

# **Chapter 1: Introduction**

## **1.1 Introduction**

Online shopping is a form of electronic commerce which allows consumers to directly buy goods or services from a seller over the Internet using a web browser or a mobile app. Consumers find a product of interest by visiting the website of the retailer directly or by searching among alternative vendors using a shopping search engine, which displays the same product's availability and pricing at different e-retailers. customers can shop online using a range of different computers and devices, including desktop computers, laptops, tablet computers and smartphones.

An online shop evokes the physical analogy of buying products or services at a regular "brick-and-mortar" retailer or shopping center; the process is called business-to-consumer (B2C) online shopping. When an online store is set up to enable businesses to buy from another businesses, the process is called business-to-business (B2B) online shopping. A typical online store enables the customer to browse the firm's range of products and services, view photos or images of the products, along with information about the product specifications, features and prices.

## **1.2 Problem Statement**

The following problems arise due to this absence:

- i. **Limited Market Reach:** Without an online shopping platform, our organization is unable to tap into the immense potential of the online market.
- ii. **Search Function Not Working Properly:** You might agree with us that having a poor search function is one of the biggest drawbacks when it comes to online shopping. Sometimes it may take a long time to find what we're looking for, sometimes it might return a lot of irrelevant results. Either way, it becomes tedious and frustrating.
- iii. **Payment Failure:** There could be several reasons behind a payment failure. One of them would be a website crash and the other can be your card number not being valid. Make sure that the credit card information entered by the customer is correct. If it is, then make sure you have enough funds in your account. Try changing payment methods if possible.

- iv. **Product Quality and Authenticity:** Customers sometime receive products that differ from their online descriptions or images. This discrepancy can lead to disappointment and dissatisfaction, undermining the credibility of online retailers.

### **1.3 Objectives**

Our proposed online shopping website aims to provides a user-friendly platform for to browse, purchase, and receive products from our extensive range of offering. The website will be designed with a focus on simplicity and functionality, ensuring an exceptional user experience that aligns with our brands image.

### **1.4 Scope and Limitation**

The scope of the online shopping website encompasses the following areas:

- i. **Product Catalog:** The website will showcase a comprehensive catalog of products, including detailed descriptions, images, and pricing information.
- ii. **User Registration and Accounts:** Customers will have the option to create personal accounts to save their preferences, track order history, and receive personalized recommendations.
- iii. **Browsing and Search:** The website will provide intuitive browsing capabilities, enabling customers to search and filter products based on various criteria such as category, price range, brand, etc.
- iv. **Shopping Cart and Checkout Process:** Customers will be able to add products to a shopping cart, review their order, and proceed to the checkout process seamlessly.

While the online shopping website aims to provide an enhanced shopping experience, there are certain limitations to consider:

- i. **Technical Constraints:** The website's functionality and performance may be influenced by factors such as internet connectivity, device compatibility, and the speed of users' internet connections.
- ii. **Security Risks:** While efforts will be made to ensure secure transactions and protect customer data, there is always a risk of cybersecurity threats, such as data breaches or unauthorized access to sensitive information.

- iii. Third-Party Integration: The integration of external services, such as payment gateways and shipping providers, may be subject to the policies, availability, and reliability of those third-party services.
- iv. User Adoption: The success of the online shopping website depends on customers' willingness to adopt and embrace online shopping. Some customers may have reservations or preferences for traditional shopping methods.

## **Chapter 2: Background Study and Literature Review**

### **2.1 Background Study**

In this new era of generation, the numbers of people shopping online has increased significantly throughout the year which give greater impact to the business world. According to Magee (2003), the growth in the number of online shoppers is greater than the growth in Internet users, indicating that more Internet users are becoming comfortable to shop online. This whole new phenomenon of purchasing online kept on increasing due to the existence of the internet that trigger the users to choose the online shopping medium to purchase their items. The Internet, as a mean for both firms and individuals to conduct business, is nowadays one of the most widely used non-store formats [1].

From the customer's point of view, the Internet (Mehta & Sivadas, 1995) offered the potential advantages of reducing shopping time and money spent. It allowed twenty-four hours a day access, provided perhaps better service, and gave the consumer a perception of control over the shopping experience. The two most commonly cited reasons for online shopping have been convenience and price [2].

### **2.2 Literature Review**

Online shopping indicates electronic commerce to buy products or services directly from the seller through the Internet. Internet-based or Click and Order business model has replaced the traditional Brick and Mortar business model. More people than before are using the web to shop for a wide variety of items, from house to shoes to airplane tickets. Now people have multiple options to choose their products and services while they are shopping through an online platform.

Emphasized that the lack of physical interaction tends to be the critical impediment in online retail sales followed by the privacy of individual information and security of financial transactions over the Internet [3].

Also, demographic variables such a sage, gender, and level of income play a facilitating role because they influence consumer perception and consumer behavior that drives them to ward son line shopping [4].

In China, online shopping intention depends on consumers' age, income, and education as well as marital status and most importantly their perceived usefulness [5].

