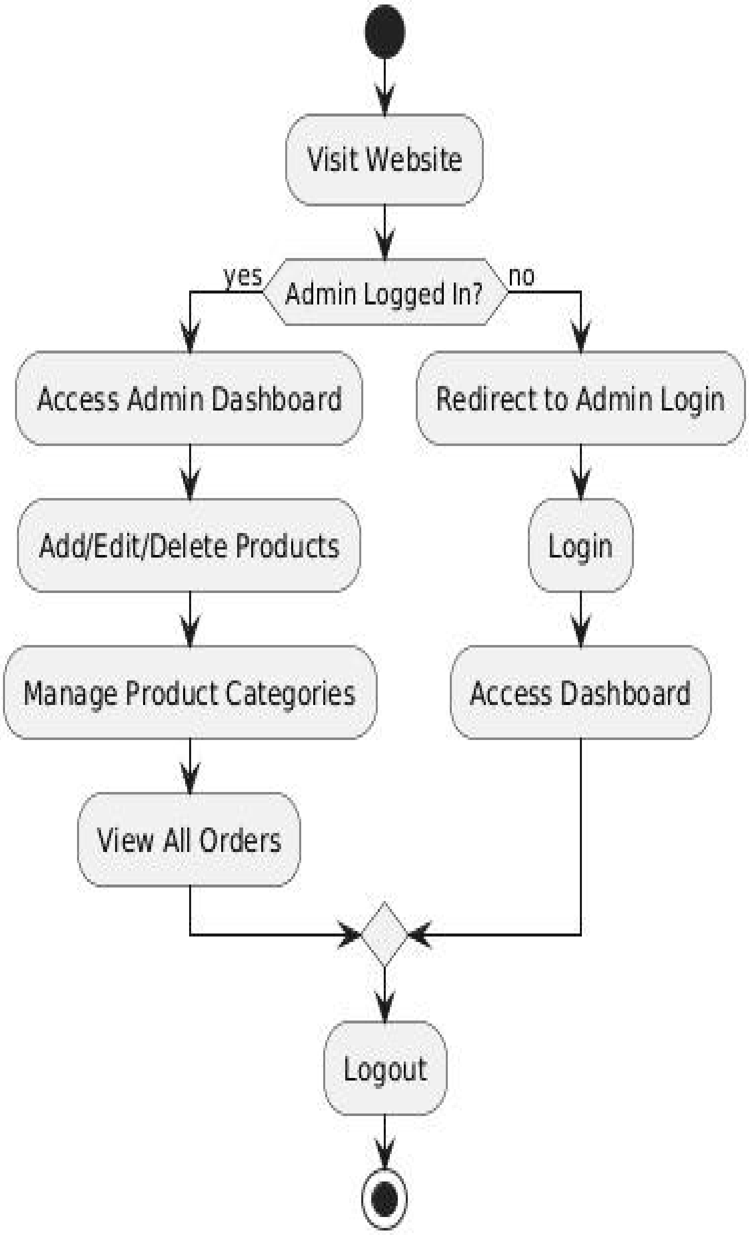


Figure 5.8 Activity Diagram (Admin)

State Diagram

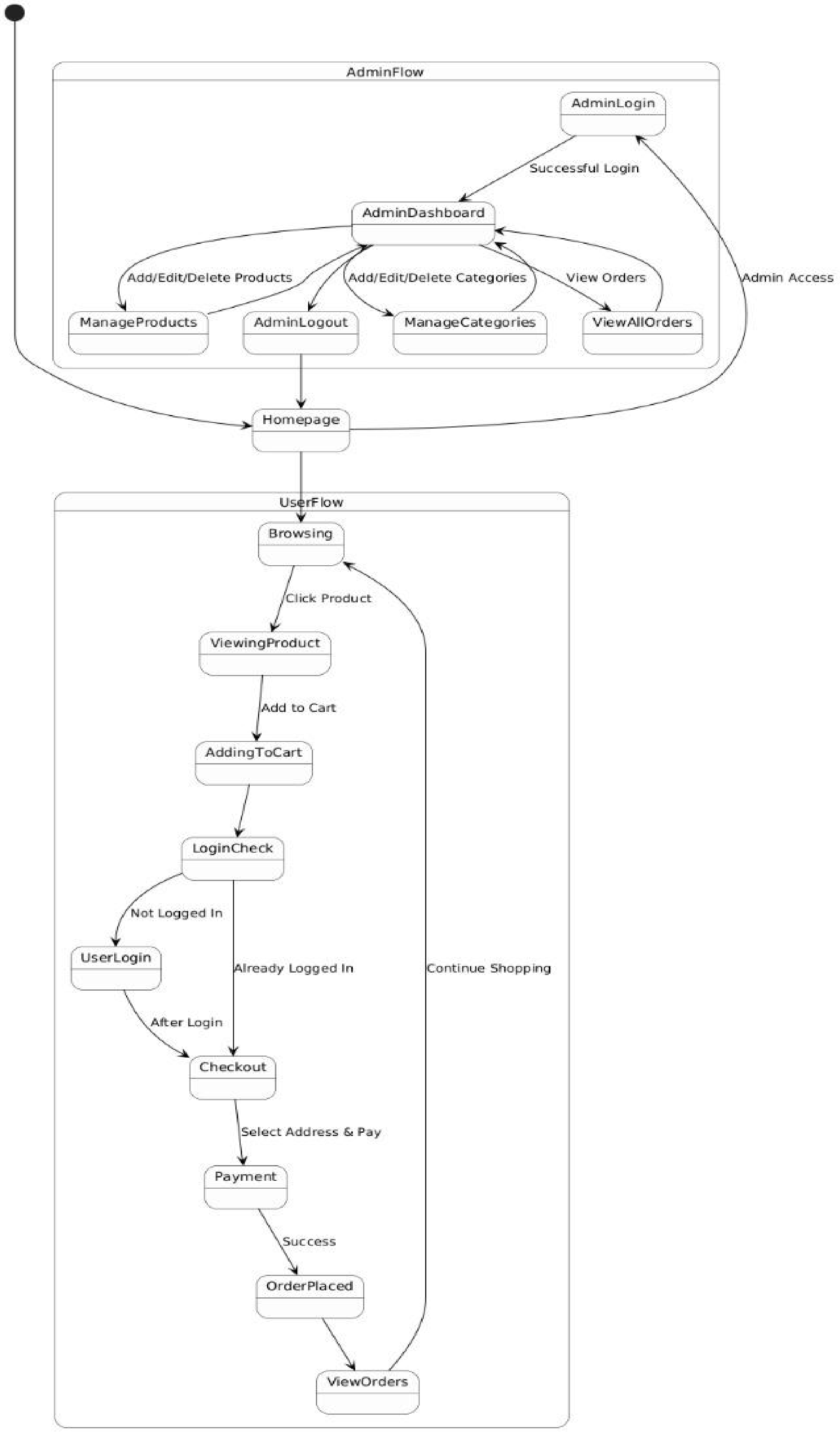


Figure 5.9 State Diagram

Database Design / File Structure

Table 1: Users Collection:

Stores all user details including registered clients and role-based access.

Field	**Type**	**Description**
id	ObjectId	Unique identifier
name	String	Full name of the user
email	String	User's email (must be unique)
password	String	Hashed password
cartdata	Object	Stores items added to the user's cart
createdAt	Date	Registration date
updateAt	Date	Last update timestamp

Table 5.1 Users Collection

Table 2: Product Collection

Stores details of each product listed on the platform.

Field	**Type**	**Description**
id	ObjectId	Unique identifier
name	String	Name of the product
Image	String	Product image URL or path.
description	String	Detailed description
price	Number	Price of the product
category	String	Category the product belongs to
Date	Date	Date product was added.
Bestseller	Boolean	Indicates if product is a bestseller.
createdAt	Date	Production creation date
updateAt	Date	Last updated date

Table 5.2 Product Collection

Table 3: Order Collection

Stores placed orders and order history.

