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Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)

E-Commerce Website For Book Store

**CSI1007 – Software Engineering Principles
Laboratory**

23MID0026

B Varun

E-Commerce Website For Book Store



Description of the Project: A full-stack e-commerce application for buying and selling books.



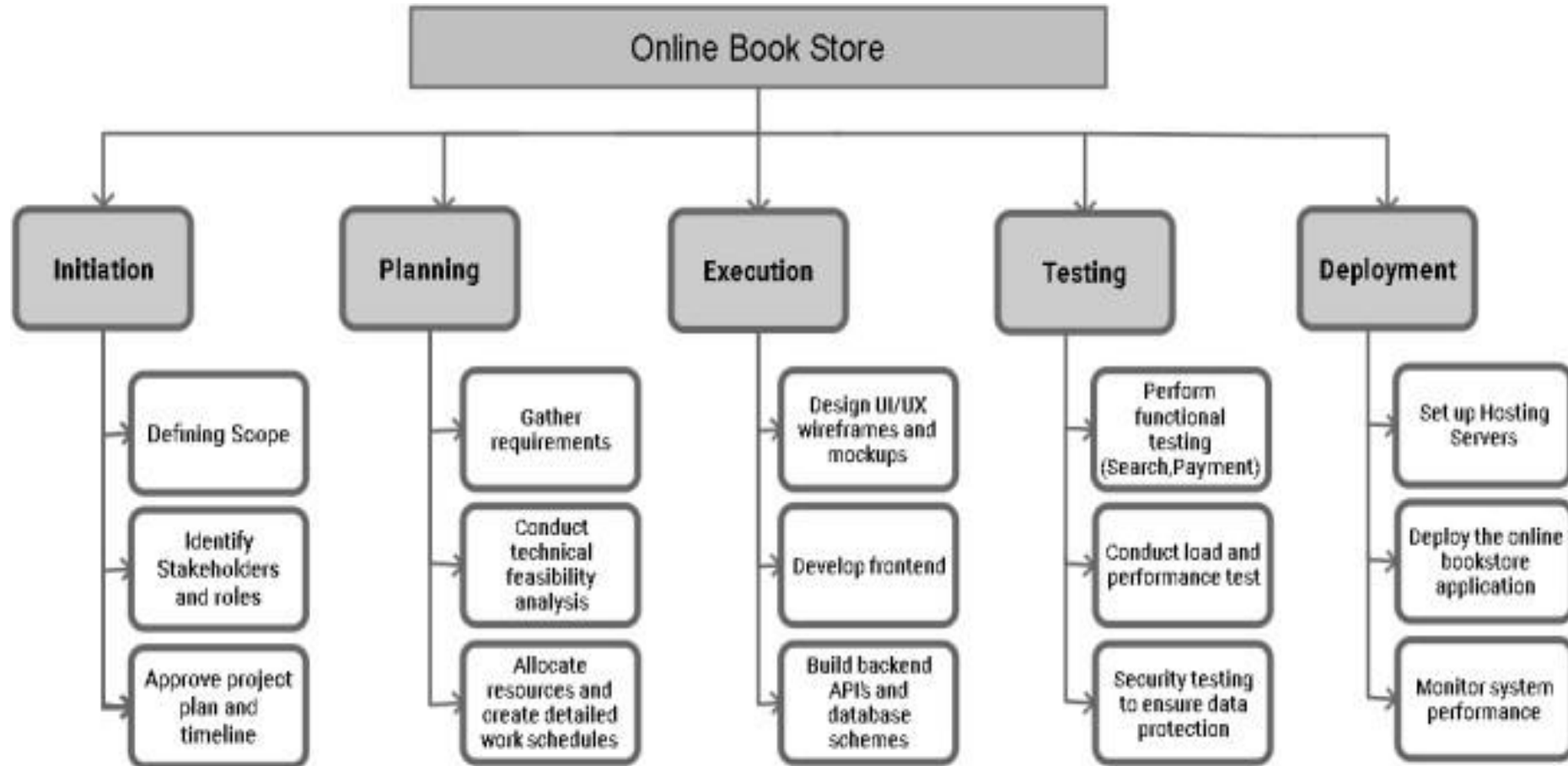
Scope of the Project: To develop a secure, user-friendly e-commerce platform for a bookstore, enabling users to browse, search, and purchase books online.



Impact of the developing Project: To expand market reach and enhance community engagements and accessibility, and reduce carbon emissions from fewer store visits, through it may increase packaging waste.