## Chapter 3: System Analysis and Design

### 3.1 System Analysis

#### 3.1.1 Requirement Analysis

##### i. Functional Requirement

- The system must provide following functionalities:
- Keeping record of customer
- Keeping record of products
- Keeping record of daily sell

Functional Requirement can be expressed in Use Case For

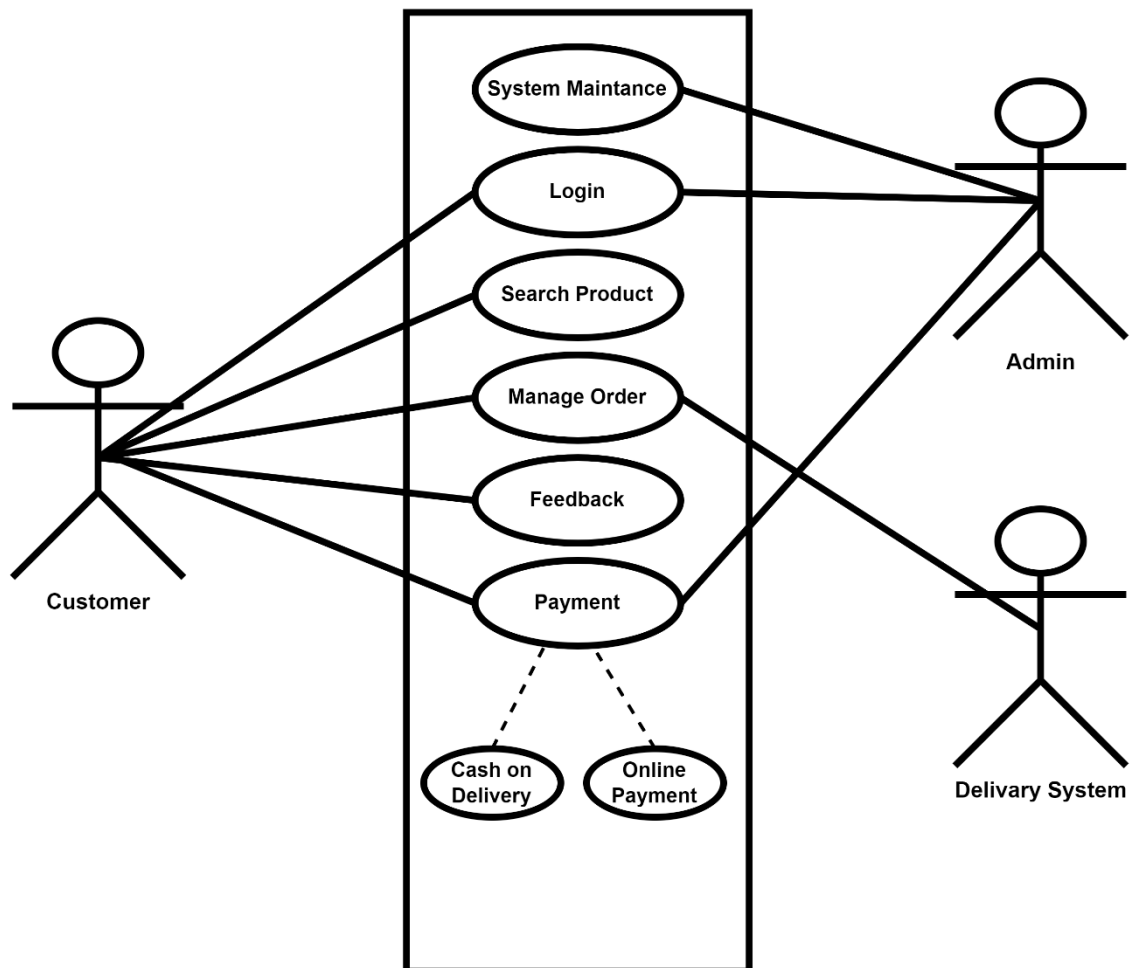


Fig-3.1: Use Case Diagram

## **ii. Non – Functional Requirement**

- **Security:** Security requirements ensure that the software is protected from unauthorized access to the system and its stored data. It considers different levels of authorization and authentication across different user's roles.
- **Performance:** Performance is a quality attribute that describes the responsiveness of the system to various user interactions with it. Poor performance leads to negative user experience. It also jeopardizes system safety when it's overloaded.
- **Usability:** Usability defines how difficult it will be for a user to learn and operate the system. Usability can be assessed from different points of view.

### **3.1.2 Feasibility Analysis**

#### **i. Technical Feasibility:**

It is technically feasible, since there will not be much difficulty in getting required resources for the development and maintaining the system as well. The project is being built by using simple technologies to reduce technological hindrances.

#### **ii. Operational Feasibility:**

In this project, the admin will know the details of each project where he may be presented and the data will be maintained as decentralized and if any inquires for that particular contract can be known as per their requirements and necessities.

#### **iii. Economic Feasibility:**

Development of this application is highly economically feasible. The only thing is to be done is making an environment for the development with an effective supervision.

