

CP-I Project Report on  
**ECOMMERCE SITE**

At

**U.V. Patel College of Engineering**



**Internal Guide:**

Prof. Bhavin Joshi

**Prepared By:**

Mr. Dhairya Chauhan (20012011018)

Mr. Deepak Mewada (20012011034)

Mr. Akshi Vasaniya (20012011005)

**B.Tech Semester V**  
**(Computer Engineering) Nov-**  
**Dec, 2022**

**Submitted To:**

Computer Engineering Department  
U.V. Patel College Of Engineering  
Ganpat University, Kherva, Mehsana, Gujarat

# **ACKNOWLEDGEMENT**

We express our sincere gratitude towards internal guide **Prof. Bhavin Joshi** for his constant help, encouragement, suggestions and inspiration throughout the project work. Without his invaluable advice, suggestions and assistance it would not have been possible for us to complete this project work

**Thank You Sir**

## **Abstract**

Online Shopping plays a great importance in the modern business environment. Here, the online Electronic Store has opened the door of opportunity and advantage to the firms. This paper analyzed the different issues of online shopping. The research aims to provide a theoretical contribution in understanding the present status of online shopping. The Study Discuss the consumers' online shopping behaviors. Paper also identifies the problems faced by the consumers when they want to accept internet shopping. Present paper is an expressive study based on the detailed review of earlier pertinent studies related to the various concepts of online shopping to discover the concept of online shopping. Solitude and safety risk emerge regularly as a reason for being cautious about internet shopping. Shopping convenience, information seeking, social contact, and diversity affects the consumer attitude towards online shopping. The impossibility of product testing, problems with complaints, product return and missus of personal data are the main doubts regarding on-line shopping

In this project Front-End is done by React.js, Back-End is done through Node.js and Database is MongoDB.

**Ganpat University, Kherva - 384 012**

**U.V. PATEL COLLEGE  
OF ENGINEERING**



**CERTIFICATE**

**TO WHOM SO EVER IT MAY CONCERN**

This is to certify that Mr. /Ms. ~~Dhairya Chauhan~~ student of **B.Tech. Semester-V (Computer Engineering)** has completed his/her full semester on site project work titled “Ecommerce Site” satisfactorily in partial fulfillment of the requirement of Bachelor of Technology degree of Computer Engineering of Ganpat University, Kherva, Mehsana in the year 2022-2023.

**Prof. Bhavin Joshi**  
**College Project Guide**

**Dr. Paresh M. Solanki**  
**Head, Computer Engineering**

**Ganpat University, Kherva - 384 012**

**U.V. PATEL COLLEGE  
OF ENGINEERING**



**CERTIFICATE**

**TO WHOM SO EVER IT MAY CONCERN**

This is to certify that Mr. /Ms. **Deepak Mewada** student of **B.Tech. Semester-V (Computer Engineering)** has completed his/her full semester on site project work titled “Ecommerce Site” satisfactorily in partial fulfillment of the requirement of Bachelor of Technology degree of Computer Engineering of Ganpat University, Kherva, Mehsana in the year 2022-2023.

**Prof. Bhavin Joshi**  
**College Project Guide**

**Dr. Paresh M. Solanki**  
**Head, Computer Engineering**

**Ganpat University, Kherva - 384 012**

**U.V. PATEL COLLEGE  
OF ENGINEERING**



**CERTIFICATE**

**TO WHOM SO EVER IT MAY CONCERN**

This is to certify that Mr. /Ms. ~~Jaydeepsinh Devda~~ student of **B.Tech. Semester-V (Computer Engineering)** has completed his/her full semester on site project work titled “Ecommerce Site” satisfactorily in partial fulfillment of the requirement of Bachelor of Technology degree of Computer Engineering of Ganpat University, Kherva, Mehsana in the year 2022-2023.

**Prof. Bhavin Joshi**  
**College Project Guide**

**Dr. Paresh M. Solanki**  
**Head, Computer Engineering**

# TABLE OF CONTENTS

<b>Chapter 1 - Introduction</b>	9
1.1 Project Overview	9
1.2 Purpose	9
1.2.1 Problem Statement	9
1.2.2 Project Aim and Objectives	10
1.3 The Solution	10
1.4 Scope and Limitation	11
<b>Chapter 2 - Literature Survey</b>	13
2.1 Introduction	13
2.2 Status of Online Shopping in Present Business Environment	13
2.3 Importance of Online Shopping	14
2.4 Problems of Online Shopping	14
2.5 The Factors which Affect online Shopping	15
<b>Chapter 3 - Software Requirement Specification</b>	16
3.1 Feasibility Study	16
3.1.1 Technical Feasibility	16
3.1.2 Time Feasibility	16
3.1.3 Operational Feasibility	16
3.1.4 Implementation Feasibility	16
3.1.5 Economic Feasibility	16
3.2 System Specification	17
3.3 Functional Requirement	17
R1 User Module	17
R1.1 Registration	17
R2.2 Login	18
R1.3 Browse Product	18
R1.4 Filter	18
R1.5 Shopping Cart	18
R1.6 Payment	18
R1.7 Track	18
R1.8 Logout	18
R1.9 Report/Bill Generator	18

R2 Admin Module	19
R2.1 Admin Login	19
R2.2 Admin Dashboard	19
R2.3 Product Management	19
R2.4 Feedback	19
3.4 Non Functional requirement	19
1 Availability	19
2 Accuray	19
3 Usability	20
4 Security	20
5 Performance	20
6 Reliability	20
<b>Chapter 4 -Diagrams</b>	21
4.1 Use-Case Diagram	21
4.2 Activity Diagram	22
4.2.1 User Activity Diagram	22
4.2.2 Admin Activity Diagram	23
4.3 Data-Flow Diagram	24
4.4 Sequence Diagram	26
4.5 Class Diagram	27
4.6 State Diagram	28
<b>Chapter 5 - Prototypes</b>	29
5.1 Login Page	29
5.2 Registration Page	30
5.3 Home Page	31
5.4 Single Product Page	32
<b>Chapter 6 -Conclusion and Future Work</b>	33
6.1 Conclusion	33
6.2 Future Work	33
<b>References</b>	34



# Chapter 1 - Introduction

## 1.1 Project Overview

E-commerce is fast gaining ground as an accepted and used business paradigm. More and more business houses are implementing web sites providing functionality for performing commercial transactions over the web. It is reasonable to say that the process of shopping on the web is becoming commonplace. An online store is a virtual store on the Internet where customers can browse the catalog and select products of interest. The selected items may be collected in a shopping cart. At checkout time, the items in the shopping cart will be presented as an order. At that time, more information will be needed to complete the transaction.