Field	**Type**	**Description**
id	ObjectId	Unique identifier
userId	ObjectId	Reference to the user
items	Array	List of ordered items
items.productId	ObjectId	Product Reference
items.quantity	Number	Ordered quantity
items.price	Number	Snapshot price at order time
totalAmount	Number	Total order cost
paymentMethod	String	e.g., "COD", "UPI"
createdAt	Date	Order placed timestamp
updateAt	Date	Last updated date

Table 5.3 Order Collection

● Description of File Structure:

Backend Folder Structure:
/controllers
/models
/routes
/config
/middleware

Frontend Folder Structure:
/components
/pages
/context

Admin Folder Structure:
/component
/context
/pages

Menu Design

- **User Side – Before Login**

Register

Login :

User Login

Home

Product / categories

Contact Us

- **User Side – After Login**

Home

products :

Browse categories

My Cart / Orders

Payment

Track Order

Order History

Logout

- **Admin Side – After Login**

Home

products:

  Add Item

  View / Manage / categorised products

Orders :

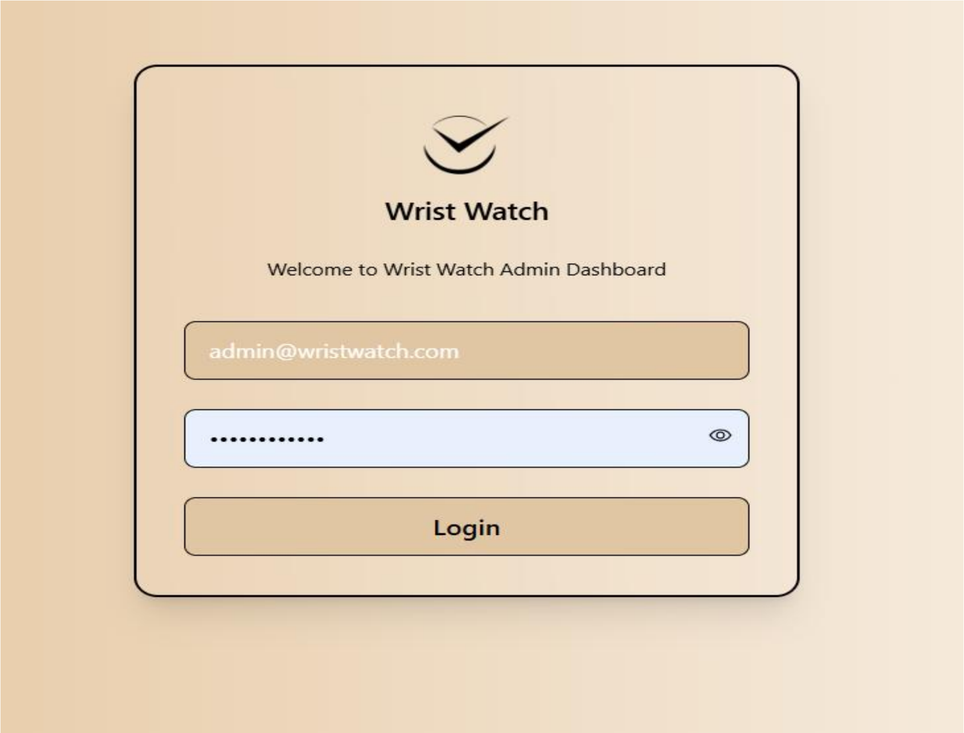
  View All Orders

  Manage Order Status

Logout

Screen Design (Admin Side)