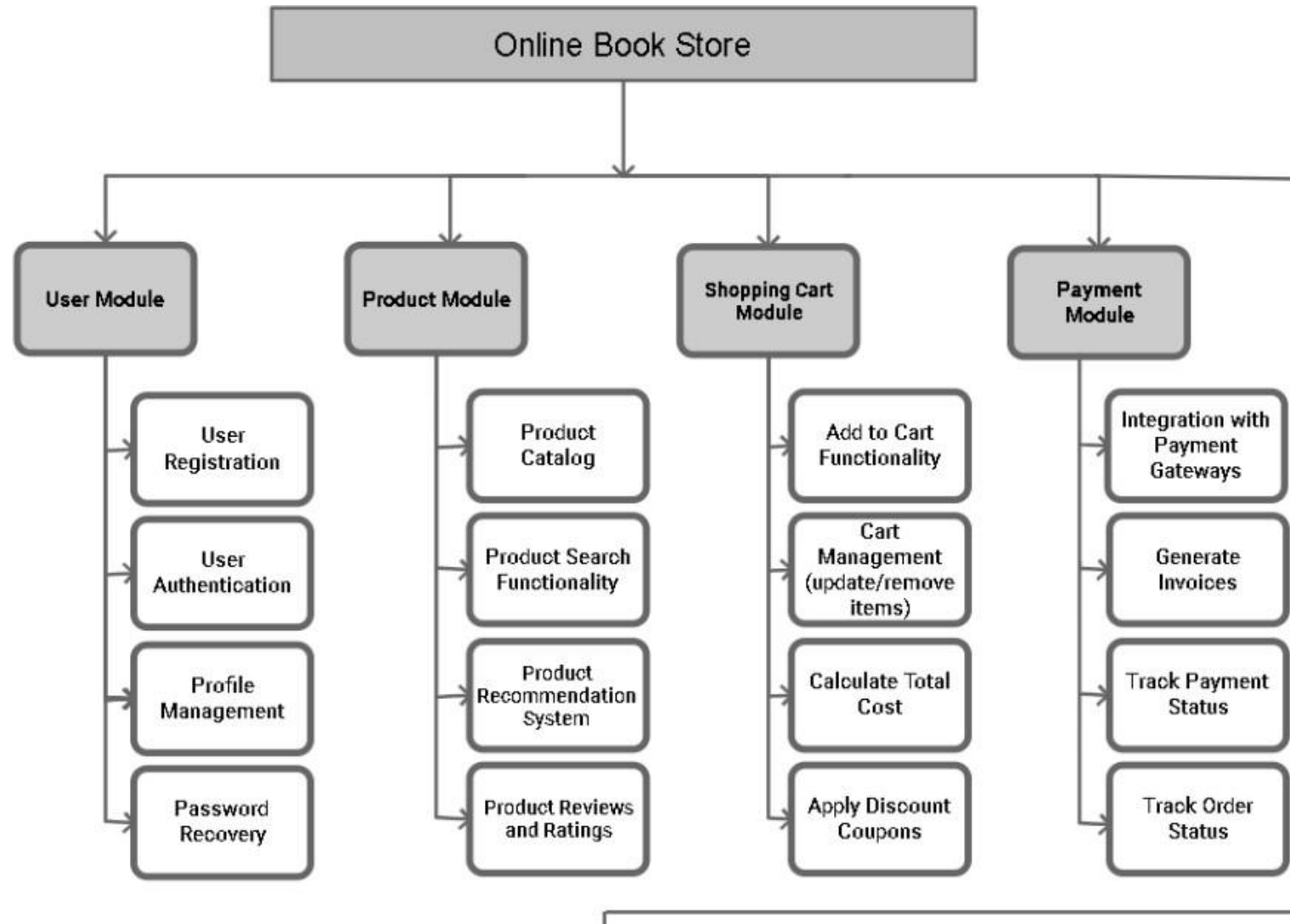
Work Breakdown Structure

- Process-Based Work Breakdown Structure

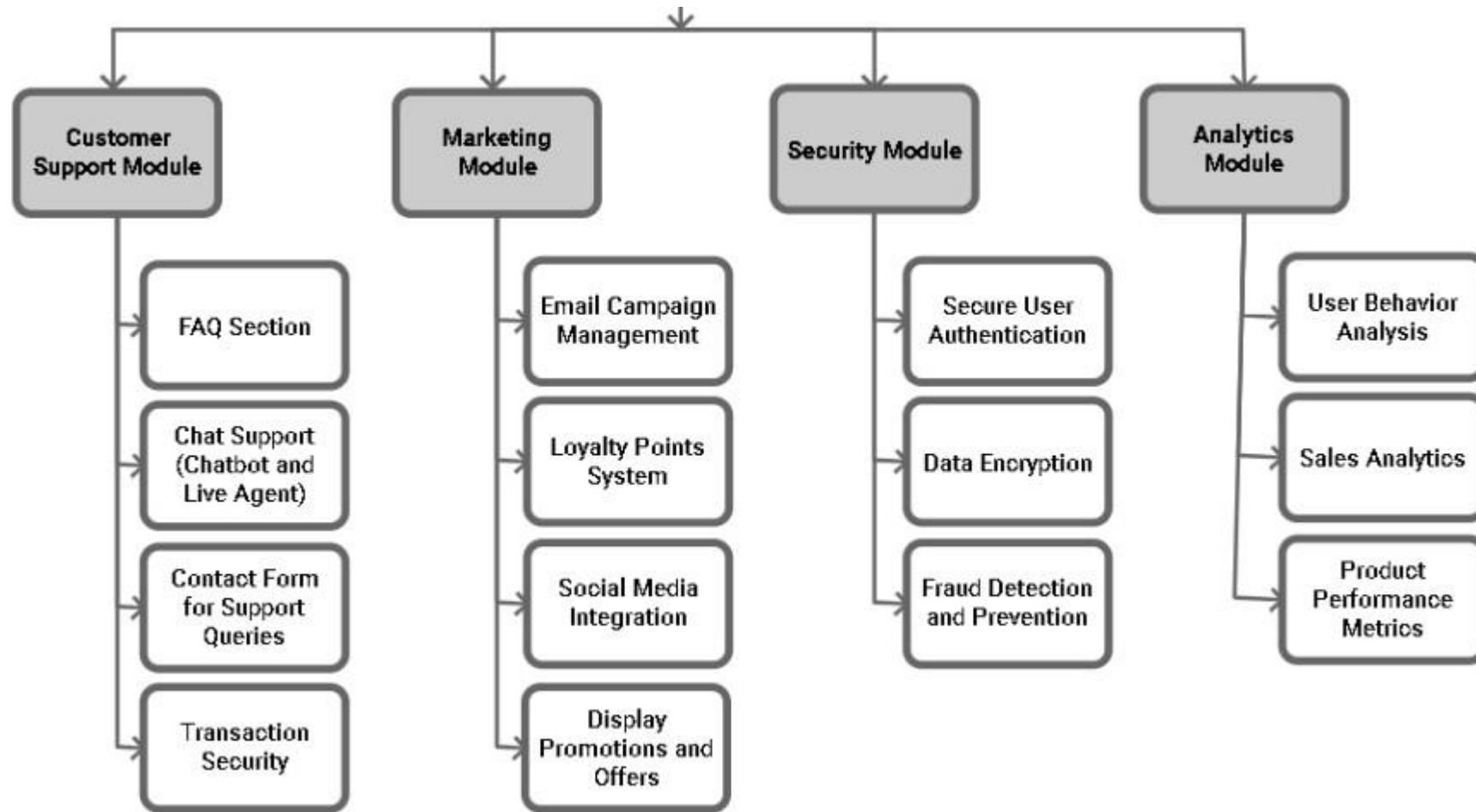


Work Breakdown Structure

- Product-Based Work Breakdown Structure



Cont.



SRS Document

Functional Requirements

Customer Interface:

- Home Page: Displays featured books, search functionality, and promotional banners.
- Search and Browse Interface: Allows users to search for books by title, author, genre, or ISBN and filter results by price, rating, or availability.
- Book Details: Provides detailed information about a selected book, including a synopsis, author biography, price, and user reviews.
- Shopping Cart and Checkout: Enables users to add books to their cart, review their selections, and proceed with secure payments.
- User Account Management: Offers functionalities for managing personal information, order history, and wishlists.

Store Administrator Interface:

- Inventory Management: Enables administrators to add, update, or remove books from the catalog and manage stock levels.
- Order Management: Facilitates the tracking and processing of customer orders.
- Analytics Dashboard: Displays key metrics such as sales performance, popular books, and customer trends.

