



**Tribhuvan University Faculty of Humanities  
and Social Sciences**

**A PROJECT REPORT**

**On**

**Online Book Shop**

**Submitted to**

**Department of Humanities & Social Science**

**NIMS College**

*In partial fulfillment of the requirements for the Bachelor's Degree in Computer  
Application*

Submitted by

**Saujanya Poudel**

**Reg. No: 6-2-756-3-2020**

**2024/11/25**

Under the Supervision of

**Nirmala Timilsena**



**Tribhuvan University**  
**Faculty of Humanities and Social Sciences**  
**NIMS College**

**Supervisor's Recommendation**

I hereby recommend that this project prepared under my supervision by Saujanya Poudel  
“**Online Book Shop**” in partial fulfillment of the requirements for the degree of Bachelor  
of Computer Application is recommended for the final evaluation.

-----  
**SIGNATURE**

Nirmala Timilsena

**SUPERVISOR**

BCA Department

Kumaripati, Lalitpur



**Tribhuvan University Faculty of Humanities  
and Social Sciences NIMS College**

**LETTER OF APPROVAL**

This is to certify that this project prepared by Saujanya Poudel entitled “**Online Book Shop**” in partial fulfillment of the requirements for the degree of Bachelor in Computer Application has been evaluated. In our opinion it is satisfactory in the scope and quality as a project for the required degree.

<b>SIGNATURE of Supervisor</b> Nirmala Timilsena Supervisor BCA Department Kanibahal Lalitpur, Nepal	<b>SIGNATURE of HOD/ Coordinator</b> Shyam Kumar Thapa College Coordinator BCA Department Kanibahal Lalitpur, Nepal
<b>SIGNATURE of Internal Examiner</b> <b>Name:</b> <b>Date:</b> <b>Internal Examiner:</b>	<b>SIGNATURE of External Examiner</b> <b>Name:</b> <b>Date:</b> <b>External Examiner:</b>

## **Abstract**

Nowadays, the network plays an important role in people's life. In the process of the improvement of the people's living standard, people's demands of the life's quality and efficiency is more higher, the traditional bookstore's inconvenience gradually emerge, and the online bookstore has gradually be used in public. This online bookshop system is based on the principle of providing convenience and service to people build using the php backend developing language and html, css, javascript for the frontend development. It is a virtual shop on the internet where customers can browse the dashboard and select books of interest. This project intends different types of forms with many types of books mainly focusing on the nepali novels, story and computer books etc. First, latest books are shown to the user and they can even search for the books they want with the name of book\_author, book\_title and even with the alphabet letters. A customer can browse any book of his / her own interest, and can view prices and other details of selected book. Once the user selects a book, he / she then has to fill in a form for checking out and add the book to the cart for purchase, place his/her order. There is a default payment option Cash On delivery for the customer placing order and a message is displayed on their dashboard showing “your order has been placed and will be reaching out.” On the Admin Panel the login and logging out system is integrated and after logging in the admin can view books and the CRUD operation is implemented for the book addition, editing, deletion, updating and searching book details and the customer order details as well.

***Keywords: Book shop, CRUD, dashboard***

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I am also thankful to my family whose silent support led me to complete my project and I am truly grateful towards my college administration for providing a positive and enriching learning experience. I specially acknowledge all of them for their advice, supervision and the vital contribution as and when required during this project. Their involvement has triggered and nourished intellectual maturity that will help me for a long time to come.

**Sincerely,**

Saujanya Poudel

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## List of Abbreviations

Abbreviations	Full Form
CRUD	Create Retrieve Update Delete
CSS	Cascading Style Sheet
DBMS	Database Management System
DFD	Data Flow Diagram
ER DIAGRAM	Entity Relation Diagram
HTML	Hypertext Markup Language
JS	JavaScript
PHP	Hypertext Preprocessor
SQL	Structured Query Language
TU	Tribhuwan University
UI	User Interface
XAMPP	Cross-Platform Apache Mysql PHP and Perl

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# **CHAPTER 1. INTRODUCTION**

## **1.1. Introduction**

Books are very essential for each and every one of us in order to increase our knowledge. An online book store is a virtual store on the internet where customers can browse the catalog and select books of interest. At checkout time, items in the e-library will be presented as an order. At that time, more information will be needed to complete the request. Usually, the customer will be asked to fill online form. A message will be displayed on the screen showing the order has been placed and we will reach you for the delivery.

This project intends different types of forms with many types of books like story, novels and study materials book etc. It can manage purchasing of books online at a reasonable price, customers can choose many customer selects a book, they can get the details of the book with every information like the book\_isbn, book\_author and a small description of what the book is about. If the customer likes the book then they can simply add to cart for future purchase and if they want to purchase the book instantly then she/he can add book to cart and fill out the form for checking out. Lastly after checking out he/she is given a default payment option as Cash on delivery and after clicking on purchase a message is displayed to them giving them a information about their order been placed.

So, me myself being a reader I have chosen the topic Online Book Shop as it brings you the world's best from the best authors, and it also gives you the ease to buy your favorite books from any part of the world.

## **1.2. Problem Statement**

This online bookshop project aims to address challenges faced by both traditional and online bookstores which are described below:

- **Limited Selection in Physical Stores**

Customers face a restricted choice of books in traditional bookstores due to space limitations, reducing their ability to find desired or niche titles.

- **High Prices in Physical Stores**

Book prices in physical stores are often higher, making books less affordable for many customers.

- **Crowded and Inconvenient Browsing**

Physical stores can become crowded, leading to an uncomfortable and inefficient browsing experience for customers.

- **Limited Product Visibility Online**

Many online bookshops fail to display a comprehensive range of books effectively, reducing customer awareness of available options.

- **Trust Issues in Online Shopping**

Customers often hesitate to purchase online due to concerns about product authenticity, quality, and secure payment options.

- **Lack of Community Engagement**

The absence of interactive features, such as book discussions or reviews, limits community involvement and reduces customer loyalty.

- **Inefficient Delivery**

Delays, high delivery costs, and inefficiencies frustrate customers and discourage repeat purchases.

- **Missed Opportunities for Authors**

Limited visibility and reach hinder authors from showcasing their work and connecting with potential readers.

- **Lack of Customer Retention Strategies**

Online bookshops often fail to implement effective measures like personalization and recommendation systems, resulting in a lack of customer loyalty.

By addressing these points,

this project aims to create a transformative online bookshop platform that ensures a satisfying, efficient, and trustworthy experience for customers while supporting the growth of authors and the online bookshop industry.

### **1.3. OBJECTIVES**

The main objective of this project is to create a platform for authors and their readers who are economically weak to afford books.

- To create access to large number of books to customers wherever they are and whenever they want it.
- Offer customers a platform to browse, search, and purchase books anytime, anywhere.
- To provide books at reasonable price.
- To provide course books to economically weak students at reasonable prices.

#### **1.3.1. Academic Objectives:**

- To use academic skills and knowledge to create a functioning book store website.
- To get knowledge on the teacher performances, activities, and behavior.
- To Build good relationship with teachers and supervisor.

#### **1.3.2. Personal Objectives:**

- To complete the project on dead line (as challenge).
- To get real life experiences on this project.
- To create theoretical project (as studied) into practical project.
- To compete with related project in the market after graduation.

#### **1.3.3. Technical Objectives:**

- To get knowledge on creating websites using different languages like php, JavaScript,html, SQL and so on.
- To design the project along with flexibility so, it can be updated in the future.
- To make the system more secures with login feature.

### **1.4. Scope and Limitation**

This online bookshop project offers a broad scope by providing a vast selection and convenient access to books. Customers can enjoy diverse genres at affordable prices, overcoming limitations faced in physical stores like crowd issues and limited choices.

However, challenges such as ensuring trustworthy transactions, addressing community engagement gaps, and managing delivery arrangements are recognized as limitations. Despite these complications, the project aims to enhance customer satisfaction, support authors, and provide a loyal online purchasing community.

## 1.5. Development Methodology

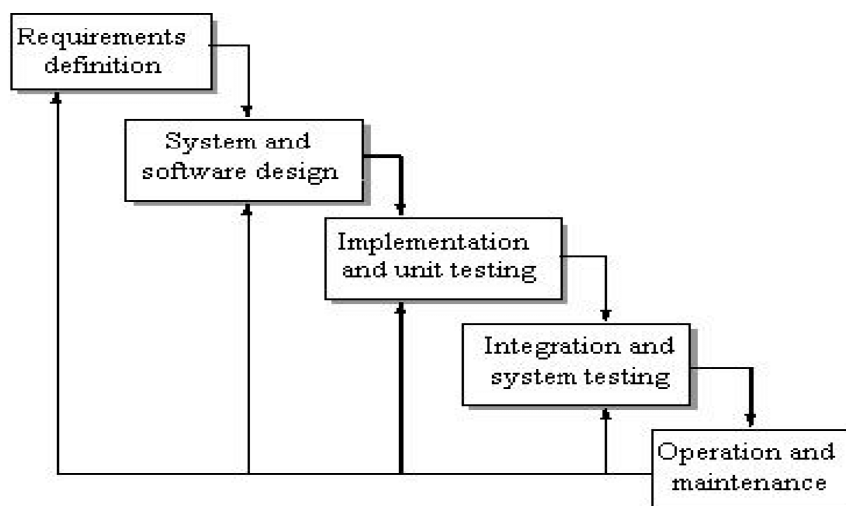
The developed system is vital to highlight and take into account several models used in software development and deployment given that this project involves the design and implementation of a software system, regardless of whether it is web-based.

The construction of this website meets the iterative waterfall model. The key benefit of employing this method is that we can concentrate on each component of the model while it is being developed and return to it as necessary. Based on this model, the project can be simply divided into various components.

The online book shop is developed using this model. The entire software development process will however permit feedback loops. The project's chosen model must favor two developers per project. Considering that we will be the only ones to carry out this job. This example seems appropriate for us to use.

The stages listed below must be followed during software development:

1. Requirements are to be proposed.
2. System design should be made according to the requirements.
3. Implementation of the features according to the design.
4. Integration and testing of the system.
5. Operation and Maintenance of the system.



**Figure 3.1: Iterative Waterfall Software Development Model**

## **1.6 Report Organization**

The font used in this report is Times New Roman. The page number is inserted at the footer aligned in center. The margin of paper must be set as top- 1 inch, bottom- 1 inch, left- 1.25 inch and right-1 inch respectively. A4 paper size is used for documentation. All the paragraphs must be justified and have a spacing of 1.5 inch. The font size for the heading is 16, section heading is 14 and sub-section heading and paragraph is 12. all the headings are bold faced and the position of figures and tables should be aligned to center. The figure caption should be aligned to center below the figure and table captions should be aligned to center above the tables. All the captions should be bold faced with the font size 12. There are five chapters which have different stages of developing the main project. First of all we have introduction with background related to books and the project I have created along with its problem statements, objectives, scope and limitations and report organization in chapter 1. Now moving to chapter 2, we have background study and literature review of this project. Similarly in chapter 3, we have System Analysis and Architectural Design. System analysis includes requirement analysis, feasibility analysis, data modeling (ERDiagram) and process modeling where requirement analysis includes functional requirements and non-functional requirements, feasibility analysis includes technical, operational, economic and schedule and lastly architectural design includes Database Schema Design, Interface Design and Physical DFD. Again in chapter 4, we have Implementation and Testing where implementation includes tools used and implementation details of modules whereas testing includes unit testing and system testing. Lastly in chapter 5, we have lesson learned, conclusion and future recommendations for the project.

## **CHAPTER 2. BACKGROUND STUDY AND LITERATURE REVIEW**

### **2.1. Background Study**

In context of Nepal, a regular department store, under the name of Moti Man Ratna Man opened at Ason, almost a century ago. From supplying provision to business organizations to retailing, wholesaling, and supplying of products, the store did it all. Then in the 1920s, the first department store in Nepal was established, and the store moved to New Road, and got its name Muncha House, given by the regular customer. The third generation, Amrit Tuladhar decided to start the Muncha Internet Venture in April 2000, through which, Nepalese were able to avail the services of Muncha House globally.