- iv. **Schedule Feasibility:** This includes the project schedule and all time allocated for their completion. The Gantt chart is as follow:

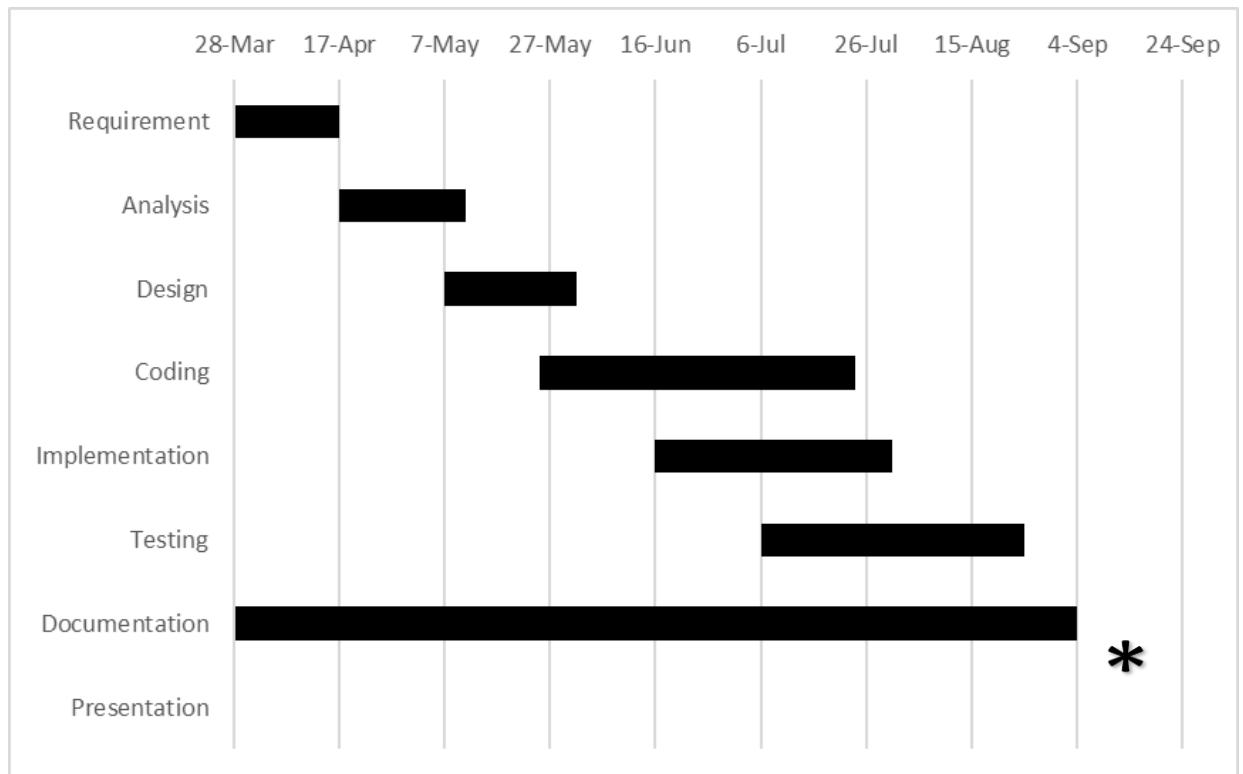


Fig-3.2: Gantt Chart

### 3.1.3 Data Modelling (ER-Diagram)

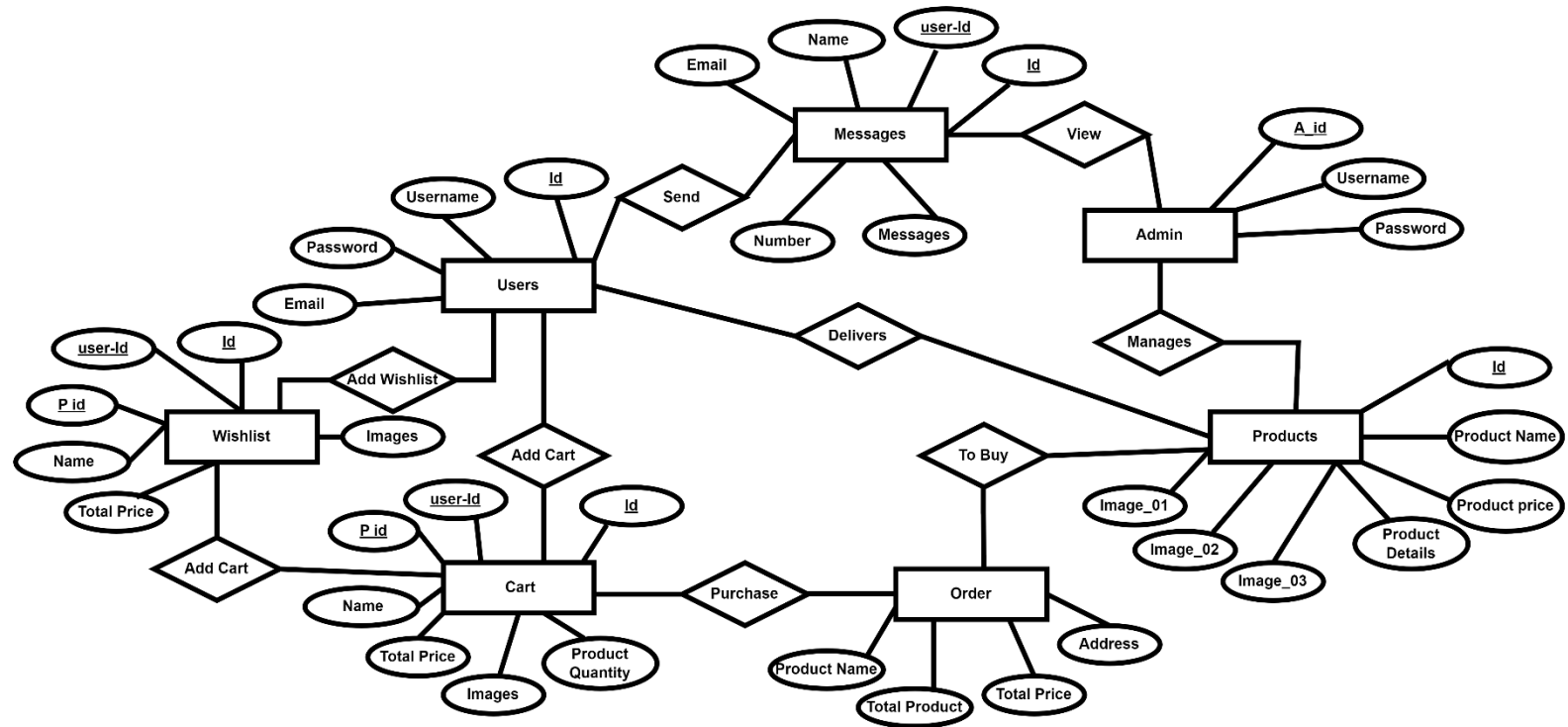


Fig-3.3: Entity-Relation Diagram



### 3.1.4 Process Modelling (DFD)

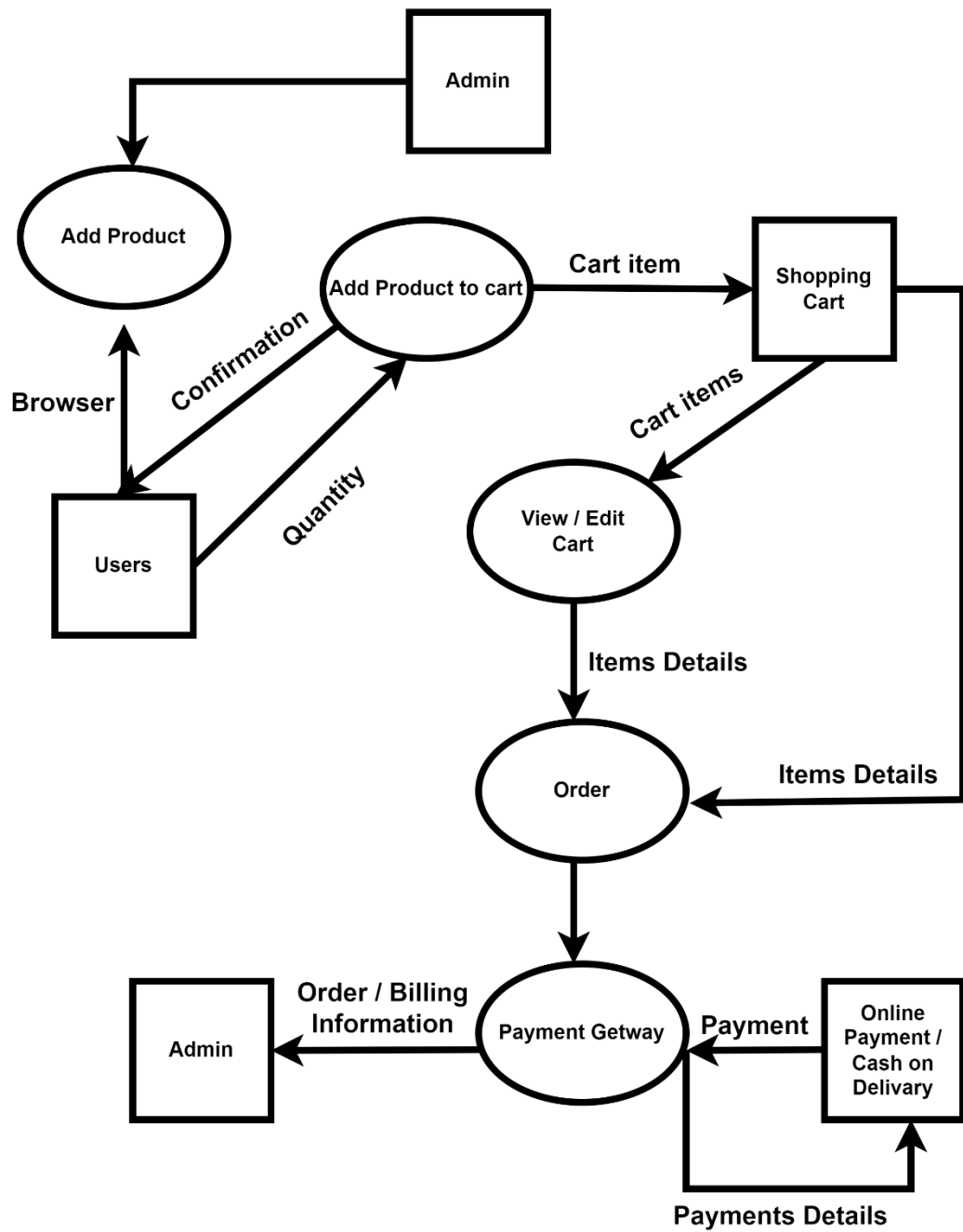


Fig-3.4: Data Flow Diagram

## 3.2 System Design

### 3.2.1 Architectural Design

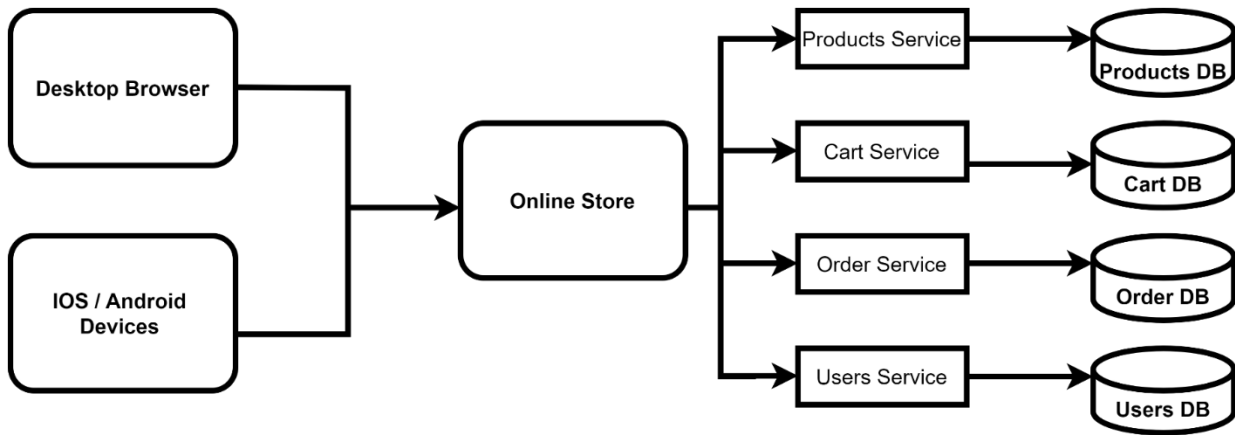


Fig-3.5: Architecture Design

### 3.2.2 Database Schema Design

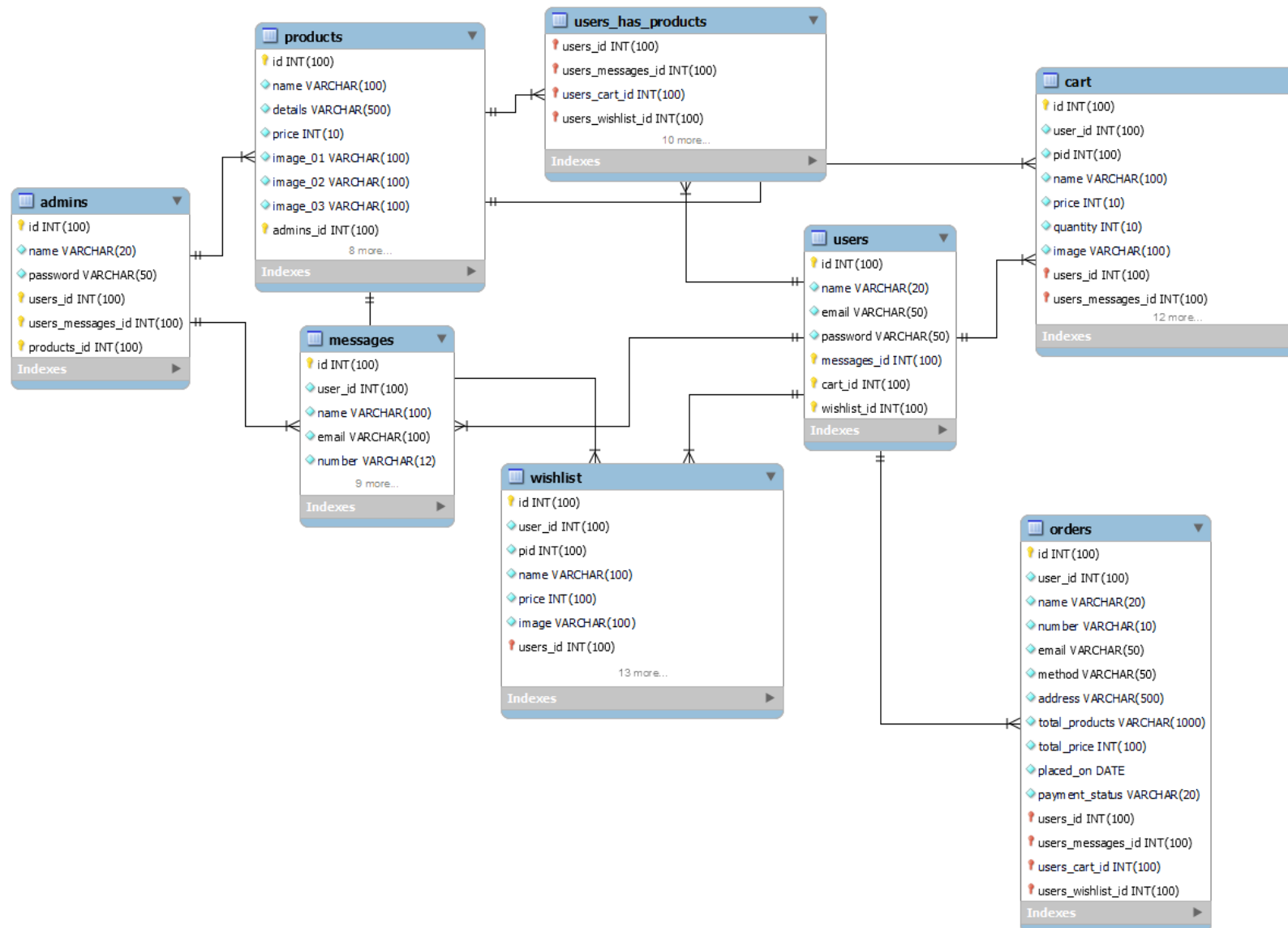


Fig-3.6: Database Schema Design

## **Chapter 4: Implementation and Testing**

### **4.1 Implementation**

#### **4.1.1 Tools Used**

- IDE: Visual Studio Code (VSCode) – A user-friendly integrated development environment (IDM) used for coding and developments tasks.
- Documentation: MS Office – Tools for creating and editing project-related documents and presentation.
- Font-end: HTML, CSS, JavaScript – A languages to development of the graphical user interface of a website.
- Back-end: PHP – A program supports font-end user services, and interface with any required resource.
- Database Management: MYSQL – An oracle-backed open source relational database management system (RDBMS) based on Structured Query Language (SQL).
- Localhost: Xampp – A free and open-source cross-platform web server solution stack package developed by Apache Friends.
- Diagramming: Draw.io – An online diagramming tool for creating visual representation such as system architecture diagrams and flowcharts.

#### **4.1.2 Implementation Details of Modules**

The modules include:

- User Registration: The user module allows users to register, log in, and log out. Users benefit from being able to sign on because this associates content they create with their account and allows various permissions to be set for their roles.