## 1.2 Purpose

In purpose we have included the purpose of our system that is to provide information of problem statement, aim of our project and the objectives.

### 1.2.1 Problem Statement

- ❖ 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 labor, 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 businesses that relied on the traditional incur a lot of consequences due to the lockdown issues.
  - Some tend to move 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 (fraudsters) and legit sellers.

### **1.2.2 Project Aim and Objectives**

The main objective of the study is to develop an online fashion brochure system. The system aims to achieve the following objectives:

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

### **1.3 The Solution**

Our Electronic Store is an Online shopping system that provides a solution to reduce and optimize these expenses. Authorized Customers do not need to go to the shops to choose, and bring the products they need by hand. They simply browse their Personal computers or cell phones to access shops, and evaluate the products description, pictures on the screen to choose products. In addition, the owners of the shop do not need to arrange or exhibit their stocks of products. They just input the description, prices of products, and upload their pictures. Simply, both customers and shop owners do not need to touch the real products in the whole process of shopping, and management. In the end the logistic center will distribute the products required by customers to

their locations. The customers are able to track the status of their orders until delivery, after which they can leave a review of the type of service they received. The payment and products' quantity will be saved in the database through the data flow. These shopping, management and distribution processes greatly simplify and optimize the retail business.

## **1.4 Scope and Limitation**

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. As the goal of this project is to develop an online fashion brochure system, this system will be designed keeping in mind the conditions (easy to use, feasibility and user friendly) stated above. It may help in effective and efficient order management. In every short time, the collection will be obvious, simple and sensible. It is very possible to observe the customer potentials and purchase patterns because all the ordering history is stored in the database. It is efficient in managing all the operations of an online store within a single platform. The project aims to automate the business process of our Electronic Store. The proposed project would cover:

### **Customer Side:**

- Customers can view/search products without login.
- Customer can also add/remove product to cart without login (if customer try to add the same product in the cart. It will add only one)
- When a customer try to purchase product, then he/she must login to system.
- After creating an account and login to the system, he/she can place order.
- If customer click on pay button, then their payment will be successful and their order will be placed.
- Customers can check their ordered details by clicking on the orders button.
- Customers can see the order status (Pending, Confirmed, Delivered) for each order
- Customers can Download their order invoice for each order
- Customers can send feedback to admin

### **Administrator Side:**

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

Additionally, if a customer places an order and the admin deleted that user (fraud detection), then their orders will automatically be deleted. Suppose one (1) customer places four (4) products in an order and admin deleted two (2) products from the website, then that two-product order will also be deleted and other two will be there. Also, if a user clicks on the purchase button without having products in their cart, then the website will ask to add the product in cart first.

## **Chapter 2 - Literature Survey**

### **2.1 Introduction**

Literature review is an expressive study based on the detailed review of earlier pertinent studies related to the various concepts of online shopping to discover the concept of online shopping. It highlights the status of online shopping, importance and problems of online shopping, factors affecting online shopping and a critical review of the privacy and security issues in online shopping.

### **2.2 Status of Online Shopping in Present Business Environment**

Online buying behavior is affected by various factors like, economic factors, demographic factors, technical factors, social factors, cultural factors, psychological factors, marketing factors and legislative factors. Customers choose an online-shop mainly based on references, clarity terms of delivery, graphic design and additional services. Problematic customers read

discussions on the Internet before they spend their money on-line and when customers are incapable of purchasing the product fast and with no trouble they leave online-shop. Kotler, (2003) described Consumer buying method as learning, information-processing and decision-making activity divided in several consequent steps: Problem identification, Information search, Alternatives evaluation, Purchasing decision, Post-purchase behavior. Euthymia identified the main constituent of the online shopping experience as follows: the functionality of the Web site that includes the elements trade with the site's usability. the emotional elements planned for lowering the customer's hesitation by communicating trust and credibility of the online seller and Web site and the content elements including the aesthetic aspects of the online presentation and the marketing mix. Usability and trust are the issues more regularly found to influence the online consumer's behavior. Free shipping is a great motivator to purchase the products and customers are willing to pay nominal charges for getting their products. While comparing the shopping with others shopping, consumers take product price and shipping charges almost equally into deliberation. There are some ways that retailers can improve the experience for their online shoppers. The first is to write the expected delivery date of the order, customers are willing to wait for their orders but want to know just how long that force is. Timely product shipment encourages shoppers to recommend an online retailer. Consumers also want to track updates and delivery notifications to understand when their package is incoming. Online shoppers want flexibility in their shipping, mainly the ability to give special delivery instructions or schedule a delivery time. Customers are also wanting to get the address changing option for filling the wrong address when they are purchasing online.

## **2.3 Importance of Online Shopping**

Customers can enjoy online shopping for 24 hours per day. Consumers can purchase any goods and services anytime and anywhere. Online shopping is user friendly compared to in store shopping because consumers can just complete his requirements just with a click of mouse without leaving their home. Online shopping has some advantages as mentioned below:

- Save the Time of the consumers.

- They can purchase any time anywhere
- They can compare the price with the other retailers very easily.
- Compare the advertising price and actual price
- They can easily track their product
- They can use cash back policy
- They can purchase the product from the foreign marketers.