The concept was new and came with a lot of obstacles and issues. The starting of [www.munchahouse.com](http://www.munchahouse.com) made a way of shopping online accessible, and glamorous to Nepalese in and outside Nepal, which was previously impossible. Over time, [munchahouse.com](http://munchahouse.com) changed to [muncha.com](http://muncha.com) from brevity reasons. It also introduced photosites in 2002. The photo-sites were exclusive to registered customers (Agrawal, 2016). With the influence and arrival of the latest technology from neighboring countries, as well as from abroad, Nepal is on the path of success through e-commerce. Online shopping is taking the Nepalese market by storm facilitated by fast speed inexpensive 3G and 4G internet technology provided by the local service providers. Similarly, the convenient modes of payments and user-friendly, as well as interactive shopping apps are further paving a pathway to unprecedented growth in the e-commerce sector. The growth in the information technology sectors and the increasing number of young human resources in information technology sector directly created more opportunities for the growth of eCommerce in Nepal.

The status of e-commerce in Nepal seems promisingly good. Many users are attracted to online shopping and using online services. Many online portals and shopping portals are launched. The competition is rapidly increasing day-by-day due to an increasing number of online stores in Nepal, which will ultimately benefit the future of e-commerce in Nepal.



Similarly, the Nepalese entrepreneurs have also enhanced another aspect of online shopping by increasing the trend of using social media as a shopping platform.

The major online companies (e-commerce) in Nepal are working as Business-to-Consumer (B2C) or Consumer-to-Consumer (C2C) model business. For instance, Hamrobazar.com is a free online portal which provides a free platform to connect buyers and sellers where both of them are consumers. Similarly, NepBay started in 2006, as an online directory of products and shops for the first time at Kathmandu for buy and sell of second hand and used items, eventually transformed itself into an online company. When NepBay introduced “Cash on Delivery” in 2013, it was first-time customers in Nepal were able to place orders online, and receive goods directly at the doorsteps. It has also been a common platform for small and medium enterprises in Nepal to showcase and sell products.

On June 2014, Kaymu.com at that time backed by Asia Pacific Internet Group launched its operation in Nepal. In July 2016, Pakistan-based e-commerce Daraz took over Kaymu and again a Chinese-owned e-commerce company Alibaba Group acquired Daraz in May 2018 and has been in Nepalese market in Business-to-Consumer (B2C) model of business in online companies. Some online companies have been performing the dual features of doing business, maintaining the physical existence of shop as well as an online portal for online shopping. Similarly, some of the online companies in Nepal have specialized in a specific product or service only. Other than the above two techniques, an approach called ‘Facebook

Store’ is also seen very popular in Nepal, where products are displayed and sold through the Facebook page or portal, rather than from a separate website.

Expansion of the internet facilities, cost reduction by the internet service providers and changing life-style of the urban teenage population, has increased the scope of online shopping in Nepal. The increasing popularity, booming of online shopping companies, and shopping pages on social media, reflect the expansion and growth of the online shopping trend in Nepal, especially at Facebook and on Instagram. The dual nature of online shopping, one through own shopping portal of the company, and others through the use of social media, made shoppers get a bulk of choice for online shopping in Nepal.

At the same time, customers are also raising issues with online shopping in Nepal. The paper has tried to find out the reasons behind to prefer online shopping by the Nepalese shoppers, and the problems they have been facing while going for it.

## **2.2. Literature Review**

### **Case Study 1- Wattpad:**

Wattpad [2] is an online social reading platform intended for users to read and write original stories. Founded by Allen Lau and Ivan Yuen, the platform aims to create social communities around stories and remove the barriers between readers and writers. Wattpad has stories available in more than 50 languages, and nearly 300,000 writers from 35 countries take part every year in the largest writing competition.

### **Case Study 2 - Booksmandala:**

Since 1991, Books Mandala [3] has existed as a tiny island of peace in a fast-moving world by fostering a culture of reading and connecting people with the books they'll love, in Nepal and beyond. In 1991, a young couple, with the help of their closest friends, started a small business selling postcards to tourists in Lakeside, Pokhara, Nepal.

Their hard work and passion quickly turned this humble venture into one of Pokhara's hidden gems, featuring floor-to-ceiling stacks of books and souvenirs. Nepal Mandala Book Shop slowly became a beloved neighborhood spot and one of the largest bookstores in Gandaki Province, with thousands of titles in stock. Expanding their reach, they began trading books across Nepal as both wholesalers and retailers, cementing their place in the Nepali literary community.

### **Case Study 3- WEBook:**

WEbook is geared towards discovering new writers and helping them on their path to publication. It brings together writers, readers, and literary agents, WEbook [4] was launched in 2008, with corporate offices based in New York City. In addition to providing a venue for writers to reach an audience, WEbook actively helps writers find agents through their AgentinBox service. This service pre-screens query letters, guaranteeing that queries will meet industry standards, and allows writers to choose

agents from the list of those interested in specific genres. Writers can also easily tailor manuscript samples to make sure every agent gets what they're looking for — AgentInbox will automatically match each agent with the right sample version. Because the ultimate goal of writers joining WEbook is to get an agent (and get published), the copy/paste function is blocked on this website.

#### **Case Study 4 - BiblioNepal:**

For over two decades, Nepal Book Depot has been a beloved destination for book enthusiasts in Thamel. Situated in the heart of Kathmandu, their mission was to serve both Nepalese readers and foreign tourists with a diverse collection of books. As the internet began to flourish in Nepal in 2020, they noticed a shift in how readers preferred to purchase books—opting for online shopping via their devices. Embracing this change, they launched BIBLIONEPAAL [5], an online extension of their cherished bookstore. Their passionate team, devoted to books and creating a positive impact, has driven their success. They continue to grow, building a community of readers who appreciate their extensive collection and outstanding service.

#### **Case Study 6 - Manga Reader:**

Manga Reader [6] is an ad free Comic Books site that allows user to read and download thousands of Comic Books for free. Manga reader has one of the largest databases of Comic Books covering all genres and sub-genres with numerous topics and themes. Apart from extensive content library, it also provides free users with premium quality features. No-ads, pop-ups and commercials are existent on this website. With no ads, hackers have a no way to pose a risk to user's device and identity. It doesn't require any registration or signup, meaning that users are not obliged to provide their full information such as name, email address, credit card details etc to have full access to the site's content features and library. With no information, there will be no information leaked. To sum it up manga reader is the best and safest Comic Books reading site.

## CHAPTER 3. ANALYSIS AND DESIGN

### 3.1 System Analysis

System analysis is conducted for the purpose of studying a system or its parts in order to identify its objectives. It is a problem solving technique that improves the system and ensures that all the components of the system work efficiently to accomplish their purpose.

#### 3.1.1 Requirement Analysis

Requirements Analysis is the process of defining the expectations of the users for an application that is to be built or modified. It involves all the tasks that are conducted to identify the needs of different stakeholders. Therefore, requirements analysis means to analyze, document, validate and manage software or system requirements.

##### i. Functional Requirements (Illustrated using USE CASE Diagram):

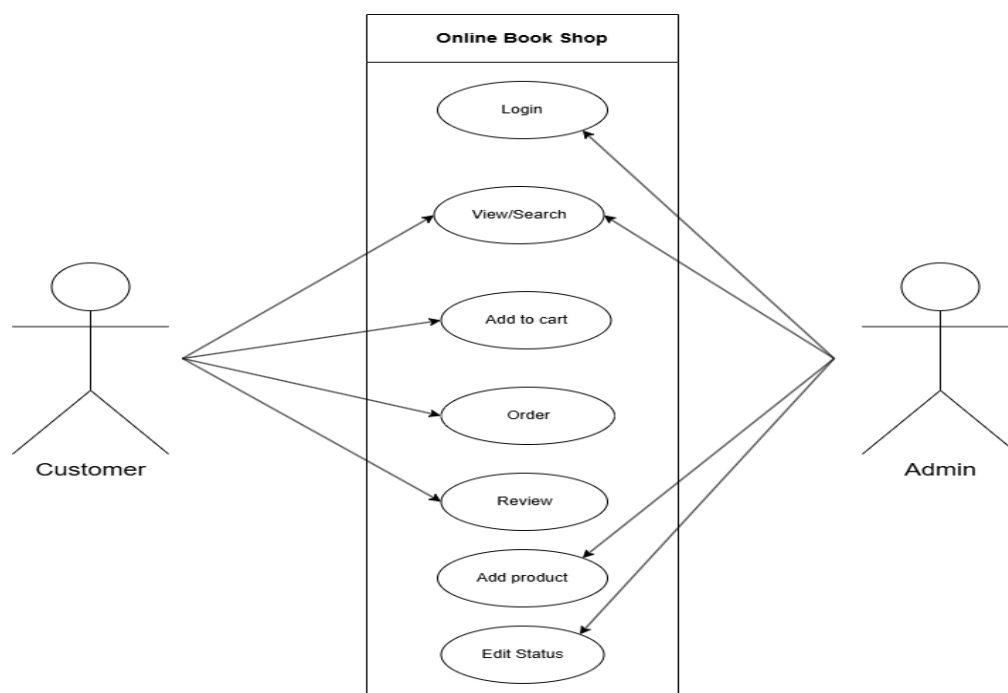


Figure 3.2: Use Case Diagram of Online Book Shop

The above case diagram shows the roles and responsibilities of the main admin and user. In this system the admin will have full access and authority to manipulate the system while the users are only allowed to carry out certain tasks.

Users can browse the platform for a book they would like to purchase, adding the book to their cart, proceeding to checkout, entering their contact information, and receiving a confirmation message for delivery. The admin can view, edit and delete the customer order and the book list with all the necessary details. If the admin want to leave the system, he/she can simply logout from the system.

## **ii. Non-Functional Requirement:**

Just like there are functional requirements there are non-functional requirements as well in a system. They are as much important as functional requirements in a system. So, I have added certain non-functional requirements so that the users can experience user friendly environment.

So, I have added password system to register and login the account so that the account is secure and other people aren't able to login without the password. And the user's information won't be visible to others for user's privacy.

### **3.1.2 Feasibility Analysis**

When a project is started the first matter to establish is to assess the feasibility of a project or product. Feasibility [7] means the extent to which appropriate data and information are readily available or can be obtained with available resources such as staff, expertise, time, and equipment. It is basically used as a measure of how practical or beneficial the development of a software system will be to you (or organization). This activity recurs throughout the life cycle.

There are many types of feasibilities:

- ★ Technical
- ★ Operational
- ★ Economic
- ★ Schedule

### **i. Technical Feasibility**

My Project is a complete web-based application. Web based applications are far more compatible across platforms than traditional installed software's. Web based systems need only be installed on the server placing minimal requirements on the end user workstation. Due to the manageability and cross platform support deploying web applications to the end user is far easier. Typically, in larger more complex systems data is stored and moved around separate systems and data sources.

The main technologies and tools that I am going to use are:

- ★ Php
- ★ HTML
- ★ Javascript
- ★ CSS

Each of the technologies mentioned above are easily available. We have experience to use these technologies so it would be manageable to implement the project within the given time. So, it is clear that project **Online Book Shop** is technically feasible.

### **ii. Operational Feasibility**

**Online Book Shop** will be a GUI based web application so the user will be able to easily understand the system and there will be no need of training. The system will help customer to check the feature and price of book by themselves and with the help of a "Digital Signage" we can easily show data, reduce display cost and salesman, and also show photographs and product features.

