

**THE MAHARAJA SAYAJIRAO UNIVERSITY OF BARODA**  
**DEPARTMENT OF COMPUTER APPLICATIONS**  
**FACULTY OF SCIENCE**



**A PROJECT REPORT**

**On**

**E-COMMERCE**

**Submitted by**

**ANSH KHANCHANDANI**

**PRN: 2020033800115021**

**In partial fulfillment for the award of the degree**

**Of**

**BACHELOR OF COMPUTER APPLICATIONS**

**In the**

**Department of Computer Applications**

**APRIL, 2023**

**Internal Guide**

Dr. / Mr. /Ms. ....

POOJA PATEL MAM

**THE MAHARAJA SAYAJIRAO UNIVERSITY OF BARODA**  
**DEPARTMENT OF COMPUTER APPLICATIONS**  
**FACULTY OF SCIENCE**



**A PROJECT REPORT**

**On**

**E-COMMERCE**

**Submitted by**

**AAYUSH CHAUHAN**

**PRN: 2020033800114636**

**In partial fulfillment for the award of the degree**

**Of**

**BACHELOR OF COMPUTER APPLICATIONS**

**In the**

**Department of Computer Applications**

**APRIL, 2023**

**Internal Guide**

Dr. / Mr. /Ms. ....

PRITIBALA PATEL MAM

## **ACKNOWLEDGEMENT**

The Project was jointly undertaken by **Ansh, Aayush** as their 6th Semester Project, under the able guidance and supervision of **POOJA PATEL MAM**. Our primary thanks goes to him, who poured over every inch of our project with painstaking attention and helped us throughout the working of the project. It's our privilege to acknowledge our deepest sense of gratitude to him for her inspiration which has helped us immensely. We are extremely grateful to her for her unstilted support and encouragement in the preparation of this project.

**CERTIFICATE**

This is to certify that Mr. /Ms. **ANSH KHANCHANDANI** a student of BCA Program (PRN No.**2020033800115021**) of The Maharaja Sayajirao University of Baroda, Vadodara, has successfully completed the mini project prescribed for the fifth semester of the program during the period from July 2022 to December 2022 towards the partial fulfillment for the degree of Bachelor of Computer Applications.

**Date:**

**Signature of the Guide  
Head**

**Prof P.K. Mehta**

**CERTIFICATE**

This is to certify that Mr. /Ms. **AAYUSH CHAUHAN** a student of BCA Program (PRN No. **2020033800114636**) of The Maharaja Sayajirao University of Baroda, Vadodara, has successfully completed the mini project prescribed for the fifth semester of the program during the period from July 2022 to December 2022 towards the partial fulfillment for the degree of Bachelor of Computer Applications.

**Date:**

**Signature of the Guide  
Head**

**Prof P.K. Mehta**

## **ABSTRACT**

The Ecommerce Website is a webbased application intended for online retailers. The main objective of this application is to make it interactive and its ease of use. It would make searching, viewing and selection of a product easier. It contains a sophisticated search engine for users to search for products specific to their needs. The search engine provides an easy and convenient way to search for products where a user can Search for a product interactively and the search engine would refine the products available based on the user's input. The user can then view the complete specification of each product. They can also view the product reviews and also write their own reviews. The application also provides a drag and drop feature so that a user can add a product to the shopping cart by dragging the item in to the shopping cart. The main emphasis lies in providing a user- friendly search engine for effectively showing the desired results and its drag and drop behavior.



## **TABLE OF CONTENTS**

ACKNOWLEDGEMENT	III
CERTIFICATE	IV
CERTIFICATE BY ORGANIZATION	V
ABSTRACT	VI
Chapter 1. Requirement Analysis	XII
1.1 Introduction	
1.1.1 Purpose.....	XII
1.1.2 Product Scope.....	XII
1.2 Overall Description	
1.2.1 Product Perspective.....	XIII
1.2.2 Product Function.....	XIII
1.2.2.1 User Characteristics.....	XIII
1.2.2.2 Principle actors.....	XIII
1.2.2.3 General constraints.....	XIV
1.2.2.4 Assumptions and dependencies.....	XIV
1.3 Functional requirements	
1.3.1 Description.....	XIV
1.3.1.1 Registration.....	XIV
1.3.1.2 Login.....	XIV
1.3.1.3 Changes to cart.....	XIV
1.3.1.4 Payment.....	XV
1.3.1.5 Report generation.....	XV
1.3.1.6 Logout.....	XV



1.4 Nonfunctional requirements	
1.4.1 Performance requirements.....	XVI
1.4.2 Technical issues.....	XVII
1.4.3 Security requirements.....	XVII
1.5 Platform specifications deployment	
1.5.1 Hardware specification.....	XVII
1.5.2 Software specification.....	XVII
Chapter 2. System design	XVIII
2.1 Use case diagram.....	XVIII
2.1.1 Admin use case diagram.....	XX
2.1.2 User use case diagram.....	XXI
2.2 Activity diagram.....	XXII
2.2.1 Admin activity diagram.....	XXIII
2.2.2 User activity diagram.....	XXV
2.3 Sequence diagram.....	XXVII
2.3.1 Admin sequence diagram.....	XXVIII
2.3.2 User sequence diagram.....	XXIX
2.4 Class diagram.....	XXX
Chapter 3. Database Design	XXXI
3.1 Design goals.....	XXXI
3.2 Procedural/modular approach.....	XXXI
3.2.1 Shop product module.....	XXXI
3.2.2 Product description module.....	XXXIII
3.2.3 Shopping cart module.....	XXXIII
	XXXIII

3.3 ER-Diagram	XXXIII
3.3.1 Admin Details ER diagram .....	XXXIV
3.3.2 User details ER diagram .....	XXXV
3.3.3 Product details ER diagram.....	XXXVI
3.3.4 Order details ER diagram.....	XXXVII
3.3.5 Category ER diagram.....	
3.3.6 Sub-Category diagram.....	XXXVIII
3.3.7 Review ER diagram.....	
3.3.8 Wishlist ER diagram.....	XXXVIII
3.3.9 Order Track History ER diagram.....	
3.3.10 Complete ER diagram.....	XXXVIII
3.4 Data modeling	
3.4.1 Data dictionary.....	
3.4.1.1 User data table.....	
3.4.1.2 Sub-Category data table.....	
3.4.1.3 Admin data table.....	
3.4.1.4 Product data table.....	
3.4.1.5 Category data table.....	
3.4.1.6 Orders data table.....	
3.4.1.7 Order Track History data table.....	
3.4.1.8 Wishlist data table.....	
3.4.1.9 Review data table.....	
Chapter 4. System Design { SCREENSHORTS & EXPLANATION}	XLI
4.1 Figure 4.1.....	XLII
4.2 Figure 4.2.....	XLIII
4.3 Figure 4.3.....	XLIV
4.4 Figure 4.4.....	XLV
4.5 Figure 4.5.....	XLVI
4.6 Figure 4.6.....	XLVII
4.7 Figure 4.7.....	XLVIII
4.8 Figure 4.8.....	XLIX
4.9 Figure 4.9.....	L
4.10 Figure 4.10.....	LI
4.11 Figure 4.11.....	LII
4.12 Figure 4.12.....	LIII
4.13 Figure 4.13.....	LIV
4.14 Figure 4.14.....	LV
4.15 Figure 4.15.....	LVI

4.16 Figure 4.16.....	LVII
4.17 Figure 4.17.....	LVIII
4.18 Figure 4.18.....	LIX
4.19 Figure 4.19.....	LX
4.20 Figure 4.20.....	LXI
4.21 Figure 4.21.....	LXII
Chapter 5. Test Reports	LXX
5.1 Unit Testing.....	LXX
5.2 Integration Testing.....	LXXII
5.3 Validation Testing.....	LXXIII
5.4 White box Testing.....	LXXIV
Chapter 6. Results & Challenges	LXXV
6.1 Challenges.....	LXXV
Chapter 7. Conclusions	LXXVI
Chapter 8. Limitation	LXXVII
8.1 Scope for future work	LXXVII
Chapter 9. References	LXXVII

# **1. REQUIREMENT ANALYSIS**

## **1.1 INTRODUCTION**

### **1.1.1 PURPOSE**

- This document is meant to delineate the features of Ecommerce Website, so as to serve as a guide to the developers on one hand and a software validation document for the prospective client on the other.
- The Ecommerce Website for Accessories item shop web application is intended to provide complete solutions for vendors as well as customers through a single get way using the internet.
- It will enable vendors to setup online shops, customer to browse through the shop and purchase them online without having to visit the shop physically.
- The administration module will enable a system administrator to approve and reject requests for new shops and maintain various lists of shop category.

### **1.1.2 PRODUCT SCOPE**

- This system allows the customer's to maintain their cart for add or remove the product over the internet.

## **1.2 OVERALL DESCRIPTION**

- The Onlineshopping system (OSS) application enables vendors to set up online shops, customers to browse through the shops, and a system administrator to approve and reject requests for new shops and maintain lists of shop categories.

- Also the developer is designing an Ecommerce Website to manage the items in the shop and also help customers to purchase them online without visiting the shop physically.
- Ecommerce Website will use the internet as the sole method for selling goods to its consumers.

### 1.2.1 **PRODUCT PERSPECTIVE**

- This product aimed toward a person who don't want to visit the shop as he might don't get time for that or might not interested in visiting there and dealing with lot of formalities.

### 1.2.2 **PRODUCT FUNCTIONS**

- Ecommerce Website should support this use case:

#### 1.2.2.1 **USER CHARACTERISTICS**

- User should be familiar with the terms like login, register, order system etc.

#### 1.2.2.2 **PRINCIPLE ACTORS**

- 2 Principle Actors are Customer and Administrator.

#### 1.2.2.3 **GENERAL CONSTRAINTS**

- A full internet connection is required for Ecommerce Website.

#### 1.2.2.4      **ASSUMPTIONS DEPENDENCIES**

- Working of Ecommerce Website need Internet Connection.

### **1.3      FUNCTIONAL REQUIREMENTS**

- This section provides requirement overview of the system. Various functional modules that can be implemented by the system will be –

#### 1.3.1      **DESCRIPTION**

##### 1.3.1.1      **REGISTRATION**

- If customer wants to buy the product then he/she must be registered, unregistered user can't go to the shopping cart.

##### 1.3.1.2      **LOGIN**

- Customer logs in to the system by entering valid user id and password for the shopping.

##### 1.3.1.3      **CHANGES TO CART**

- Changes to cart means the customer after login or registration can make order or cancel order of the product from the shopping cart.

##### 1.3.1.4      **PAYMENT**

- In this system we are dealing the mode of payment by Cash. We will extend this to credit card, debit card etc in the future.

#### 1.3.1.5 **REPORT GENERATION**

- After ordering for the product, the system will send one copy of the bill to the customer's Email-address and another one for the system data base.

#### 1.3.1.6 **LOGOUT**

- After ordering or surfing for the product customer has to logout.

## 1.4NONFUNCTIONAL REQUIREMENTS

➤ Following Non-Functional Requirements will be there in the insurance to the internet:

- a. Secure access to consumer's confidential data.
- b. 24X7 availability.
- c. Better component design to get better performance at peak time.
- d. Flexible service based architecture will be highly desirable for future extension. On-Functional Requirements define system properties and constraints.

❑ Various other Non-Functional Requirements are:

- ❖ Security
- ❖ Reliability
- ❖ Maintainability
- ❖ Portability
- ❖ Extensibility
- ❖ Reusability
- ❖ Compatibility
- ❖ Resource Utilization

### 1.4.1 PERFORMANCE REQUIREMENTS

- In order to maintain an acceptable speed at maximum number of uploads allowed from a particular customer as any number of users can access to the system at any time.
- Also the connections to the servers will be based on the attributes of the user like his location and server will be working 24X7 times.



#### 1.4.2 **TECHNICAL ISSUES**

- This system will work on client-server architecture. It will require an internet server and which will be able to run PHP application.
- The system should support some commonly used browser such as IE, Mozilla Firefox, chrome etc.

#### 1.4.3 **SECURITY REQUIREMENTS**

- Secure access to consumer's confidential data with email & password and also at time of Secure access to consumer's confidential data user can also need a email verification through email security code

