WEB TECHNOLOGY REPORT

"BOOKLY"

Report submitted in partial fulfilment of the requirement for

Web technology subject

by

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CONTRIBUTION

This project, **Bookly: Handpicked Books to Your Door**, was developed by four team members. Below are the key contributions of each team member:

1. Shivraj Tiwari (00996202722 T12)

- **Role**: Frontend Developer
- Designed the website UI, ensuring responsiveness and smooth navigation.
- Developed the homepage, book listings, and dynamic elements using **HTML**, **CSS**, and **JavaScript**.

2. Vansh Kumar (00796202722 T12)

- **Role**: Backend Developer
- Developed server-side functionality using **PHP** for user authentication, shopping cart, and payment integration.
- Designed the **MySQL database** schema and implemented data handling for users and products.

3. Shivesh Mishra Suman (02896202722 T12)

- **Role**: Full Stack Developer
- Integrated frontend and backend functionality, ensuring smooth data flow between UI and database.
- Developed features like **product search**, **filtering**, and the **admin panel** for managing content.

4. Vedant Arya (01096202722 T12)

- **Role**: Database Administrator and Tester
- Managed the **MySQL database** and optimized queries for fast performance.
- Conducted website testing and debugging, ensuring a smooth user experience.

DECLARATION

We, the undersigned, declare that the work presented in this report titled **"Bookly: Handpicked Books to Your Door"** is our original work, and we have contributed equally to the project development. We acknowledge the guidance received from our professors, peers, and online resources, and we confirm that all sources have been duly cited.

We further declare that this project has not been submitted for any other academic or professional purpose.

Member Signatures

Name	Signature
Shivesh	_____
Vansh	_____
Shivraj	_____
Vedant	_____

Date of Submission: _____

ACKNOWLEDGEMENT

We would like to express our sincere gratitude to all the individuals who supported us throughout the development of this project.

First and foremost, we would like to thank our instructor,**Apurva Mam**, for their continuous guidance, encouragement, and insightful feedback, which greatly contributed to the successful completion of this project. Their support throughout the entire process helped us stay on track and overcome challenges.

We also wish to acknowledge the contributions of our peers, who provided valuable suggestions and advice during team meetings and discussions. Their input helped us improve the overall quality of our work.

Lastly, we would like to extend our thanks to all the online resources, tutorials, and communities that provided invaluable learning materials and technical solutions, which were integral to the development of the **Bookly** website.

We appreciate all the help and encouragement that led to the successful completion of this project.

Team Members:

- Shivesh(02896202722)
- Vansh(00796202722)
- Shivraj(00996202722)
- Vedant(01096202722)

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INTRODUCTION

Welcome to Bookly

Bookly is a comprehensive **book-buying e-commerce platform** developed as part of the **Web Technology** subject project. This platform integrates both **front-end and back-end technologies** to provide a seamless online book shopping experience, delivering all kinds of books directly to users' doorsteps.

•Objective

The primary goal of **Bookly** is to create an efficient and user-friendly **online bookstore**. Through this project, we aimed to:

● **Provide Easy Access to Books** – Offer a wide range of books across various genres, making them accessible to users with doorstep delivery.

● **Enhance User Experience** – Develop an intuitive and interactive interface that ensures smooth navigation, efficient search, and a seamless purchasing process.

● **Implement Full-Stack Development Skills** – Apply both **front-end and back-end technologies** to build a robust and functional e-commerce platform.

•System Overview

Bookly is a dynamic e-commerce web application designed to provide a seamless online book-buying experience. The system integrates various features to ensure an intuitive platform for users to browse, search, and purchase books with doorstep delivery**.**

Architecture

Bookly follows a full-stack architecture, integrating both front-end and back-end components. Here's a breakdown of the system**:**

1. Front-End:

- **Technologies Used:** The user interface is built using HTML, CSS, jQuery, and JavaScript.
- **Features**: Includes an engaging homepage, a categorized book catalog, an advanced search feature, and a smooth checkout process**.**

2. Back-End:

- **Technologies Used:** The server-side of the application is developed using PHP, handling user authentication, order processing, and data management.
- **Database**: MySQL is used to store book details, user information, order history, and other relevant data.
- **APIs:** Integration with external APIs for functionalities like book recommendations and payment processing.

3. Deployment:

- **Hosting:** The source code is managed using GitHub for version control. The application is deployed on a web hosting service supporting PHP and MySQL, ensuring smooth accessibility**.**

Functional Components

● **Book Browsing & Search** – Enables users to explore a vast collection of books across various genres with advanced search and filter options.

● **Seamless Order & Delivery Management** – Allows users to place orders, track shipments, and receive books at their doorstep with ease.

● **Engaging Homepage** – Features an eye-catching landing page showcasing bestsellers, new arrivals, and personalized book recommendations.

● **Wishlist & Cart System** – Users can save books for later in a wishlist or directly add them to their cart for a smooth shopping experience.