### **iii. Economic Feasibility**

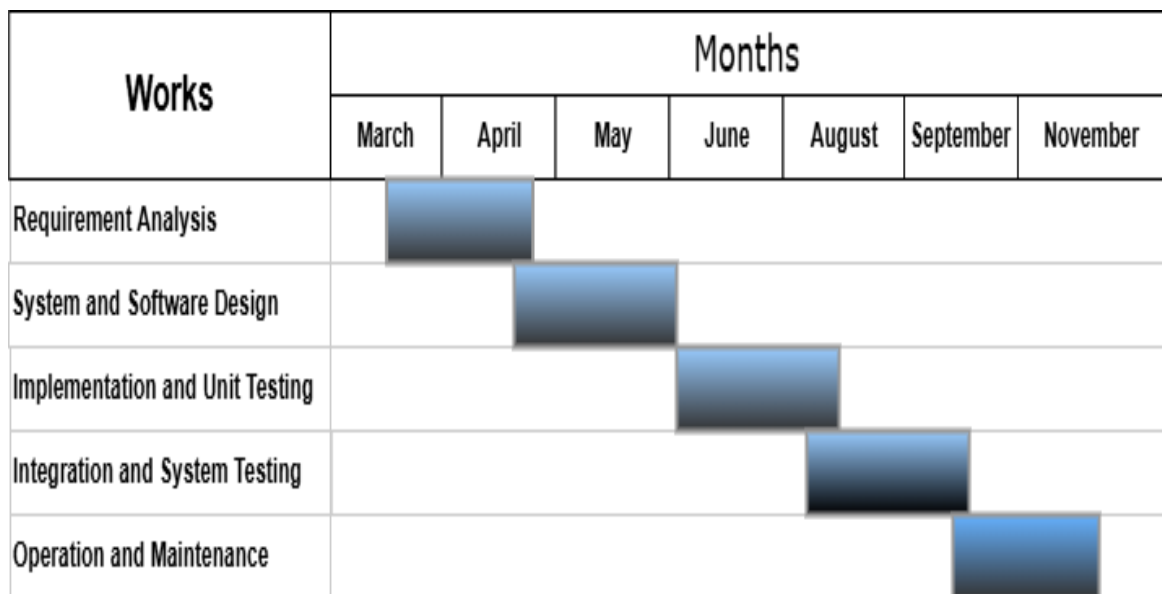
**Online Book Shop** will be developed using open-source software like Sublime Text and MySQL, so our project is economically feasible because the proposed system is very affordable. So, there is no issue related to development tools.

### **iv. Schedule Feasibility**

Time is an important factor. To complete the project in time we have made Gantt chart for our project task schedule. According to our schedule plan our project will be implemented till Bhadra and there will be one month for testing purpose. So, it is clear that **Used Book Shop** is feasible to complete before the deadline.

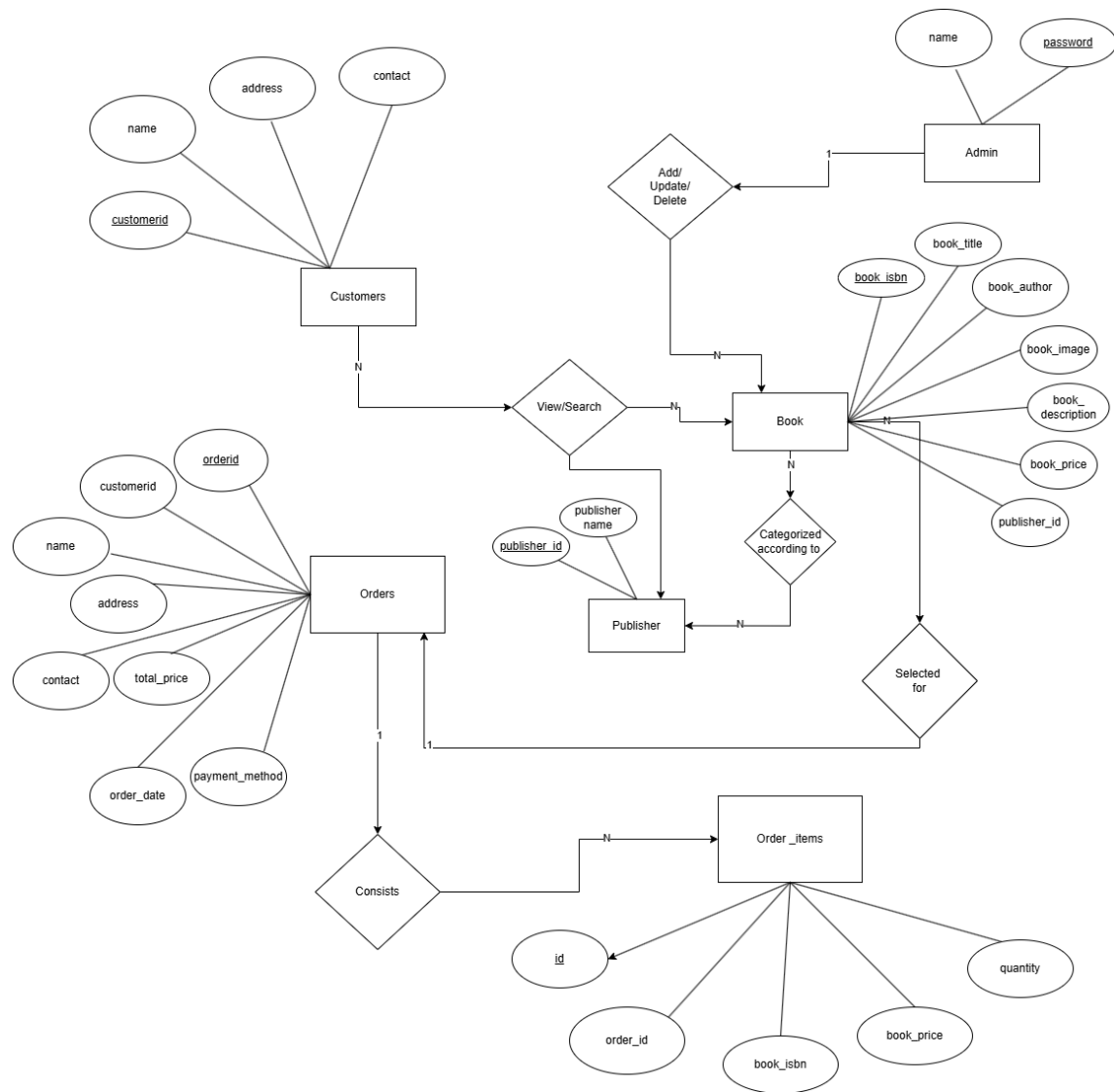
**Table 3.1.2: Scheduling of Online Book Shop**

Work	Starting Date	Ending Date
Requirement Analysis/Plan	15th March 2024	15th April 2024
System Design	16th April 2024	30th May 2024
Implementation and Unit Testing	1st June 2024	20th August 2024
Integration and System Testing	30th August 2024	15th September 2024
Operation and Maintenance	16th September 2024	5th November 2024



**Figure 3.3: Gantt Chart**

### 3.1.3 Data Modeling (ER- Diagram)



**Figure 3.4: ER- Diagram**

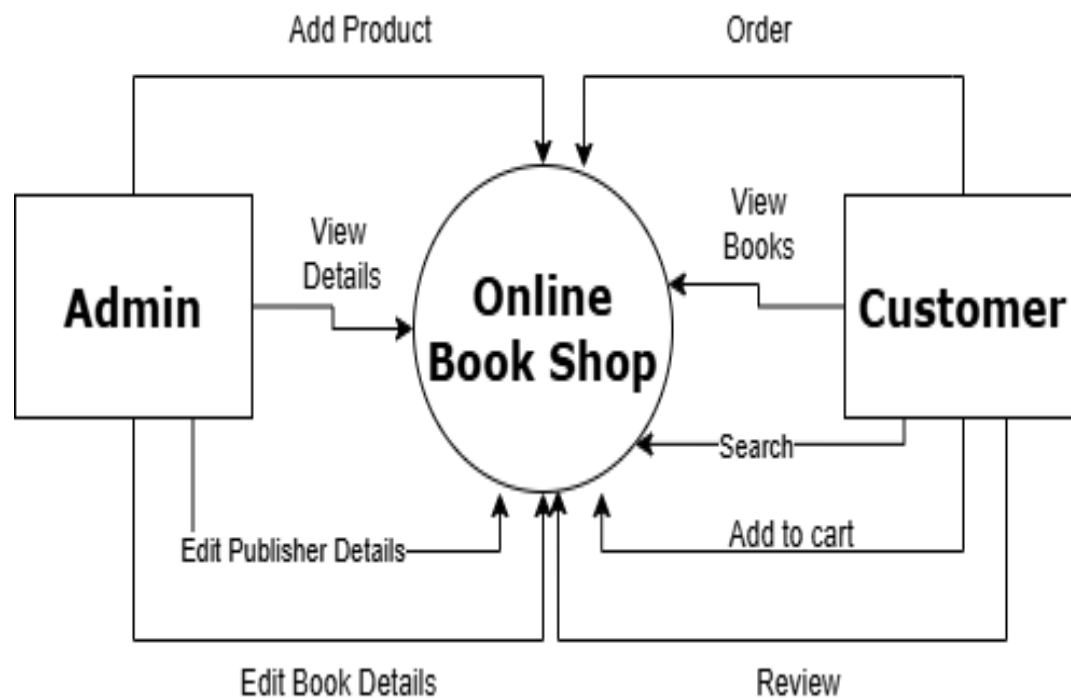
Above ER-Diagram shows the one to many Relationship between Admin and customers in the system. Similarly in my project, there are seven entities which includes Admin, Customer, Book, Publisher, Order and Order\_items .Though we have 6 different entities, admin is the head of the site and control all the activities. So, admin is the one responsible who controls all the activities like adding or deleting books taking orders and many more.

Admin has the full authority of the website.