- Checkout: A checkout module is a special container that hosts all modules that are required to create an order. It presents a step-by-step flow that a customer uses to enter all the relevant information to make a purchase. It captures the address, and billing information.
- Payment: Payment module implements payment gateway integration of an application. It provides one-time payment and recurring payment options. Like eSewa, Khalti, IME Pay etc.
- Quick view: The quick view module lets users quickly view product information when they browse products on a list page, and add one or more products to the cart from the list page, without having to go to the product details page (PDP). The quick view module

provides an overview of the product information that users require to make an "add to cart" decision. It also provides a link to the PDP, so that users can view additional product details and purchase options.

## 4.2 Testing

### 4.2.1 Unit Testing

Table-4.1 Test Cases for Unit Testing

| Test Case No | Module             | Test Description                        | Steps                                     | Expected Result                  | Result |
|--------------|--------------------|---|---|----------------------------------|--------|
| TC_01        | User Registration  | Verify user registration functionality  | Input valid user details and register     | User is registered successfully  | Pass   |
| TC_02        | Admin Registration | Verify Admin registration functionality | Input valid Admin details and register    | Admin is registered successfully | Pass   |
| TC_03        | Add Product        | Add product in font-end website         | Post with details and submits             | Add product successfully         | Pass   |
| TC_04        | Profile Update     | Update Admin & User profile             | Fill in relevant details and Save profile | Profile is update                | Pass   |

### 4.2.2 System Testing

Table-4.2 Test Cases for System Testing

| Test Case No | Module     | Test Description                       | Steps  | Expected Result                      | Result |
|--------------|------------|--|--|--------------------------------------|--------|
| TC_05        | Contact us | Send message<br>In Admin<br>dashboard  | Send a<br>message<br>between<br>admin & user         | Messages are<br>sent and<br>received | Pass   |
| TC_06        | Quick View | User see quick<br>view in website      | Add to cart,<br>wishlist &<br>increase<br>quantity   | Add to<br>shopping cart              | Pass   |
| TC_07        | Payment    | Verify secure<br>payment<br>processing | Initiate and<br>complete a<br>payment<br>transaction | Payment is<br>processed              | Pass   |
| TC_08        | Wishlist   | User see wishlist<br>in website        | Add to cart,<br>See quick<br>view & delete<br>item   | Add to<br>shopping cart              | Pass   |

## **Chapter 5: Conclusion and Future Recommendations**

### **5.1 Lesson Learnt / Outcome**

Throughout the development of final project, a wide range of lessons were learned, and significant outcome were achieved, contributing to both personal and professional growth. The key lessons and outcomes are as follows:

- **Customers are Also Thinking Way Ahead of You:** Customers often think of new ways to improve your products. After all, they are the ones using them. Therefore, it's wise to continuously reach out to them to understand their needs.
- **Checkout Pages Should Be as Few as Possible:** If one checkout page is an option, go for it. Fit as much information on that page as you can.