### **1.5 PLATFORM SPECIFICATIONS – DEPLOYMENT**

#### 1.5.1 **Hardware Specification**

- Processor CORE 2 DUE
- RAM 1 GB
- Minimum space required 80 GB

#### 1.5.2 **Software Specification**

- Operating environment windows 7
- Platform Xampp Server (MySql)
- Notepad++

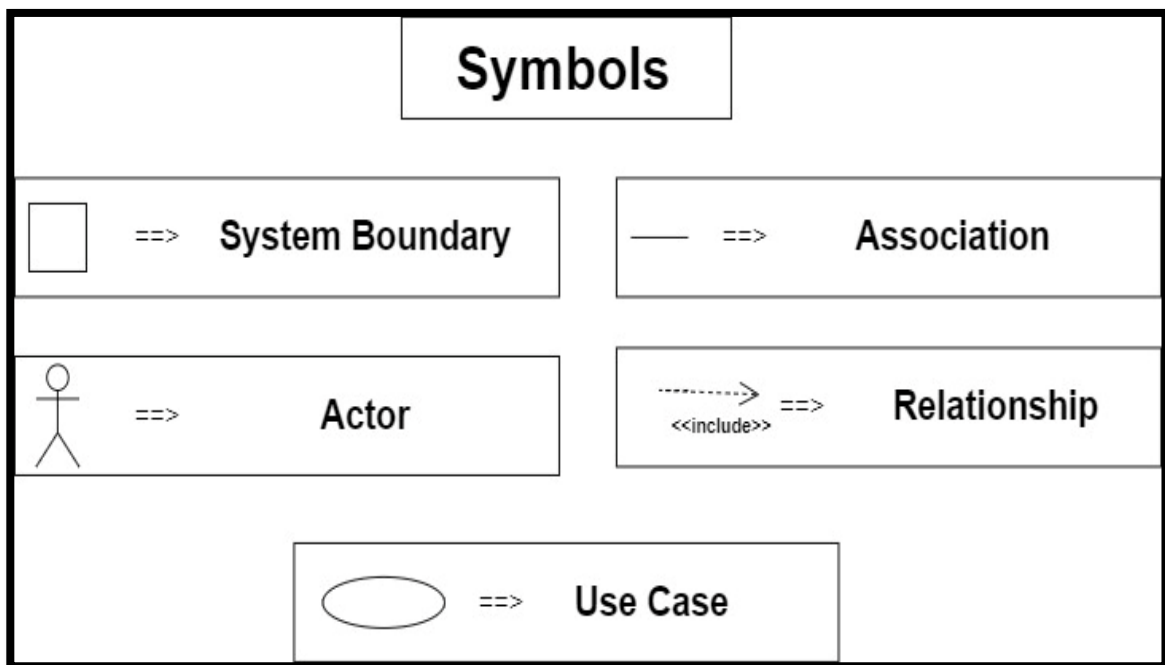
## 2. SYSTEM DESIGN

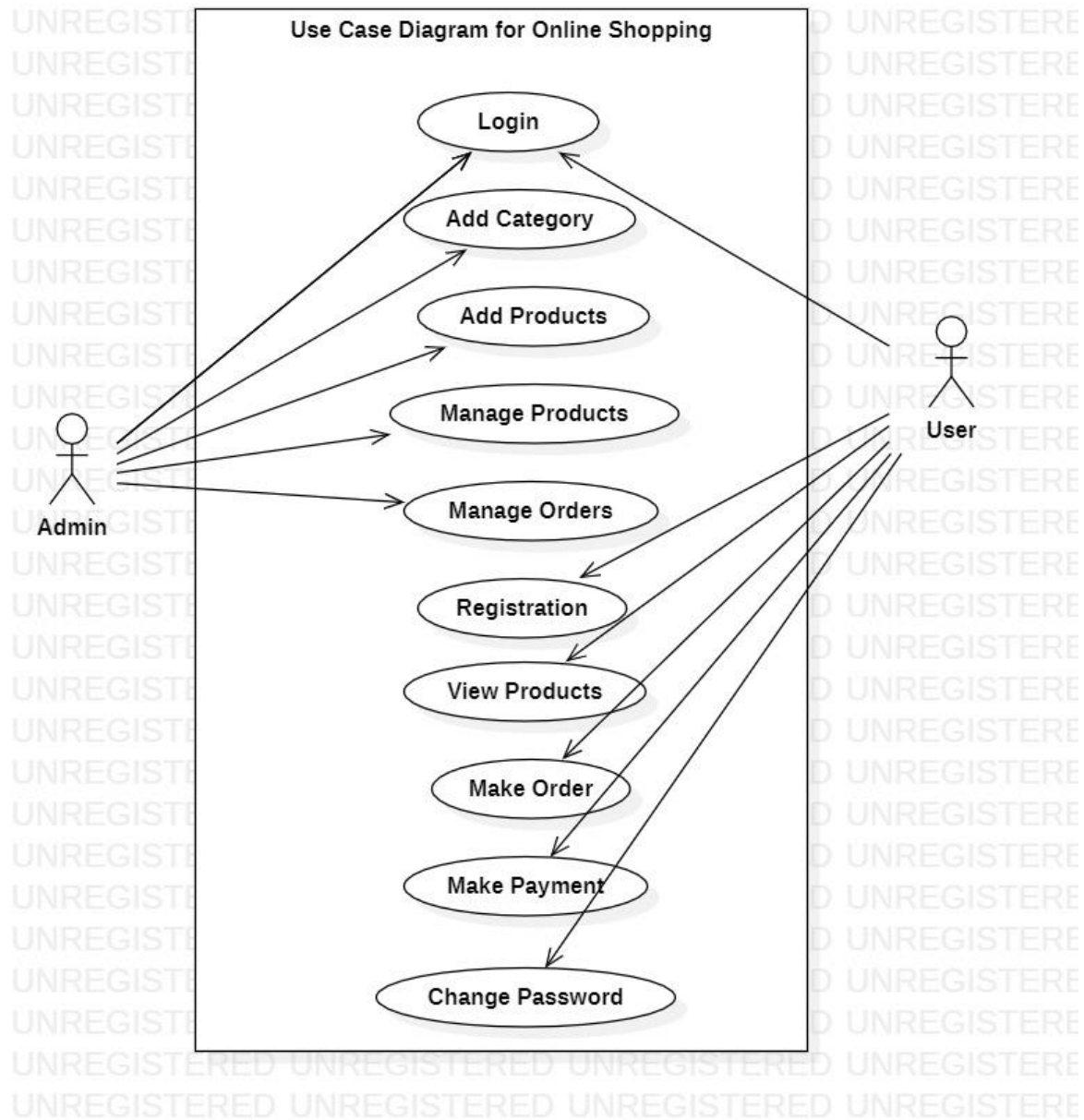
- ❖ After carefully analyzing the requirements and functionality of the web application, I had two important diagrams by the end of the analysis phase. They are the ER diagram and data flow diagram which were the basis for finding out entities and relationships between them, the flow of information.

### 2.1 USE CASE DIAGRAM

- ❑ This Use Case Diagram is a graphic representation of the interactions among the elements of Ecommerce Website.
- ❑ It represents the methodology used in system analysis to identify, clarify, and organize system requirements of ecommerce website.

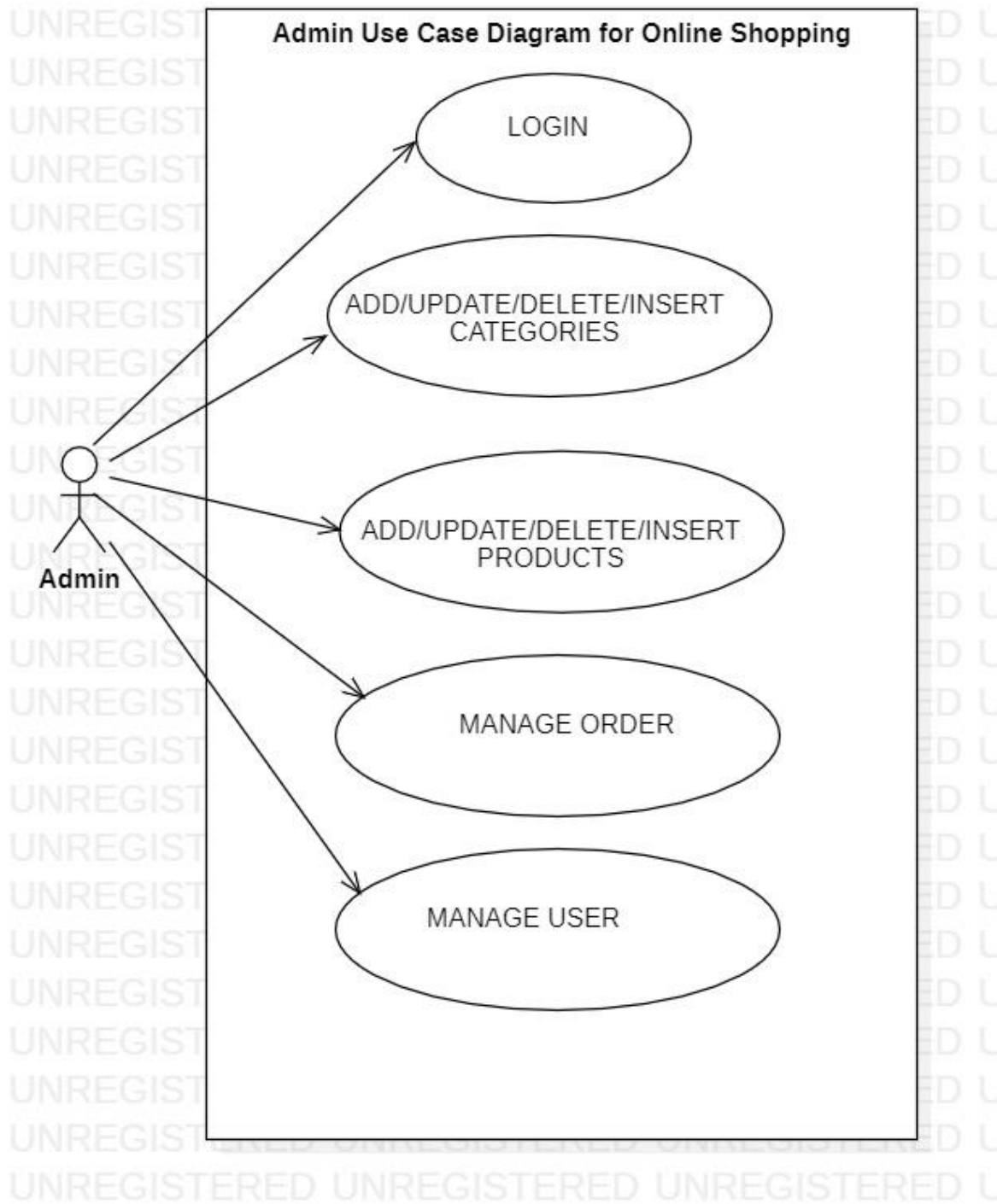
#### SYMBOLS:





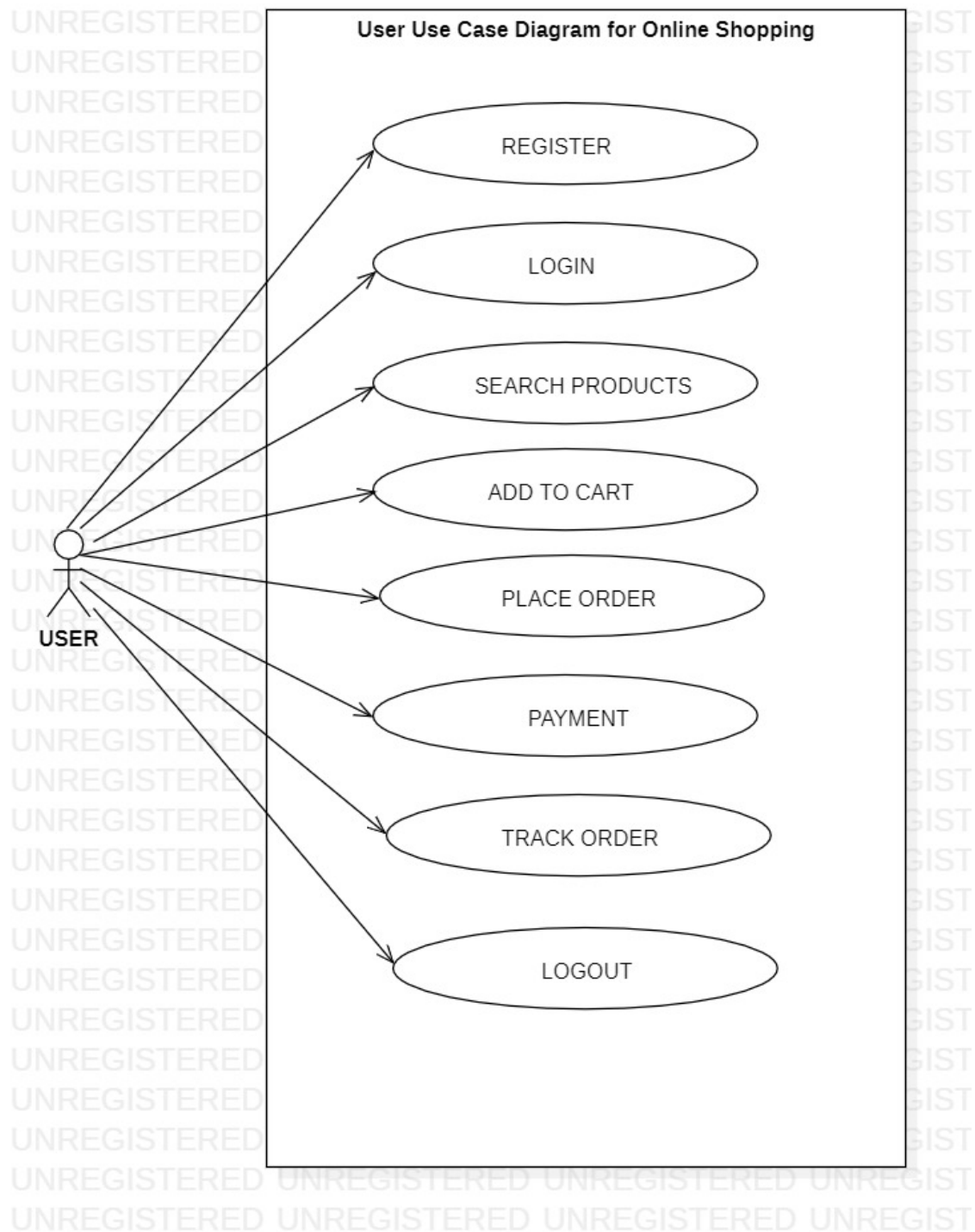
**Figure 2.1.1: Use Case Diagram**

### 2.1.2 ADMIN USE CASE DIAGRAM



**Figure 2.1.2: Admin Use Diagram**

### 2.1.3 USER USE CASE DIAGRAM



**Figure 2.1.3: User Use Diagram**

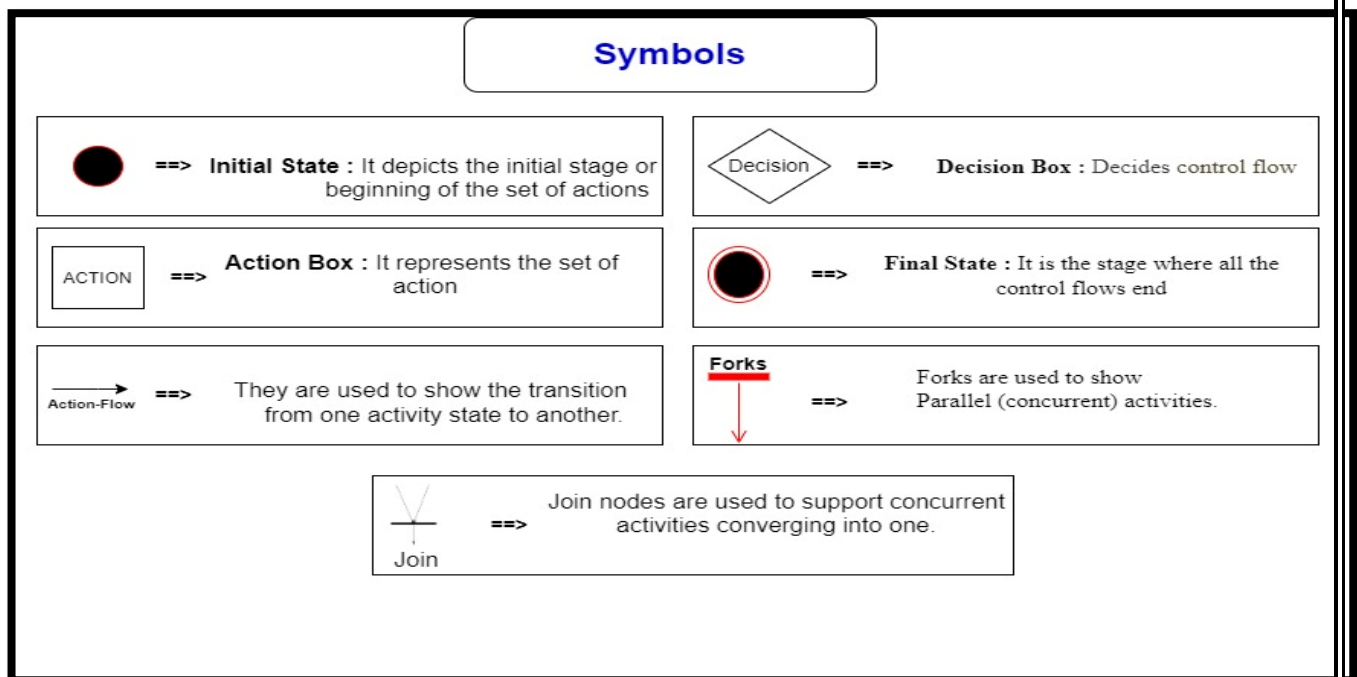
## 2.2 ACTIVITY DIAGRAM

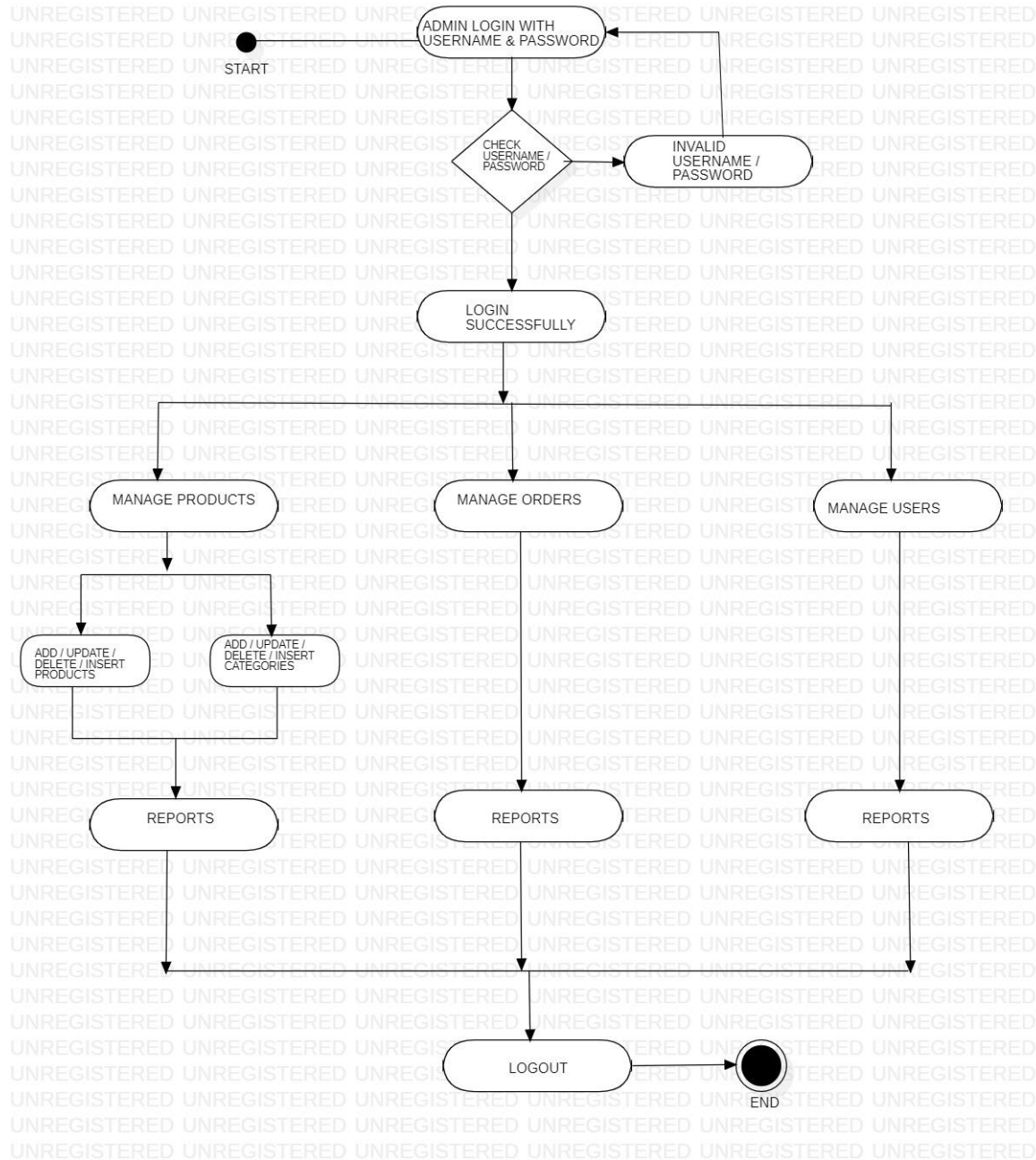
### Intro...

- Activity diagram is used to represent the flow of control within the system.
- The flow can be sequential, branched, or concurrent.
- This is the Login Activity Diagram of Ecommerce Website, which shows the flows of Login Activity, where admin will be able to login using their Email ID and password.
- After login user can manage all the operations on shopping website.
- The diagram below helps demonstrate how the login page works in a Ecommerce Website System. The various objects in the Citizen.

### 2.2.1 ADMIN ACTIVITY DIAGRAM

- Admin Activity Diagram of Ecommerce Website which shows the flows between the activities of Admin in a System.
- ❖ The main activity involved in this Admin Activity Diagram of System are as follows:
  1. Manage product
  2. Manage order
  3. Manage user
  4. Manage review





**Figure 2.2.1: Admin Activity Diagram**

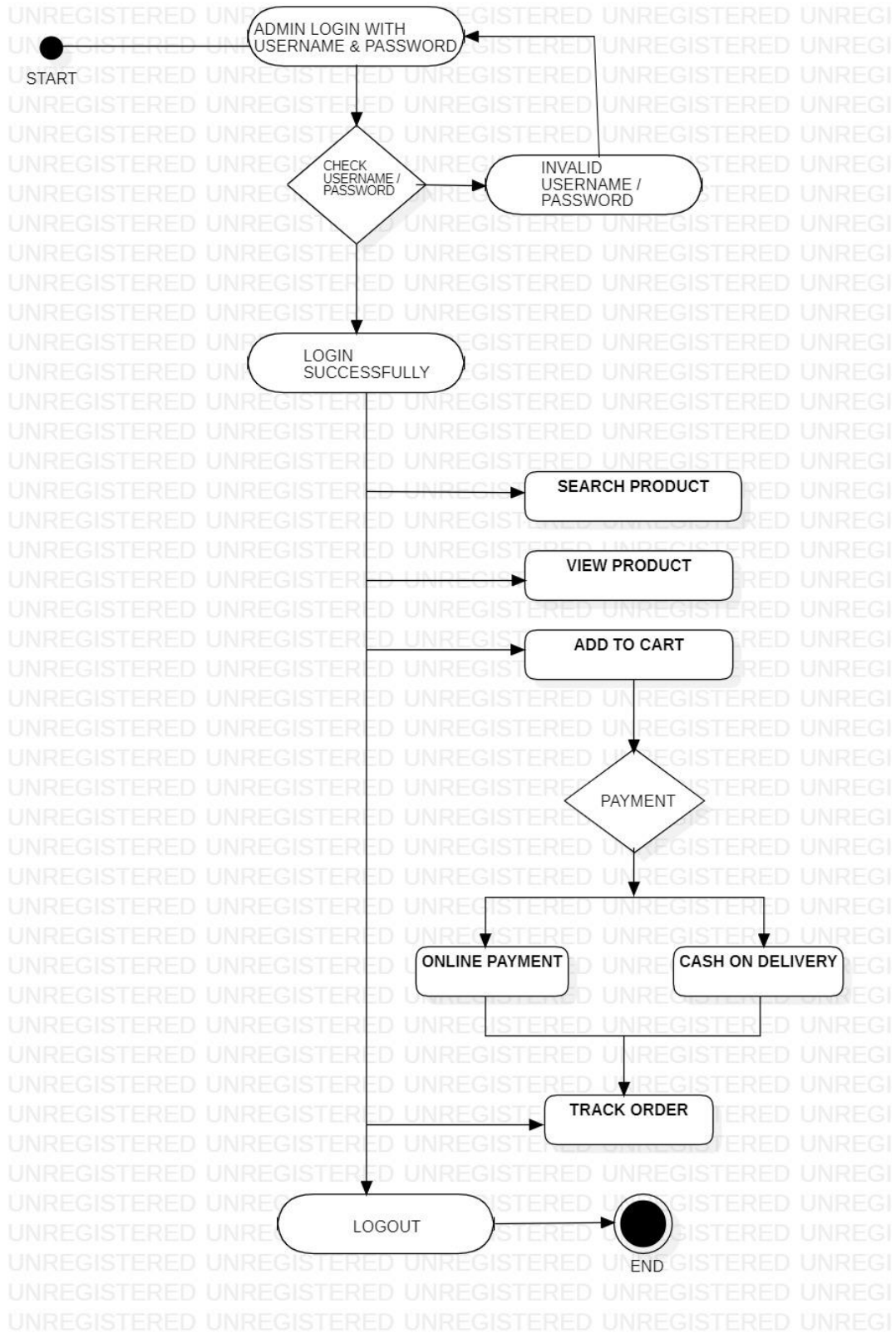


### 2.2.2 USER ACTIVITY DIAGRAM

- User Activity Diagram of Ecommerce Website which shows the flows between the activities of Admin in a System.

❖ The main activity involved in this Admin Activity Diagram of Website are as follows:

1. Search Product
2. View Product
3. Add to Cart
4. Payment
5. Track Order



**Figure 2.2.2: User Activity Diagram**

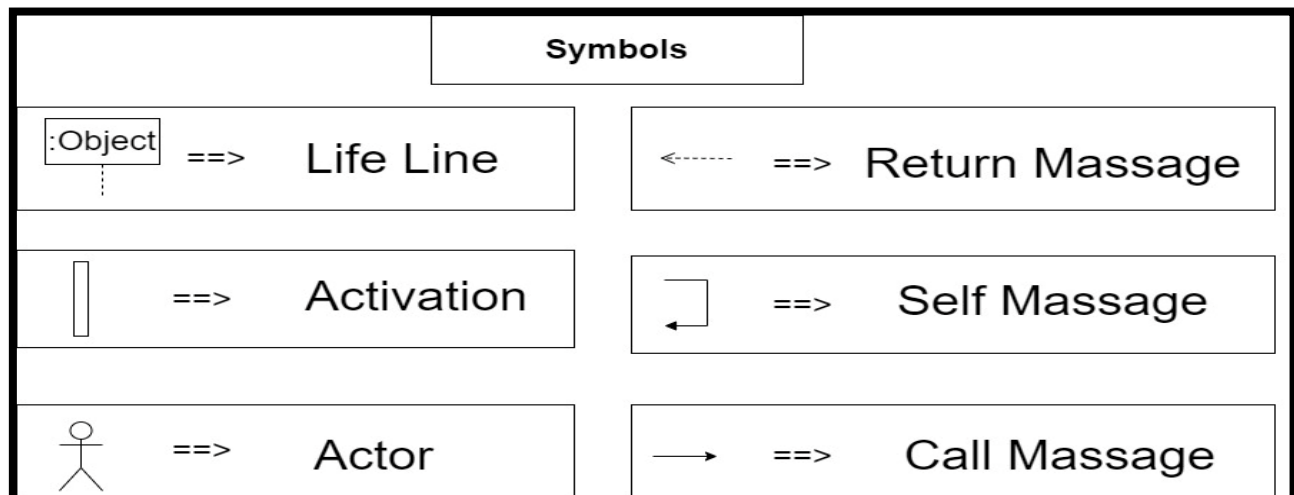
## 2.3 SEQUENCE DIAGRAM

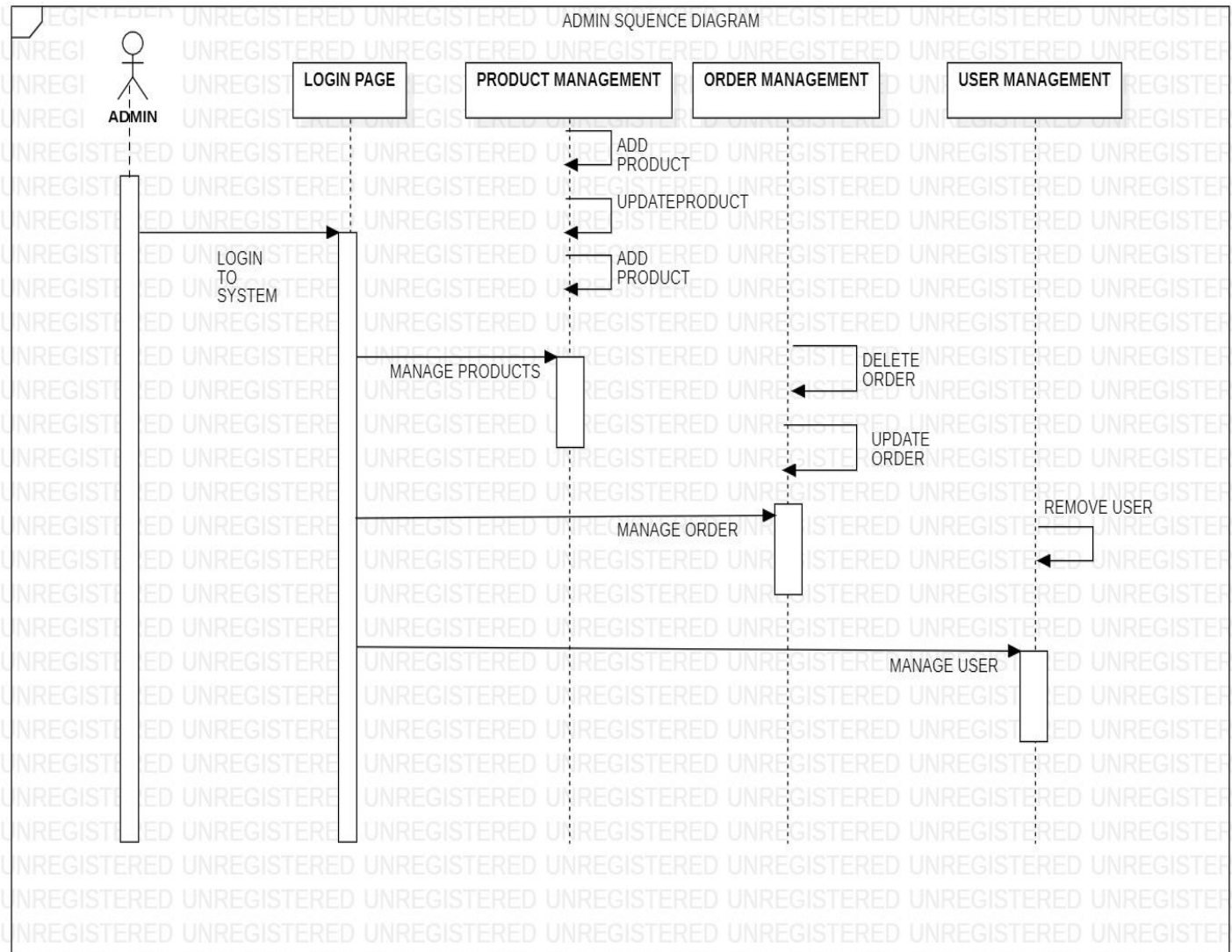
### 2.3.1 ADMIN SEQUENCE DIAGRAM

❑ Ecommerce Website Sequence diagram shows the interaction between the objects of user and Ecommerce Website management.