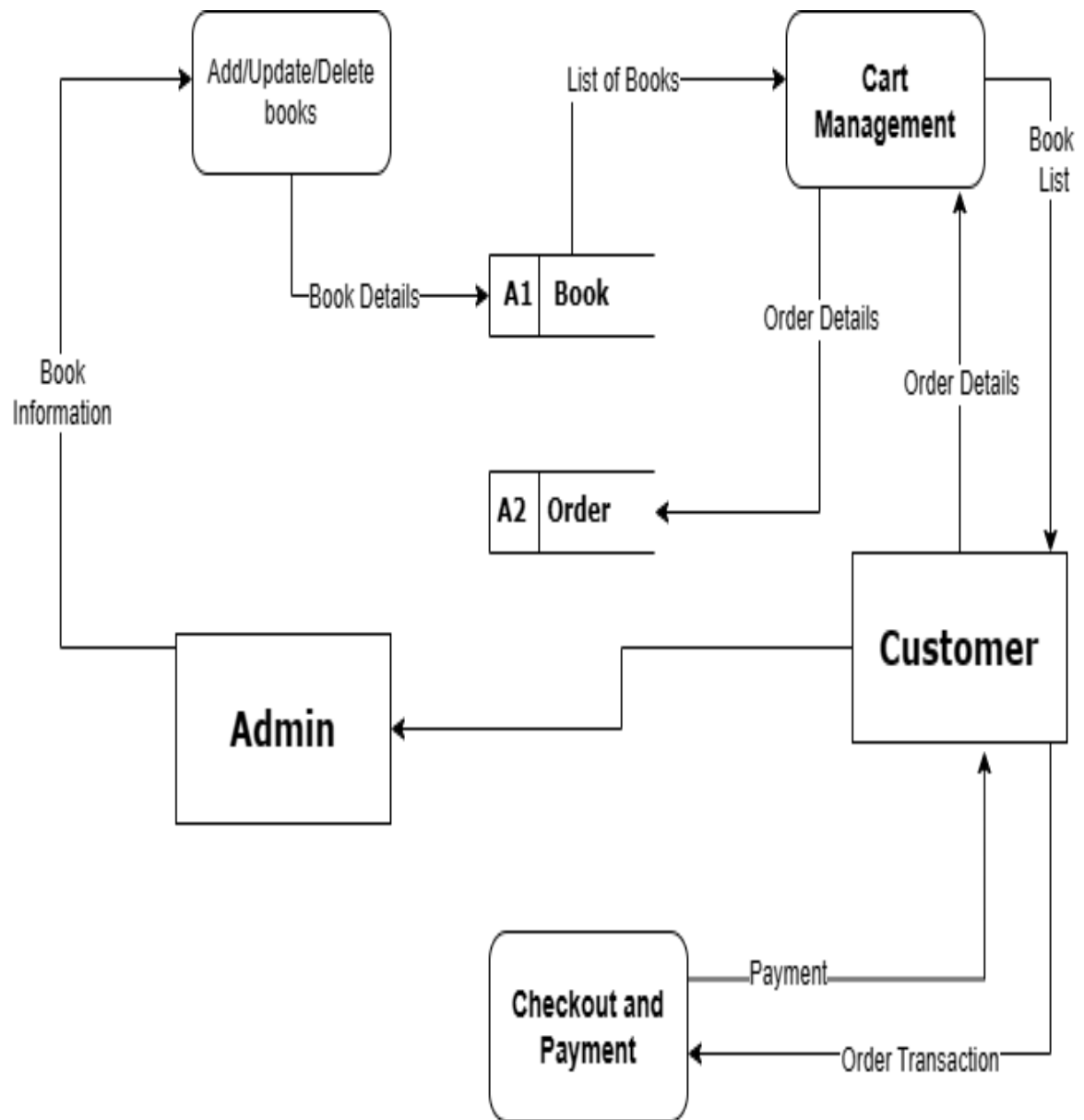


### 3.1.4 Process Modeling

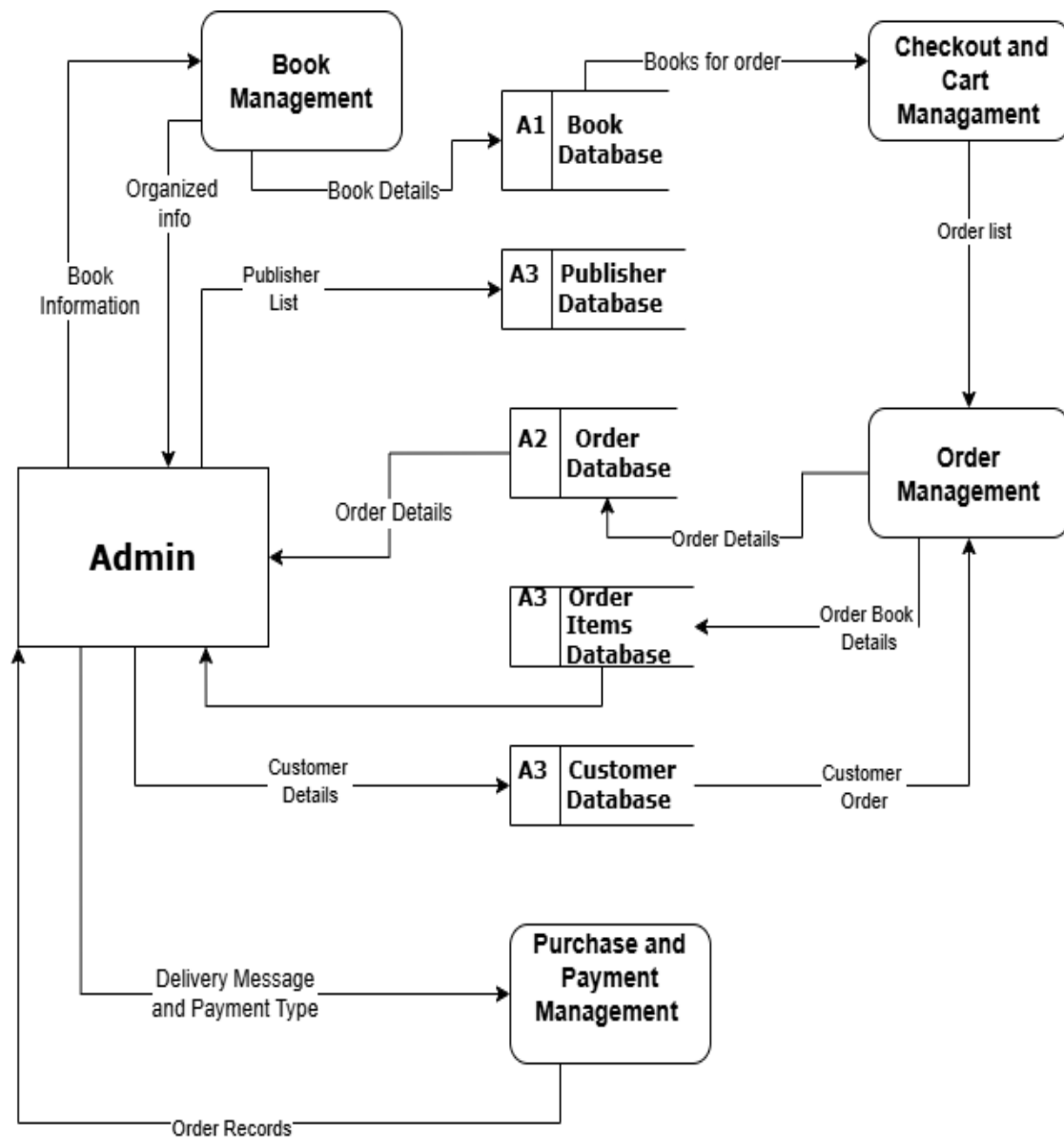
Process modeling involves graphically representing the processes, or actions, that capture, manipulate, store, and distribute data between a system and its environment and among components within a system. A common form of a process model is a data-flow diagram (DFD). A data-flow diagram is a graphic that illustrates the movement of data between external entities and the processes and data stores within a system.



**Figure 3.5: Context Level Diagram**



**Figure 3.6: First Level DFD**



**Figure 3.7: Second level DFD**

### 3.1.6 Architecture Design

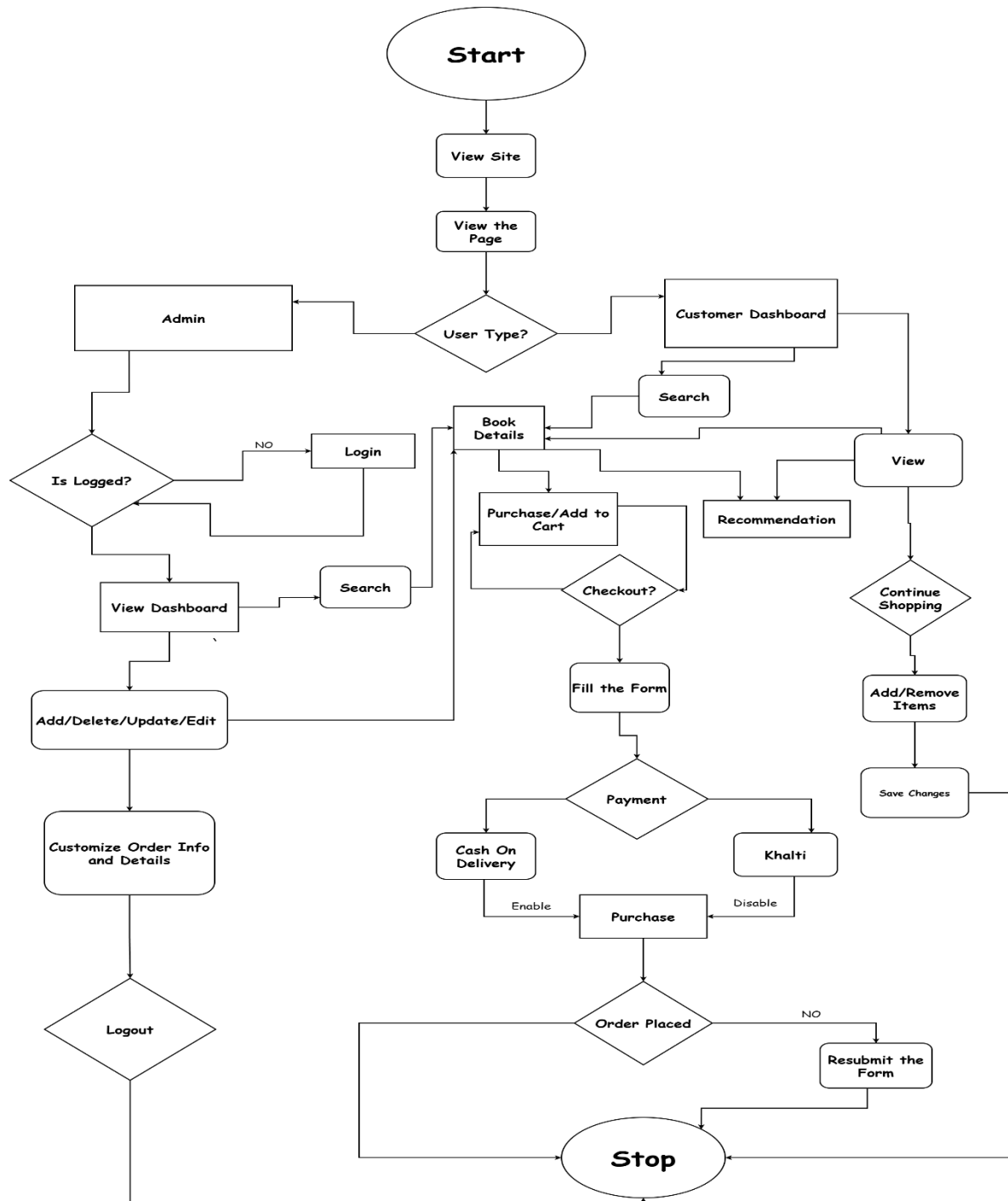
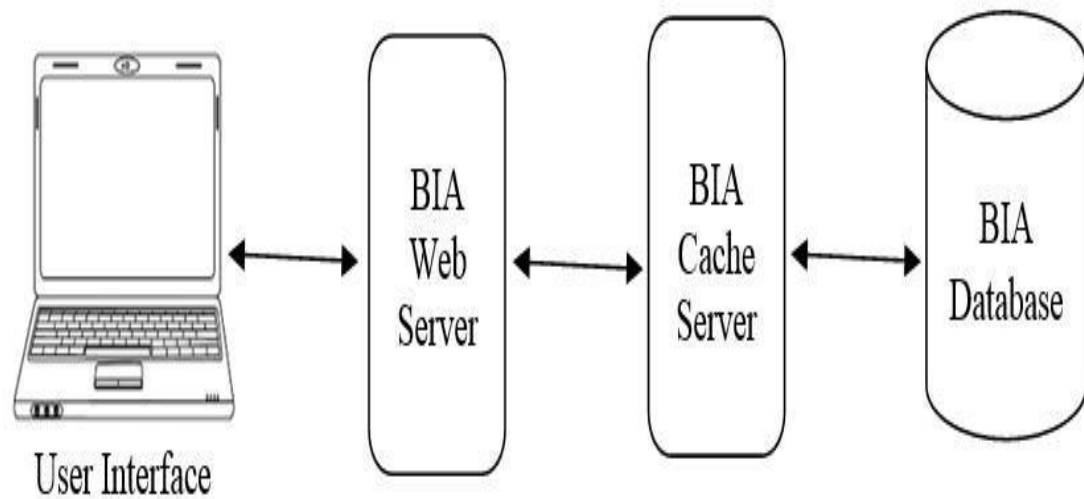


Figure 3.8: Architecture Design

### 3.2 System Design



**Figure 3.9: System Design**

### 3.3 Algorithm Details

#### A. Binary Search Algorithm:

This project implements a Binary Search Tree (BST) data structure to store and manage book records, allowing for efficient insertion, searching, and traversal operations which includes:

#### 1. Insertion Algorithm

The insert method adds a new book to the tree:

- **Process:**
  - If the tree is empty ( $\$root == null$ ), the new book becomes the root node.
  - Otherwise, the insertNode method is called recursively:
    - Compare the title of the new book ( $\$newNode \rightarrow title$ ) with the title of the current node.
    - If the new book's title is less than the current node's title, move to the left child.

- If the new book's title is greater than or equal to the current node's title, move to the right child.
- Insert the book at the appropriate position when a null spot is found.

## 2. Search Algorithm

The search method finds a book by its title:

- **Process:**
  - Start at the root and compare the target title with the current node's title.
  - If the target matches the current node's title, return the node.
  - If the target is less than the current node's title, recursively search in the left subtree.
  - If the target is greater than the current node's title, recursively search in the right subtree.

## 3. In-Order Traversal Algorithm

The In-Order Traversal method performs an in-order traversal of the Binary Search Tree:

- **Process:**
  - Recursively visit the left subtree.
  - Add the current node to the result list.
  - Recursively visit the right subtree.
- **Use Case:**
  - Retrieves all books in the tree in alphabetical order of their titles, as the BST stores them in sorted order.
- **Time Complexity:**
  - $O(n)$ , where  $n$  is the number of nodes in the tree.

## B. Randomized Algorithm:

Randomized algorithm used in this project for recommending books is a "**Top Selling Books**" algorithm. This is a basic popularity-based recommendation approach, which suggests books based on their sales performance.