- **Don't Forget About Your Local Customers:** Maybe you can offer fast shipping to those in the area. Maybe you can hold events to get people excited about new products.
- **Data is Always Better Than Advice from People:** It's easy to take advice from your cousin, or even one of your employees for that matter, but data is always going to tell you the truth.

### **5.2 Conclusion**

Online shopping is becoming more popular day by day with the increase in the usage of World Wide Web, Understanding customer's need for online selling has become challenge for marketers. Specially understanding the consumer's attitudes towards online shopping, making improvement in the factors that influence consumers to shop online and working on factors that affect consumers to shop online will help marketers to gain the competitive edge over others.

We have also worked on demographic factors of online shoppers, to see a correlation within demography factors such as Age, occupation and Education; this will also give an insight to online retailers to see the online shopping attitudes within these demographic factors.

The findings that we have gained in this research are as follows; starting from preference of buying on daily basis to yearly basis. The least number of people have preferred to buy on daily and weekly basis, also moderate number of respondent's have preferred to buy on monthly and yearly basis. Secondly, by considering items preference to shop online with

respect to different commodities like travel and leisure, food, electronic, books, apparels and footwear. People have shown either least or moderate interest to shop these items online. considering driving factors to online shopping people are more inclined to shop online just because they receive high discounts and product pricing and also variety in product range.