❖ The instance of class objects involved in this Admin Sequence Diagram of Ecommerce Website are as follows:

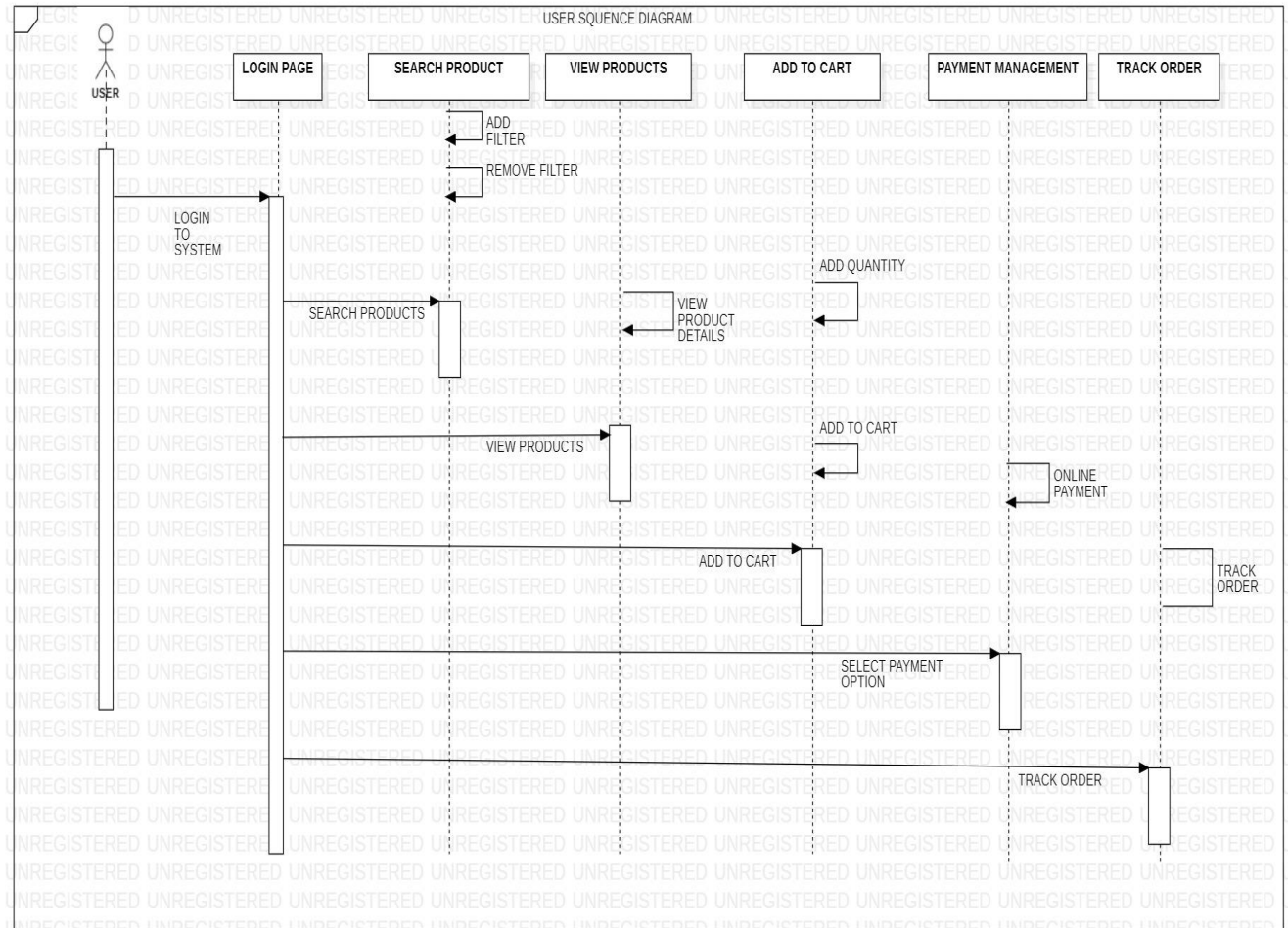
1. Login Page
2. Product Management
3. Order Management
4. User Management





**Figure 2.3.1: Admin Sequence Diagram**

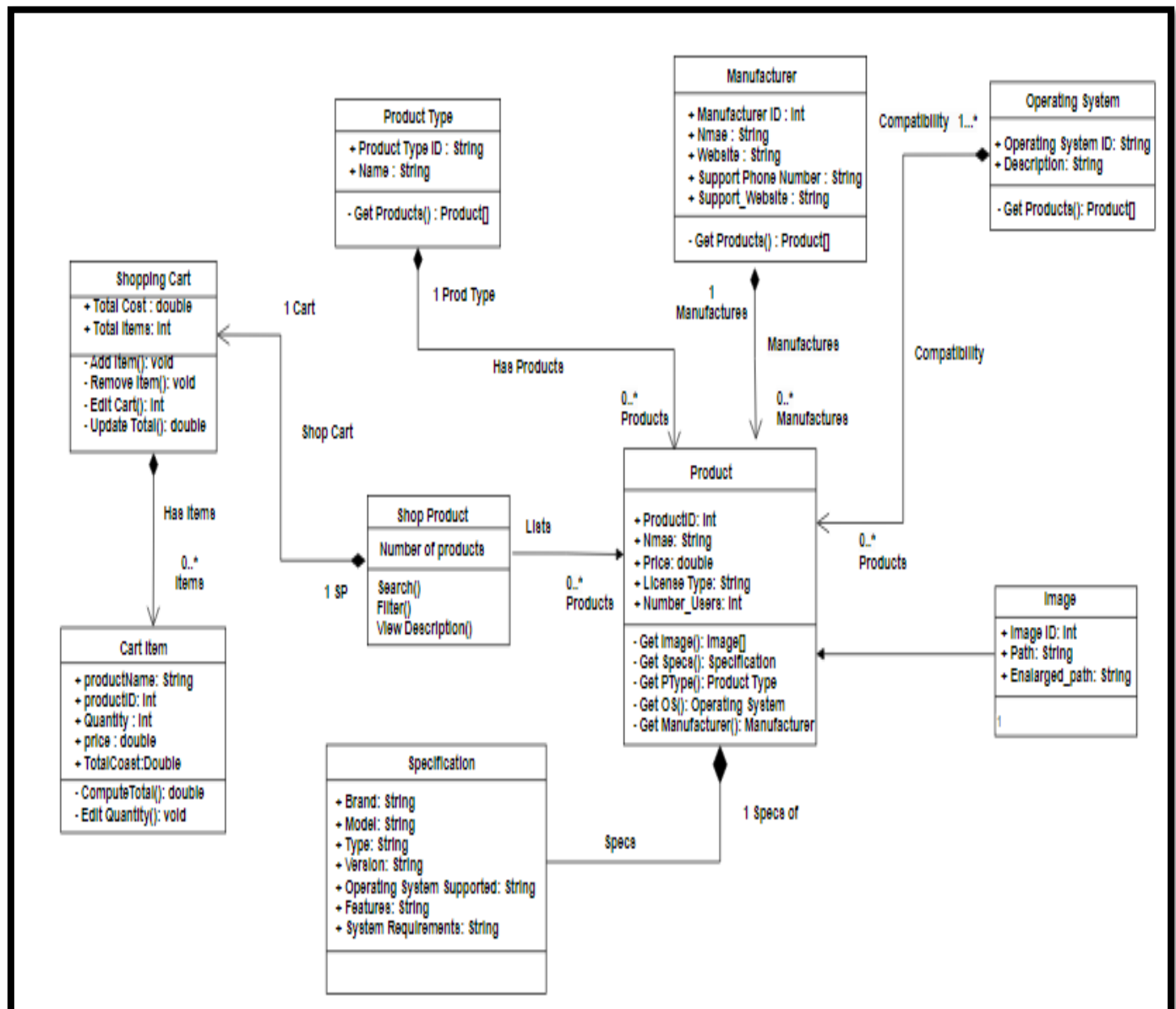
### 2.3.2 USER SEQUENCE DIAGRAM



**Figure 2.3.2: User Sequence Diagram**

## CLASS DIAGRAM

- Ecommerce Website Class Diagram describes the structure of a Ecommerce Website System classes, there at tributes, operations (or methods), and the relationships among objects.



**Figure 2.4: Class Diagram**

## **3.DATABASE DESIGN**

### **3.1 DESIGN GOALS**

- i. The design of the web application involves the design of the forms for listing the products, search for products, display the complete specification for the product, and design a shopping cart that is easy to use.
- ii. Design of an interactive application that enables the user to filter the products based on different parameters.
- iii. Design of application that decreases data transfers between the client and the server.

### **3.2 PROCEDURAL/MODULAR APPROACH**

Following are all the modules designed for the Ecommerce Website .

#### **3.2.1 SHOP PRODUCT MODULE**

This module starts when the user visits the home page or when a user searches for a product by entering a search term. This part of the application includes displaying all the products that are available or the products that match the search term entered by the user. The user can then filter these products based on various parameters like manufacturer, product type, operating system supported or a price range. The user browses through the products and each product would be displayed with an image and its features like operating system supported, number of user licenses and if it is a full version or an upgrade version. A user can add a product to the cart either by dragging the product and dropping it in the cart or by clicking a button. The user would be able to see the shopping cart summary.

### **3.2.2 PRODUCT DESCRIPTION MODULE**

This module starts when a user visits the product description page. A user can view various images of the product of different sizes. The user can see an enlarged image in a popup window. The user can view the complete specification of the product like its features, operating system supported, system requirements etc. A user can also view the manufacturer information and also information about rebates, exchange policies etc. A user can also view the reviews of the product. A user can also write a review for the product.

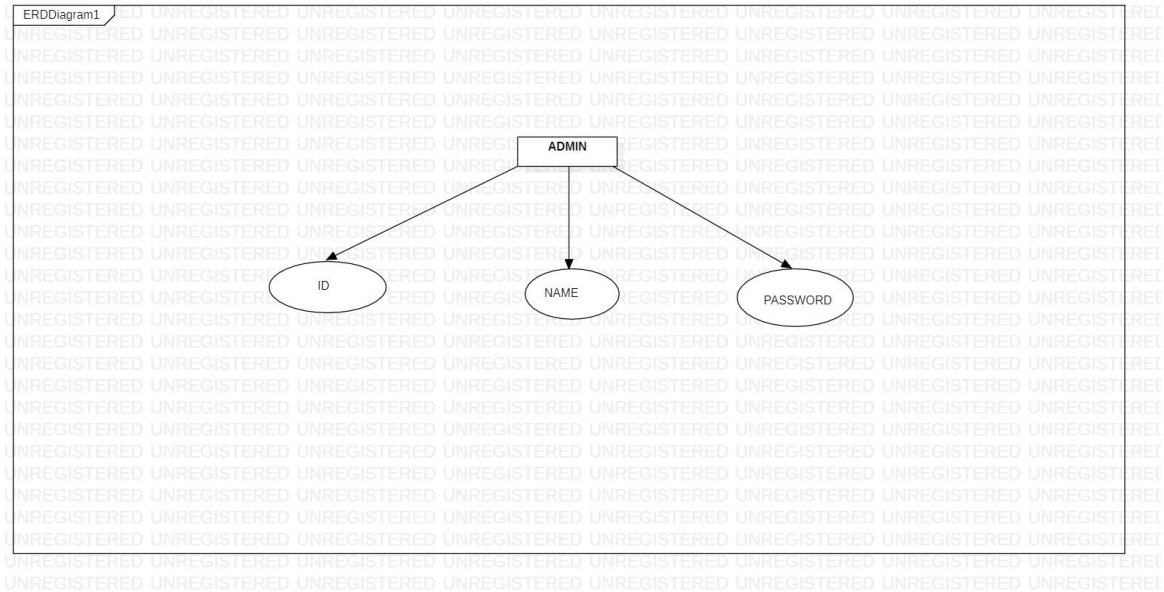
### **3.2.3 SHOPPING CART MODULE**

This module starts when the user views the shopping cart. All the products that have been added to the shopping cart by the user are listed along with their price and the quantity. The total price of all the products added to cart is displayed. A user can edit the quantity of each product or remove the product from the shopping cart. A user can remove the product from the cart by clicking a button or by dragging the product and dropping it outside the cart. The total price changes accordingly when a user edits the quantity of a product or when a product is removed from the cart.