Specifically:

1. The function `selectTopSellingBooks($conn, 4)` is being used to fetch the top 4 books with the highest sales.
2. The algorithm assumes that the books with the highest sales are most likely to be of interest to users.

### **Key Characteristics of the Algorithm:**

- **Type:** Popularity-based recommendation.
- **Logic:** Selects books ranked by their sales figures, with no personalization for individual users.
- **Strengths:**
  - Simple to implement.
  - Effective for showcasing trending or widely appealing items.
- **Weaknesses:**
  - Does not account for individual user preferences or reading history.
  - May not suggest niche or less popular but relevant books for specific users.





## CHAPTER 4. IMPLEMENTATION AND TESTING

### 4.1. Implementation

#### 4.1.1 Tools Used (CASE tools, Programming languages, Database platforms)

- CASE Tools

**Table 4.1: CASE Tools**

Used for	Tools and technologies
Analysis Tools	
Design Tools	
Programming Tools	Sublime, Visual Studio Code
Prototyping Tools	Balsamiq
Maintenance Tools	Sublime, Visual Studio code
Diagram Tools	
Process Modeling Tools	Xmind
Documentation Tools	Microsoft Word
Configuration Management Tools	Ms Word
Change Control Tools	
Web Development Tools	Sublime, Microsoft Edge, Visual Studio
Web Deployment Tools	DOCKER



#### i. Xmind:

**XMind** is a mind mapping and brainstorming software, developed by XMind Ltd. In addition to the management elements, the software can be used to capture ideas, clarify thinking, manage complex information, and promote team collaboration. It supports mind maps, fishbone diagrams, tree diagrams, organization charts, spreadsheets, etc. Normally, it is used for knowledge management, meeting minutes, task management.

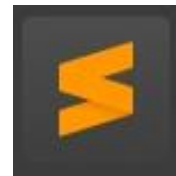


#### ii. Visual Studio Code:

**Visual Studio Code (VS Code)** is a popular, lightweight, and powerful **source-code editor** developed by Microsoft. It is open-source and free to use, offering an efficient environment for coding across various programming languages and frameworks. It is designed to be quick and responsive, suitable for small or large projects. Provides **syntax highlighting**, **code autocompletion**, and **smart suggestions** for variables, methods, and modules.

#### iii. Sublime:

**Sublime Text** is a shareware cross-platform source code editor. It natively supports many programming languages and markup languages. Users can expand its functionality with plugins, typically community-built and maintained under free-software licenses. To facilitate plugins, Sublime Text features a Python API.



#### iv. Draw.io:

**Draw.io** [8] is a proprietary software for making diagrams and charts<sup>1</sup>. It is a free, online diagramming tool that allows you to create flowcharts, diagrams, mind maps, organization charts, and much more<sup>2</sup>. The software lets you choose from an automatic layout function, or create a custom layout. They have a large selection of shapes and hundreds of visual elements to make your diagram or chart one-of-a-kind.

#### vii. WPS Office:

**WPS Office** is a free office software that includes Writer, Spreadsheet, Presentation and PDF, providing a seamless working experience for multiple devices like PC, pad and phone to achieve high work efficiency anytime and anywhere.

Compared with most office software, WPS Office stands out for requiring less memory, offering more functions and enjoying faster speed. It supports multiple operating systems, such as mac OS, iOS, Linux, Android and Windows. The personal basic version is free to use. A fully featured professional-grade version is also available for a subscription fee.


#### viii. Docker:

**Docker** is a tool that helps developers package applications and all the things they need (like code, libraries, and system settings) into containers. These containers can run anywhere—on your computer, on someone else's computer, or even on cloud servers—without worrying about compatibility issues.

Docker is popular and used because of following reasons:

- It saves time by reducing errors related to compatibility.
- It's lightweight compared to virtual machines.
- It simplifies deployment and makes apps more reliable.
- **Programming Languages**

**Table 4.2: Programming Languages**

Used for	Tools and technologies
Programming languages	

#### i. HTML:

The HyperText Markup Language or HTML is the standard markup language for documents designed to be displayed in a web browser. It can be assisted by



technologies such as Cascading Style Sheets (CSS) and scripting languages such as JavaScript.

Web browsers receive HTML documents from a web server or from local storage and render the documents into multimedia web pages. HTML describes the structure of a web page semantically and originally included cues for the appearance of the document.

## **ii. JavaScript:**

JavaScript is a dynamic programming language that's used for web development, in web applications, for game development, and lots more. It allows you to implement dynamic features on web pages that cannot be done with only HTML and CSS.



Many browsers use JavaScript as a scripting language for doing dynamic things on the web. Any time you see a click-to-show dropdown menu, extra content added to a page, and dynamically changing element colors on a page, to name a few features, you're seeing the effects of JavaScript.

## **iii. CSS:**

Cascading Style Sheets (CSS) is a style sheet language used for describing the presentation of a document written in a markup language such as HTML. CSS is a cornerstone technology of the World Wide Web, alongside HTML and JavaScript.



CSS is designed to enable the separation of presentation and content, including layout, colors, and fonts. This separation can improve content accessibility; provide more flexibility and control in the specification of presentation characteristics; enable multiple web pages to share formatting by specifying the relevant CSS in a separate.

## **iv. PHP:**

PHP is a general-purpose scripting language geared toward web development. PHP originally stood for Personal Home Page, but it now stands for the recursive initialism



PHP: Hypertext Preprocessor

PHP code is usually processed on a web server by a PHP interpreter implemented as a module, a daemon or as a Common Gateway Interface (CGI) executable. On a web server, the result of the interpreted and executed PHP code – which may be any type of

data, such as generated HTML or binary image data – would form the whole or part of an HTTP response.

#### **v. Ajax:**

AJAX stands for Asynchronous JavaScript and XML. Ajax uses XHTML for content, CSS for presentation, along with Document Object Model and JavaScript for dynamic content display.



It uses various web technologies on the client-side to create asynchronous web applications. With Ajax, web applications can send and retrieve data from a server asynchronously (in the background) without interfering with the display and behaviour of the existing page.

#### **vi. JQuery:**

Query is a JavaScript library designed to simplify HTML DOM tree traversal and manipulation, as well as event handling, CSS animation, and Ajax. jQuery's syntax is designed to make it easier to navigate a document, select DOM elements, create animations, handle events, and develop Ajax applications. jQuery also provides capabilities for developers to create plug-ins on top of the JavaScript library. This enables developers to create abstractions for low-level interaction and animation, advanced effects and high-level, theme-able widgets.



### **• Database Platforms**

#### **i. Mysqli:**

The MySQLi Extension (MySQL Improved) is a relational database driver used in the PHP scripting language to provide an interface with MySQL databases.

MySQLi extension

features a dual interface - it supports both the procedural and object-oriented programming paradigms.



Statements can be executed with the `mysqli_query()`, `mysqli_real_query()` and `mysqli_multi_query()` functions. The `mysqli_query()` function is the most common, and combines the executing statement with a buffered fetch of its result set, if any, in one call.

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

##### **Admin module:**

Admin is the main person who has the full authorities and rights to access the website. So admin have many features on websites like registering the name of the customer, adding new books, new courses and deleting, update and view and searching the book from list.

The features are described below:

- **Addition:**

Addition features allows admin to add anything in the system. Admin can add user as the member of the system. Admin will also be able to add new books.

- **Deletion:**

Deletion features allows the admin to delete anything from the system if it is not needed anymore. This allows to remove user from being member of system, deleting the contents, etc.

- **Update:**

Update features allows admin to change in the user's email, book etc if it is needed.

- **View :**

View features allows admin to view the admin dashboard only but can see others activities that user can't see.

- **Search:**

Search feature allows admin to search the book from the list in the homepage and also while updating and editing the book list data.

##### **Customers**

Customers refer to the people or entities who visit the platform to browse, purchase, or manage book-related activities. Customer have features like browsing website, viewing books and its descriptions, searching books as per their interest and adding to cart as well.

The features are described below:

- **View: Customer Dashboard**

View features allow customers to see only customer dashboard. Customer can view every schedule done by the admin.

- **Search:**

Search features allow customers to search the books based on their interest.

- **Adding Books To Cart:**

This feature allows customers to add their books of interest to the cart which they can purchase as they want.

## 4.2 Testing

### 4.2.1 Test case for Unit Testing

#### Test case for admin login with correct data

In the following table admin login is checked using correct email and password when the login is successful the site will redirect to dashboard and the test result was as expected and successful.

**Table 4.3: Admin login with correct data**

S.No	Action	Inputs	Expected Output	Actual Output	Test Result	Test Comment
1.	Launch Application	Localhost:8080	OBS home	OBS home	Pass	Launch Successful
2.	Enter correct Username & Password	Username: Admin Password: Admin123	Login Successful	Login Successful	Pass	Login Successful

### Test case for admin login with incorrect data

The following table admin login is checked using incorrect email and password when the login is attempted error message is shown and the site will stay in the same page the result was as expected and successful.

**Table 4.4: Admin login with incorrect data**

S.No	Action	Input	Expected Output	Actual Output	Test Result	Test Comment
1.	Launch Application	Localhost:8082	obs home	URL not found	Fail	Invalid URL
2.	Enter invalid username & valid Password for phpmyAdmin	Username: Saujanya Password: 123	Incorrect Username or password.	Incorrect Username or password.	Fail	Invalid login attempts Stopped.

### 4.2.2 Test Cases for System Testing (User testing)

**Table 4.5: Test Cases for System Testing**

S.No	Action	Input	Expected Output	Actual Output	Test Result
1.	On click Add button	Add New user	Added successful	Added successful	pass
2.	On Click Delete button	Delete exist user	Deleted successful	Deleted successful	pass
3.	On click Book List button	Edit Book List	Edit successful	Edit Successful	pass
4.	On click Customer List button	View and edit the purchase details	Successful	Successful	pass

## **CHAPTER-5. CONCLUSION AND FUTURE RECOMMENDATION**

### **5.1 Lesson Learned**

The primary objective of this project is to create a system that helps people who don't have enough money to buy books. The main lesson I learned from this project is programming as this project created an opportunity to learn programming. Another lesson is that coding isn't as easy as it seems to be because we don't know all the codes. Because of this project I not only learned programming but I also got the knowledge of other different programs like XAMPP, MYSQL, Draw.io and many more. In addition to this I got to explore the new deployment tool i.e. Docker which is a tool that helps developers package applications and all the things they need (like code, libraries, and system settings) into containers. A container is like a box that holds your app and everything it needs to run.

### **5.2 Conclusion**

The web page is successfully developed and the users will be able to buy the books. Though there had been a lot of problems and errors at the beginning phase of developing the website, the web page is tested acceptably and all the errors are debugged. The website works fully and I'm sure it will be able to satisfy the need of users.

### **5.3 Future Recommendation**

Though this project seems to be completed, I have few features that I want to add in the coming future so that it can be better and more advanced in coming future.

Some features I want to add on my project are:

- AI used recommendations based on customer browsing, purchasing history and ratings feature as well.
- Filtering to suggest books that similar users have purchased.
- Trending or bestsellers books in specific categories.
- A responsive and optimized mobile app with all platform features.
- Push notifications for promotions, offers, and personalized recommendations.
- Notify users when out-of-stock books are available again.