### **5.3 Future Recommendations**

As the online shopping platform moves forward, the followings recommendations can further enhance its impact and sustainability:

- Continuous improvement based on user feedback: regularly gather user feedback and implement updates to enhance the platform's functionality and user experience.
- Market expansion: Consider expanding the platform's reach beyond Nepal to reach a broader audience of skilled professionals and organizations.
- Enhance payment options: Integrate additional payment methods to cater to diverse user preferences and geographical locations.
- Advance feature: Explore the integration of advanced features like AI-powered to improve the understand between users and admins.



# Appendices

## Appendix: Project Screenshots

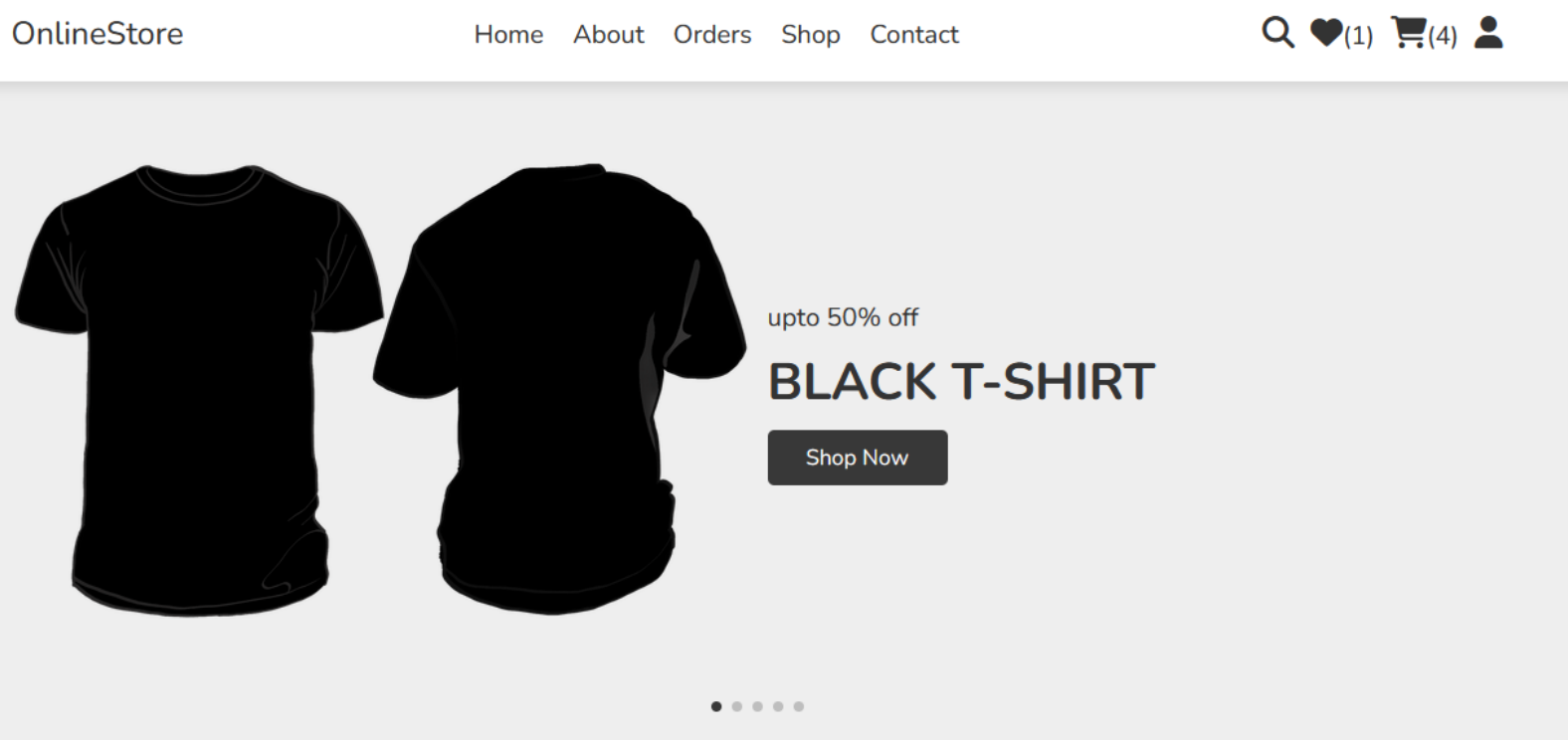


Fig-I Home Page


### REGISTER NOW

Register Now

already have an account?

Login Now

Fig-II Login / Register page



Shirts

NRS1500/-

sub total : NRS6000/-

Delete Item

grand total : NRS6000/-

Continue Shopping

Delete All Item

Proceed To Checkout

**Quick Links**

- > [Home](#)
- > [About](#)
- > [Shop](#)
- > [Contact](#)

**Extra Links**

- > [login](#)
- > [register](#)
- > [cart](#)
- > [orders](#)

**Contact Us**

- 📞 9800001100
- 📞 9811110000
- ✉️ [onlinestore@gmail.com](mailto:onlinestore@gmail.com)
- ✉️ [storeonline@gmail.com](mailto:storeonline@gmail.com)