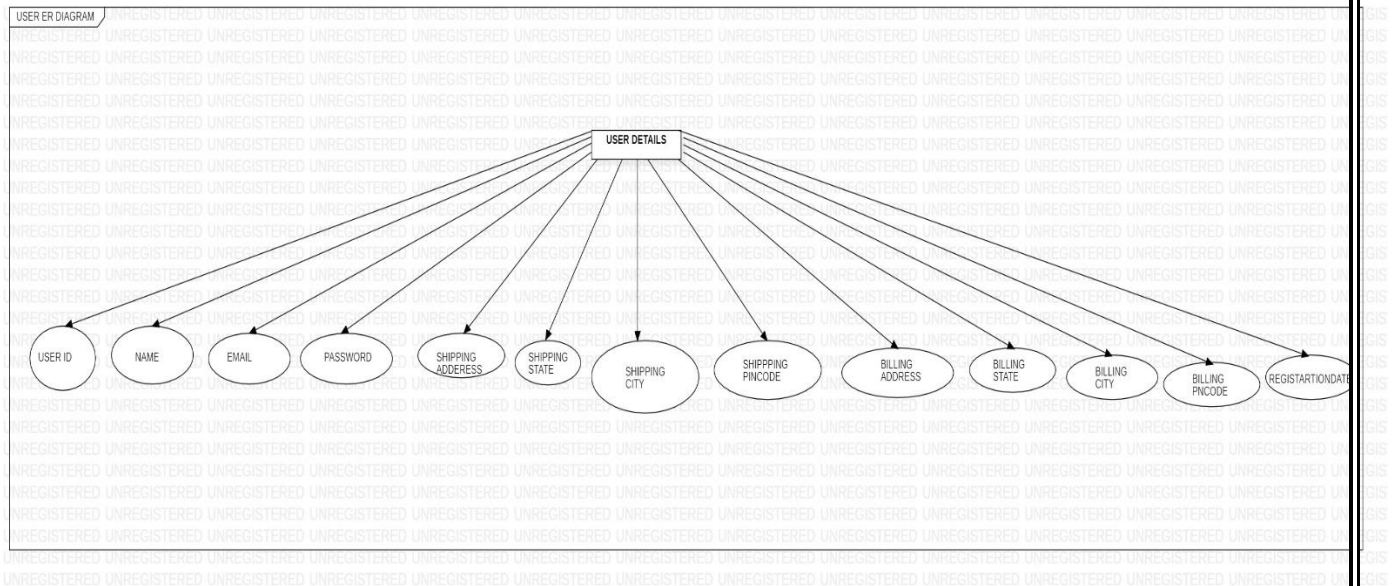
### 3.3 ER DIAGRAM

#### 3.3.1 ADMIN



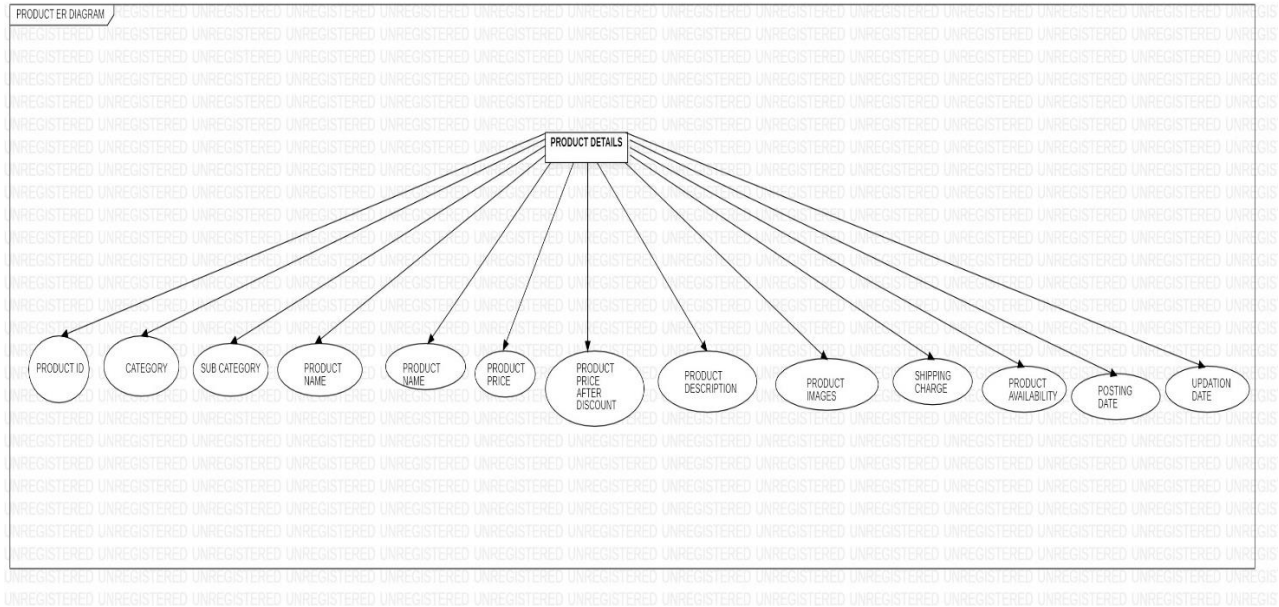
**Figure 3.3.1: Admin ER Diagram**

#### 3.3.2 USER DETAILS



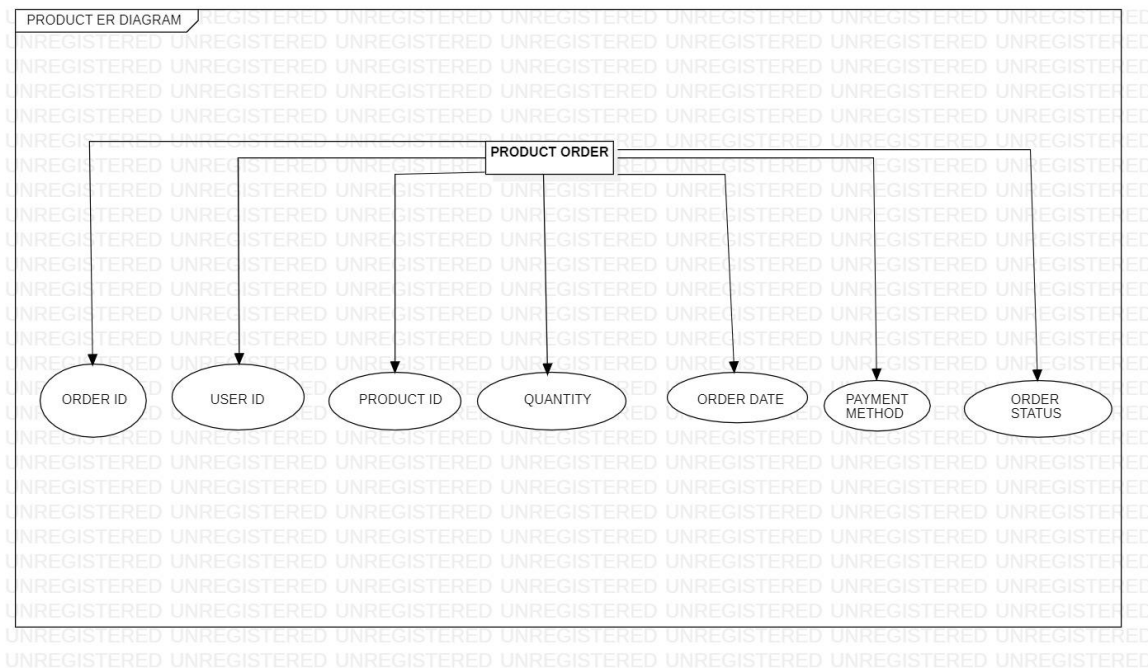
**Figure 3.3.2: User Diagram**

### 3.3.3 PRODUCT DETAILS



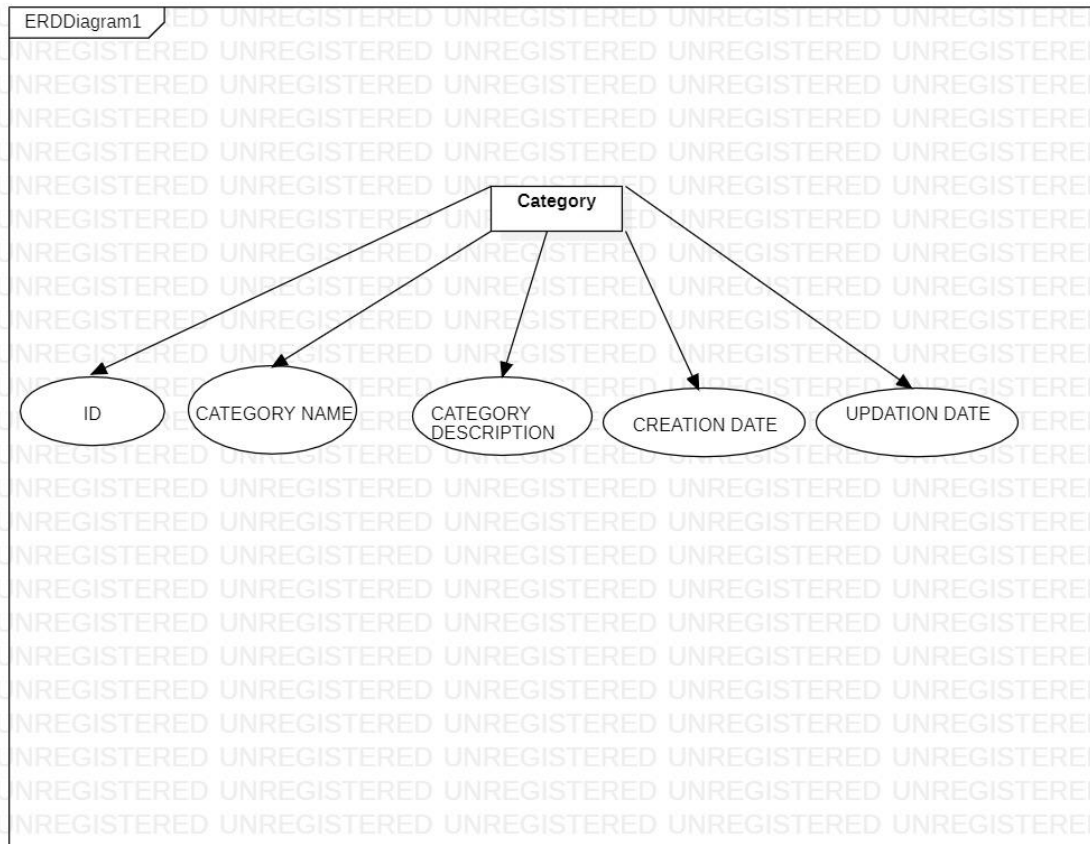
**Figure 3.3.3: Product Diagram**

### 3.3.4 PRODUCT ORDERS



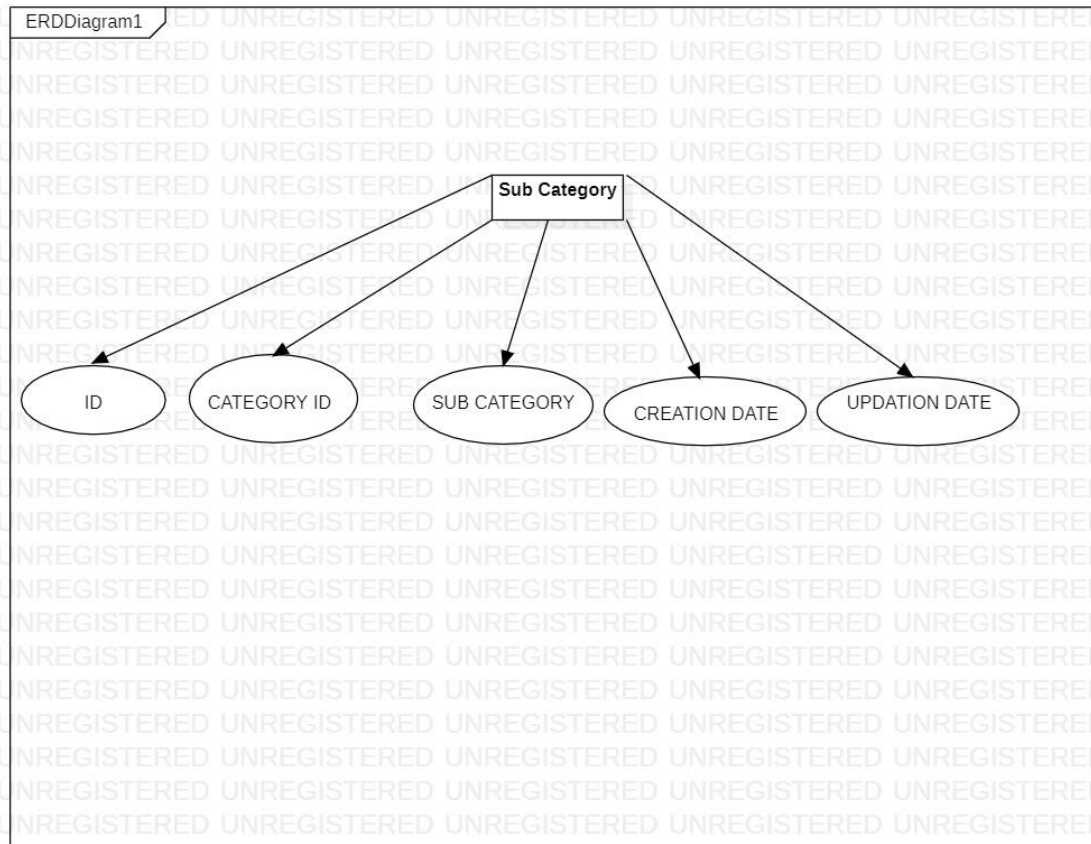
**Figure 3.3.4: Product Order Diagram**

### 3.3.5 CATEGORY



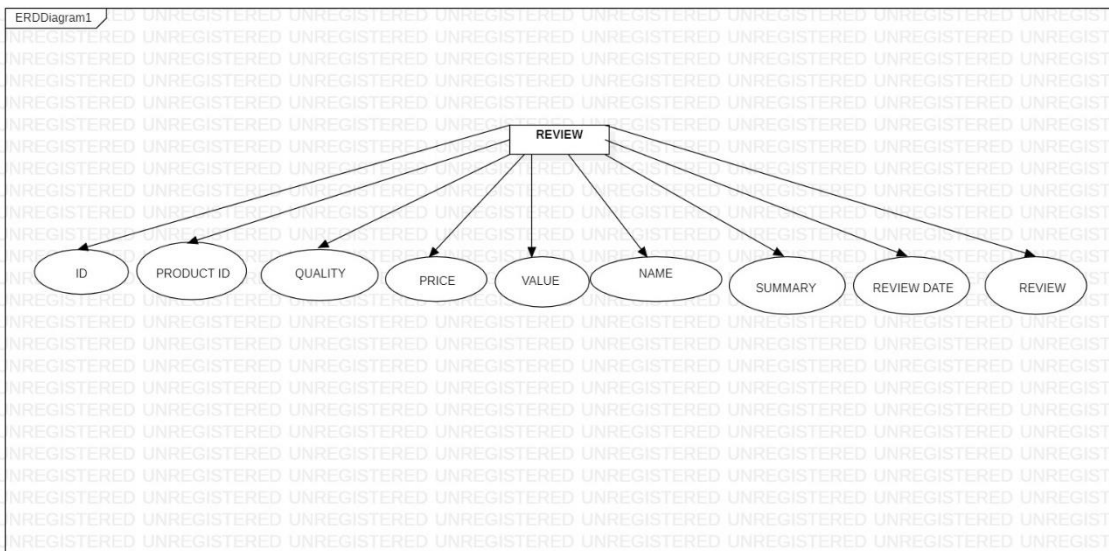
**Figure 3.3.5:Product Category**

### 3.3.6: SUB-CATEGORY



**Figure 3.3.6:Product Sub Category**

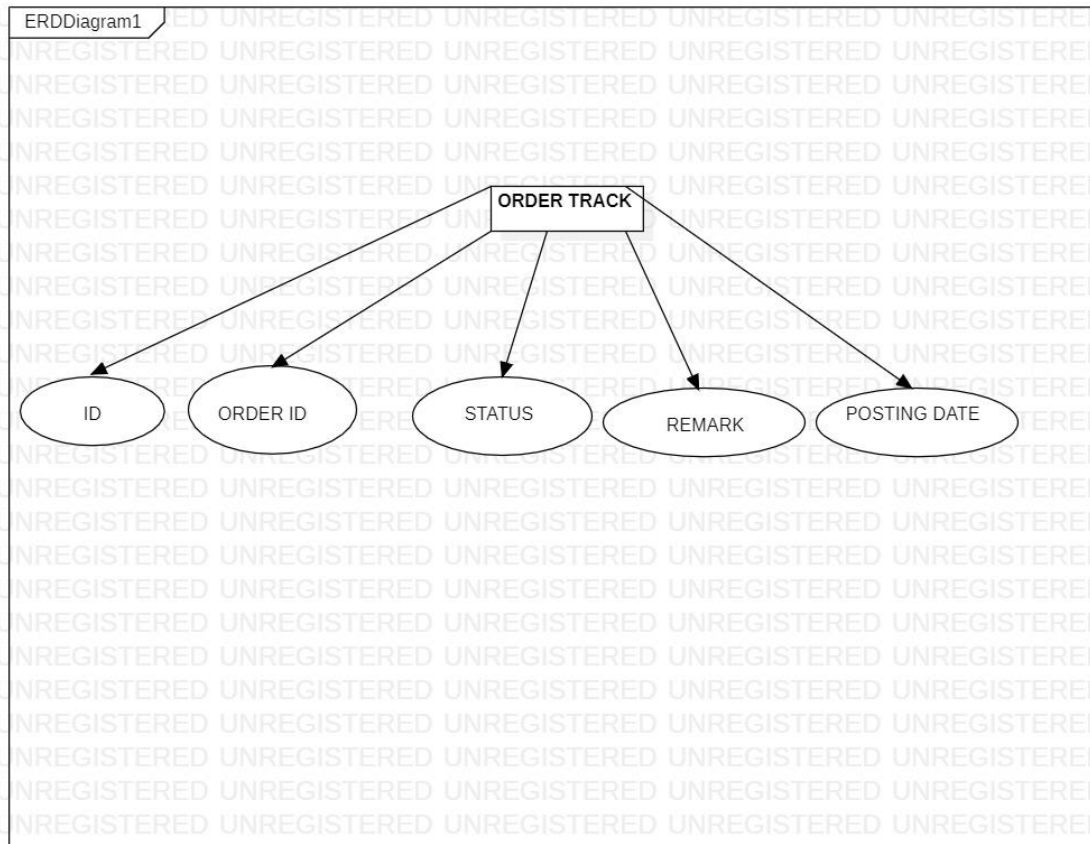
### 3.3.7:REVIEW



**Figure 3.3.7:Review Products**

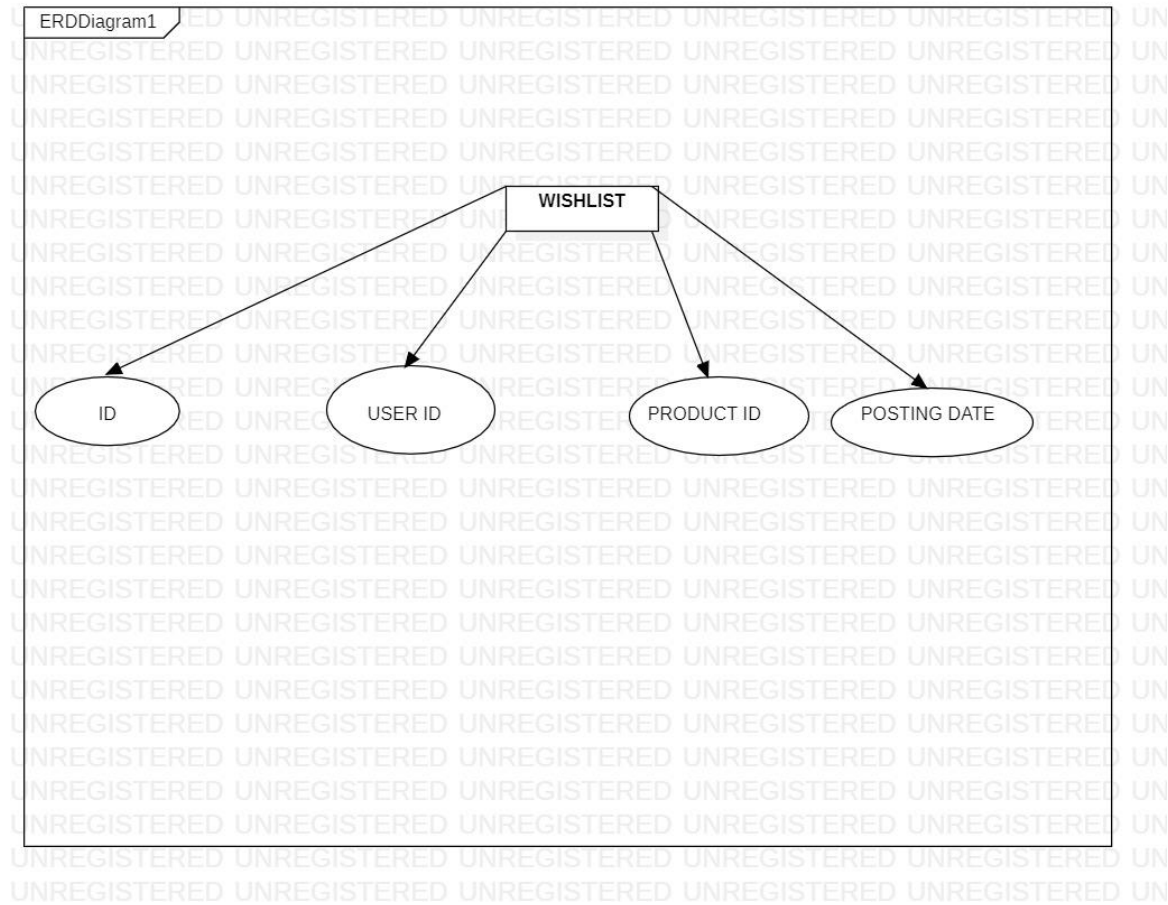


### 3.3.8:ORDER TRACK HISTORY



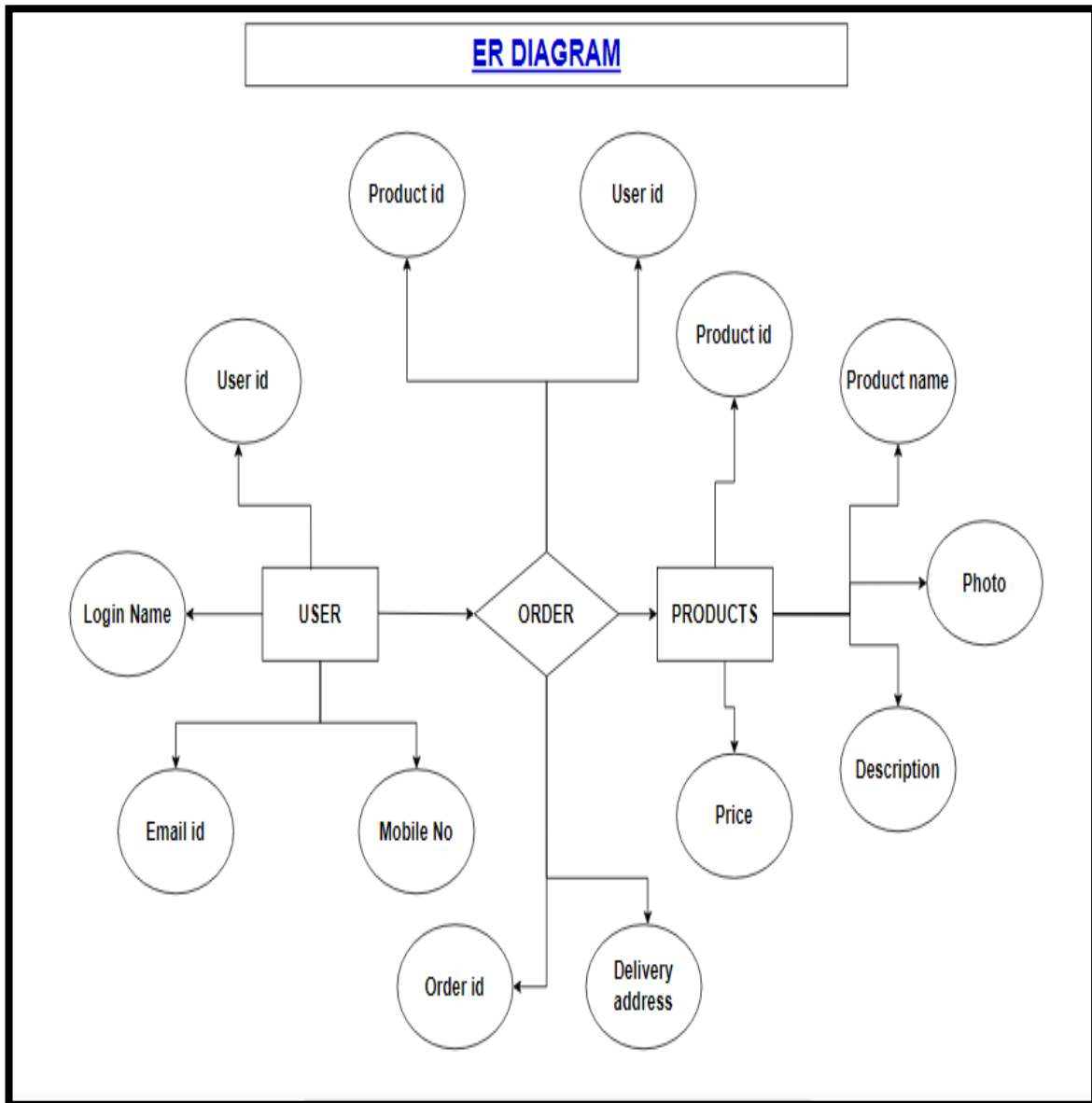
**Figure 3.3.8:Track Order**

### 3.3.9:WISHLIST



**Figure3.3.10:User Wishlist**

### 3.3.5 COMPLETE ER DIAGRAM



**Figure 3.3.5: Entity Relation Ship Diagram**

### 3.4 DATA MODELING

#### ○ DATA DICTIONARY

#### 1.USER DATA TABLE

### USER DATA TABLE

FIELD NAME	DATATYPE	CONSTRAINT	DESCRIPTION
ID	INT	NOT NULL, UNIQUE	USER ID
NAME	TEXT	NOT NULL	USER NAME
EMAIL	VARCHAR	NOT NULL, UNIQUE	USER EAMIL
PASSWORD	VARCHAR	NOT NULL, UNIQUE	USER PASSWORD
CONTACT NO	INT	NOT NULL, UNIQUE	USER SHIPPING ADDRESS
SHIPPING ADDRESS	VARCHAR	NOT NULL	USER SHIPPING ADDRESS
SHIPPING STATE	TEXT	NOT NULL	USER SHIPPING STATE
SHIPPING CITY	TEXT	NOT NULL	USER SHIPPING CITY
SHIPPING PINCODE	INT	NOT NULL	USER SHIPPING PINCODE
BILLING ADDRESS	VARCHAR	NOT NULL	USER BILLING ADDRESS
BILLING STATE	TEXT	NOT NULL	USER BILLING STATE
BILLING CITY	TEXT	NOT NULL	USER BILLING CITY
BILLING PINOCDE	INT	NOT NULL	USER BILLING PINCODE
REGISTRATION DATE	DATE & TIME	NOT NULL	USER REGISTRATION DATE



## 2.SUB CATEGORY DATE

### SUB-CATEGORY TABLE

FIELD NAME	DATATYPE	CONSTRAINT	DESCRIPTION
ID	INT	NOT NULL UNIQUE	ID
CATEGORY ID	INT	NOT NULL	ID OF CATEGORY
SUBCATEGORY	TEXT	NOT NULL	NAME OF SUBCATEGORY
CREATION DATE	DATE & TIME	NOT NULL	DATE AT WHICH CATEGORY WAS CREATED
UPDATION DATE	DATE & TIME	NOT NULL	DATE AT WHICH CATEGORY WAS UPDATED

## 3.ADMIN WITH EMAIL ID DATA TABLE

### ADMIN DATA TABLE

FIELD NAME	DATATYPE	FILED LENGTH	CONSTRAINT	DESCRIPTION
ID	INT	30	NOT NULL, UNIQUE	ADMIN ID
NAME	TEXT	30	NOT NULL	ADMIN NAME
PASSWORD	VARCHAR	30	NOT NULL, UNIQUE	USER PASSWORD

## 4.PRODUCT DATA TABLE

### PRODUCT'S TABLE



FIELD NAME	DATATYPE	CONSTRAINT	DESCRIPTION