Admin Login



Wrist Watch

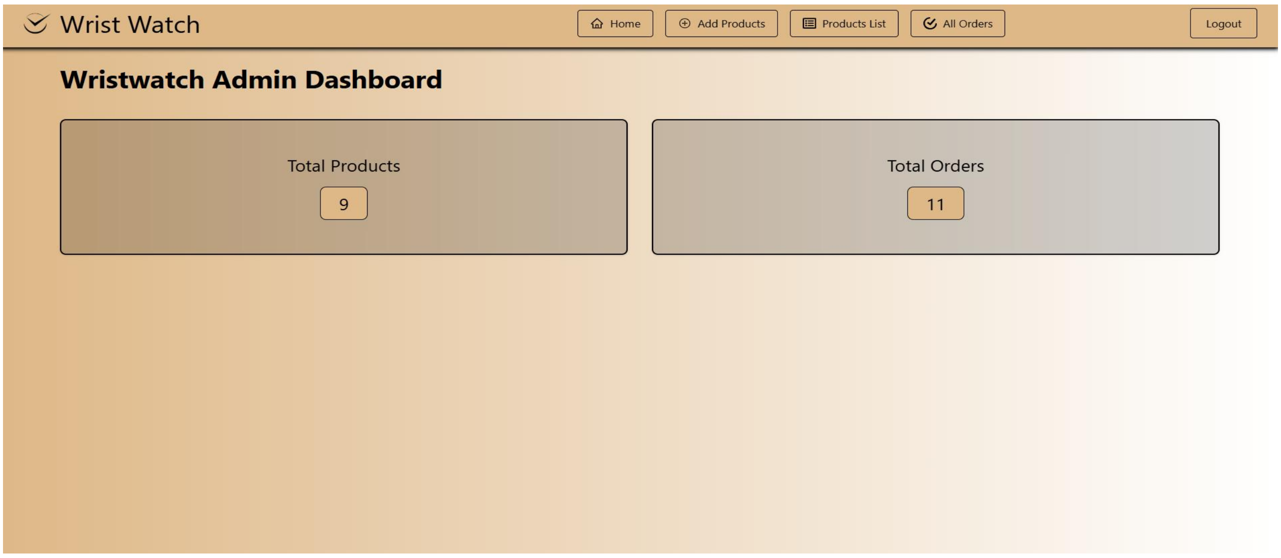
Welcome to Wrist Watch Admin Dashboard

admin@wristwatch.com

••••••••••••

Figure 5.10 Admin Login

Home Page



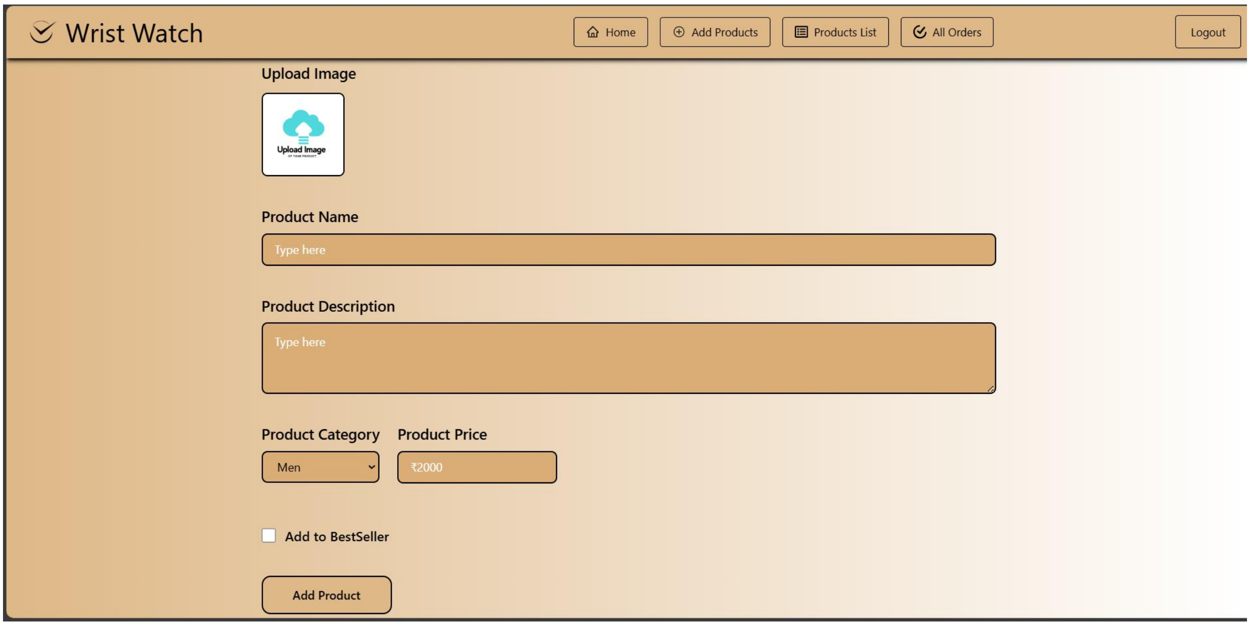
Wristwatch Admin Dashboard

Total Products 9

Total Orders 11

Figure 5.11 Home

Add Product



Upload Image

Product Name

Type here

Product Description

Type here

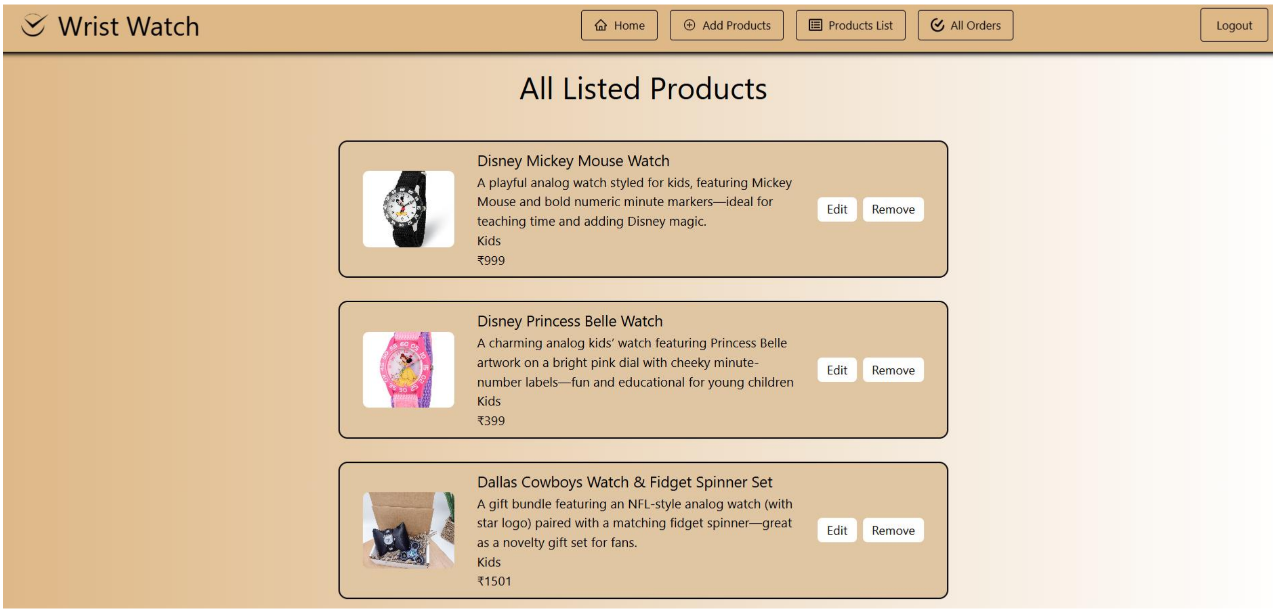
Product Category: Men

Product Price: ₹2000

□ Add to BestSeller

Figure 5.12 Add Product

Product List



All Listed Products

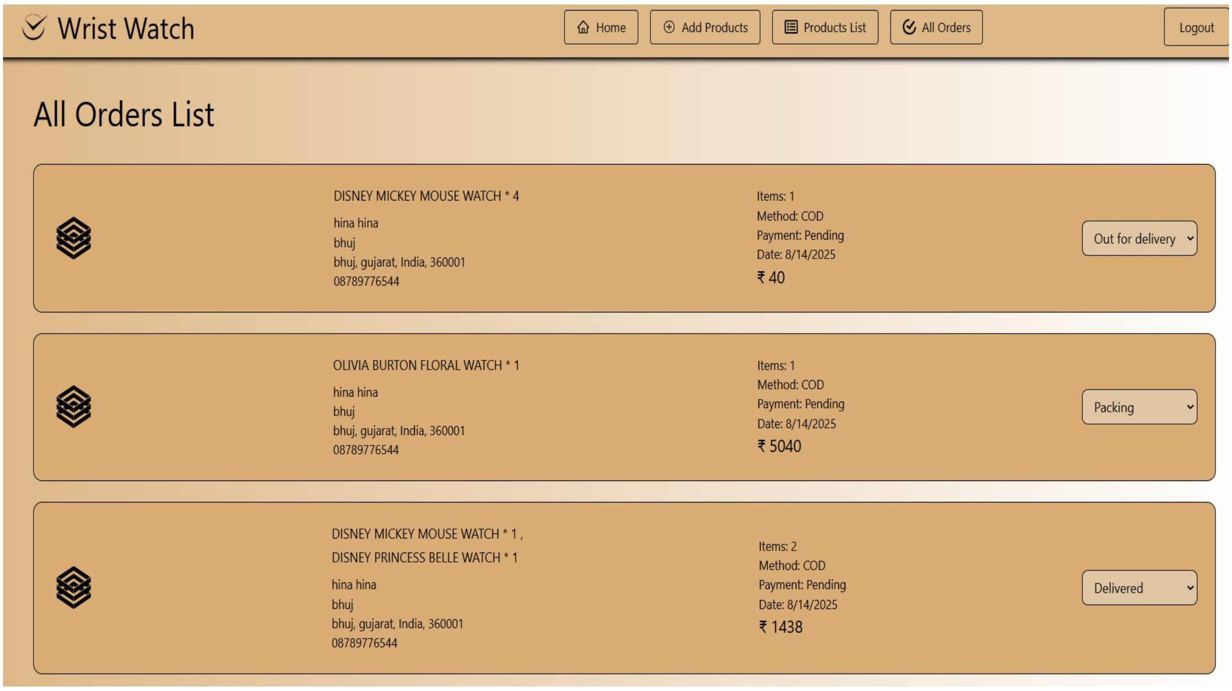
Disney Mickey Mouse Watch
A playful analog watch styled for kids, featuring Mickey Mouse and bold numeric minute markers—ideal for teaching time and adding Disney magic.
Kids
₹999

Disney Princess Belle Watch
A charming analog kids' watch featuring Princess Belle artwork on a bright pink dial with cheeky minute-number labels—fun and educational for young children
Kids
₹399

Dallas Cowboys Watch & Fidget Spinner Set
A gift bundle featuring an NFL-style analog watch (with star logo) paired with a matching fidget spinner—great as a novelty gift set for fans.
Kids
₹1501

Figure 5.13 Product List

All Orders



All Orders List

DISNEY MICKEY MOUSE WATCH * 4
hina hina
bhuj
bhuj, gujarat, India, 360001
08789776544

Items: 1
Method: COD
Payment: Pending
Date: 8/14/2025
₹ 40

Out for delivery

OLIVIA BURTON FLORAL WATCH * 1
hina hina
bhuj
bhuj, gujarat, India, 360001
08789776544

Items: 1
Method: COD
Payment: Pending
Date: 8/14/2025
₹ 5040

Packing

DISNEY MICKEY MOUSE WATCH * 1 ,
DISNEY PRINCESS BELLE WATCH * 1
hina hina
bhuj
bhuj, gujarat, India, 360001
08789776544