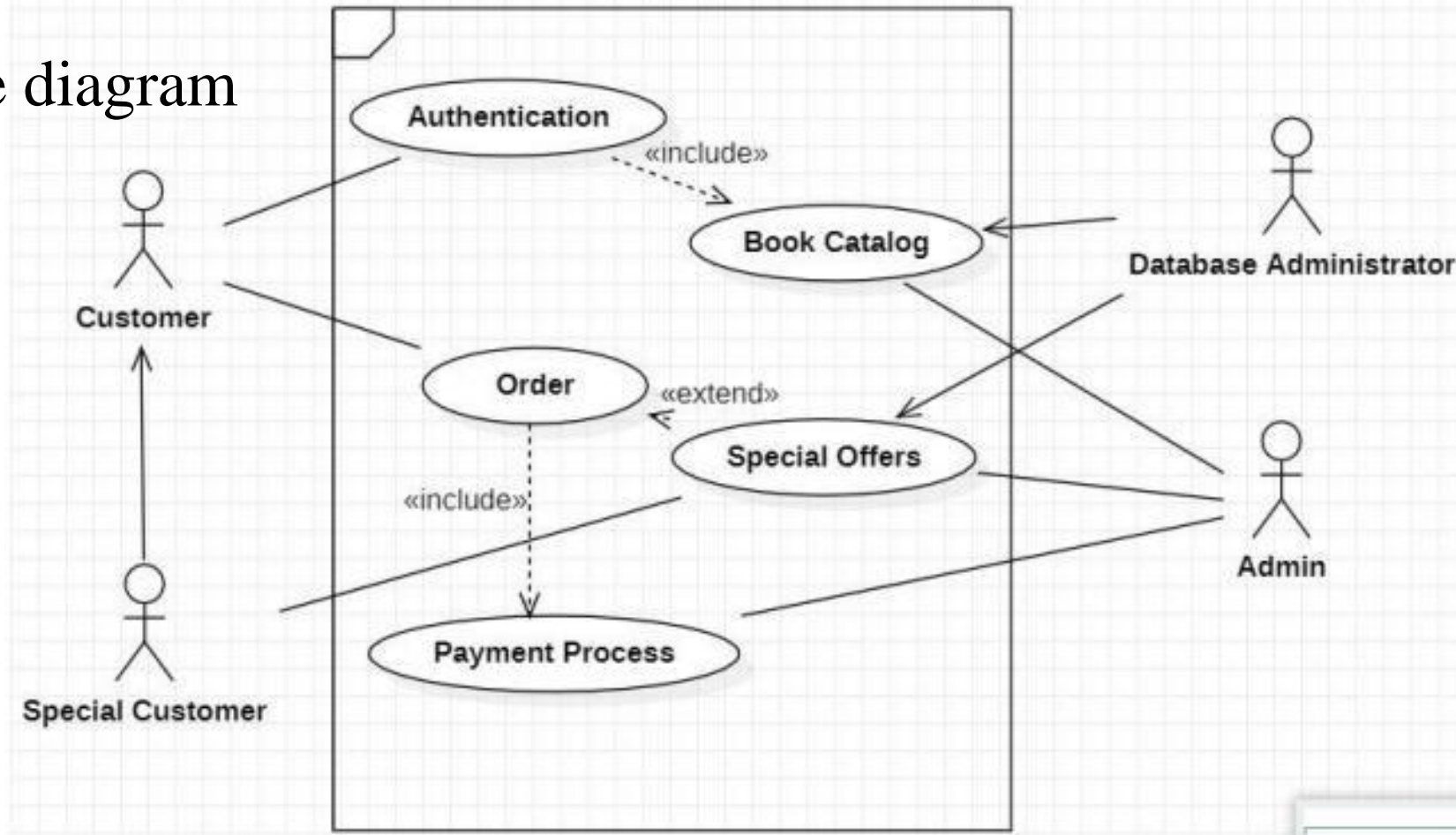
SRS Document

Non-Functional Requirements

- **Usability:** Provide a user-friendly interface with clear navigation, enabling users to easily browse, purchase, and track orders.
- **Scalability:** Design the platform to handle growing user demand and inventory sizes efficiently.
- **Response Time:** Ensure the maximum response time for system operations such as user login, book search, and checkout does not exceed 2 seconds under normal conditions.
- **Throughput:** Support processing of up to 1,000 orders per second during peak periods without system degradation.
- **Concurrency:** Allow up to 100,000 simultaneous users to browse, search, and purchase books without affecting performance or stability.
- **Availability:** Ensure a minimum of 99.99% system uptime, excluding scheduled maintenance, to provide consistent access to customers worldwide.
- **Fault Tolerance:** Implement mechanisms to recover from failures such as server crashes or network outages without data loss or service disruption.
- **Responsiveness:** Ensures website design adapts and renders well across various devices and screen sizes maintaining optimal usability and appearance.