● **Book Details & Reviews** – Each book page includes detailed descriptions, author information, pricing, and user reviews to help with purchase decisions.

● **User Authentication & Profiles** – Secure login/signup system with personalized user dashboards to manage orders, wishlists, and purchase history.

Data Flow

The system functions as follows:

● **User Interaction –** Users navigate the front-end interface to browse books, search for titles, add items to their cart, and place orders**.**

● **Request Processing –** User actions trigger requests to the back-end, where PHP processes them and retrieves or updates relevant data.

● **Data Management –** The back-end communicates with the MySQL database to store and manage book listings, user accounts, order details, and transaction records**.**

● **Response Delivery –** The back-end sends the necessary data back to the front-end, ensuring real-time updates on book availability, pricing, and order status**.**

PROJECT MANAGEMENT

Bookly – A Web-Based E-Commerce Platform for Books

Goals

● Scope: Develop a web application that allows users to browse, search, and purchase books with features like an intuitive landing page, secure checkout, wishlist management, and doorstep delivery.

● Objective: Create an easy-to-use and efficient online bookstore that simplifies book shopping for users.

Timeline

● Day 1-2: UI/UX design and project planning.
● Day 3-4: Backend development using PHP & MySQL.
● Day 5: Integration of features like user authentication, cart system.
● Day 6: Testing and final optimizations.
● Day 7: Deployment and live launch.

Technologies & Tools Used in Bookly

Development Tools

Frontend:

- **HTML:** Used to structure the content and create the layout of the website. The homepage, product pages, user registration, and login forms are all structured using HTML elements.

- **CSS:** Provides the styling for the website, including typography, colors, and overall layout. We used CSS to ensure that the website is mobile-responsive, meaning it looks great on both desktop and mobile devices.

- **Javascript:** Used to add interactivity to the website. JavaScript handles features such as dynamic search filters, book carousel

sliders, and updating the shopping cart without needing to reload the page.

Backend:

- **PHP:** Handles server-side logic, processing requests, and managing the flow of data.
- **MySQL:** Used for database management, storing book details, user accounts, and order data.

- **XAMPP:** We used XAMPP as a local server environment to develop and test the website on our machines before deployment. XAMPP provides an easy-to-install package that includes Apache (web server), MySQL (database server), and PHP (programming language). This enabled us to run a local version of the website on our laptops and simulate a real server environment during development.

Version Control

- **GitHub:** For code versioning, collaboration, and overall project management.

Deployment

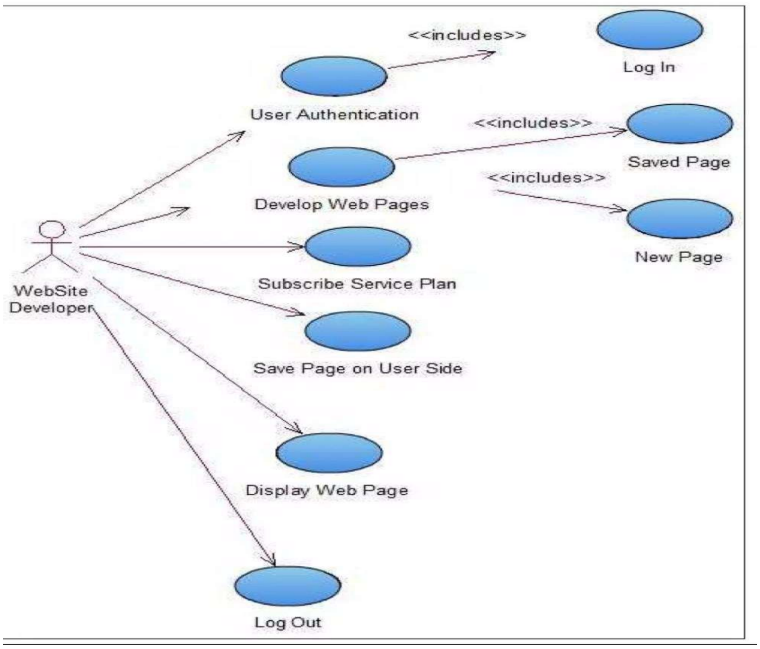
- **Web Hosting:** Deployed on a platform supporting PHP and MySQL to make the application accessible to users.