## **2.4 Problems of Online Shopping**

Online shopping problems are a great barrier to the online purchase aim of customers. General problems include the prospect of having a credit card. The security to confirm the reliability of the provided goods and the risk to buy a product that it would not value as much as the customer pays for it. Aftersales problems, involved difficulty to change not working product with a new one and products warranty are not assured. Online shopping has various disadvantages as mentioned below:

- The customers can not touch and feel the products when they want to purchase.
- Some time delivery time is so much late
- Some time they will pay the shipping charges so the cost of the product may increase.
- Lack of personal attention by the sellers. More chance to fraud.
- Security of internet banking password and credit card password
- Lack of quality

## **2.5 The Factors which Affect online Shopping**

There are some factors which affect the online shopping by the Kotler

- Convenience (no traffic, 24 hr. access)
- Product Selection
- Availability of Products
- Customers Satisfaction
- Delivery Mode

# **Chapter 3 - Software Requirement Specification**

## **3.1 Feasibility Study:**

### **3.1.1 Technical Feasibility**

The technical requirements for the application is economic and it doesn't need any other additional Hardware or Software.

### **3.1.2 Time Feasibility**

Time feasibility corresponds to whether sufficient time is available to complete the project.

### **3.1.3 Operational Feasibility**

Operational feasibility corresponds to whether users are aware of the interface environment and sufficient resources are available or not.

### **3.1.4 Implementation Feasibility**

Implementation Feasibility is about basic infrastructure required to develop the system. Considering all the points below, it is feasible to develop a system

### **3.1.5 Economic Feasibility**

Economic Feasibility is about the total cost incurred for the system. The software resource requirement of the proposed system is Node.js and MongoDB for backend development and HTML, CSS, JS, React.js for the frontend UI.

## 3.2 System Specifications

This section describes the hardware components and software requirements needed for effective and efficient running of the system

**Table:** Hardware Requirements

SR	Hardware	Minimum System Requirement
01	Processor	2.4GHz Processor speed
02	Memory	2 GB RAM
03	Disk Space	500 GB

**Table:** Software Requirements

SR	Software	Minimum System Requirement
01	Operating System	Windows 8, Windows 10/11 or MAC Os 10.8,10.9, or 10.11, LINUX
02	Database	MongoDB
03	Runtime Environment	Node.js & VS Code

## 3.3 Functional Requirement

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

### R1 User Module

#### R1.1 Registration

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

#### R1.2 Login

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



### **R1.3 Browse Product**

Customer searches for the product by entering the product model or name into the search bar.

### **R1.4 Filter**

Users can filter products according to their buying needs so that their time can be saved.

### **R1.5 Shopping Cart**

User will browse products and if he/she likes the products then can add product to cart to buy or added for later to buy

### **R1.6 Payment**

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

### **R1.7 Track:**

After purchasing a product, a customer/user can track order by redirecting to a courier partner.

### **R1.8 Logout**

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

### **R1.9 Report/Bill 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 database.

## **R2 Admin Module**

### **R2.1 Admin Login:**

Admin can provide username, password to login in as admin.

### **R2.2 Admin Dashboard:**

After login, there is a dashboard where the admin can see how many customers are registered, how many products are there for sale, and how many orders are placed.

### **R2.3 Product Management:**

Admin can add/delete/view/edit the products. Admin can view/delete orders. Admin can change status of order (order is pending, confirmed, out for delivery, delivered)

### **R2.4.Feedback:**

Admin can view the feedbacks sent by customers

## **3.4 Non-functional Requirements**

It specifies the quality attribute of a software system. They judge the software system based on Responsiveness, Usability, Security, Portability and other non-functional standards that are critical to the success of the software system.

**1 Availability:** The system should remain operational any day and any place.

**2 Accuracy:** There is a need to optimize the system to ensure more accurate results and calculations.

**3 Usability:** The system should provide a User-friendly user interface and tooltips to enhance itself and be effectively responsive.

**4 Security:** The system must be able to provide security against any external injections by using a layered security system. Implementation of

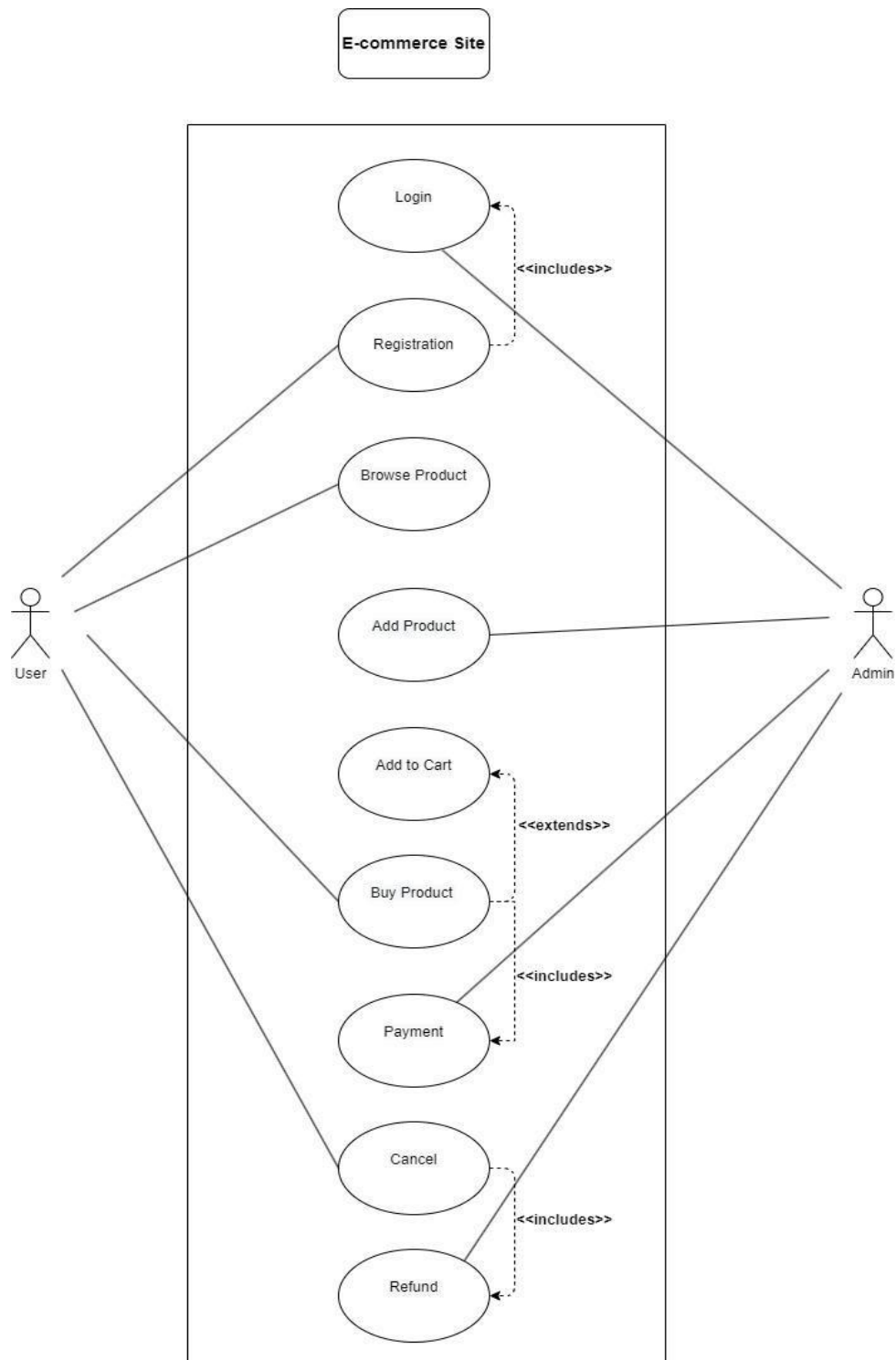
user login functionalities also ensures the system is secure from unauthorized persons.