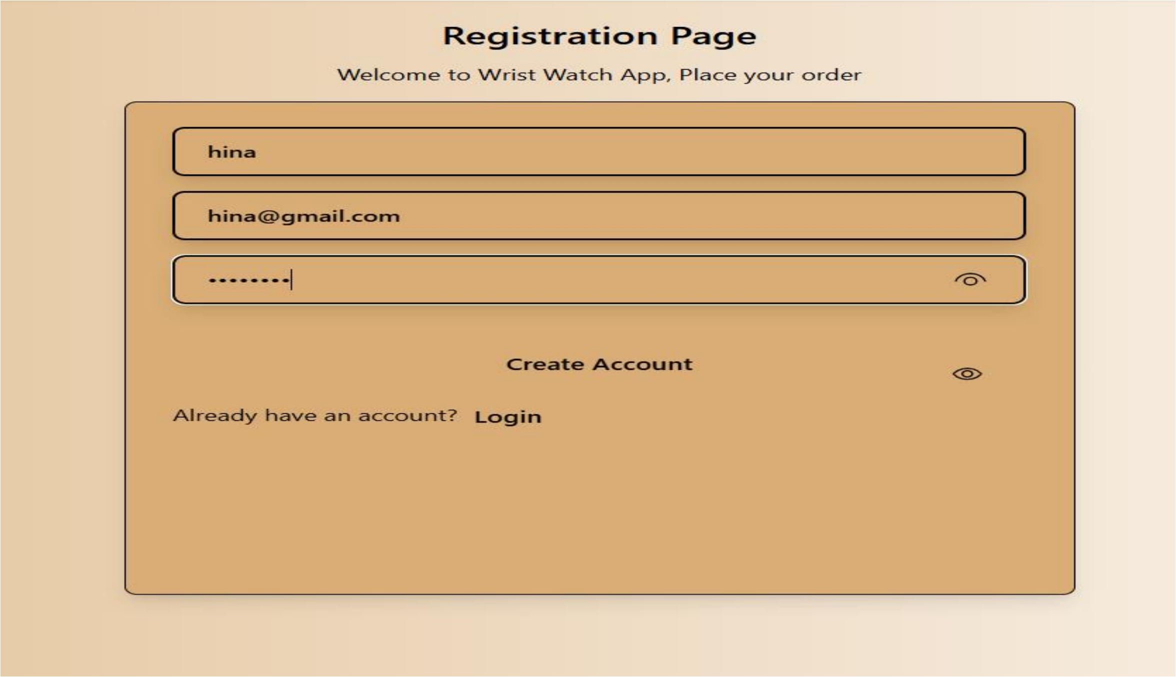
Items: 2
Method: COD
Payment: Pending
Date: 8/14/2025
₹ 1438

Delivered

Figure 5.14 All Orders

User Side :

Registration


Registration Page

Welcome to Wrist Watch App, Place your order

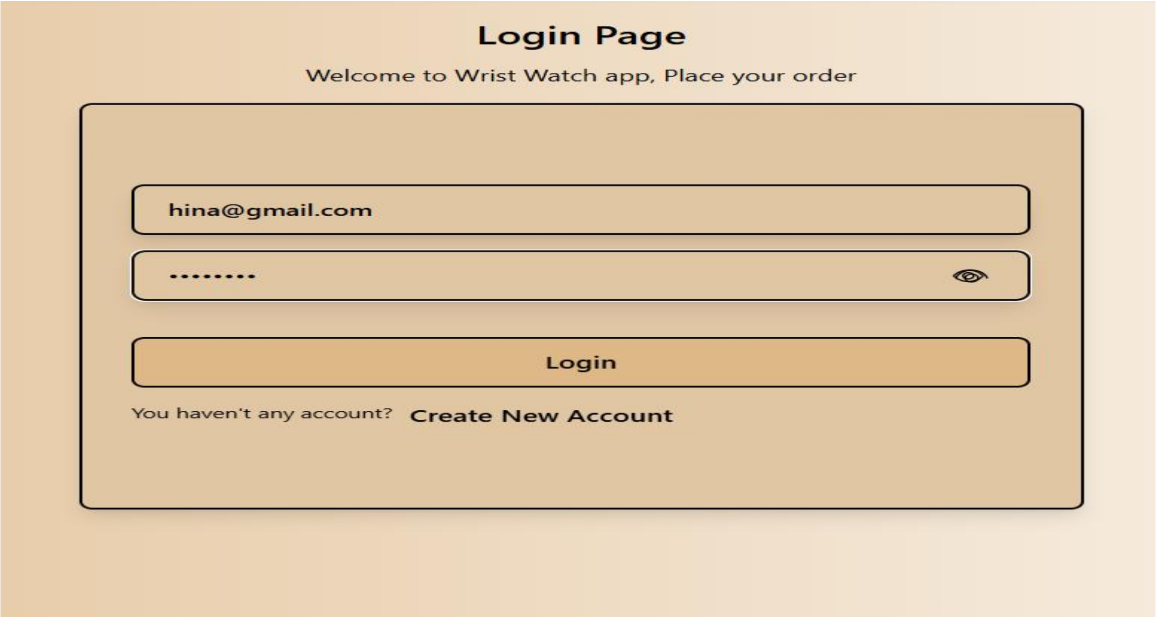
hina

hina@gmail.com

•••••••••

Figure 5.15 Registration

Login


Login Page

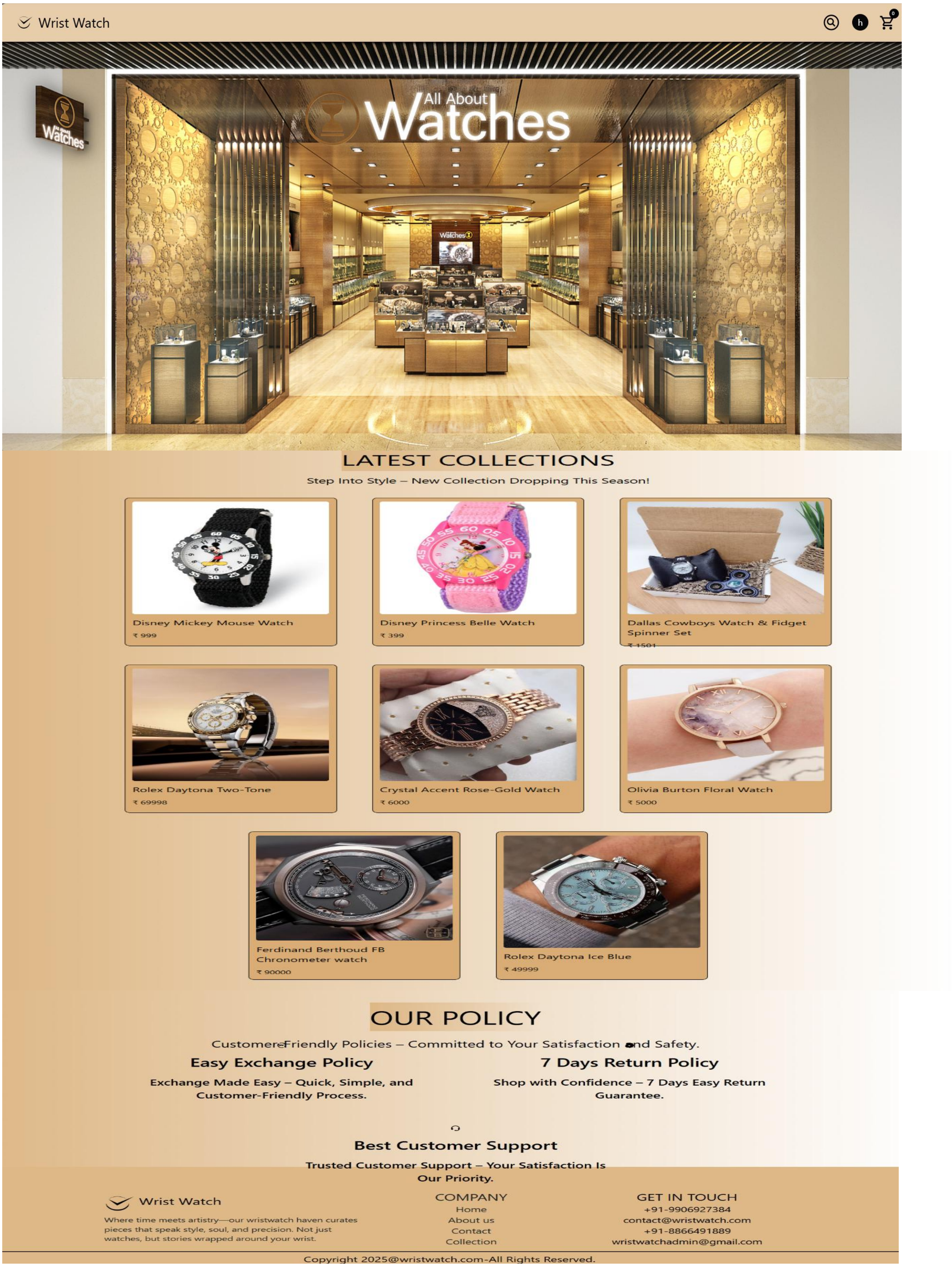
Welcome to Wrist Watch app, Place your order

hina@gmail.com

•••••••••

Figure 5.16 Login

Home Page



LATEST COLLECTIONS

Step Into Style – New Collection Dropping This Season!