ID	INT	NOT NULL, UNIQUE	ID
CATEGORY ID	INT	NOT NULL	ID OF CATEGORY
SUBCATEGORY ID	INT	NOT NULL	ID OF SUBCATEGORY
PRODUCT NAME	VARCHAR	NOT NULL	NAME OF THE PRODUCT
PRODUCT COMPANY	VARCHAR	NOT NULL	NAME OF COMPANY
PRODUCT PRICE	INT	NOT NULL	PRICE OF THE PRODUCT AFTER DISCOUNT
PRODUCT PRICE BEFORE DISCOUNT	INT	NOT NULL	PRICE OF THE PRODUCT BEFORE DISCOUNT
PRODUCT IMAGE 1	VARCHAR	NOT NULL	PRODUCT IMAGES
PRODUCT IMAGE 2	VARCHAR	NOT NULL	PRODUCT IMAGES
PRODUCT IMAGE 3	VARCHAR	NOT NULL	PRODUCT IMAGES
SHIPPING CHARGE	INT	NOT NULL, NULL	SHIPPING CHARGES ON THE PRODUCT
PRODUCT AVAILABILITY	VARCHAR	NOT NULL	STOCK OF PRODUCT
POSTING DATE	DATE & TIME	NOT NULL	DATE AT WHICH PRODUCT WAS POSTED FIRST TIME
UPDATION DATE	DATE & TIME	NOT NULL	DATE AT WHICH PRODUCT WAS POSTED UPDATED



## 5.CATEGORY DATA TABLE

### CATEGORY TABLE

FIELD NAME	DATATYPE	CONSTRAINT	DESCRIPTION
ID	INT	NOT NULL UNIQUE	CATEGORY ID
CATEGORY NAME	TEXT	NOT NULL	NAME OF CATEGORY
CATEGORY DESCRIPTION	VARCHAR	NOT NULL	DESCRIPTION OG CATEGORY
CREATION DATE	DATE & TIME	NOT NULL	DATE AT WHICH CATEGORY IS CREATED
UPDATION DATE	DATE & TIME	NOT NULL	LAST UPADTION DATE OF CATEGORY

## 6.ORDER'S DATATABLE

### ORDER'S TABLE

FIELD NAME	DATATYPE	CONSTRAINT	DESCRIPTION
Id	Int	NOT NULL UNIQUE	ID
User Id	Int	NOT NULL	ID OF USER
Product Id	Int	NOT NULL	ID OF PRODUCT
Quantity	Int	NOT NULL	QUANTITY OF ORDER
Order Date	Date & Time	NOT NULL	DATE AT WHICH ORDER WAS PLACED
Payment Method	VARCHAR	NOT NULL	MODE OF PAYMENT COD
Order Status	VARCHAR	NOT NULL	STATUS OF ORDER

## 7.ORDER TRACK HISTORY TABLE

### ORDER-TRACK HISTORY TABLE



FIELD NAME	DATATYPE	CONSTRAINT	DESCRIPTION
ID	INT	NOT NULL, UNIQUE	ID
ORDER ID	INT	NOT NULL	ID OF ORDER
STATUS	TEXT	NOT NULL	STATUS OF ORDER
REMARK	VARCHAR	NOT NULL	REMARK WITH ORDERS
POSTING DATE	DATE & TIME	NOT NULL	DATE OF DELIVERY



## 7.WISHLIST TABLE

### WISHLIST TABLE

FIELD NAME	DATATYPE	CONSTRAINT	DESCRIPTION
ID	INT	NOT NULL, UNIQUE	ID
USER ID	INT	NOT NULL	ID OF USER
PRODUCT ID	INT	NOT NULL	ID OF PRODUCT
POSTING DATE	DATE & TIME	NOT NULL	DATE OF PRODUCT WISHLISTED

**8.REVIEW TABLE****REVIEW TABLE**

FIELD NAME	DATATYPE	CONSTRAINT	DESCRIPTION
ID	INT	NOT NULL, UNIQUE	ID
PRODUCT ID	INT	NOT NULL	ID OF PRODUCT
QUALITY	INT	NOT NULL	QUALITY OF PRODUCT
PRICE	INT	NOT NULL	PRICE OF PRODUCT
VALUE	INT	NOT NULL	VALUE OF PRODUCT
NAME	TEXT	NOT NULL	NAME OF USER
SUMMARY	VAR CHAR	NOT NULL	SUMMARY OF PRODUCT
REVIEW	VARCHAR	NOT NULL	REVIEW OF PRODUCT
REVIEW DATE	DATE & TIME	NOT NULL	DATE OF REVIEW