**5 Performance:** Response time is very good for a given piece of work. The system will support a multi-user environment.

**6 Reliability:** The system will be highly reliable and it generates all the updates information in correct order. Data validation and verification is done at every stage of activity. System recovery will also be speed.

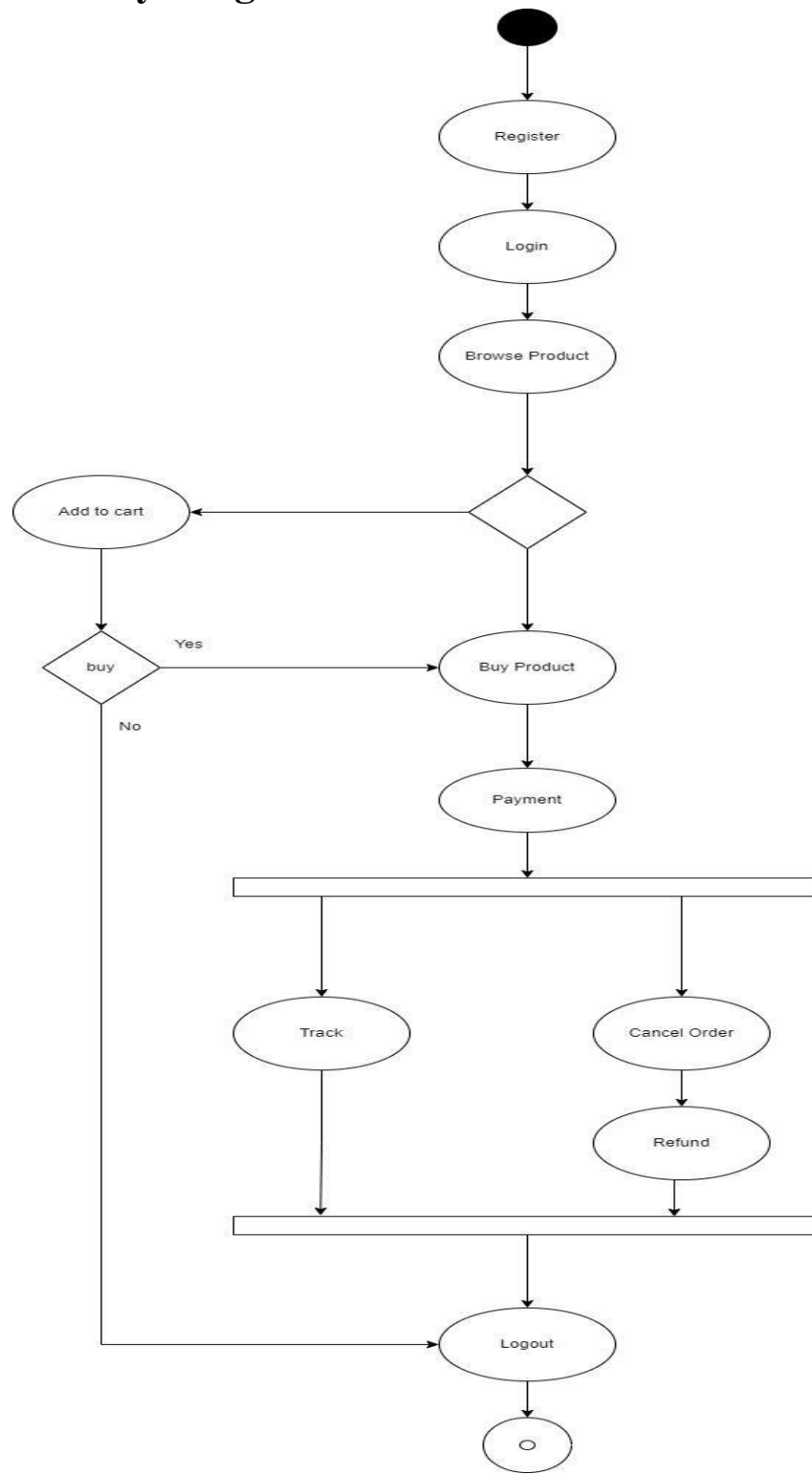
# Chapter 4 - Diagrams

## 4.1 Use-Case Diagrams

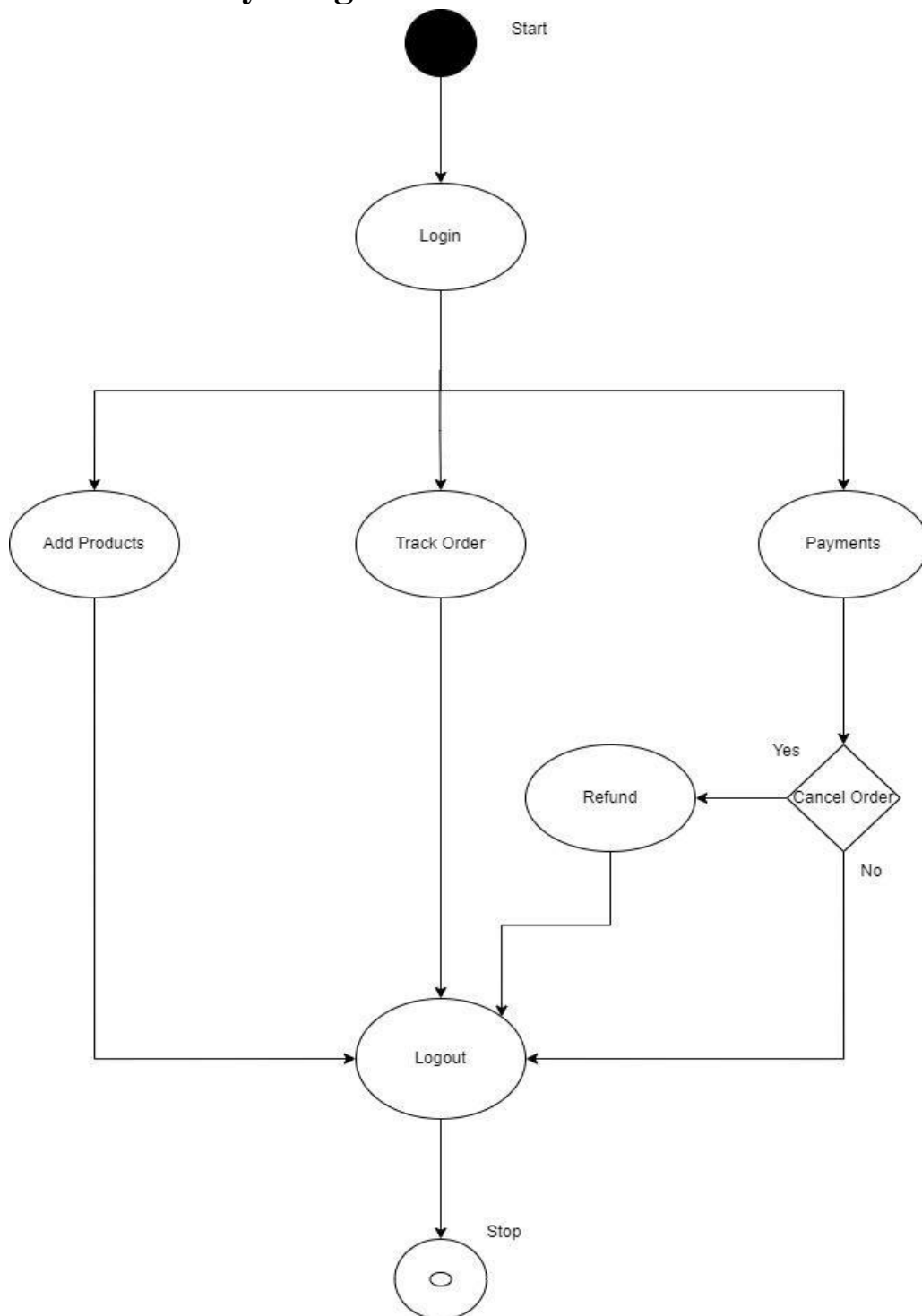