Testing and Debugging

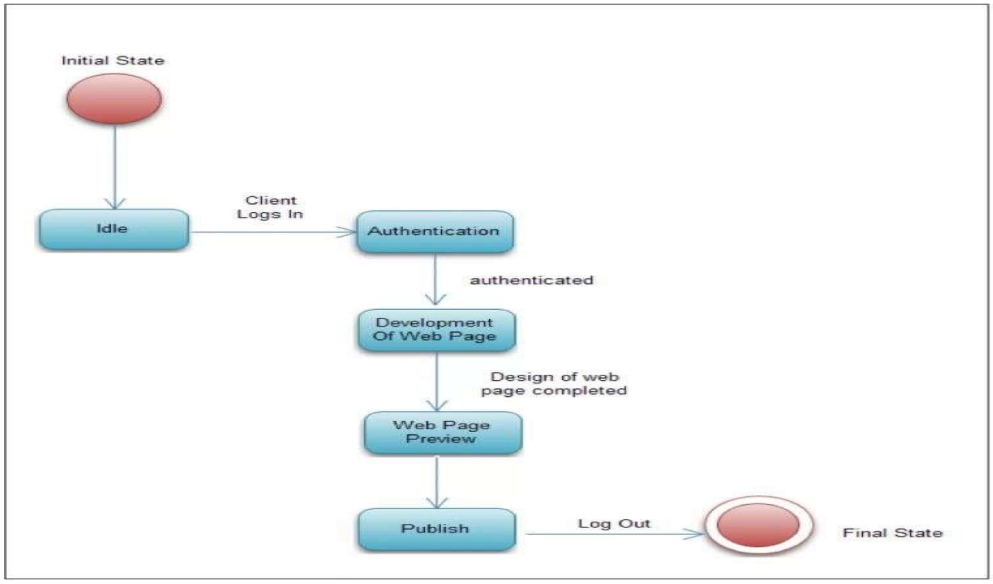
- **Visual Studio Code:** IDE for testing, debugging, and optimizing the web application to ensure smooth user experience.

DIAGRAM

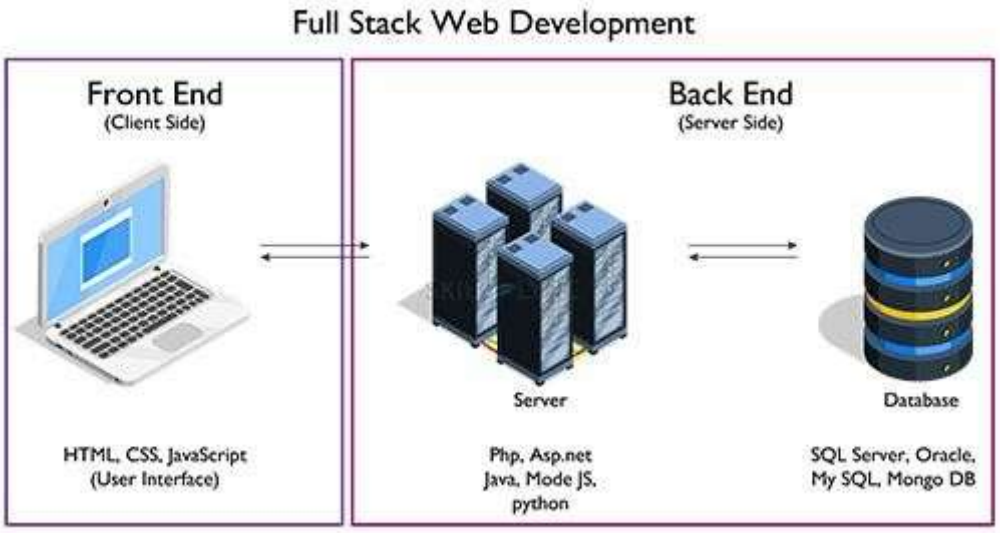
- **Use Case Diagram**



- **State Chart Diagram**



- **Full Stack Web Development**



Software Requirement Specification (SRS)

1. Introduction

1.1 Purpose

The purpose of this Software Requirement Specification (SRS) document is to define the requirements for the development of the Bookly web application. This document provides a detailed description of both functional and non-functional requirements, the system's design, and the constraints under which the application will be developed. The goal of Bookly is to offer an efficient platform for users to browse, purchase, and receive books at their doorstep with a smooth user experience.

1.2 Scope

Bookly is designed to enhance the book-buying experience by integrating a seamless user interface with powerful back-end functionalities. The system will support features such as book browsing, a shopping cart, secure payment integration, and a user authentication system. Future enhancements will include personalized recommendations, subscription-based services, and integration with third-party book review platforms.

1.3 Definitions, Acronyms, and Abbreviations

- UI: User Interface
- API: Application Programming Interface
- CRUD: Create, Read, Update, Delete
- DB: Database
- SaaS: Software as a Service
- ISBN: International Standard Book Number
- CMS: Content Management System

1.4 References

- HTML & CSS Documentation
- JavaScript Documentation
- PHP Documentation
- MySQL Documentation
- Payment Gateway API Documentation

1.5 Overview

This document outlines the requirements for Bookly, including system functionalities, user interactions, and performance criteria. It is intended for developers, project managers, and stakeholders involved in the project's development and deployment.

2. **Overall Description**

2.1 Product Perspective

Bookly is a web-based application designed to provide a seamless online book purchasing experience. It integrates front-end and back-end technologies to deliver a user-friendly platform for browsing, purchasing, and receiving books. The system will be deployed on a suitable web hosting platform and utilize GitHub for version control and collaboration.