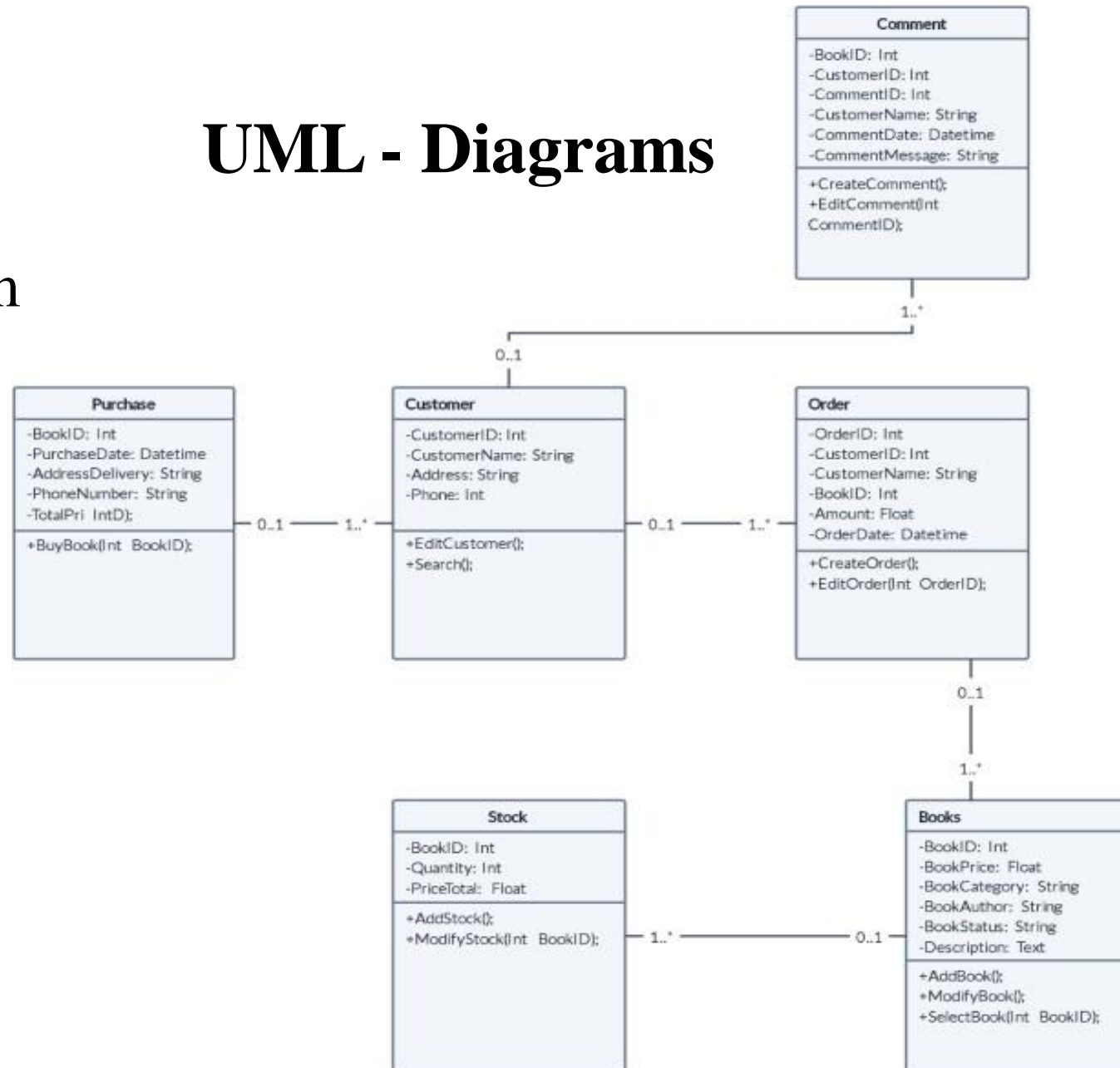
UML - Diagrams

- use-case diagram



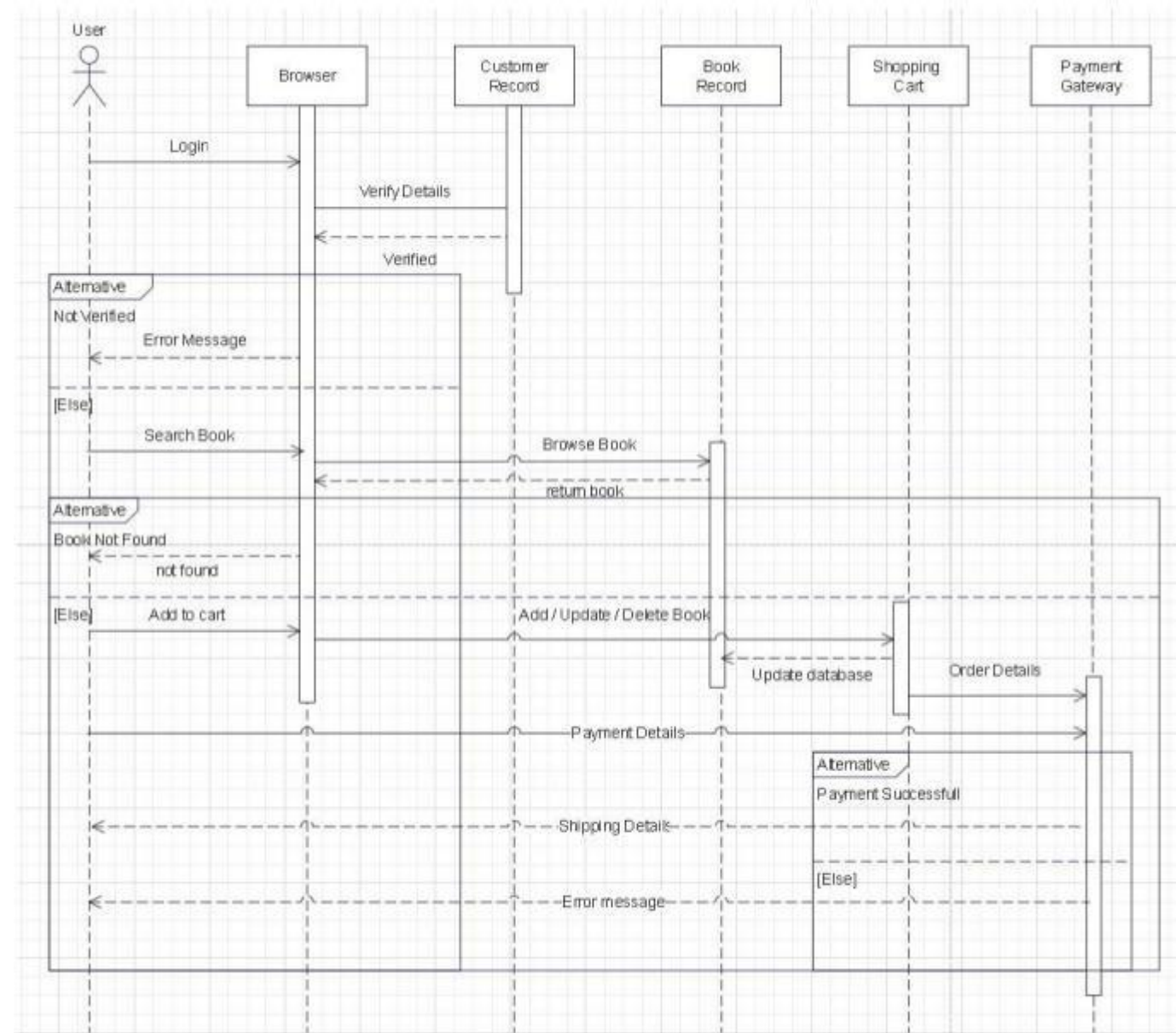
UML - Diagrams

- class diagram



UML - Diagrams

- sequence diagram



Testing

TEST CASE 1: Verify Gmail Login for New Account Creation

TEST CASE ID: TC001

TEST SCENARIO: Ensure that a new user can create an account using Gmail login

TEST CASE DESCRIPTION: Validate that the user can register successfully using Gmail authentication and access the online bookstore.

TEST DATA:

- Valid Gmail: user@gmail.com (with correct credentials)
- Invalid Gmail: wronguser@gmail.com (wrong credentials)

EXPECTED RESULT:

- If valid Gmail credentials are used, the account should be created, and the user should be redirected to their homepage.
- If invalid credentials are used, an error message like “Invalid email or password” Should appear.

ACTUAL RESULT:

- Valid credentials: Successfully signed up and redirected to homepage.
- Invalid credentials: Error message displayed.

PASS/FAIL: Pass.