# APPENDICES

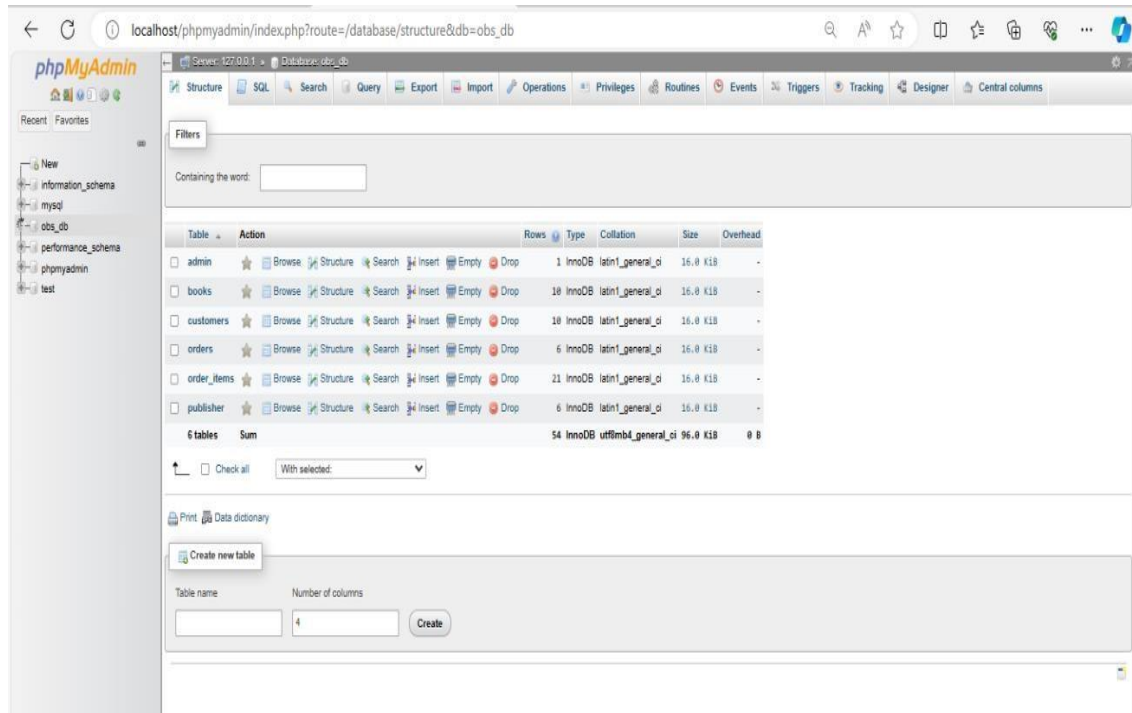


Figure 3.1: Total Of Database

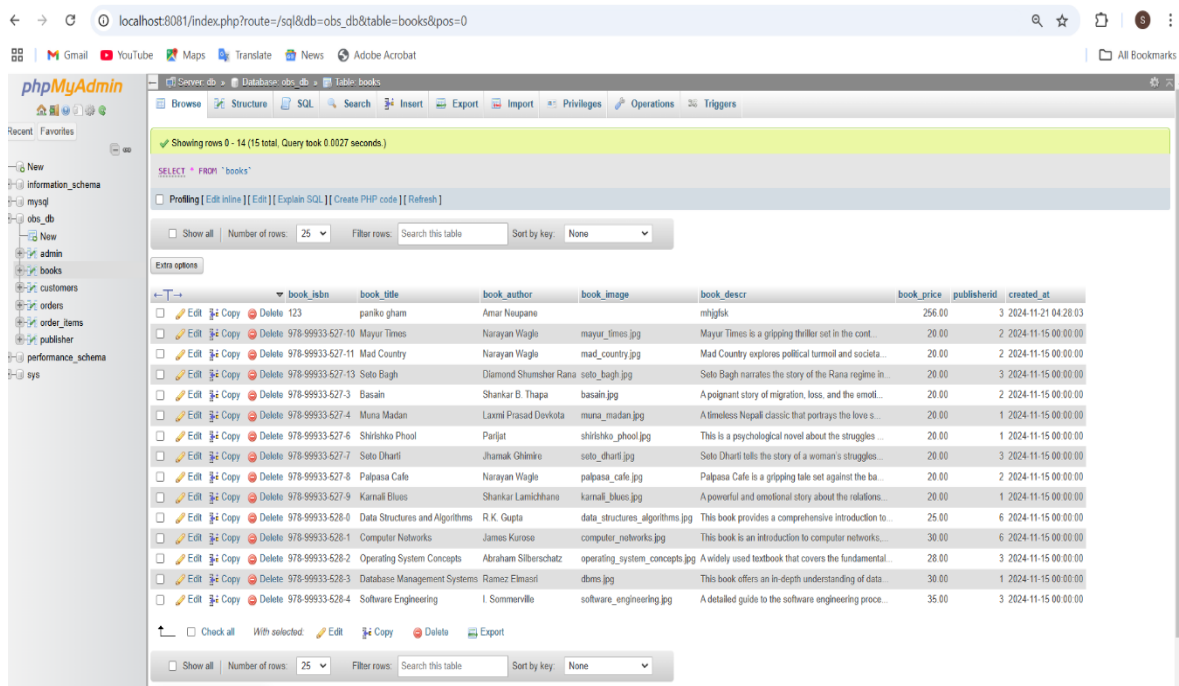


Figure 3.10: Book Database

Showing rows 0 - 11 (12 total, Query took 0.0005 seconds)

```
SELECT * FROM `customers`
```

Number of rows: 25 | Filter rows: Search this table | Sort by key: None

customerid	name	address	contact
1	admin	hik	gjkj
2	admin	bkbkj	gjkj
3	admin	ughj	gjk
4	admin	hik	ufy
5	Saujanya Poudel	gkgj	jdgh
6	saujanya	fy	986037689
7	sau	uigl	868
8	Saujanya Poudel	rgdh	2345671890
9	ritu	sg	3675231785
10	12	hfhgj	3675231785
11	yvfdaw	ghdgrfj	8674883932
12	Ritu	laltpur	9860309718

Query results operations: Print, Copy to clipboard, Export, Display chart, Create view

Figure 3.11: Customer Database

Showing rows 0 - 16 (17 total, Query took 0.0006 seconds)

```
SELECT * FROM `orders`
```

Number of rows: 25 | Filter rows: Search this table | Sort by key: None

orderid	customerid	book_id	name	address	contact	total_price	order_date	payment_method
1	3	978-99933-527-10	admin	ughj	gjk	2600.00	2024-11-20 15:21:38	cod
2	3	978-99933-527-10	admin	ughj	gjk	2600.00	2024-11-20 15:24:05	cod
3	4	978-99933-527-10	admin	hik	ufy	5200.00	2024-11-20 15:24:23	cod
4	4	978-99933-527-10	admin	hik	ufy	5200.00	2024-11-20 15:28:16	cod
5	5	978-99933-527-10	Saujanya Poudel	gkgj	jdgh	2600.00	2024-11-20 15:35:11	cod
6	6	978-99933-527-10	saujanya	fy	986037689	5200.00	2024-11-20 15:52:38	cod
7	6	978-99933-527-10	saujanya	fy	986037689	5200.00	2024-11-20 15:57:07	cod
8	6	978-99933-527-10	saujanya	fy	986037689	5200.00	2024-11-20 16:04:26	cod
9	7	978-99933-527-10	sau	uigl	868	7800.00	2024-11-20 16:06:20	cod
10	8	978-99933-527-10	Saujanya Poudel	rgdh	2345671890	7800.00	2024-11-20 16:10:37	khalti
11	9	978-99933-527-10	ritu	sg	3675231785	7800.00	2024-11-20 16:15:13	cod
12	9	978-99933-527-10	ritu	sg	3675231785	7800.00	2024-11-20 16:17:46	cod
13	9	978-99933-527-10	ritu	sg	3675231785	7800.00	2024-11-20 16:17:52	cod
14	9	978-99933-527-10	ritu	sg	3675231785	7800.00	2024-11-20 16:17:58	cod
15	10	978-99933-527-10	12	hfhgj	3675231785	7800.00	2024-11-20 16:18:30	cod
16	11	978-99933-527-10	yvfdaw	ghdgrfj	8674883932	20.00	2024-11-21 03:54:40	cod
17	12	978-99933-527-10	Ritu	laltpur	9860309718	20.00	2024-11-21 04:14:22	cod

Figure 3.12: Order Database

Showing rows 0 - 2 (3 total. Query took 0.0022 seconds)

```
SELECT * FROM `order_items`
```

Profiling [ Edit inline ] [ Edit ] [ Explain SQL ] [ Create PHP code ] [ Refresh ]

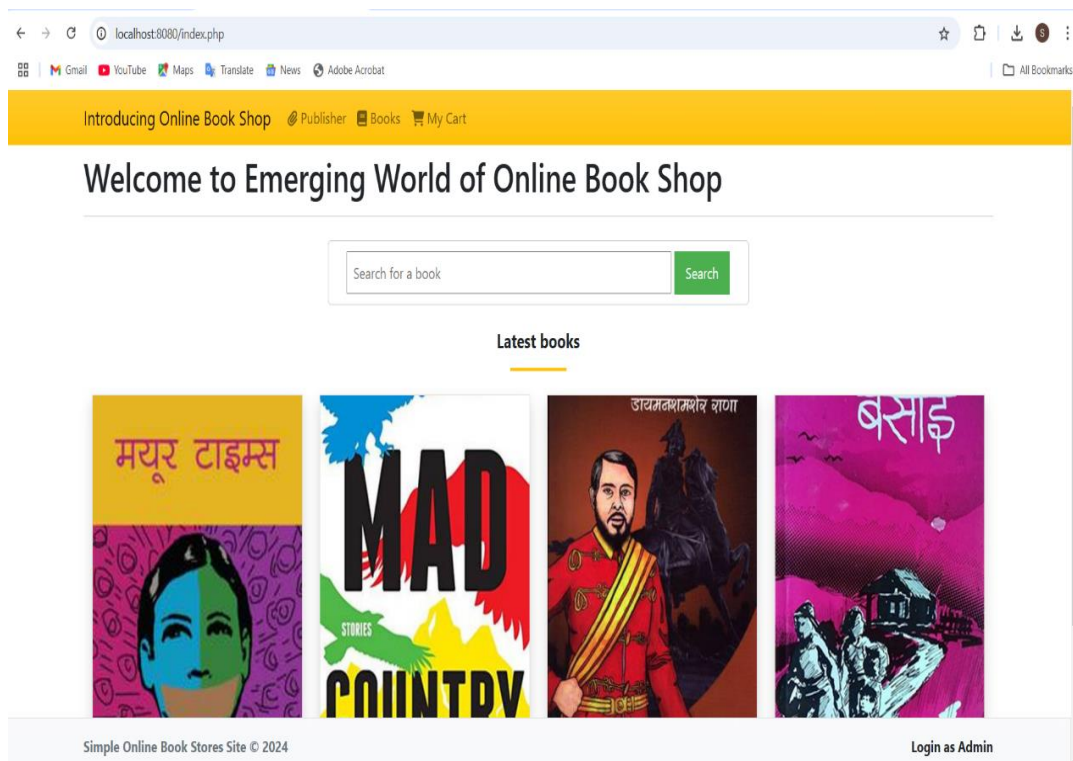
Number of rows: 25 Filter rows: Search this table Sort by key: None

		id	order_id	book isbn	book price	quantity
<input type="checkbox"/>	Edit Copy Delete	12	24	978-99933-527-4	20.00	1
<input type="checkbox"/>	Edit Copy Delete	13	24	978-99933-527-3	20.00	1
<input type="checkbox"/>	Edit Copy Delete	14	25	978-99933-528-2	28.00	1

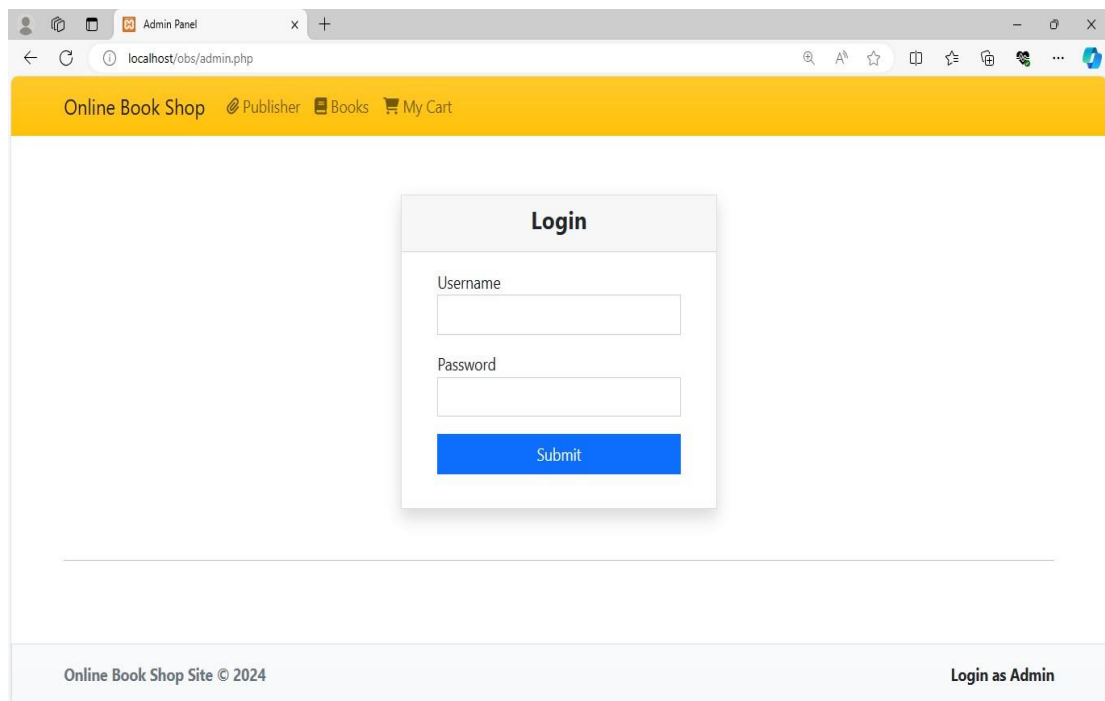
Check all With selected: Edit Copy Delete Export