2.2 Product Functions

- Book Browsing and Search: Users can explore a wide range of books, filter by genre, author, and other criteria, and easily find their desired titles.
- Shopping Cart and Checkout: Users can add books to their cart, review their selections, and proceed to a secure checkout process.
- Live Price Updates: Provides real-time book pricing and availability to ensure users get the most current information.
- Personalized Recommendations: Offers book suggestions based on user preferences, purchase history, and ratings.

- Order Tracking: Allows users to track the status of their orders, from purchase to delivery.

2.3 User Classes and Characteristics

- General Users: Individuals browsing books, reading descriptions, and making purchases without needing to sign in.
- Registered Users: Users who create an account, allowing them to save preferences, track orders, and receive personalized book recommendations.
- Admins: Users responsible for adding new books, managing inventory, processing orders, and handling customer inquiries.

2.4 Operating Environment

- Front-End: Compatible with modern web browsers (Chrome, Firefox, Safari, Edge) and optimized for both desktop and mobile devices.
- Back-End: Powered by PHP, with a MySQL database for managing user data, book inventory, and order information. External APIs will be integrated for payment processing and order tracking.

2.5 Design and Implementation Constraints

- Security: Basic security measures such as SSL encryption, user authentication, and payment data validation will be implemented to protect users' information.
- Performance: The application should be fast, responsive, and able to handle multiple users simultaneously without performance degradation.
- Compatibility: The system should be compatible with all major web browsers and adhere to best practices in web development.

2.6 Assumptions and Dependencies

- Internet Access: Users will need an internet connection to access and interact with the platform.
- Third-Party Services: Bookly will use services like GitHub for version control and hosting solutions to deploy the web application.

3. Requirement Specification

The **requirement specification** of the **Bookly** website outlines the functional and non-functional requirements necessary to ensure a smooth, efficient, and secure operation of the online bookstore. These specifications define the system's key capabilities and constraints that will guide its development and implementation.

1. Functional Requirements

1.1 User Authentication

- **Login/Registration**: Users must be able to create an account using an email and password or via third-party authentication services like Google or Facebook. Registered users can log in securely using their credentials.

- **Password Recovery**: Users should be able to reset their passwords using a valid email address.

1.2 Product Management

- **Product Catalog**: The website should display books in various categories such as fiction, non-fiction, science, and more. Each product should contain details like title, author, price, description, and a cover image.

- **Search and Filter**: Users should be able to search for books using keywords (title, author, ISBN) and filter by genre, price, ratings, etc.

- **Book Details Page**: Each book should have a detailed page showing its description, price, reviews, and availability.

1.3 Shopping Cart and Checkout

- **Add to Cart**: Users should be able to add books to their shopping cart with the option to adjust quantities or remove items.

- **Checkout Process**: The checkout process should be simple and include steps like confirming the cart, entering shipping details, and payment options.

- **Order Confirmation**: After a successful transaction, users should receive an order confirmation along with estimated delivery dates.

1.4 User Reviews and Ratings

- **Book Reviews**: Users can leave reviews for books they've purchased, with the ability to rate books on a scale (e.g., 1 to 5 stars).

- **Moderation**: Reviews should be monitored for inappropriate content before being published.

1.5 Admin Panel

- **Product Management**: Admins should have the ability to add, update, or remove products from the catalog.

- **User Management**: Admins should be able to view and manage user accounts, including blocking or deleting users if necessary.

- **Order Management**: Admins should be able to view and manage orders, including updating order status (e.g., shipped, delivered).

2. Non-Functional Requirements

2.1 Performance

- The website should load within **3 seconds** for optimal user experience.

- The system should be able to handle at least **500 concurrent users** without performance degradation.

2.2 Scalability

- The website should be designed to accommodate a growing product catalog and user base. It must allow for easy updates to both content and features.

2.3 Security

- **Data Encryption**: All sensitive user data, including personal and payment information, must be encrypted during transmission (via **SSL/TLS**).

- **Authentication**: Implement strong password policies and support multi-factor authentication for user accounts.

2.4 Usability

- The website should be user-friendly and intuitive, with easy navigation and a responsive design that works well on both desktop and mobile devices.

- The **Bookly** interface should have clear calls-to-action and simple steps for completing a purchase.

2.5 Availability and Reliability

- The website should have **99.9% uptime**, with minimal downtime for maintenance.

- **Backup**: Regular backups should be made to prevent data loss in case of system failure.

2.6 Compatibility

- The website must be compatible with major web browsers, including **Google Chrome, Firefox, Safari**, and **Microsoft Edge**.

- It should also work seamlessly on **mobile devices** (iOS, Android).

2.7 Maintainability

- The system should be easy to maintain, with clear documentation for developers to handle updates, bug fixes, and feature enhancements.