Disney Mickey Mouse Watch
₹ 999

Disney Princess Belle Watch
₹ 399

Dallas Cowboys Watch & Fidget Spinner Set
₹ 1501

Rolex Daytona Two-Tone
₹ 69998

Crystal Accent Rose-Gold Watch
₹ 6000

Olivia Burton Floral Watch
₹ 5000

Ferdinand Berthoud FB Chronometer watch
₹ 90000

Rolex Daytona Ice Blue
₹ 49999

OUR POLICY

Customer-Friendly Policies – Committed to Your Satisfaction and Safety.

Easy Exchange Policy

Exchange Made Easy – Quick, Simple, and Customer-Friendly Process.

7 Days Return Policy

Shop with Confidence – 7 Days Easy Return Guarantee.

Best Customer Support

Trusted Customer Support – Your Satisfaction Is Our Priority.

Wrist Watch

Where time meets artistry—our wristwatch haven curates pieces that speak style, soul, and precision. Not just watches, but stories wrapped around your wrist.

COMPANY
Home
About us
Contact
Collection

GET IN TOUCH
+91-9906927384
contact@wristwatch.com
+91-8866491889
wristwatchadmin@gmail.com

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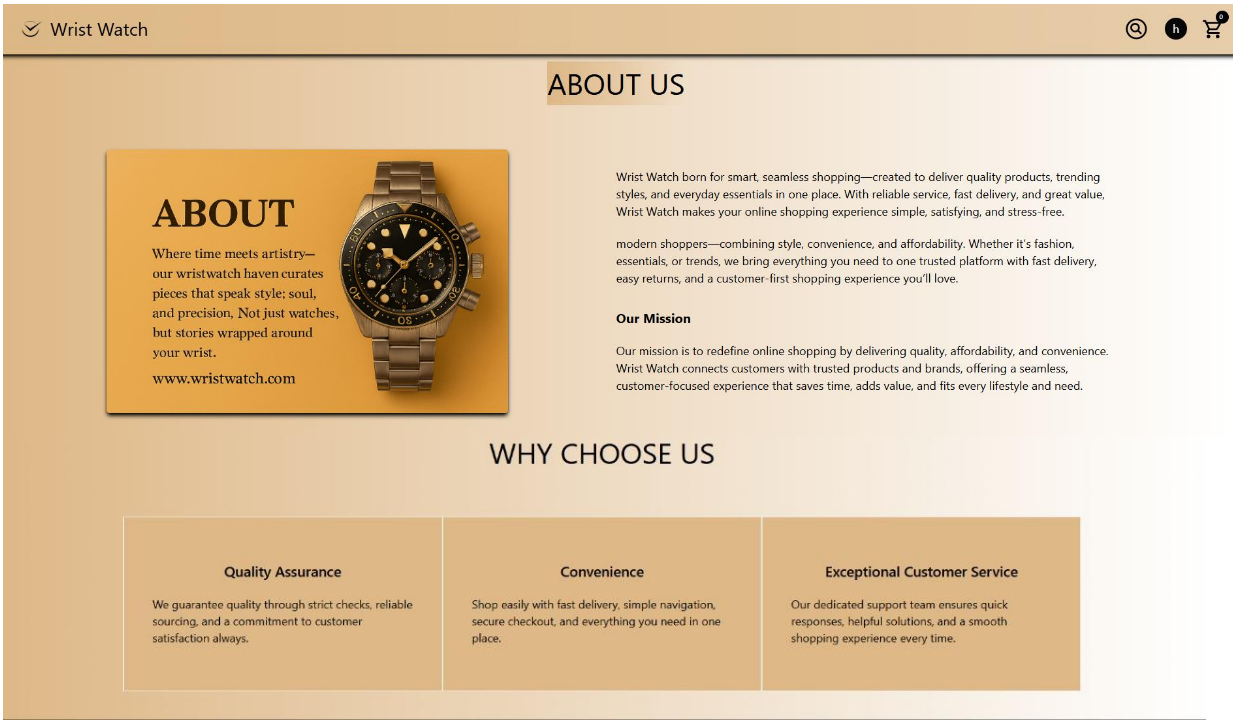
Figure 5.17 Home Page

About Us



ABOUT US

ABOUT

Where time meets artistry—our wristwatch haven curates pieces that speak style; soul, and precision, Not just watches, but stories wrapped around your wrist.

www.wristwatch.com

Wrist Watch born for smart, seamless shopping—created to deliver quality products, trending styles, and everyday essentials in one place. With reliable service, fast delivery, and great value, Wrist Watch makes your online shopping experience simple, satisfying, and stress-free.

modern shoppers—combining style, convenience, and affordability. Whether it's fashion, essentials, or trends, we bring everything you need to one trusted platform with fast delivery, easy returns, and a customer-first shopping experience you'll love.

Our Mission

Our mission is to redefine online shopping by delivering quality, affordability, and convenience. Wrist Watch connects customers with trusted products and brands, offering a seamless, customer-focused experience that saves time, adds value, and fits every lifestyle and need.

WHY CHOOSE US

Quality Assurance

We guarantee quality through strict checks, reliable sourcing, and a commitment to customer satisfaction always.

Convenience

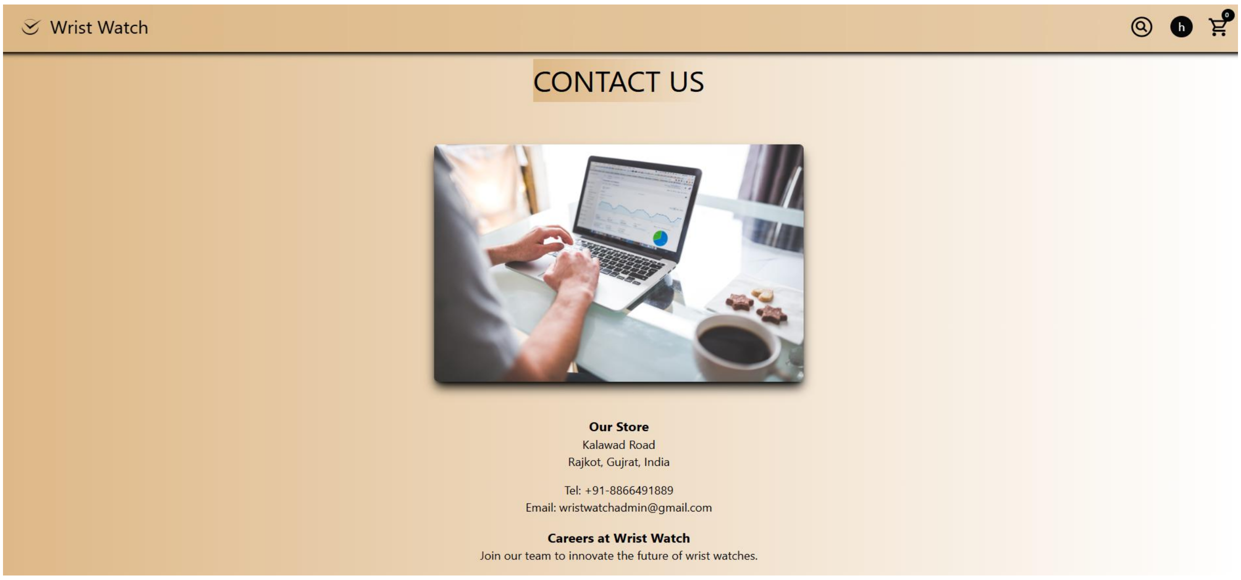
Shop easily with fast delivery, simple navigation, secure checkout, and everything you need in one place.