## 4.2 Activity Diagrams

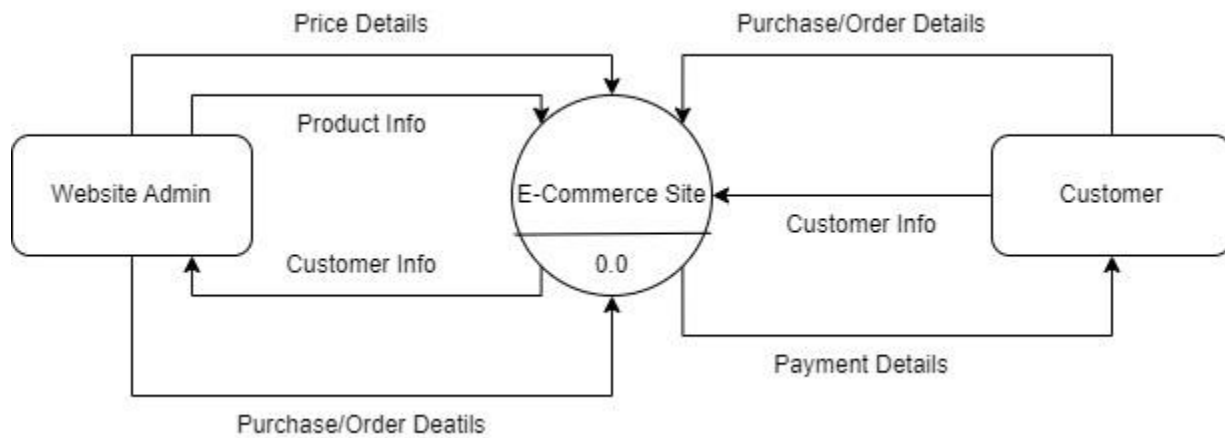
### 4.2.1 User Activity Diagram



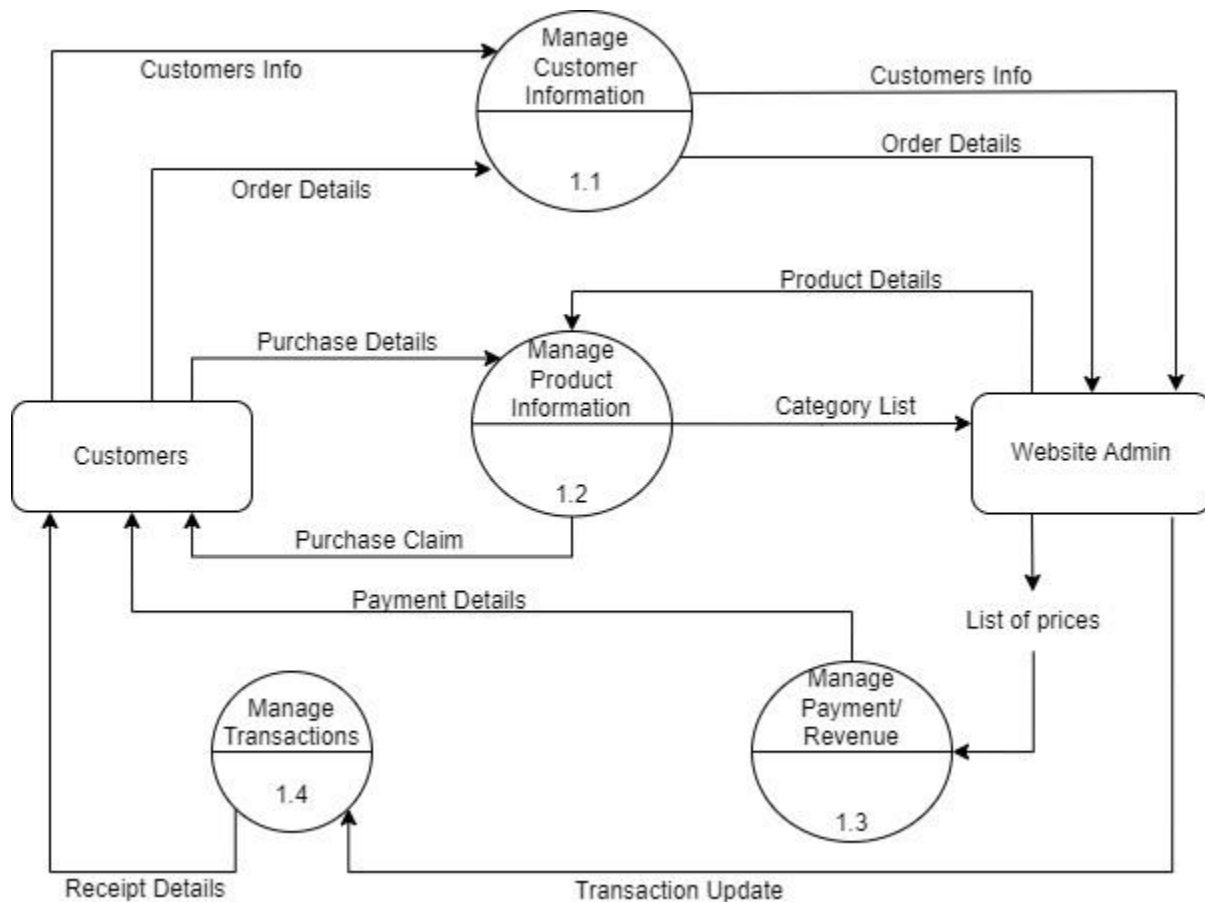
### 4.2.2 Admin Activity Diagram



### 4.3 Data Flow Diagram: Level-0:



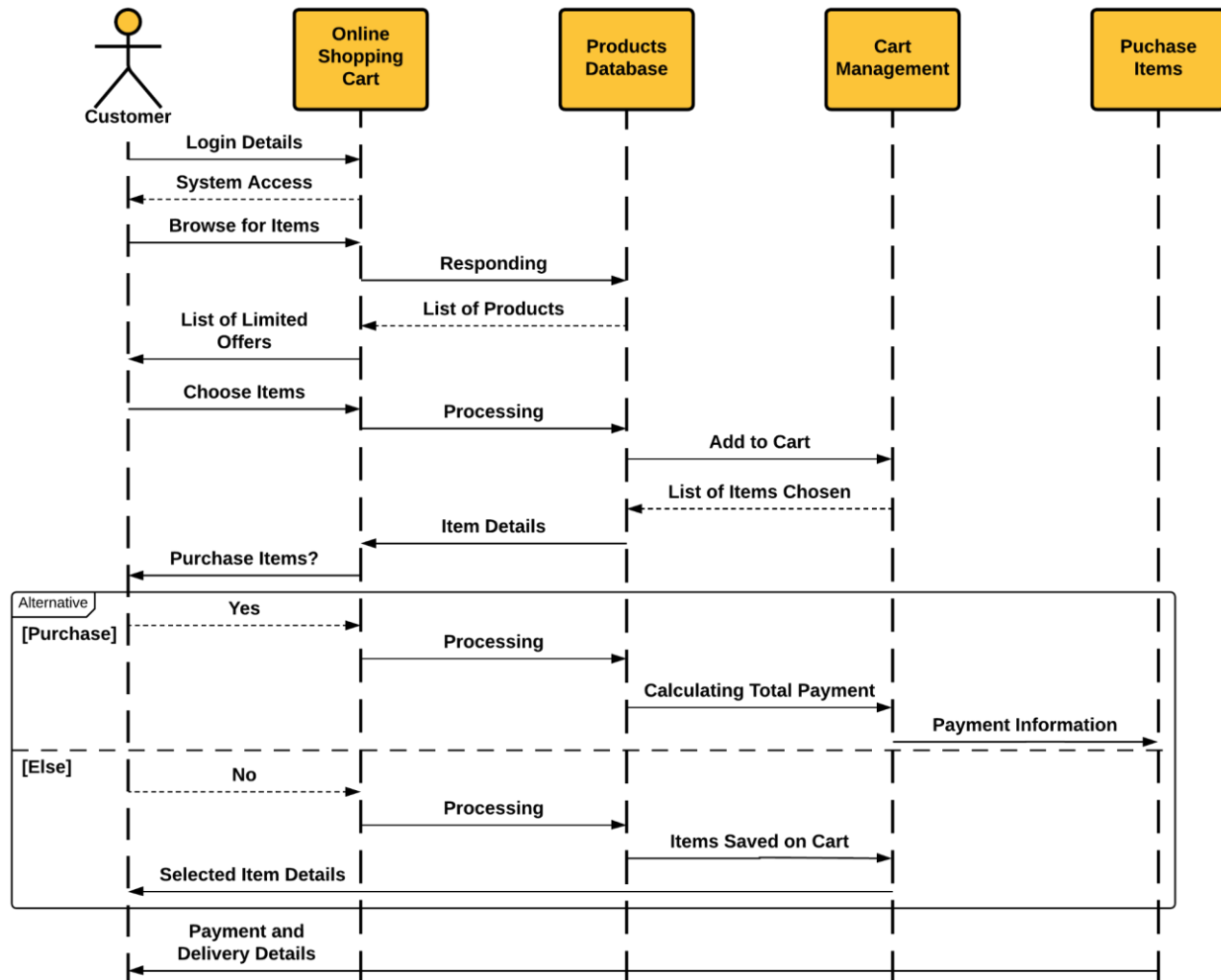
## Level-1:



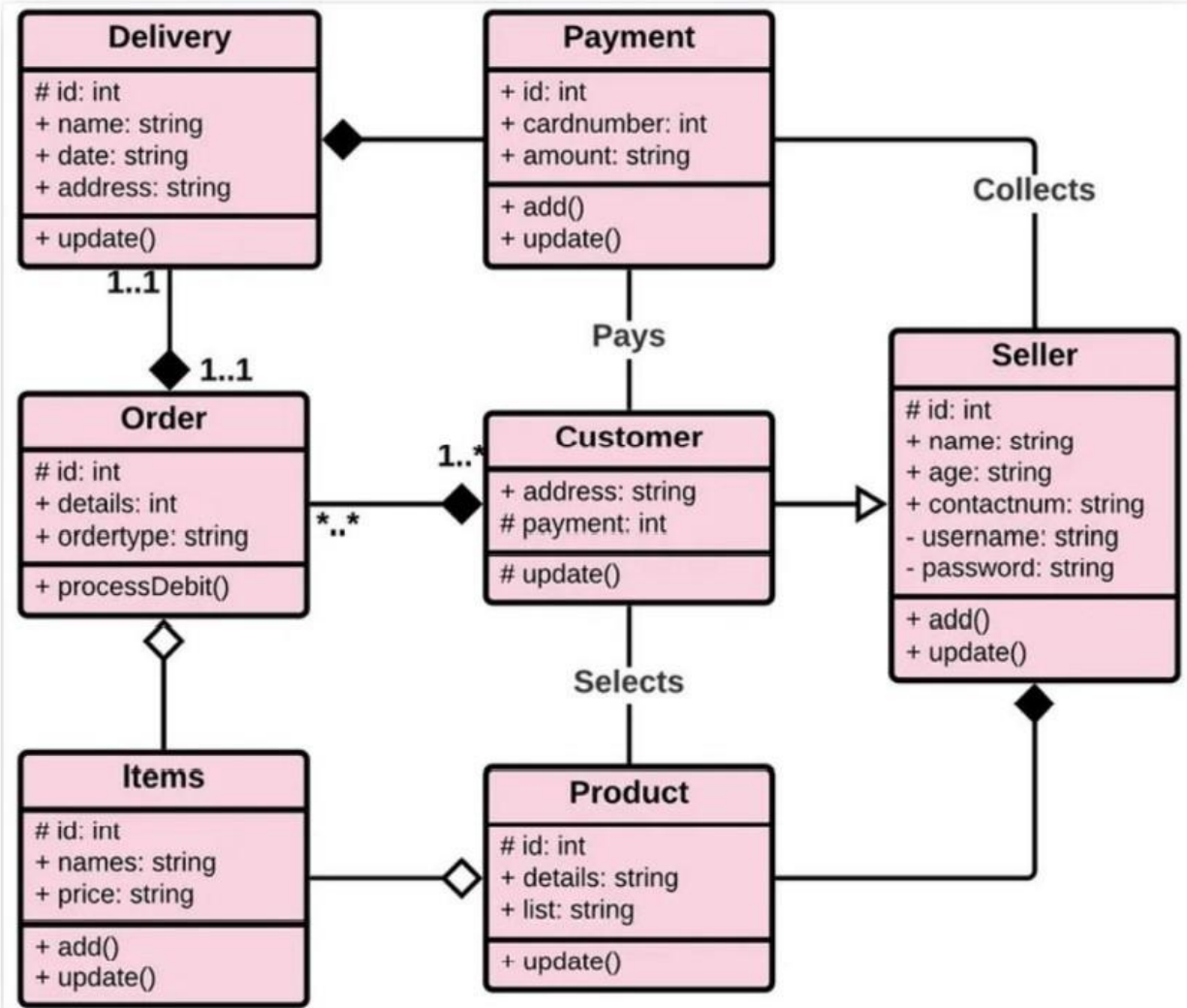
## Level-2:



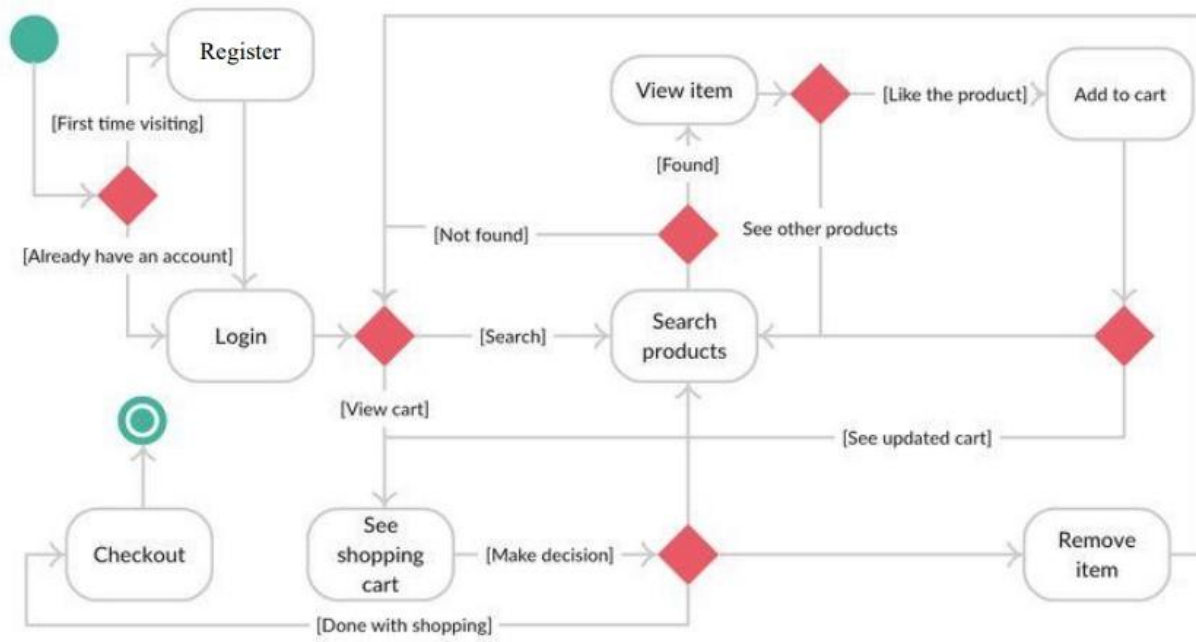




## 4.5 Class Diagram:



**4.6 State Diagram:**



# Chapter 5 - Prototypes

## 5.1 Login Page



---

## 5.2 Registration Page

**CREATE NEW ACCOUNT**

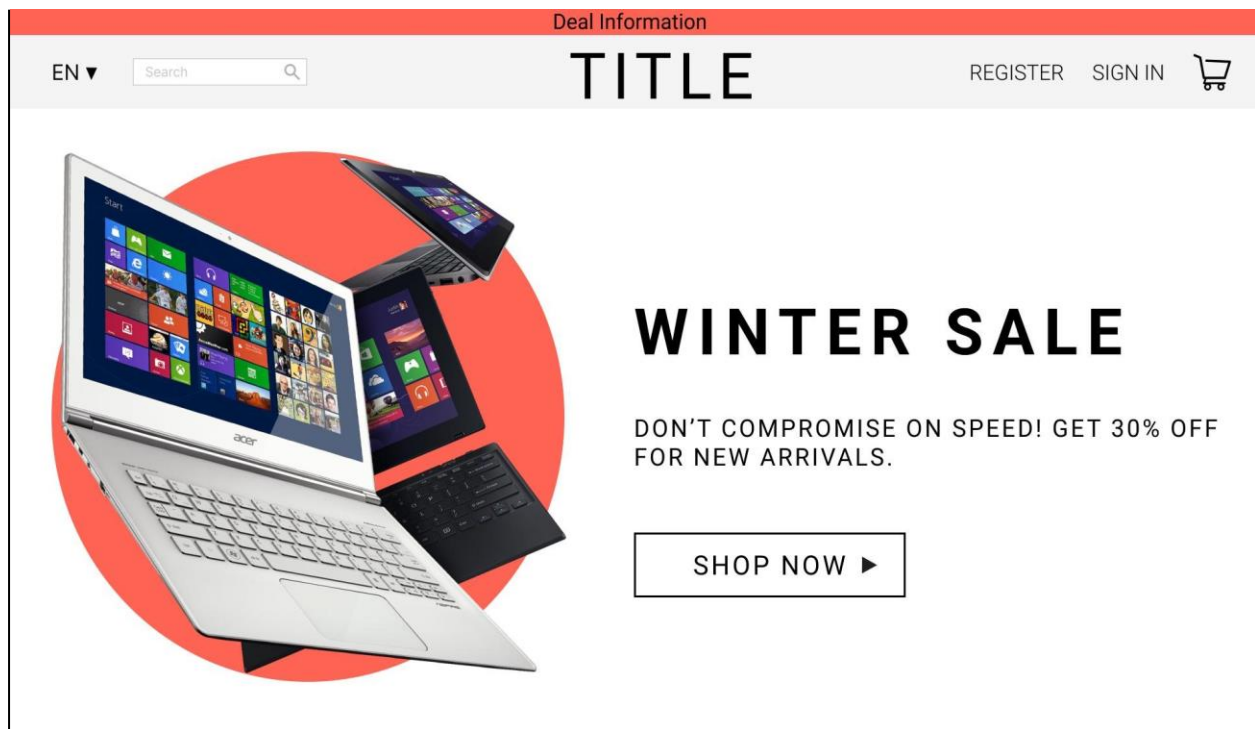
First Name	Last Name
Username	Email
Password	Confirm-Password

By creating account, I consent to the processing my personal data in accordance with the **PRIVACY POLICY**

**CREATE ACCOUNT**

---


## 5.3 Home Page




## 5.4 Single Product Page

EN ▾

TITLE

REGISTER SIGN IN 




Deal Information



### IPHONE 13

Lorem Ipsum sollicitudin aliquam ultrices sagittis orci a scelerisque purus semper eget dui at tellus at urna condimentum mattis pellentesque id nibh tortor id aliquet lectus proin nibh nisl condimentum id venenatis a condimentum vitae sapien pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas sed tempus urna et pharetra pharetra massa massa ultricies mi quis hendrerit dolor magna eget est lorem ipsum dolor sit amet consectetur adipiscing elit pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas integer eget aliquet nibh praesent tristique magna sit amet purus gravida quis blandit turpis cursus

₹69,999.00

Color :   

Storage: 256 GB

− 1 +

ADD TO CART

# **Chapter 6 - Conclusion and Future Work**

## **6.1 Conclusion**

While developing this project we have learnt a lot about Node.js/MongoDB and working with database management, we have also learnt how to make the application user-friendly (easy to use and handle) by hiding the complicated parts of it from the users. During the development process, we studied carefully and understood the criteria for making a software more demanding, we also realized the importance of maintaining a minimal margin for errors.

## **6.2 Future Work**

- Implementation
- Testing



## References:

1. Kandra, A. (2001). The Myth of Secure E-shopping. PC World July: 29-32.
2. Wikipedia : <https://en.wikipedia.org/wiki/E-commerce>
3. Ecommerce Site Project ( University of Eldoret )