3. System Constraints

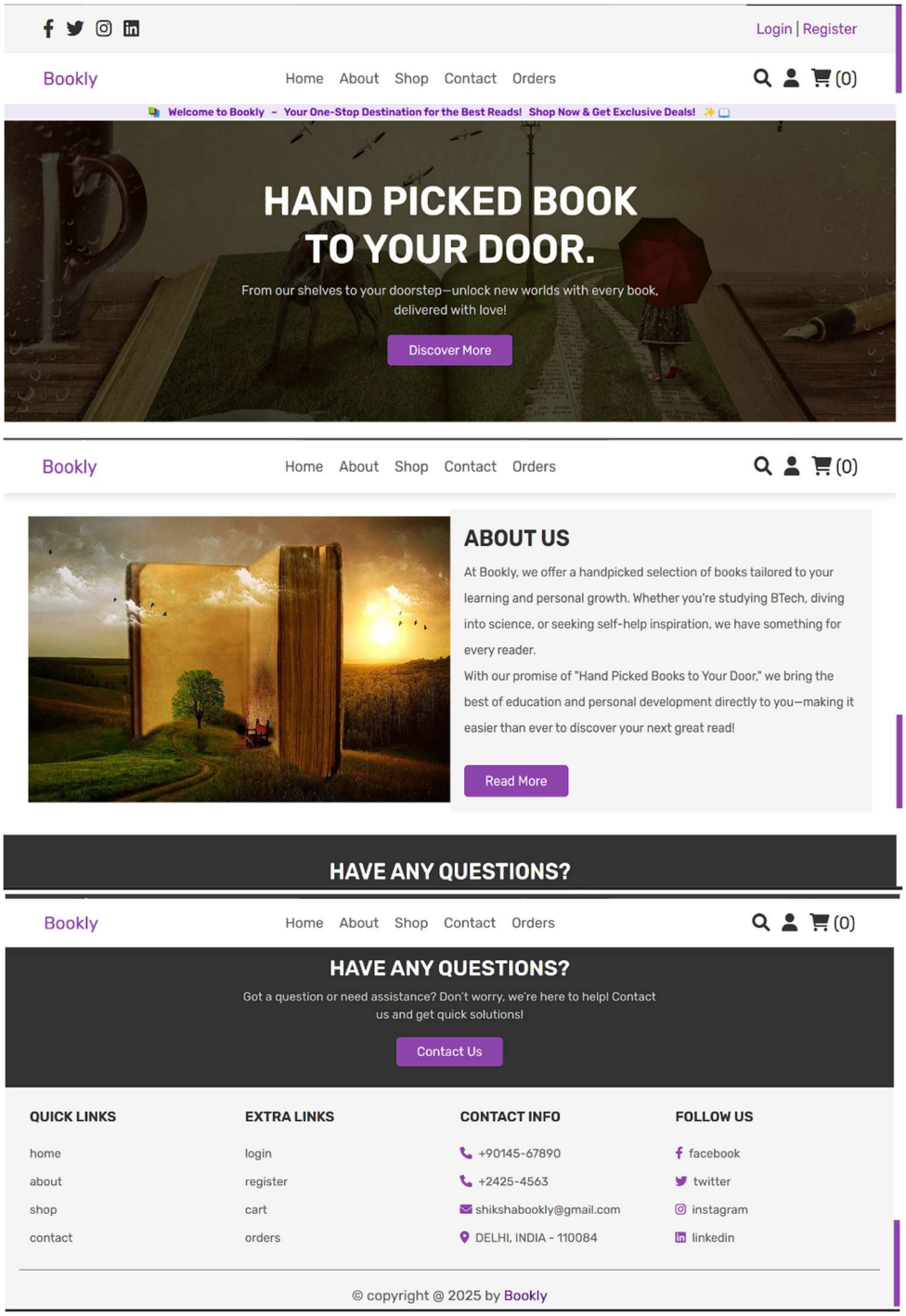
- **Hosting**: The website will be hosted on a **shared server** initially, with plans to migrate to a dedicated server as traffic increases.

- **Third-Party Integrations**: The website should integrate with third-party services like payment gateways, email services, and shipping providers.

- **Database**: The system will use a **MySQL database** for storing product, user, and order information.

ScreenShots

1. UserPanel



LOGIN NOW

abc123@gmail.com

.....

Login Now

don't have an account? register now

REGISTER NOW

ABC

abc123@gmail.com

.....

.....

user

Register Now

already have an account? login now

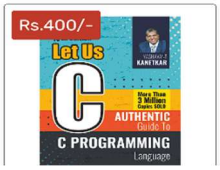
Login | Register

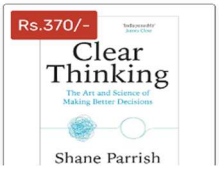
Bookly Home About Shop Contact Orders (0)

OUR SHOP

home / shop

LATEST PRODUCTS





Bookly Home About Shop Contact Orders (0)

YOUR ORDERS

home / orders

PLACED ORDERS

placed on : 31-Mar-2025

name : Vansh

number : 8956421345

email : vansh123@gmail.com

address : flat no. 52, model town, Delhi, India - 110003

payment method : cash on delivery

your orders : , Let Us C by Yashwant Kanetkar(Technical Book) (1) , Be Useful by Arnold(Self Help Book) (6)

total price : Rs.2020/-

payment status : completed

Bookly Home About Shop Contact Orders (2)