Exceptional Customer Service

Our dedicated support team ensures quick responses, helpful solutions, and a smooth shopping experience every time.

Figure 5.18 About Us

Contact Us



CONTACT US

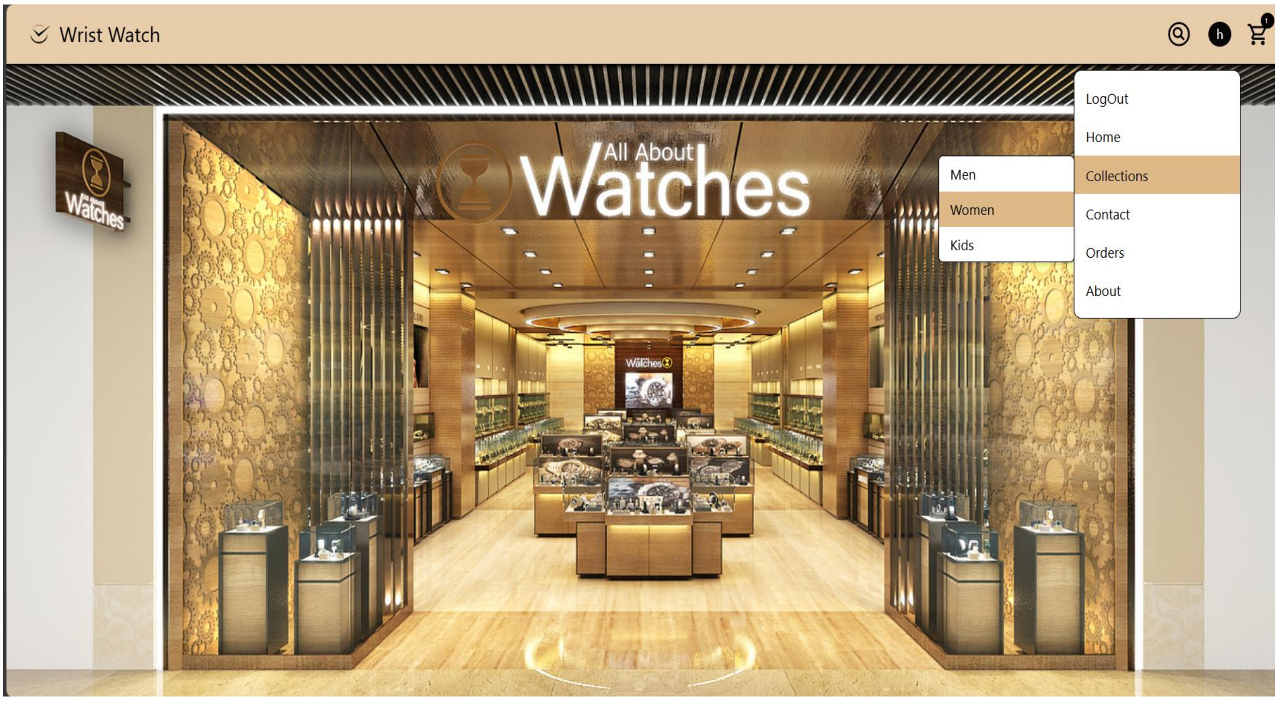
Our Store
Kalawad Road
Rajkot, Gujrat, India

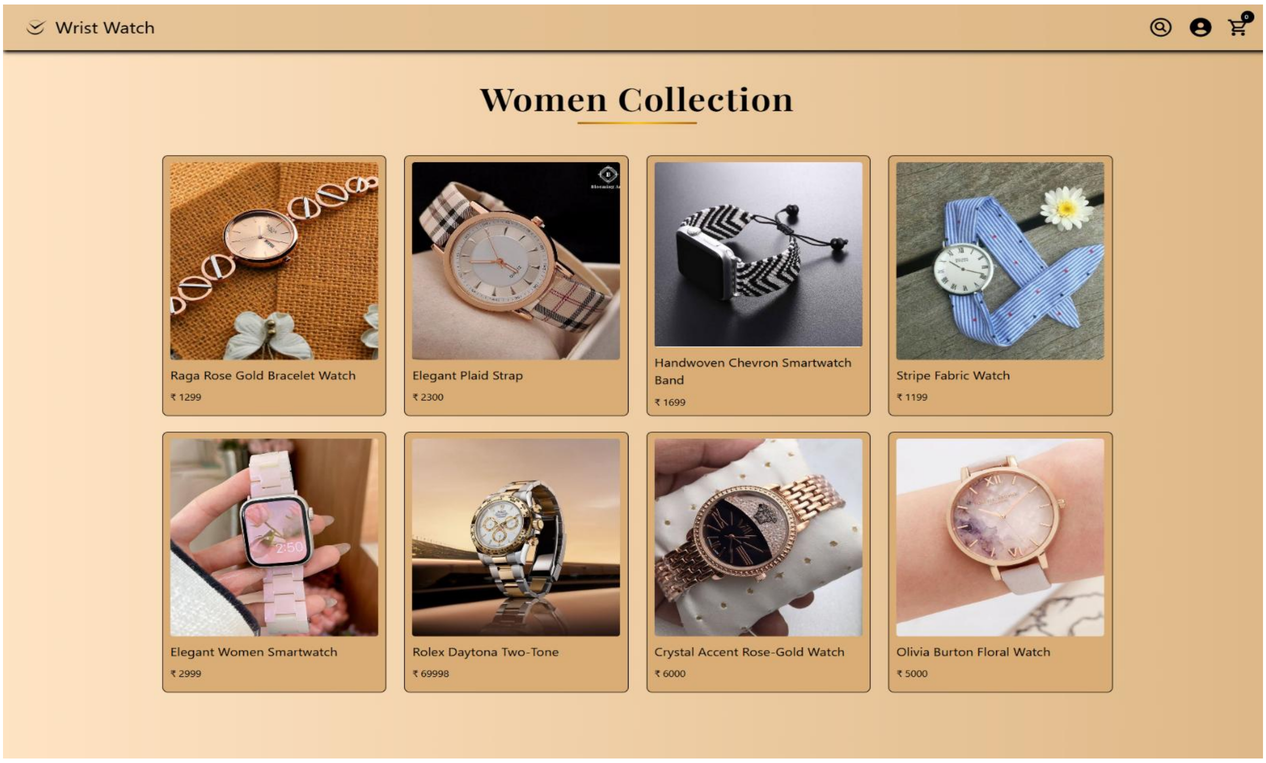
Tel: +91-8866491889
Email: wristwatchadmin@gmail.com

Careers at Wrist Watch
Join our team to innovate the future of wrist watches.