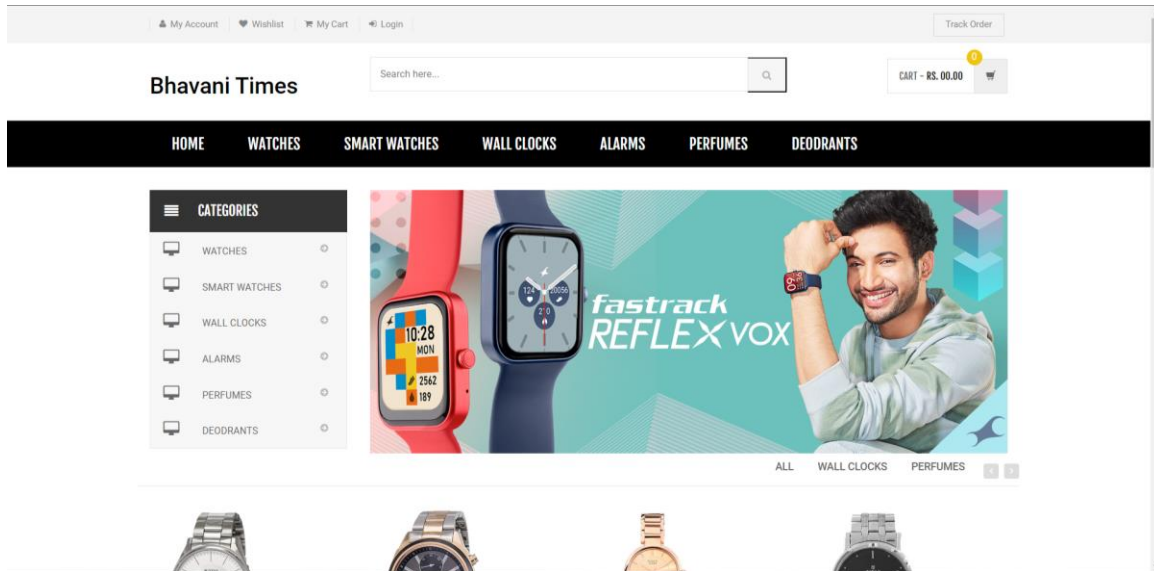
## **4. SCREENSHOTS OF THE UI**

### **○ INTERFACE AND DESIGN**

### **❖ SCREENSHORTS AND EXPLANATION**

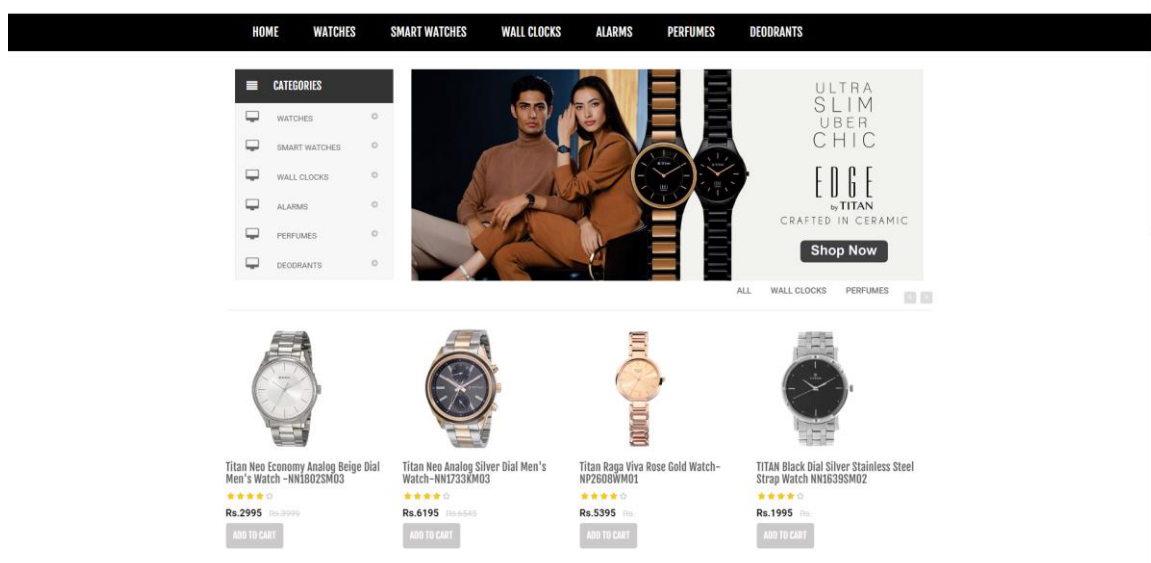
- The user interface of the application has been designed using Notepad++. The main controls used in the design are HTML, CSS, JAVASCRIPT, AJAX, PHP, MYSQL.
- The user can see the list of products that are available. The user can search for products by entering the search term into the search textbox provided on the top. This textbox is watermarked with the words “Search Terms” to let the user know that this is the place to enter the search terms. The user can filter the products by using the dropdown lists.

## 1. Home page of Bhavani Times Website : -



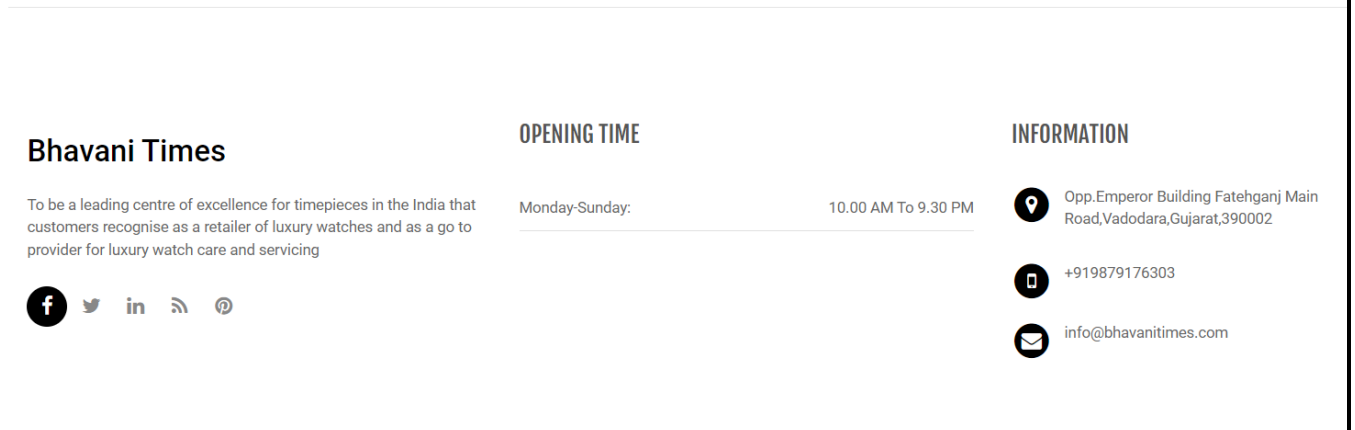
**Figure 4.1: Home page of System**

## 2. DASH BOARD:-



**Figure 4.2: Dash board of System**

### 3. :- FOOTER



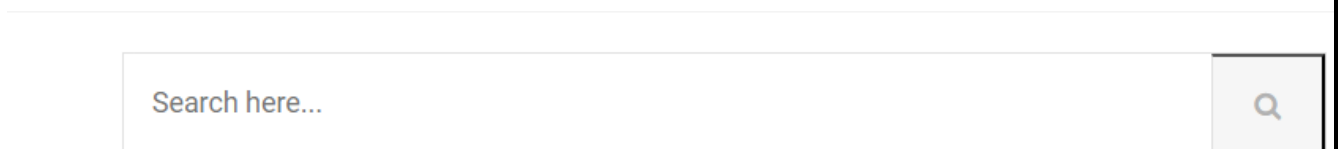
**Figure 4.3: FOOTER**

### 4. MENU BAR :-



**Figure 4.4: Menu**

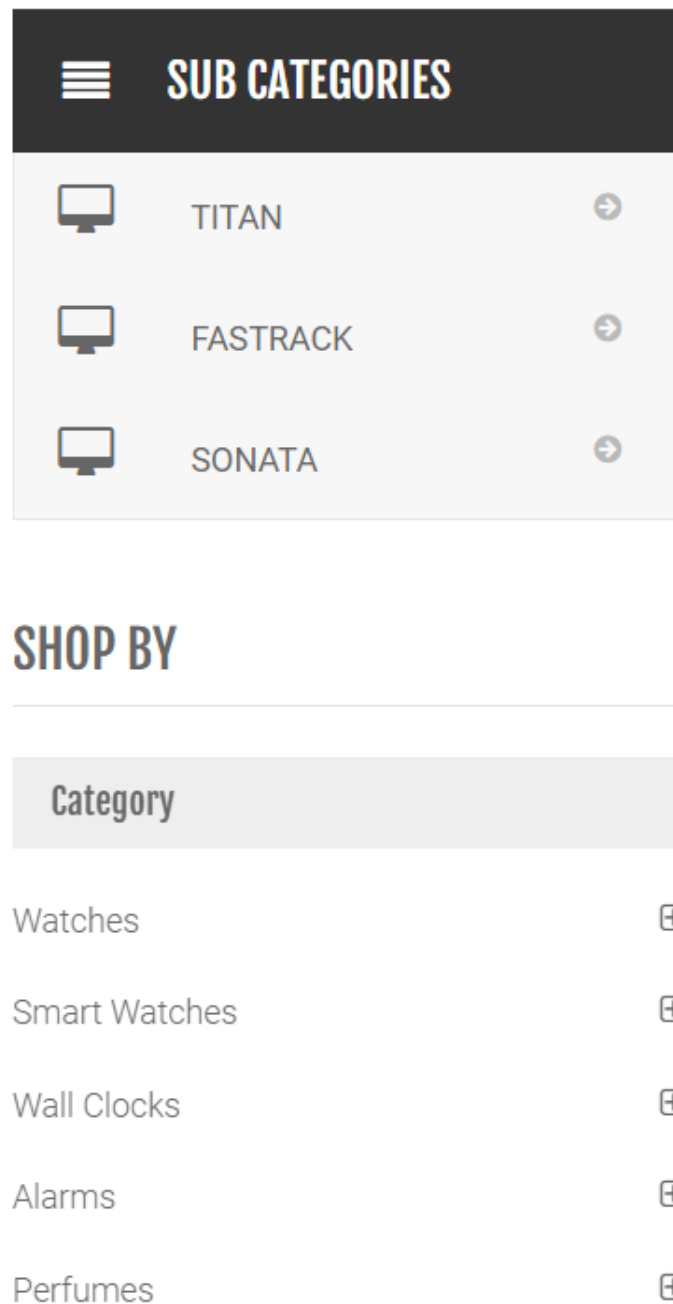
### 5. SEARCH BAR: -



**Figure 4.5: Search Bar**



## 6. SEARCH BAR WITH FILTER:-



**Figure 4.6: Filter**

## 7. REGISTER USER:-

### CREATE A NEW ACCOUNT

Create your own Shopping account.

Full Name \*

Email Address \*

Contact No. \*

Password. \*

Confirm Password. \*

SIGN UP

### SIGN UP TODAY AND YOU'LL BE ABLE TO :

Speed your way through the checkout.

Track your orders easily.

Keep a record of all your purchases.

**Figure 4.7:** Registration page

## 8. LOGIN :-

### SIGN IN

---

Hello, Welcome to your account.

Email Address \*

Password \*

[Forgot your Password?](#)

LOGIN

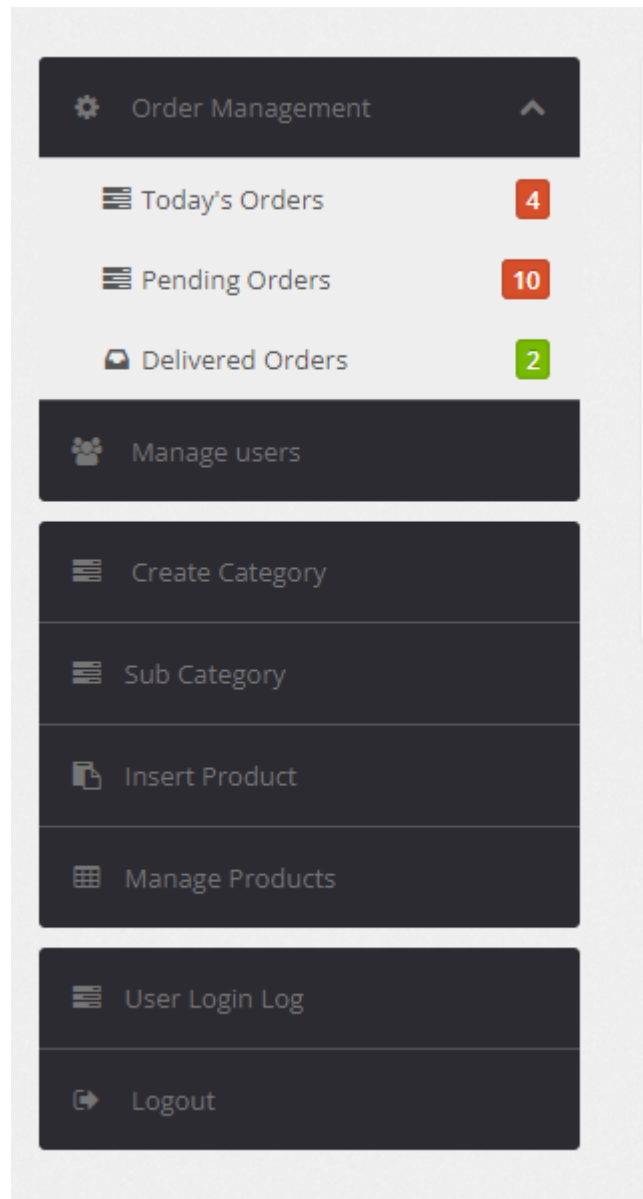
**Figure 4.8:** Login with email

## 9. ADMIN DASH BOARD: -

The screenshot displays the Admin Dashboard for 'Bhavani Times | Admin'. The top navigation bar includes the site name and a user profile dropdown for 'Admin'. The sidebar on the left contains the following menu items: Order Management, Manage users, Create Category, Sub Category, Insert Product, Manage Products, User Login Log, and Logout. The main content area features a 'Admin Change Password' form with three input fields: 'Current Password' (labeled 'Enter your current Password'), 'New Password' (labeled 'Enter your new current Password'), and a confirmation field (labeled 'Enter your new Password again'). A 'Submit' button is located at the bottom of the form. At the bottom of the dashboard, a copyright notice reads: '© 2017 Shopping Portal All rights reserved.'

**Figure 4.09:** Admin dashboard

## 10. ADMIN MENU OPTION: -



**Figure 4.10:** Admin Menu bar

## 11. ADMIN PRODUCT DETAILS: -





Manage Products						
Show <input type="text" value="10"/> entries		Search: <input type="text"/>				
#	Product Name	Category	Subcategory	Company Name	Product Creation Date	Action
1	Titan Neo Economy Analog Beige Dial Men's Watch -NN1802SM03	Watches	Titan	Titan	2023-04-07 13:04:49	<a href="#">✎</a> <a href="#">+</a>
2	Titan Neo Analog Silver Dial Men's Watch- NN1733KM03	Watches	Titan	Titan	2023-04-07 13:13:48	<a href="#">✎</a> <a href="#">+</a>
3	Titan Raga Viva Rose Gold Watch-NP2608WM01	Watches	Titan	Titan	2023-04-07 13:22:46	<a href="#">✎</a> <a href="#">+</a>
4	TITAN Black Dial Silver Stainless Steel Strap Watch NN1639SM02	Watches	Titan	Titan	2023-04-07 18:51:14	<a href="#">✎</a> <a href="#">+</a>
5	Titan Karishma Analog Multi-Colour Dial Men's Watch-NL1639SM01/NN1639SM01	Watches	Titan	Titan	2023-04-07 20:11:56	<a href="#">✎</a> <a href="#">+</a>
6	Titan Karishma Analog Champagne Dial Women's Watch-NM2601YM03 / NL2601YM03	Watches	Titan	Titan	2023-04-07 20:20:32	<a href="#">✎</a> <a href="#">+</a>
7	Titan Analog Watch - For Women 2638WL01	Watches	Titan	Titan	2023-04-07 20:32:36	<a href="#">✎</a> <a href="#">+</a>
8	Titan Analog Black Dial Men's Watch- NM9151SM02 / NL9151SM02	Watches	Titan	Titan	2023-04-07 20:41:09	<a href="#">✎</a> <a href="#">+</a>
9	Sonata Play Analog Silver Dial Women's Watch- 8164SL04/NP8164SL04	Watches	Sonata	Sonata	2023-04-07 20:46:53	<a href="#">✎</a> <a href="#">+</a>
10	Sonata Linnea Pink Dial Purple Leather Strap Watch for Women	Watches	Sonata	Sonata	2023-04-07 20:56:34	<a href="#">✎</a> <a href="#">+</a>
Showing 1 to 10 of 156 entries						<a href="#">&lt;</a> <a href="#">&gt;</a>

**Figure 4.11: Order manage by admin**

## 12. ADD PRODUCT BY ADMIN: -

Insert Product	
Category	<input type="text" value="Select Category"/>
Sub Category	<input type="text"/> <span>Please select an item in the list.</span>
Product Name	<input type="text" value="Enter Product Name"/>
Product Company	<input type="text" value="Enter Product Comapny Name"/>
Product Price Before Discount	<input type="text" value="Enter Product Price"/>
Product Price After Discount(Selling Price)	<input type="text" value="Enter Product Price"/>
Product Description	<div> <b>B I U</b> [List Icons] Font Size... Font Family...            Font Format [Image Icons]  <input style="width: 100%; height: 150px;" type="text"/> </div>
Product Shipping Charge	<input type="text" value="Enter Product Shipping Charge"/>
Product Availability	<input type="text" value="Select"/>
Product Image1	<input type="button" value="Choose File"/> No file chosen
Product Image2	<input type="button" value="Choose File"/> No file chosen
Product Image3	<input type="button" value="Choose File"/> No file chosen
<input type="button" value="Insert"/>	