Query results operations: Print Copy to clipboard Export Display chart Create view

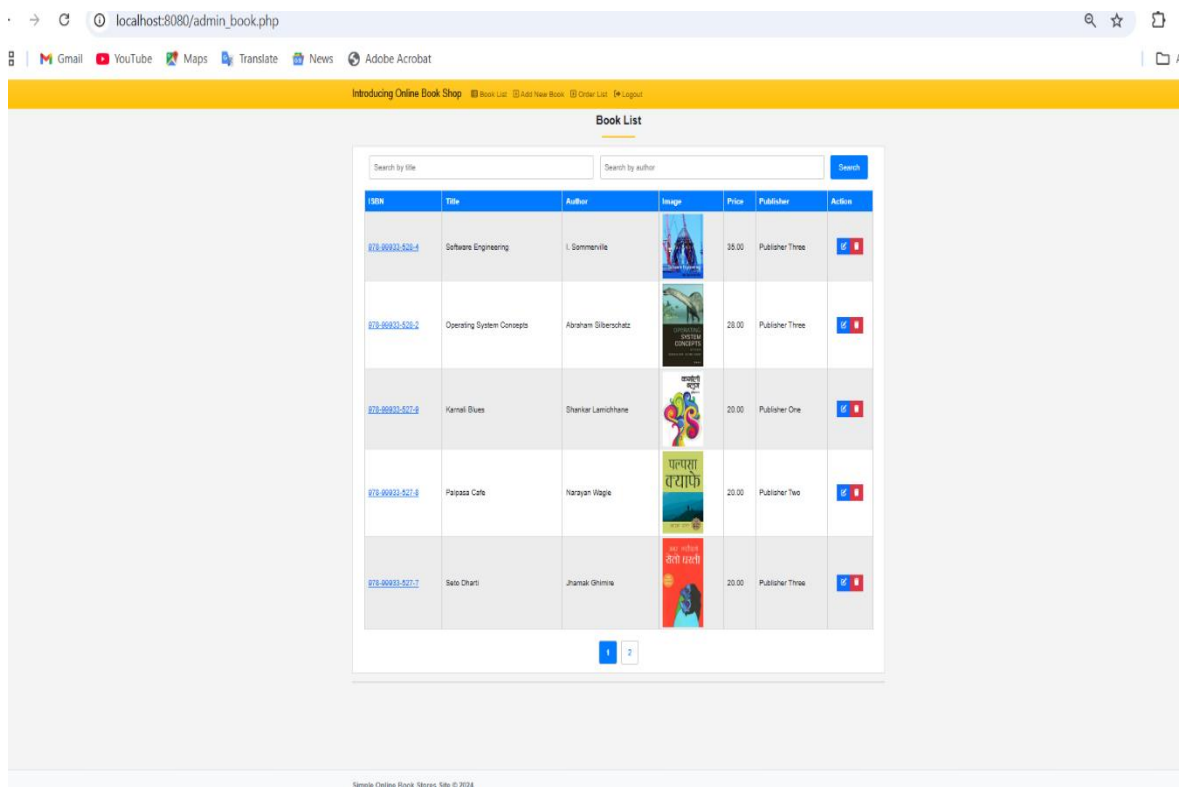
**Figure 3.13: Order items Database**



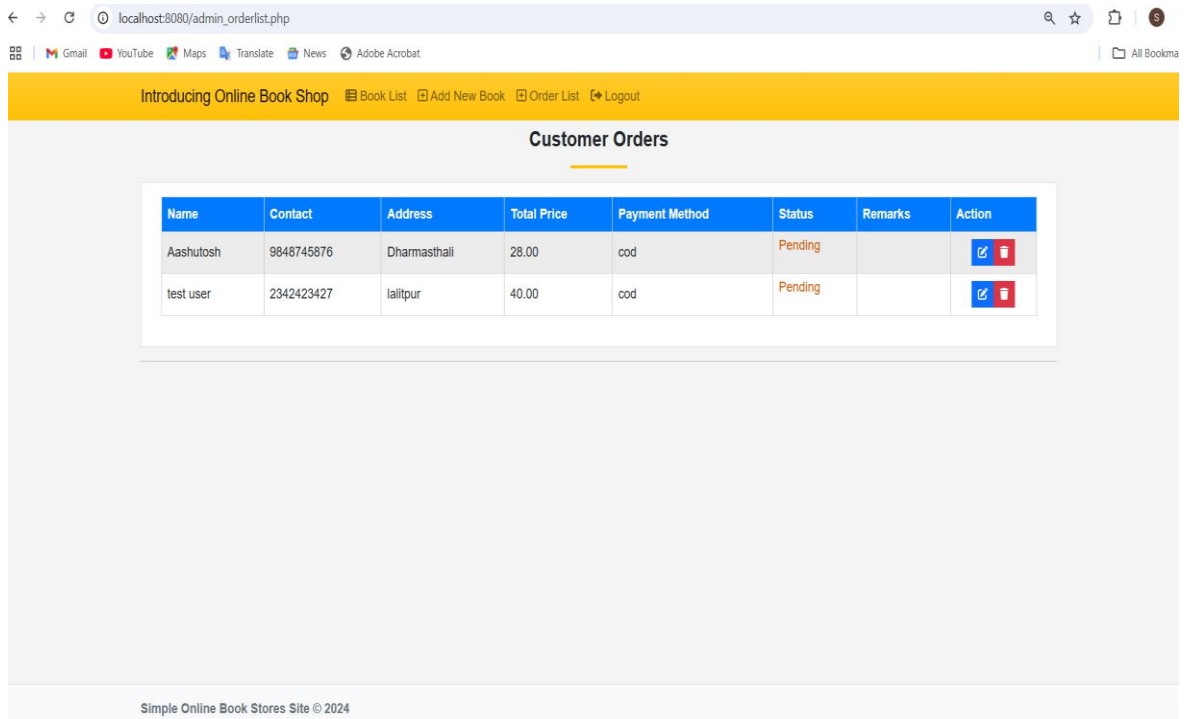
**Figure 3.14: Homepage**



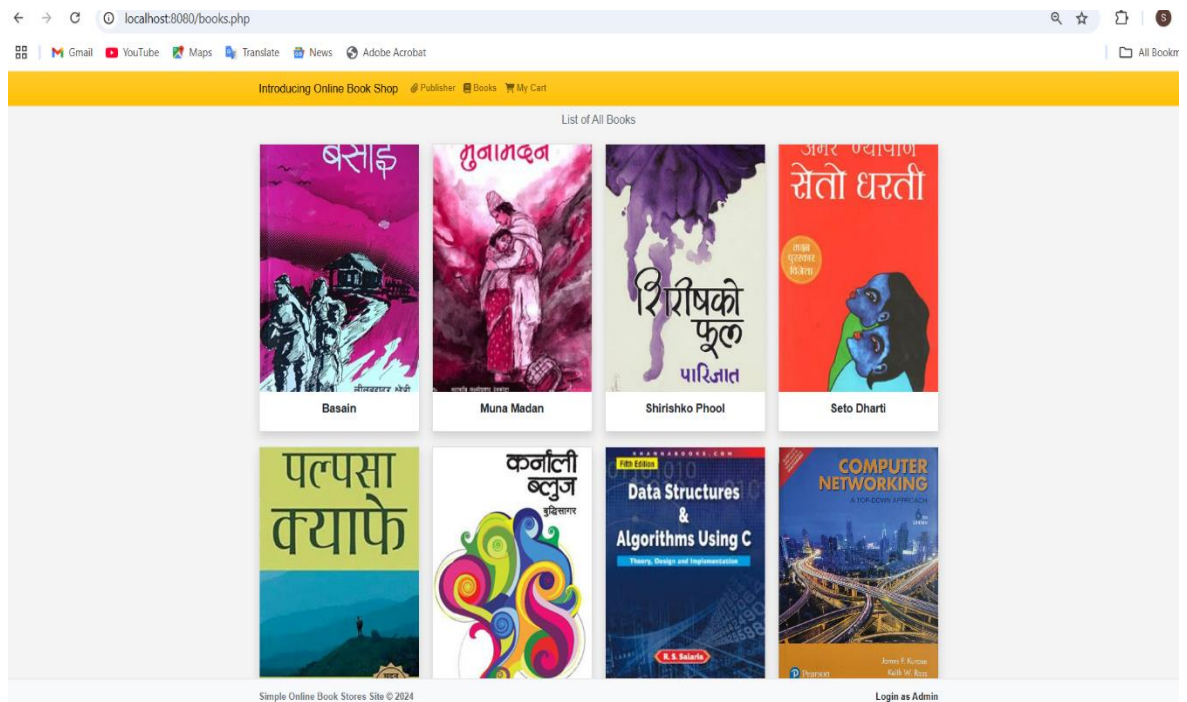
**Figure 3.15: Admin Login Page**



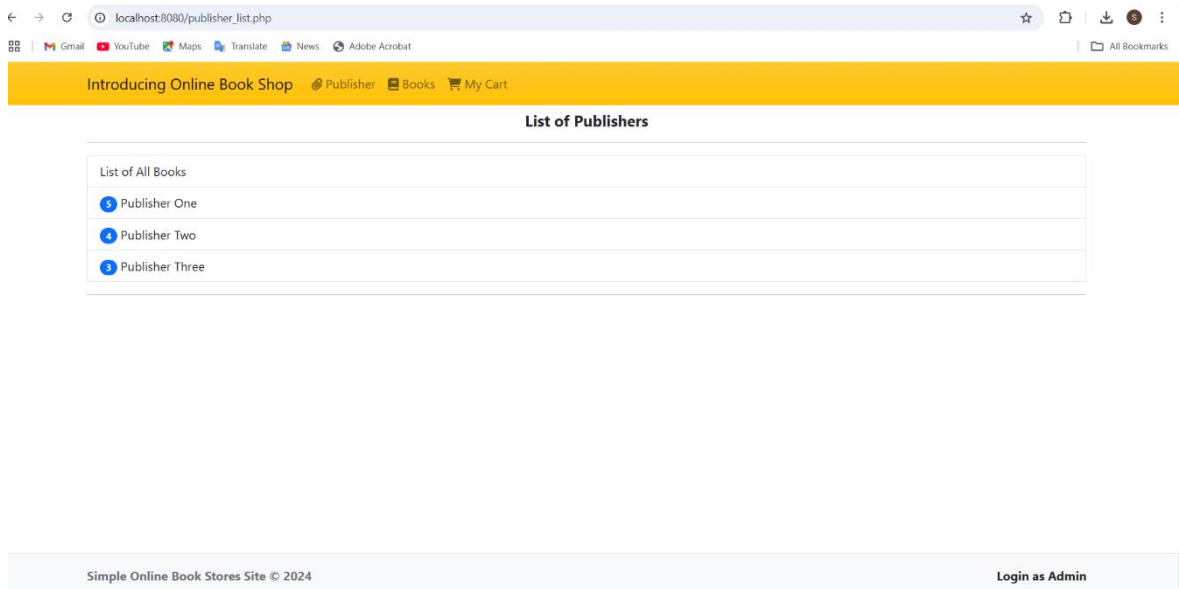
**Figure 3.16: Admin Book Page**



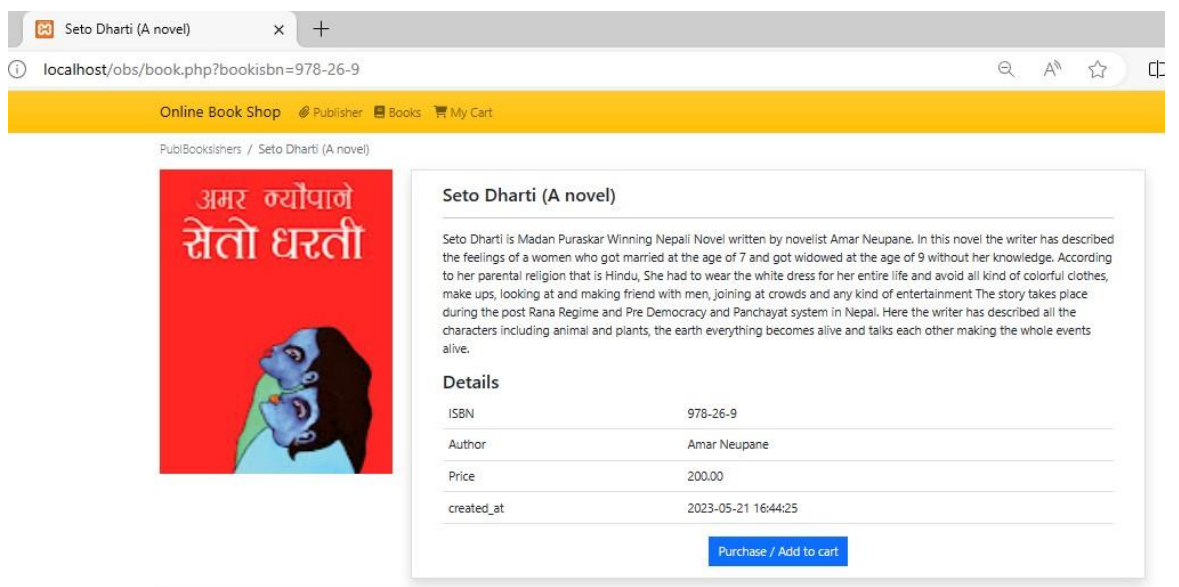
**Figure 3.17: Admin Order List Page**



**Figure 3.18: Book List**



**Figure 3.19: Publisher List**



**Figure 3.20: Book Description Page**

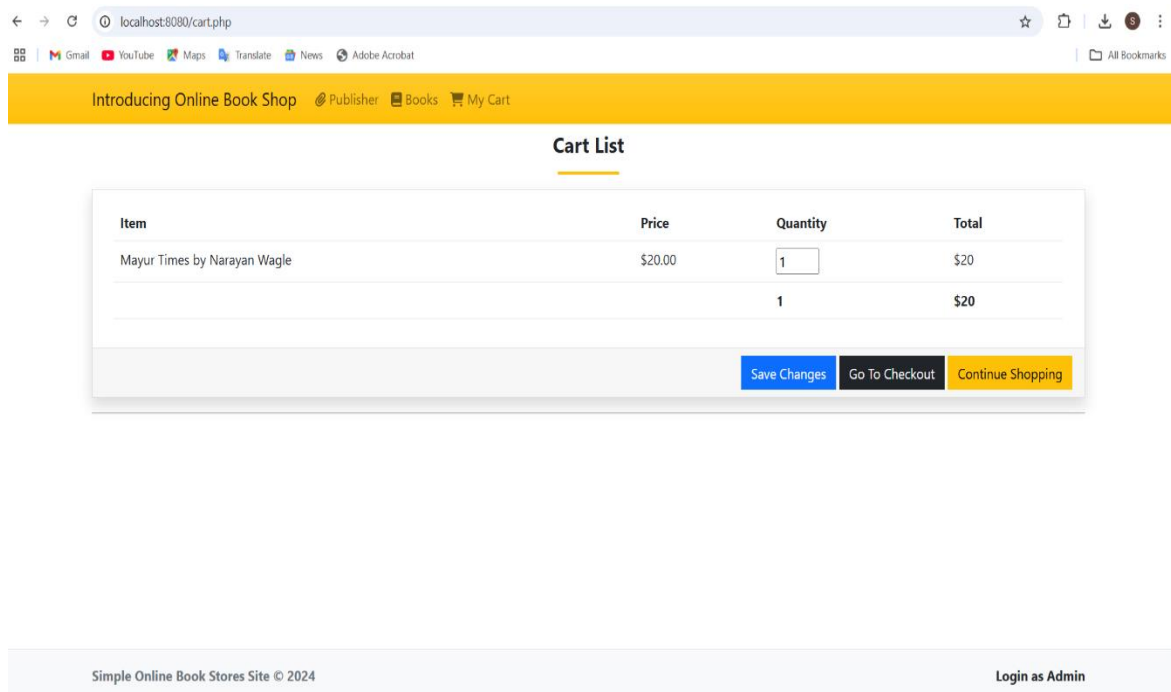


Figure 3.21: Cart Page

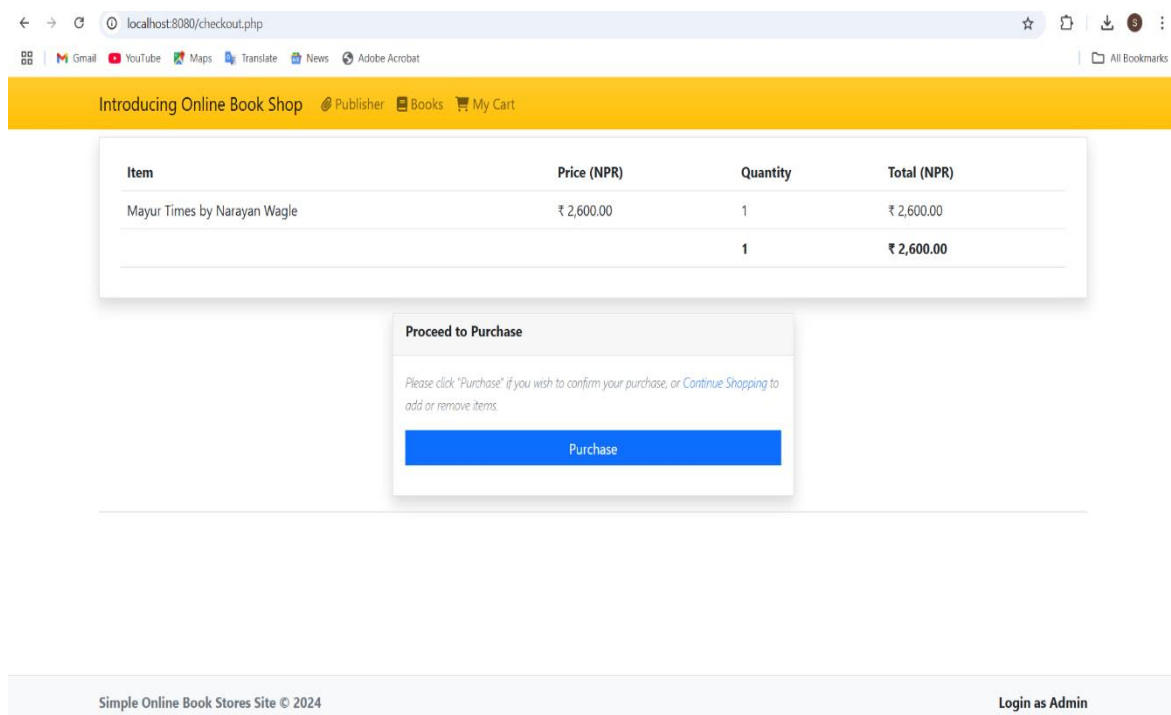
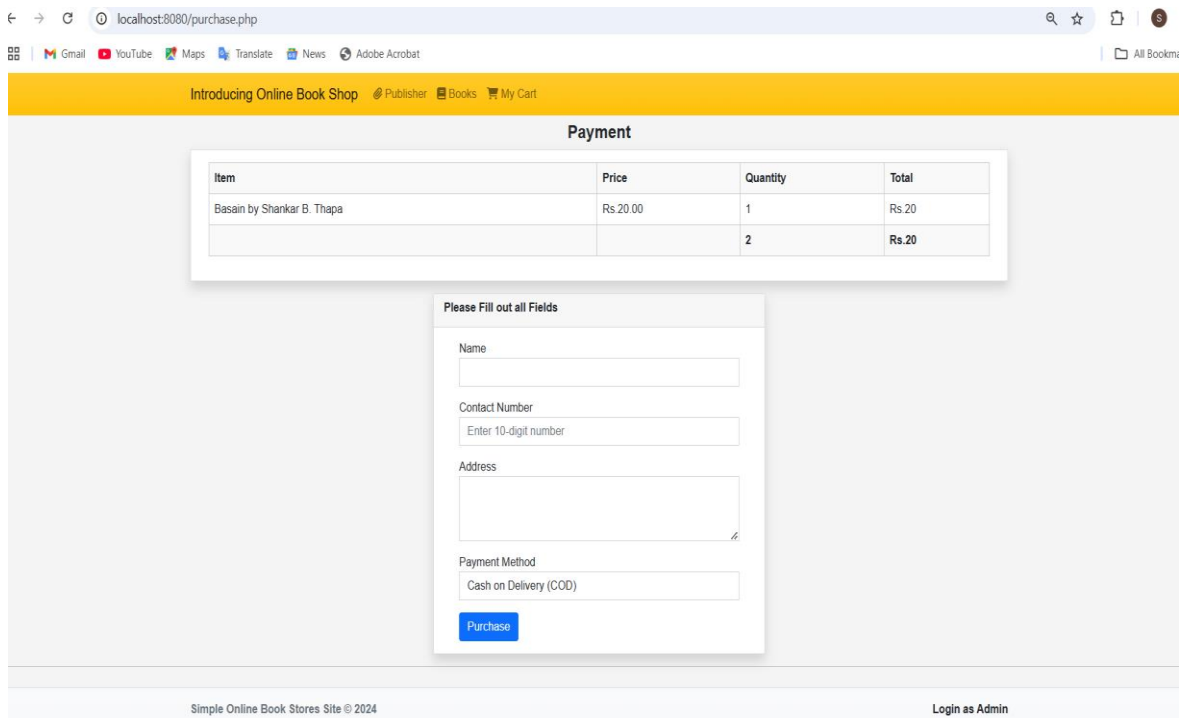


Figure 3.22: Checkout Page



**Figure 3.23: Payment Page**



<b>Log Sheet for Online Book Shop</b>	
Student Name	Saujanya Poudel
Email Id	Saujanyapdl22@gmail.com
University	Tribhuvan University
College Name	Nims College
College Address	Kumaripati,Lalitpur
Supervisor	Nirmala Timilsena
Course and Code	Project-II ()

<b>Meeting Submission and Background Research</b>		
<b>Date</b>	<b>Tasks</b>	<b>Signature</b>
2024/4/15	Submitted abstract (one page proposal with the title and description of what the project requirements are.	
2024/5/15	Submitted proposal of the project with the objective, features and problem statements.	
2024/6/5	Learned to research about the background study and literature review of the project topic.	
2024/6/15	Got to learn about the diagrammatic tool (draw.io) for making the system architecture designs.	
2024/6/25	Took suggestion and learned on how the process and data modeling diagrams are created and designed.	
2024/7/15	Started coding with the help to use different references websites and coding platforms.	
2024/8/15	Discussed on the error occurred and the code working as per our requirements or not and implemented the suggestion.	
2024/9/25	Showed the layout of the project and asked for the recommendation on the changes needed.	
2024/10/10	Showed the changes implemented as per supervisor's recommendation on the code.	
2024/10/20	Worked and discussed on the final documentation formats and layouts	
2024/11/20	Presented the whole project code and final documentation to supervisor.	

## References

- [1] Muncha House The,First online venture and Department Store in Nepal, 2020.
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- [7] Feasibility study,[https://en.wikipedia.org/wiki/Feasibility\\_study](https://en.wikipedia.org/wiki/Feasibility_study).
- [8] diagrams.net,cross-platform graph drawing software application developed in HTML5 and JavaScript,<https://en.wikipedia.org/wiki/Diagrams.net>.