Figure 5.19 Contact Us

Our Collection





Women Collection

Raga Rose Gold Bracelet Watch
₹ 1299

Elegant Plaid Strap
₹ 2300

Handwoven Chevron Smartwatch Band
₹ 1699

Stripe Fabric Watch
₹ 1199

Elegant Women Smartwatch
₹ 2999

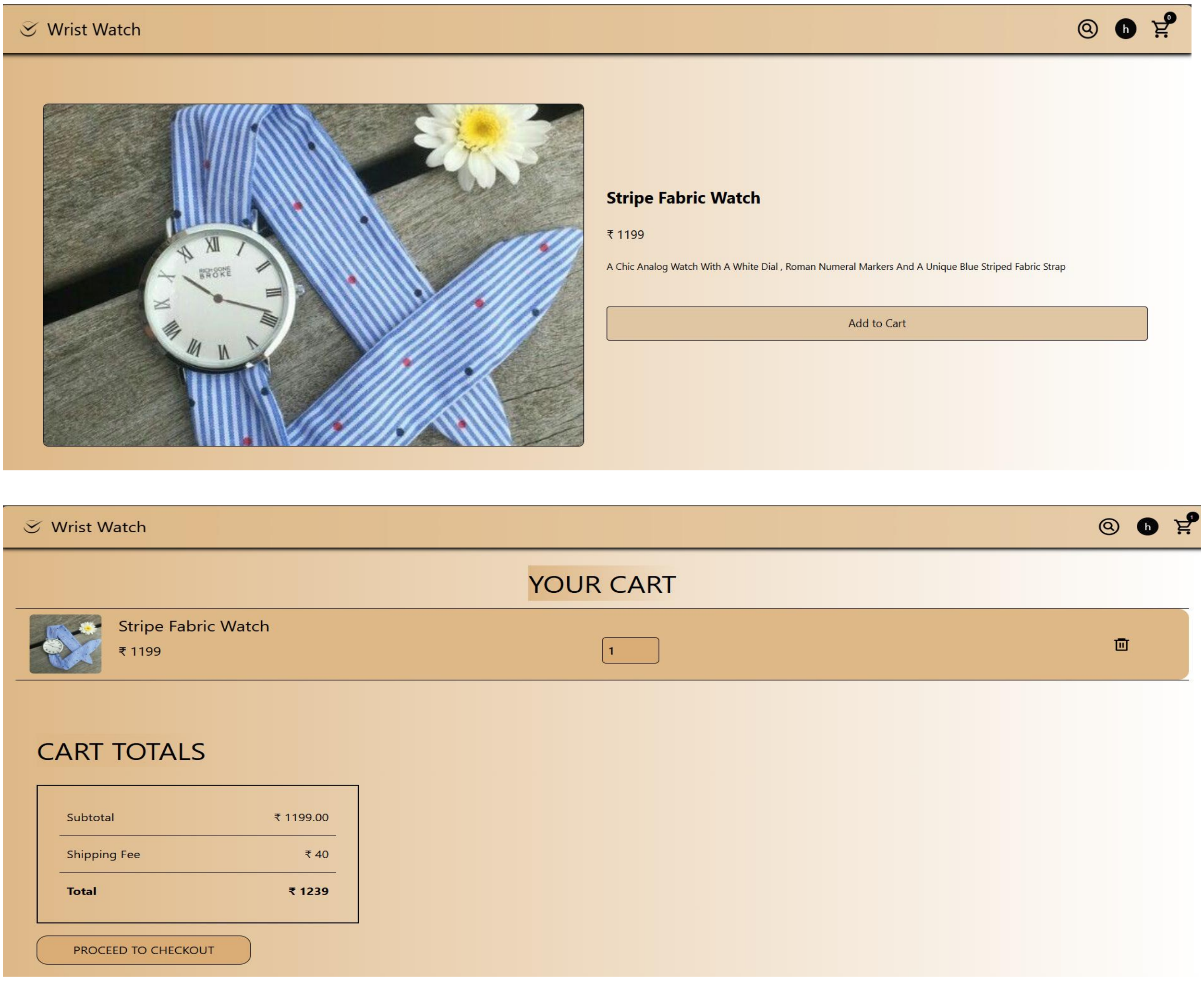
Rolex Daytona Two-Tone
₹ 69998

Crystal Accent Rose-Gold Watch
₹ 6000

Olivia Burton Floral Watch
₹ 5000

Figure 5.20 Our Collection

Add to Cart



Stripe Fabric Watch

₹ 1199

A Chic Analog Watch With A White Dial , Roman Numeral Markers And A Unique Blue Striped Fabric Strap

Stripe Fabric Watch
₹ 1199

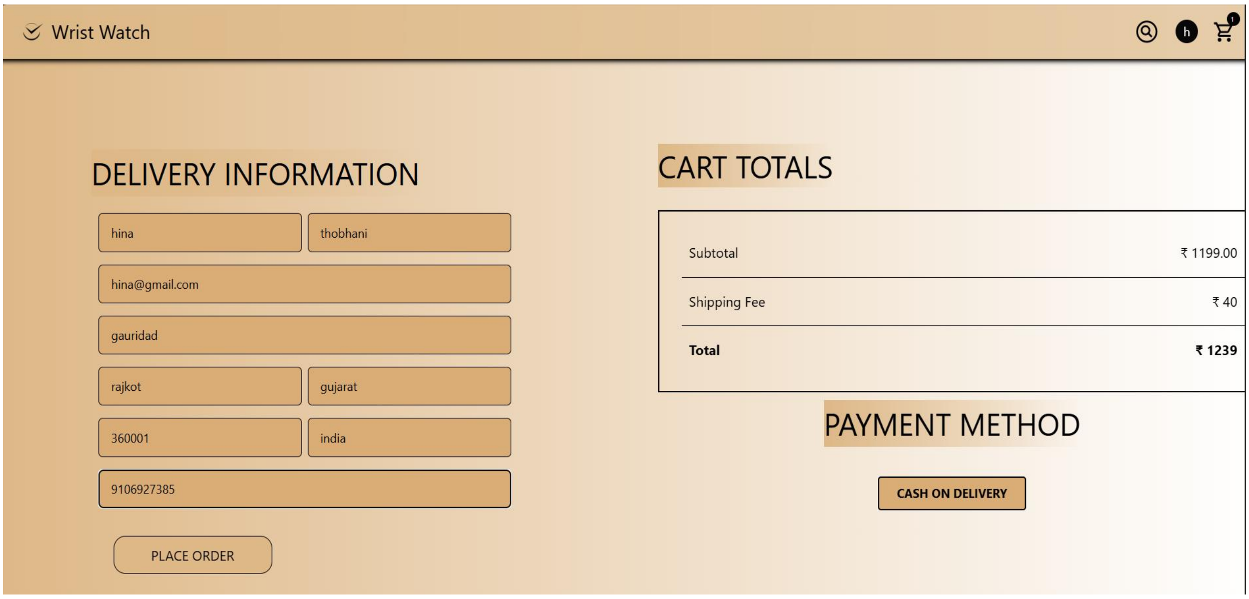
1

CART TOTALS

Subtotal	₹ 1199.00
Shipping Fee	₹ 40
Total	**₹ 1239**

Figure 5.21 Add to Cart

Check Out



Wrist Watch

DELIVERY INFORMATION

hina

thobhani

hina@gmail.com

gauridad

rajkot

gujarat

360001

india

9106927385

PLACE ORDER

CART TOTALS

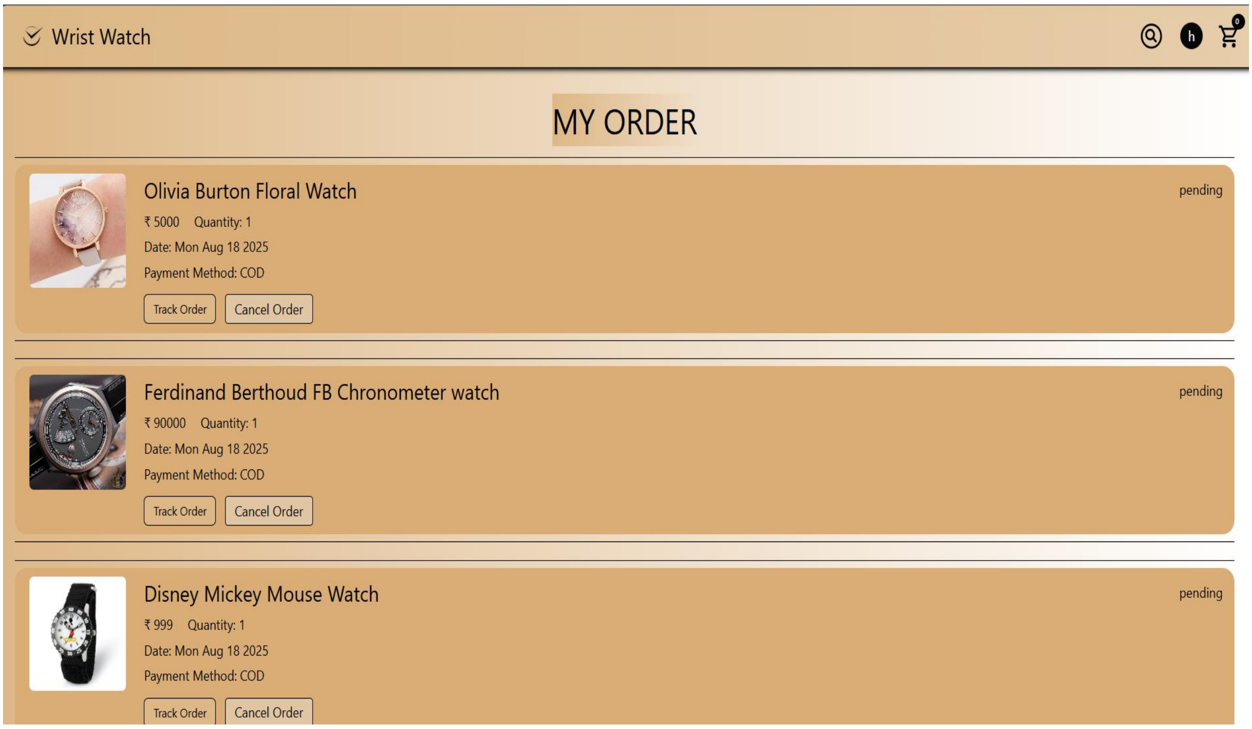
Subtotal	₹ 1199.00
Shipping Fee	₹ 40
Total	**₹ 1239**