### 13. ORDERS VIEW BY ADMIN

Pending Orders								
Show		10	▼	entries		Search:		
#	Name	Email /Contact no	Shipping Address	Product	Qty	Amount	Order Date	A
1	Anuj Kumar	anuj.lpu1@gmail.com/9009857868	CS New Delhi,Delhi,New Delhi-110001	TITAN Black Dial Silver Stainless Steel Strap Watch NN1639SM02	1	2045	2017-03-11 01:13:04	
2	BABURAO	BAB8338@GMAIL.COM/7878959597	„-“	Engage M1 Perfume Spray For Men, Citrus and Woody, Skin Friendly, 120ml	1	200	2023-04-24 08:19:11	
Showing 1 to 2 of 2 entries								
 								

**Figure 4.13: Orders view by admin**

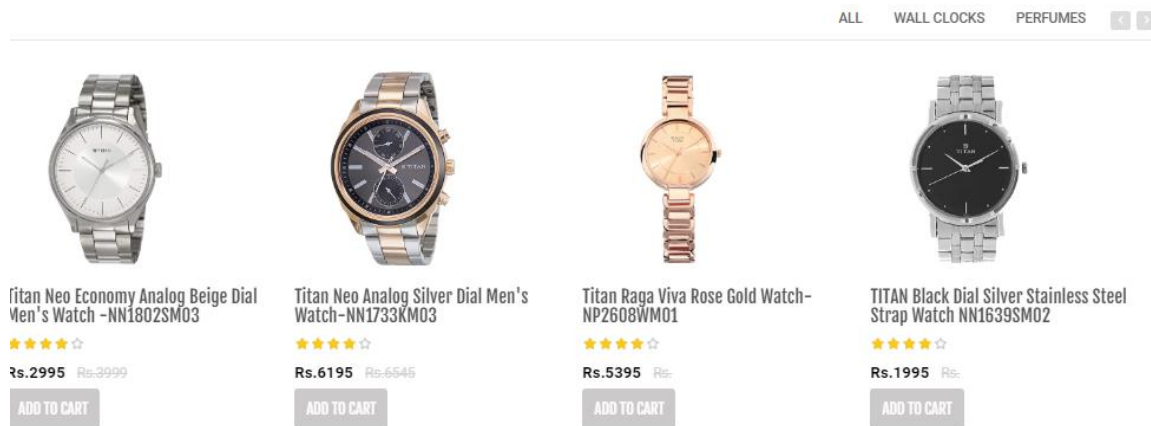


## 14. ADMIN MANAGE USERS

Manage Users					
Show		10	▼	entries	Search: <input type="text"/>
#	Name	Email	Contact no	Shipping Address/City/State/Pincode	Billing Address/City/State/Pincode
1	Anuj Kumar	anuj.lpu1@gmail.com	9009857868	CS New Delhi, Delhi, New Delhi-110001	New Delhi, Delhi, New Delhi-110092
2	Amit	amit@gmail.com	8285703355	“-0	“-0
3	hg	hgfhgf@gmass.com	1121312312	“-0	“-0
4	jeetu	motwani@gmail.com	1234567890	“-	“-
5	Jeetu Motwani	motwanijitu22@gmail.com	9033385202	“-	“-
6	ANSH KHANCHANDANI	harryanshu1124@gmail.com	9725004765	B-204, Devi Narayan Tower, Waraisa Ring rd ,Vadodara, Gujarat-390006	B-204, Devi Narayan Tower, Waraisa Ring rd ,Vadodara, Gujarat-390006
7	BABURAO	BAB8338@GMAIL.COM	7878959597	“-	“-
8	Jeetu Motwani	motwanijitu223@gmail.com	9033338520	“-	“-
Showing 1 to 8 of 8 entries					<input type="button" value="◀"/> <input type="button" value="▶"/>

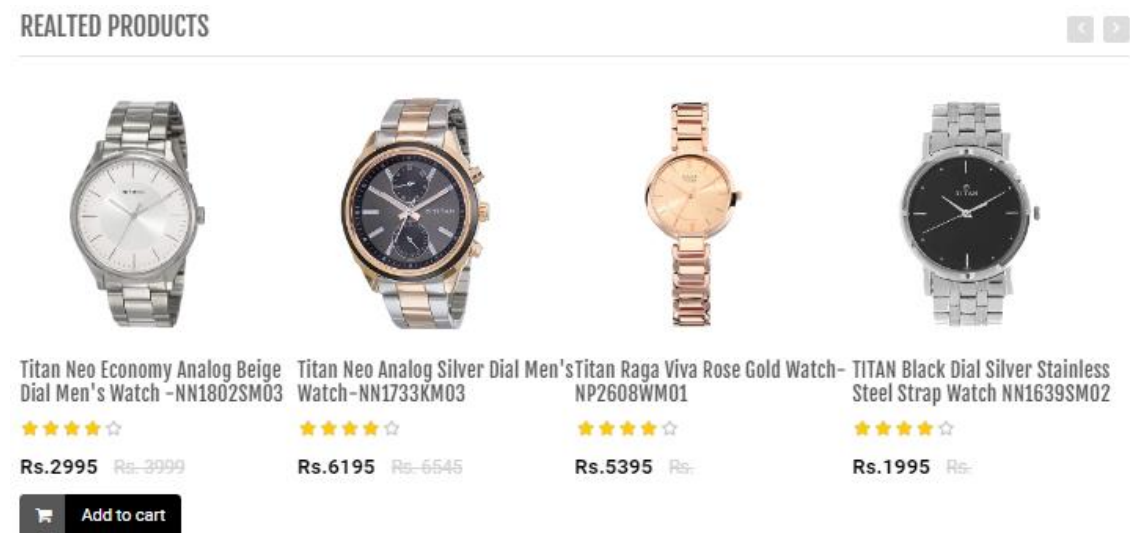
**Figure 4.14:** user manage Dashboard

## 15.FEATURED PRODUCT



**Figure 4.15:** Upcoming product show

## 16. RELATED PRODUCTS: -



**Figure 4.16:** Related Products

## 17.OUR BRANDS

OUR BRANDS



**fastrack**

**TITAN**

**SONATA**

**FIREBOLTT**

**WILD  
STONE**

**FOGG**

**Figure 4.17: Our Brands**

## 18. PRODUCT DESCRIPTION



**Titan Neo Analog Silver Dial Men's Watch-NN1733KM03**

★★★★☆ (0 Reviews)

AVAILABILITY : **In Stock**

PRODUCT BRAND : **Titan**

SHIPPING CHARGE : **Free**

**Rs. 6195** ~~Rs. 6545~~



QTY :

1

**ADD TO CART**



SHARE : [f](#) [t](#) [in](#) [r](#) [p](#)

**DESCRIPTION**

**REVIEW**

Dial Color: Silver, Case Shape: Round, Dial Glass Material: Mineral Band Color: Rose Gold, Band Material: Metal Watch Movement Type: Quartz, Watch Display Type: Analog Case Material: Brass, Case Diameter: 48 millimeters Water Resistance Depth: 50 meters, Buckle Clasp 24 Months manufacturer warranty on manufacturing defects Remove plastic at crown to start the watch Ideal for birthday, anniversary and wedding gift

**Figure 4.18: Product details**


## 19.ADDRESS DETAILS BY USERS:-

SHIPPING ADDRESS	BILLING ADDRESS
Billing Address*	Shipping Address*
<input type="text" value="New Delhi"/>	<input type="text" value="CS New Delhi"/>
Billing State *	Shipping State *
<input type="text" value="New Delhi"/>	<input type="text" value="New Delhi"/>
Billing City *	Shipping City *
<input type="text" value="Delhi"/>	<input type="text" value="Delhi"/>
Billing Pincode *	Shipping Pincode *
<input type="text" value="110092"/>	<input type="text" value="110001"/>
<input type="button" value="UPDATE"/>	<input type="button" value="UPDATE"/>

**Figure 4.19:** Address add by user when user order's product

## 20. SHOPPING INFO : -

Home / Shopping Cart

Remove	Image	Product Name	Quantity	Price Per unit	Shipping Charge	Grandtotal
<input type="checkbox"/>		<b>TITAN RAGA VIVA ROSE GOLD WATCH- NP2608WM01</b> ★★★★★☆ ( 3 Reviews )	1	RS 5395.00	RS 50.00	5445.00
<a href="#">CONTINUE SHOPPING</a>		<a href="#">UPDATE SHOPPING CART</a>				

**SHIPPING ADDRESS**

Billing Address\*

New Delhi

**BILLING ADDRESS**

Shipping Address\*

CS New Delhi

**GRAND TOTAL** **5445.00**

[PROCEED TO CHECKOUT](#)

**Figure 4.20: Shipping details**

## 20. TRACK ORDER :-

### TRACK YOUR ORDER

Please enter your Order ID in the box below and press Enter. This was given to you on your receipt and in the confirmation email you should have received.

Order ID

Registered Email

[TRACK](#)

**Figure 4.21: Track Order**

# 1. TESTING

- Software testing is a process of running with intent of finding errors in software. Software testing assures the quality of software and represents final review of other phases of software like specification, design, code generation etc.

## 5.1 UNIT TESTING

- Unit testing emphasizes the verification effort on the smallest unit of software design i.e.; a software component or module. Unit testing is a dynamic method for verification, where program is actually compiled and executed. Unit testing is performed in parallel with the coding phase. Unit testing tests units or modules not the whole software.
- I have tested each view/module of the application individually. As the modules were built up testing was carried out simultaneously, tracking out each and every kind of input and checking the corresponding output until module is working correctly.
- The functionality of the modules was also tested as separate units. Each of the three modules was tested as separate units. In each module all the functionalities were tested in isolation.
- In the Shop Products Module when a product has been added to cart it has been made sure that if the item already exists in the shopping cart then the quantity is increased by one else a new item is created in the shopping cart. Also the state of the system after a product has been dragged in to the shopping cart is same as the state of the system if it was added by clicking the add to cart button. Also it has been ensured that all the images of the products displayed in the shop products page are drag gable and have the product property so that they can be dropped in the cart area.

- In the Product Description Module it has been tested that all the images are displayed properly. Users can add review and the as soon as a user adds a review it is updated in the view customer review tab. It has been checked to see if the whole page refreshes or a partial page update happens when a user writes a review.
- In the Cart Details it has been tested that when a user edits a quantity or removes a product from the cart, the total price is updated accordingly. It has been checked to see if the whole page refreshes or a partial page update happens when a user edits the cart.
- Methods were written to retrieve all the manufacturers from the database, strings that match a certain search term, products that match certain filter criteria, all images that belong to a particular product etc. Unit test cases were automatically generated for these methods and it can be seen in figure 6.1 that the tests have passed.

## **5.2 INTEGRATION TESTING**

- In integration testing a system consisting of different modules is tested for problems arising from component interaction. Integration testing should be developed from the system specification. Firstly, a minimum configuration must be integrated and tested.
- In my project I have done integration testing in a bottom up fashion i.e. in this project I have started construction and testing with atomic modules. After unit testing the modules are integrated one by one and then tested the system for problems arising from component interaction.

## TEST CASES TABLES

TEST CASES	INTERFACE	FUNCTIONALITY CHECK	RESULT
1	USER LOGIN	CONFIRM LOGIN WITH EMAIL	PASS
2	CONFIRM EMAIL	AUTHENITICATION	PASS
3	CONFIRM EMAIL	REGISTRATION	PASS
4	REGISTRATION	SEARCH PRODUCT	PASS
5	SEARCH PRODUCT	VIEW PRODUCT	PASS
6	VIEW PRODUCT	ADD TO CART	PASS
7	ADD TO CART	BUY PRODUCT	PASS
8	PAYMENT	CONFIRM PAYMENT	PASS/TESTING MODE
9	TRACK ORDER	-	PASS
10	LOGOUT	LOGOUT FROM SYSTEM	PASS

### 5.3 VALIDATION TESTING

- ❖ It provides final assurances that software meets all functional, behavioral & performance requirement. Black box testing techniques are used.
  - There are three main components
    - Validation test criteria (no. in place of no. & char in place of char)
    - Configuration review (to ensure the completeness of s/w configuration.)
    - Alpha & Beta testing-Alpha testing is done at developer's site i.e. at home & Beta testing once it is deployed. Since I have not deployed my application, I could not do the Beta testing.
  - Test Cases- I have used a number of test cases for testing the product. There were different cases for which different inputs were used to check whether desired output is produced or not.



1. Addition of a new product to the cart should create a new row in the shoppingcart.
2. Addition of an existing product to the cart has to update the quantity of theproduct.
3. Any changes to items in the cart have to update the summary correctly.
4. Because same page is inserting data into more than one table in the database atomicity of the transaction is tested.
5. The state of the system after a product has been dragged in to the cart should be same as the state of the system if the same product is added to the cart by clicking a button.

## **5.4 WHITE BOX TESTING**

- ❖ In white box testing knowing the internal working of the product, tests can be conducted to ensure that internal operations are performed according to specification and all internal components have been adequately exercised. In white box testing logical path through the software are tested by providing test cases that exercise specific sets of conditions and loops.
- Using white-box testing software developer can derive test case that
  - Guarantee that all independent paths within a module have been exercised at least once.
  - Exercise all logical decisions on their true and false side.
  - Exercise all loops at their boundaries and within their operational bound.

- Exercise internal data structure to ensure their validity.

At every stage of project development I have tested the logics of the program by supplying the invalid inputs and generating the respective error messages. All the loops and conditional statements are tested to the boundary conditions and validated properly.

## 6 RESULTS & CHALLENGES

- The application can be used for any Ecommerce application. It is easy to use, since it uses the GUI provided in the user dialog. User friendly screens are provided. The application is easy to use and interactive making Ecommerce Website a recreational activity for users. It has been thoroughly tested and implemented.

### 6.1 CHALLENGES

- Compatibility with browsers like Mozilla Firefox, Internet explorer etc
- Using a layered approach in developing the application which would make the application maintainable.
- Learning new technologies like using JavaScript for drag and drop behavior and Ajax toolkit controls with little guidance.

The overall idea of doing this project is to get a real time experience. Learn new technologies

## CONCLUSIONS

- ❖ The 'Ecommerce Website' is designed to provide a web based application that would make searching, viewing and selection of a product easier. The search engine provides an easy and convenient way to search for products where a user can Search for a product interactively and the search engine would refine the products available based on the user's input. The user can then view the complete specification of each product. They can also view the product reviews and also write their own reviews.

## **7 LIMITATIONS**

- ❖ This application does not have a built in check out process. An external checkout package has to be integrated in to this application. Also users cannot save the shopping carts so that they can access later i.e. they cannot create wish lists which they can access later. This application does not have features by which user can set price ranges for products and receive alerts once the price reaches the particular range.

### **7.1 SCOPE FOR FUTURE WORK**

The following things can be done in future.

- The current system can be extended to allow the users to create accounts and save products in to wish list.
- The users could subscribe for price alerts which would enable them to receive messages when price for products fall below a particular level.
- The current system is confined only to the shopping cart process. It can be extended to have an easy to use check out process.

## 8 REFERENCES

1. For Development In PHP  
<https://www.csharpcorner.com/UploadFile/1910c0/php-tutorial-part-1/>
2. For Database <https://www.w3schools.com/sql/>
3. Sample Ecommerce Application <https://github.com/>
4. Diagram draw from <https://www.app.diagrams.net/>
5. Ajax Toolkit controls <http://asp.net/ajax>