SHOPPING CART

home / cart

PRODUCTS ADDED

Bookly Home About Shop Contact Orders (2)

Let Us C by Yashwant Kanetkar(Technical Book)	Database Management System(Technical Book)
Rs.400/-	Rs.750/-
2 Update	1 Update
sub total : Rs.800/-	sub total : Rs.750/-

Delete All

grand total : Rs.1550/-

Continue Shopping | Proceed To Checkout

QUICK LINKS	EXTRA LINKS	CONTACT INFO	FOLLOW US
home	login	+90145-67890	facebook
about	register	+2425-4563	twitter

Login | Register

Bookly Home About Shop Contact Orders (2)

CHECKOUT

home / checkout

Let Us C by Yashwant Kanetkar(Technical Book) (Rs.400/- x 2)

Database Management System(Technical Book) (Rs.750/- x 1)

grand total : Rs.1550/-

PLACE YOUR ORDER

your name : enter your name

your number : enter your number

Bookly Home About Shop Contact Orders (2)

PLACE YOUR ORDER

your name : Vansh

your number : 9863542567

your email : vansh123@gmail.com

payment method : cash on delivery

address line 01 : 89

address line 01 : Shastri Park

city : Delhi

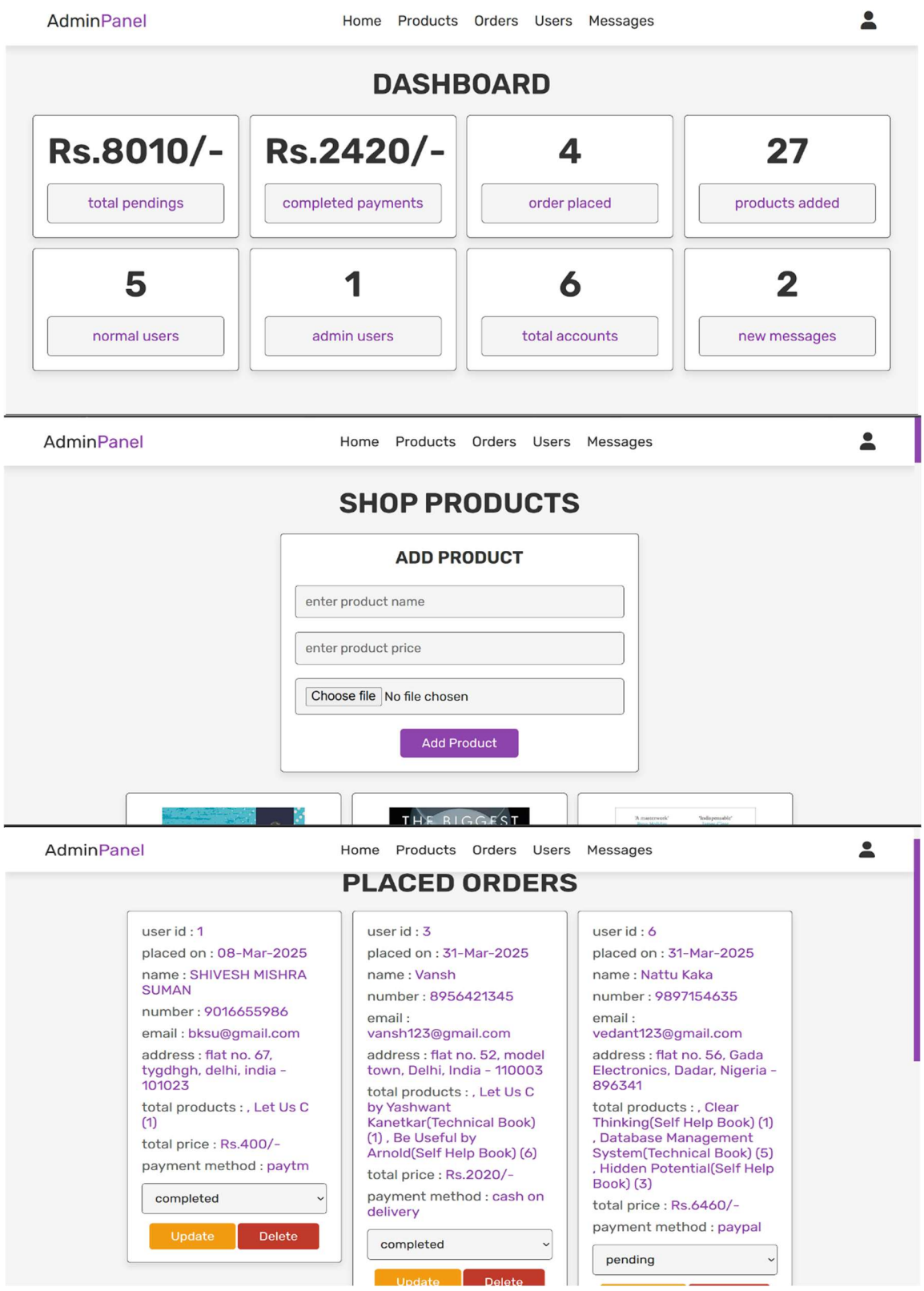
state : Delhi

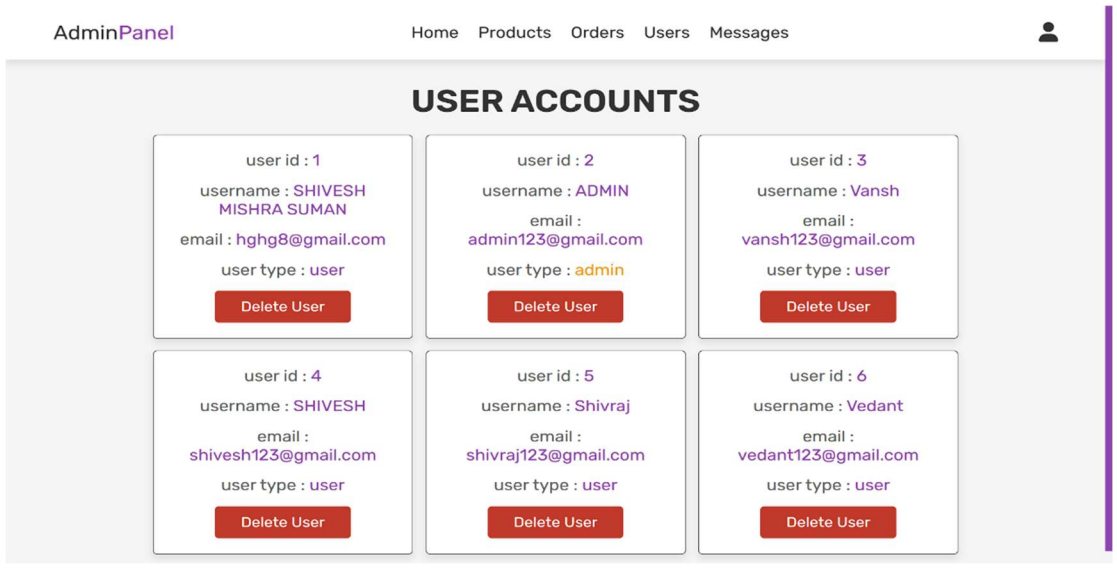
country : India

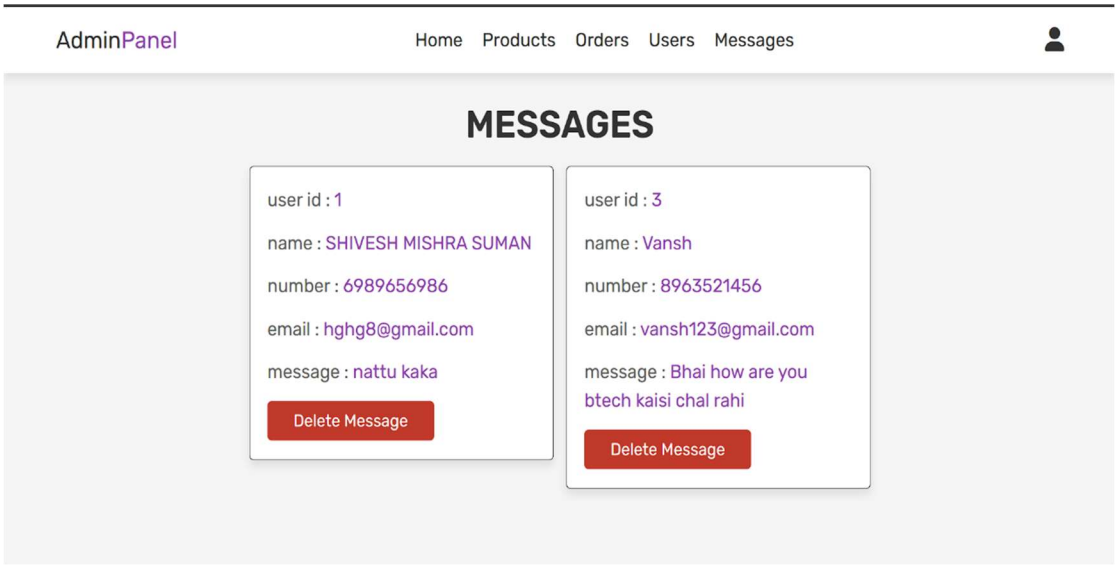
pin code : 112345

Order Now

2. AdminPanel




AdminPanel
Home Products Orders Users Messages
USER ACCOUNTS
user id : 1
username : SHIVESH MISHRA SUMAN
email : hghg8@gmail.com
user type : user
Delete User
user id : 2
username : ADMIN
email : admin123@gmail.com
user type : admin
Delete User
user id : 3
username : Vansh
email : vansh123@gmail.com
user type : user
Delete User
user id : 4
username : SHIVESH
email : shivesh123@gmail.com
user type : user
Delete User
user id : 5
username : Shivraj
email : shivraj123@gmail.com
user type : user
Delete User
user id : 6
username : Vedant
email : vedant123@gmail.com
user type : user
Delete User