PAYMENT METHOD

CASH ON DELIVERY

Figure 5.22 Check Out

My Orders



Wrist Watch

MY ORDER

Olivia Burton Floral Watch

₹ 5000 Quantity: 1

Date: Mon Aug 18 2025

Payment Method: COD

Track Order Cancel Order

pending

Ferdinand Berthoud FB Chronometer watch

₹ 90000 Quantity: 1

Date: Mon Aug 18 2025

Payment Method: COD

Track Order Cancel Order

pending

Disney Mickey Mouse Watch

₹ 999 Quantity: 1

Date: Mon Aug 18 2025

Payment Method: COD

Track Order Cancel Order

pending

Figure 5.23 My Orders

Code of module

● Add.jsx

```
const handleAddProduct = async (e) => {
  setLoading(true);
  e.preventDefault();

  try {
    const formData = new FormData();
    formData.append('name', name);
    formData.append('description', description);
    formData.append('price', price);
    formData.append('category', category);
    formData.append('bestseller', bestseller);
    formData.append('image', image1);

    const result = await axios.post(`${serverUrl}/api/product/addproduct`, formData, {
      withCredentials: true,
    });

    toast.success('Product added successfully');
    setLoading(false);

    if (result.data) {
      setName('');
      setDescription('');
      setImage1(false);
      setPrice('');
      setBestSeller(false);
      setCategory('Men');
    }
  } catch (error) {
    console.log(error);
    toast.error('Failed to add product');
    setLoading(false);
  }
 };
```

- ## List.jsx

```
function Lists() {
  const [list, setList] = useState([]);
  const [editingId, setEditingId] = useState(null);
  const [editData, setEditData] = useState({});
  const { serverUrl } = useContext(authDataContext);

  const fetchList = async () => {
    try {
      const result = await axios.get(serverUrl + "/api/product/list");
      setList(result.data);
    } catch (error) {
      console.log(error);
    }
  };

  const removeList = async (id) => {
    try {
      const result = await axios.post(`${serverUrl}/api/product/remove/${id}`, {},
{ withCredentials: true });
      if (result.data) fetchList();
      else console.log("Failed to remove Product");
    } catch (error) {
      console.log(error);
    }
  };

  const handleEditClick = (item) => {
    setEditingId(item._id);
    setEditData({
      name: item.name,
      description: item.description,
      category: item.category,
      price: item.price
    });
  };

  const handleSave = async (id) => {
    try {
      const result = await axios.put(`${serverUrl}/api/product/update/${id}`, editData, {
        withCredentials: true
      });
      if (result.data.success) {
        setEditingId(null);
        fetchList();
      } else {
        console.log("Failed to update product");
      }
    } catch (error) {
      console.log(error);
    }
  };

  useEffect(() => {
    fetchList();
  }, []);
```

Order.jsx

```
function Orders() {
  let [orders, setOrders] = useState([]);
  let { serverUrl } = useContext(authDataContext);

  const fetchAllOrders = React.useCallback(async () => {
    try {
      const result = await axios.post(serverUrl + '/api/order/list', {}, { withCredentials: true });
      setOrders(result.data.reverse());
    } catch (error) {
      console.log(error);
    }
  }, [serverUrl]);

  const statusHandler = async (e, orderId) => {
    try {
      const result = await axios.post(serverUrl + '/api/order/status', { orderId, status:
e.target.value }, { withCredentials: true });
      if (result.data) {
        await fetchAllOrders();
      }
    } catch (error) {
      console.log(error);
    }
  };

  useEffect(() => {
    fetchAllOrders();
  }, [fetchAllOrders]);
```

- **Login.jsx**

```
function Login() {
  const [show, setShow] = useState(false);
  const [email, setEmail] = useState("");
  const [password, setPassword] = useState("");
  const { getAdmin } = useContext(adminDataContext);
  const { serverUrl } = useContext(authDataContext);
  const navigate = useNavigate();
  const [loading, setLoading] = useState(false);

const AdminLogin = async (e) => {
  e.preventDefault();
  setLoading(true);
  try {
    const result = await axios.post(
      `${serverUrl}/api/auth/adminlogin`,
      { email, password },
      { withCredentials: true }
    );


    if (result.data?.token) {
      localStorage.setItem("adminToken", result.data.token);
    }

    toast.success("Admin Login Successful");

    await getAdmin();
    navigate("/admin/home");

  } catch (error) {
    toast.error(error?.response?.data?.message || "Admin Login Failed");
  } finally {
    setLoading(false);
  }
};
```

CHAPTER 6

SYSTEM TESTING

Sr. No.	Test Case	Expected Result	Passed/ Failed
1.	Access the homepage URL directly without login	The system should redirect to the login page or allow limited access with restricted features	Passed
2.	Register a new user (customer) on the website.	Upon registration, the system should redirect to the login page	Passed
3.	Login using a valid username and password	The system should successfully log in and redirect to the user dashboard or home page	Passed
4.	Check if session is created after login	A session should be created and maintained during the user's active session	Failed
5.	Verify UI consistency across pages (theme, fonts, colors)	All pages should follow a consistent and clean design	Passed
6.	Verify the database connection	The system should connect to the database without errors	Passed
7.	Click on "Delete" button to remove a product (admin action)	The product should be deleted from the database and disappear from product listings	Passed
8.	Click on “Add to Cart” and check cart update	The selected product should be added to the user's cart	Passed
9.	Submit a product order (checkout process)	Order details should be saved in the database and a confirmation should be shown	Passed
10.	Logout from the system	User session should end and the system should redirect to the login or homepage	Passed

Table 6.1 System Testing

CHAPTER 7

CONCLUSION

The Online Watch Shop provides a simple, secure, and convenient way for customers to browse and purchase watches. With an easy-to-use platform, users can explore various watch collections, place orders, and track their purchases without hassle.

The system ensures a smooth shopping experience by offering clear product details, secure payment options, and efficient order management. It also helps streamline operations by managing products, customer data, and order history effectively. By making the buying process faster and more reliable, the Online Watch Shop enhances customer satisfaction and improves the overall shopping experience.

CHAPTER 8

LEARNING DURING PROJECT WORK

During the development of this project, we gained valuable insights into various technical and practical aspects, including:

Understanding the **MERN stack (MongoDB, Express.js, React.js, Node.js)** for building scalable and efficient web applications.

Implementing **database management using MongoDB** to ensure fast and accurate data storage and retrieval.

Enhancing **problem-solving skills** by troubleshooting challenges in frontend design, backend logic, and API integration.

Learning about **UI/UX design principles** to create a visually appealing, responsive, and user-friendly interface.

Strengthening **teamwork and collaboration** by dividing modules, managing timelines, and integrating different system components smoothly.

8.1 Future Enhancements

To further improve the online watch shop, the following enhancements can be considered:

- Providing live updates on order status and delivery time.
- Enhanced search options for users to find available blood types quickly.
- Consumers love unique, custom-made watches. Offering engraving, strap customization, or dial personalization could be a great selling point.
- Introduce a wishlist feature to save favourite watches for future purchases.
- Provide a dedicated blog for watch reviews, trends, and styling tips.

CHAPTER 9

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