**Follow Us**

- [f](#) facebook
- [t](#) twitter
- [@](#) instagram
- [in](#) linkedin

Fig-III Shopping Cart

## DASHBOARD

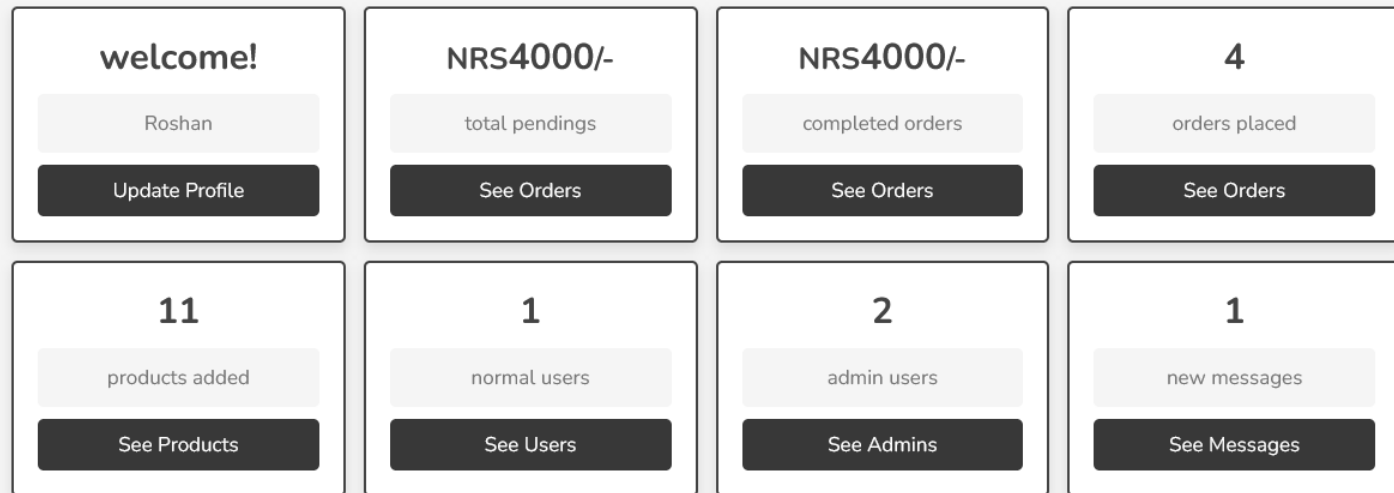
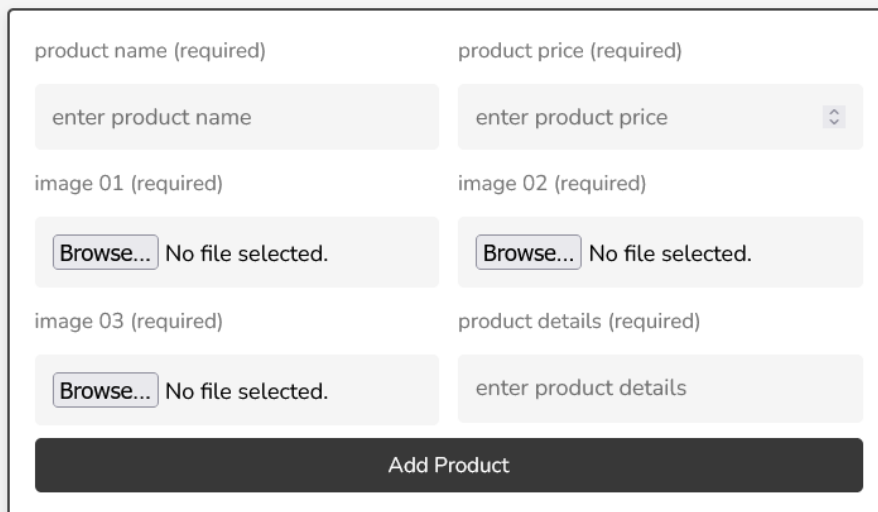


Fig-IV Admin Dashboard

## ADD PRODUCT



The Add Product form is a structured input area for adding a new product. It contains several required fields and a final submission button.

| Field                      | Label                       | Value |
|----------------------------|-----------------------------|-------|
| product name (required)    | enter product name          |       |
| product price (required)   | enter product price         |       |
| image 01 (required)        | Browse... No file selected. |       |
| image 02 (required)        | Browse... No file selected. |       |
| image 03 (required)        | Browse... No file selected. |       |
| product details (required) | enter product details       |       |
| Add Product                |                             |       |

Fig-V Add Product

## References

- [1] V. Saprikis, A. Chouliara and M. Vlachopoulou, "Perceptions towards Online Shopping: Analyzing the Greek University Students' Attitude," *Communications of the IBIMA*, p. 13, 2010.
- [2] S. Chen and T.-Z. Chang, "A descriptive model of online shopping process: Some empirical results," *International Journal of Service Industry Management*, 1 December 2003.
- [3] C. Demangeot and A. J. Broderick, "Consumer Perceptions of Online Shopping Environments: A Gestalt Approach," 08 January 2010.
- [4] C. Kim and W. Zhao, "An Empirical Study on the Integrated Framework of e-CRM in Online Shopping: Evaluating the Relationships Among Perceived Value, Satisfaction, and Trust Based on Customers' Perspectives.," *Journal of Electronic Commerce in Organizations*, January 2008.
- [5] W. Gong and R. L. Stump, "Factors influencing consumers' online shopping in China," *Journal of Asia Business Studies*, August 2013.