Testing

TEST CASE 2: Verify add to cart functionality

TEST CASE ID: TC004

TEST SCENARIO: ensure that users can add books to cart

TEST CASE DESCRIPTION: validate that users can add books to cart and purchase later

Test Steps:

1. Open online book store app
2. Login in using Gmail
3. Search for a book
4. Click on “Add to cart”
5. Navigate to the cart section
6. Verify that the book is added to the cart

EXPECTED RESULT:

- The book should be saved in the cart

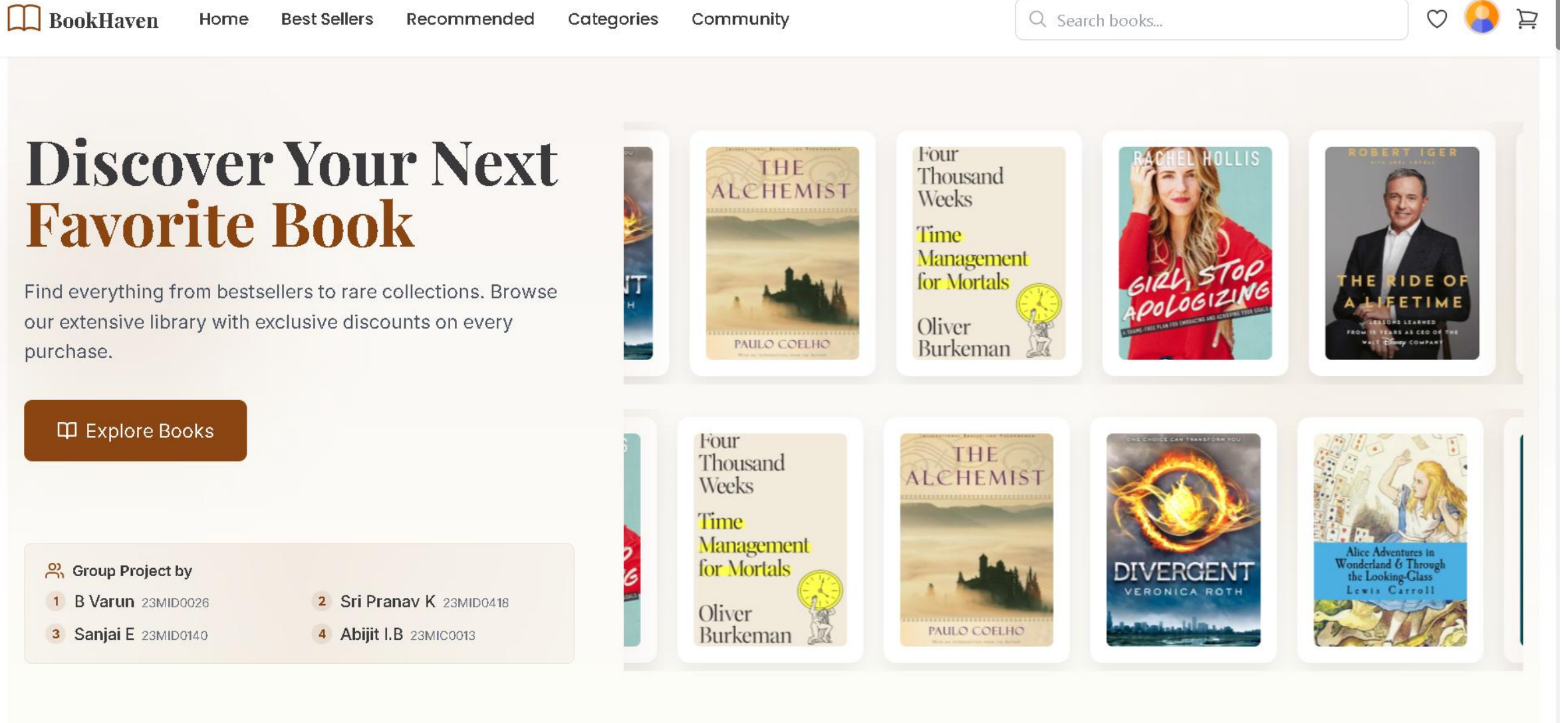
ACTUAL RESULT:

- Book successfully added to cart

PASS/FAIL: Pass

Project – UI Screenshots

Home Page



Project – UI Screenshots

Login/Signup Page

[Home](#)[Best Sellers](#)[Recommended](#)[Categories](#)[Community](#)

Login to Your Account

Welcome back! Please enter your details

Email

Password

Login

Don't have an account? [Register](#)

Or continue with

 Sign in with Google

Project – UI Screenshots

Book Catalog

Bestsellers & Deals

Discover popular books loved by readers worldwide and exclusive limited-time offers

[View all books →](#)

 **Bestsellers**  Limited-Time Deals

All Books

Business

Fiction

Horror

Adventure

Technical



BUSINESS

Find a Sponsor

Who's pulling for you? Who's got your back? Who's putting your hat i...

₹499 ~~₹599~~ Unknown

 Add to Cart



TECHNOLOGY

The Future Is Faster Than You

In their book Abundance, bestselling authors and futurists Peter...

₹411 ~~₹697~~ Unknown

 Add to Cart



HORROR

Right Behind You

Right Behind You is a collection of 13 horror stories of different genres....