AdminPanel
Home Products Orders Users Messages
MESSAGES
user id : 1
name : SHIVESH MISHRA SUMAN
number : 6989656986
email : hghg8@gmail.com
message : nattu kaka
Delete Message
user id : 3
name : Vansh
number : 8963521456
email : vansh123@gmail.com
message : Bhai how are you btech kaisi chal rahi
Delete Message

Future Scope

The **Bookly** website, while already offering a seamless book-buying experience, has significant potential for expansion and enhancement in the future. Below are some key areas for further growth:

1. Expansion of Product Catalog

- **Audiobooks**: Adding audiobooks would cater to users who prefer listening over reading, providing an additional revenue stream.
- **E-books**: Introducing a digital library would allow users to purchase and instantly download books in e-book formats.
- **Merchandise**: Expanding into book-related merchandise like bookmarks, reading glasses, and accessories could diversify the platform's offerings.

2. Advanced Recommendation System

- **Personalized Recommendations**: Leveraging machine learning, the website could recommend books based on user history and preferences.
- **Collaborative Filtering**: Suggestions could be made based on similar users' interests, helping users discover new books they might enjoy.

3. Subscription and Membership Plans

- **Book Subscriptions**: A monthly subscription model could offer users books based on preferences, delivering value and increasing engagement.
- **Premium Membership**: Premium users could access benefits like exclusive discounts, early book releases, and free shipping.

4. Enhanced Payment Options

- **Cryptocurrency Payments**: Integrating cryptocurrency options such as **Bitcoin** could attract a tech-savvy audience.

- **Installment Payments**: Services like **Klarna** or **Afterpay** could provide flexible payment options, allowing users to pay in installments.

5. Mobile Application Development

- **iOS and Android Apps**: Native mobile apps would provide a smoother, on-the-go user experience with features like push notifications, offline browsing, and easy checkout.

- **Push Notifications**: Users could receive updates about discounts, new arrivals, and their order statuses directly on their mobile devices.

6. Improved User Interface (UI/UX)

- **Advanced Search Filters**: Introducing more refined search options like genre, ratings, and release year would make finding books easier.

- **Dark Mode**: Adding a dark mode option would cater to users who prefer a darker interface, especially for late-night browsing.

- **Streamlined Navigation**: Simplifying the checkout process and improving the website's overall navigation would enhance user satisfaction.

Conclusion

Bookly marks a significant advancement in streamlining the online book-buying experience, offering a convenient, interactive, and user-friendly platform that brings a wide variety of books directly to users' doorsteps. Designed with the intent to simplify the book-shopping journey, Bookly provides a seamless experience for book lovers, from browsing to purchase.

Summary of Achievements

- Full Stack Integration: The platform integrates a dynamic front-end, built with HTML, CSS & JavaScript, paired with a robust backend powered by PHP. The backend handles user interactions, order management, and payment processing efficiently, ensuring smooth transactions.
- Key Functional Features: Core features include a streamlined book search, detailed book listings, a secure checkout system, user reviews, and personalized recommendations. These functionalities work together to provide users with a comprehensive and enjoyable shopping experience.
- User Experience: With an emphasis on simplicity and aesthetics, Bookly boasts an intuitive interface designed to facilitate easy navigation. The platform is responsive, fast, and secure, ensuring that users can shop with confidence and ease.

Reflections on the Development Process

The development of Bookly presented a range of challenges, including the integration of various technologies, maintaining a user-friendly interface, and ensuring the security of user data. The project provided valuable insights into e-commerce web development, underscoring the importance of balancing back-end functionality with an optimal front-end experience.

Future Prospects

Looking ahead, Bookly plans to introduce several exciting enhancements, such as:

- Backend Optimization and Database Expansion: Incorporating advanced backend systems and scalable databases to manage a growing inventory and handle more complex user interactions.
- Subscription Model: Introducing a subscription service to provide users with access to exclusive content, discounts, and early book releases.
- Personalized Book Recommendations: Using machine learning algorithms to tailor book suggestions based on user preferences and browsing history.
- AI Chatbot: Integrating an AI-powered assistant to offer instant support, assist with book recommendations, and answer customer queries, further enhancing user experience. These additions will enhance the platform's value, offering more personalized and convenient shopping options for users.

Final Thoughts

Bookly has successfully created a strong foundation for an innovative book-buying platform. The project has met its initial objectives, with potential for growth and continuous improvement. As e-commerce technology evolves, Bookly is well-positioned to expand its offerings, ensuring a more enriched and interactive experience for its users.
The process of developing this platform has been both challenging and rewarding, providing a deeper understanding of e-commerce development and the influence of technology in shaping user experiences within the online retail industry.

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