₹195 ~~₹295~~ Unknown

 Add to Cart



HORROR

The Wind on Haunted Hill

A gorgeously illustrated spooky story for young readers by India's most...

₹150 ~~₹400~~ Unknown

 Add to Cart



BUSINESS

Standing Out while Blending In

Standing Out While Blending In explores how to maintain individual...

₹1175 ~~₹1600~~ Unknown

 Add to Cart

Project – UI Screenshots

Product Page

 BookHaven

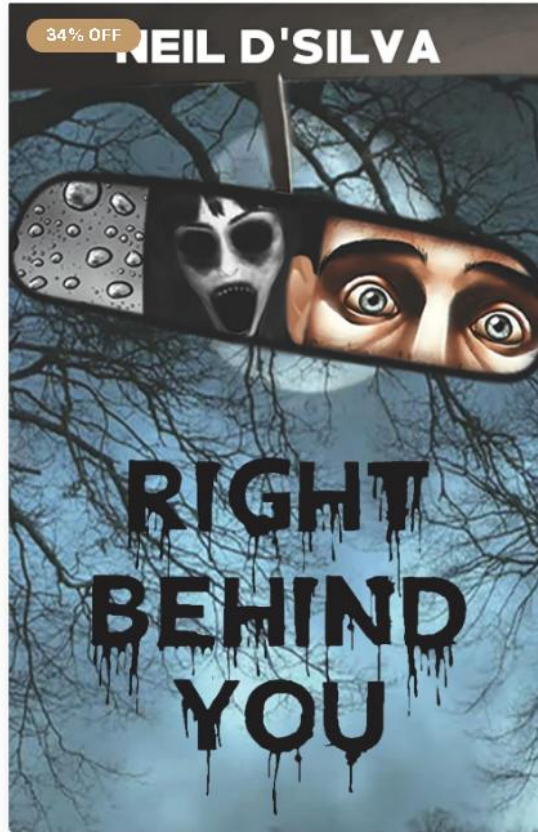
[Home](#)

[Best Sellers](#)

[Recommended](#)

[Categories](#)

[Community](#)



HORROR Published: March 23, 2025

Right Behind You

By Unknown Author

₹195 ~~₹295~~

 Add to Cart

Buy Now

Description

Right Behind You is a collection of 13 horror stories of different genres. The thing that connects these stories is the emotion of our inner fears that resides in all of us. We might mask these fears, we might even deny them, but they emerge when least expected and then they begin to encroach upon every aspect of our lives. In this collection of assorted horror stories, you will find noir horror, urban myths, fantasies, campfire tales, stories of phobias, gore, and even a story that takes place entirely on chat. An e-horror story, if you could call it that. Just like a rollercoaster is a source of unexpected adventure and you won't find its shocks and thrills unless you actually ride on it, you won't get the real experience of Right Behind You unless you read it. So, sit back, fasten your seatbelts, and plunge into the drive.

Product Details

Category: Horror

Publication: 2025

Product ID: 67e00d0e




Project – UI Screenshots

Shopping Cart

[← Continue Shopping](#)

Your Shopping Cart

[🗑 Clear Cart](#)

	Right Behind You Category: Horror	₹195	<div>– 1 +</div> <div>🗑 Remove</div>
	The Wind on Haunted Hill Category: Horror	₹150	<div>– 1 +</div> <div>🗑 Remove</div>
	Find a Sponser Category: Business	₹499	<div>– 1 +</div> <div>🗑 Remove</div>

Order Summary

Subtotal	₹844.00
Shipping	Calculated at checkout
Taxes	Calculated at checkout
Total	₹844.00

🛒 Proceed to Checkout

Project – UI Screenshots

Order Placement Page

Cash On Delevary

Total Price: ₹844.00

Items: 3

Personal Details

Please fill out all the fields.

Full Name

Email Address

Phone Number

Address / Street

City

Country / region

 × ▲

State / province

 × ▲

Zipcode

☐ I am agree to the [Terms & Conditions](#) and [Shoping Policy](#).

Place an Order

Project – UI Screenshots


User Dashboard

My Dashboard



Welcome back, User!

U

varun452005@gmail.com
Member since 3/24/2025

 **Your Orders (1)**

Track and manage your book purchases

 Order #4f0563da
 3/10/2025 at 12:59 AM

Pending ₹40 ▾

Project – UI Screenshots

Order Details Page

Your Orders

1

Order ID: 67cdec1903fe75a44f0563da

Name: werg

Email: varun452005@gmail.com

Phone: 65126265152

Total Price: ₹40

Address:

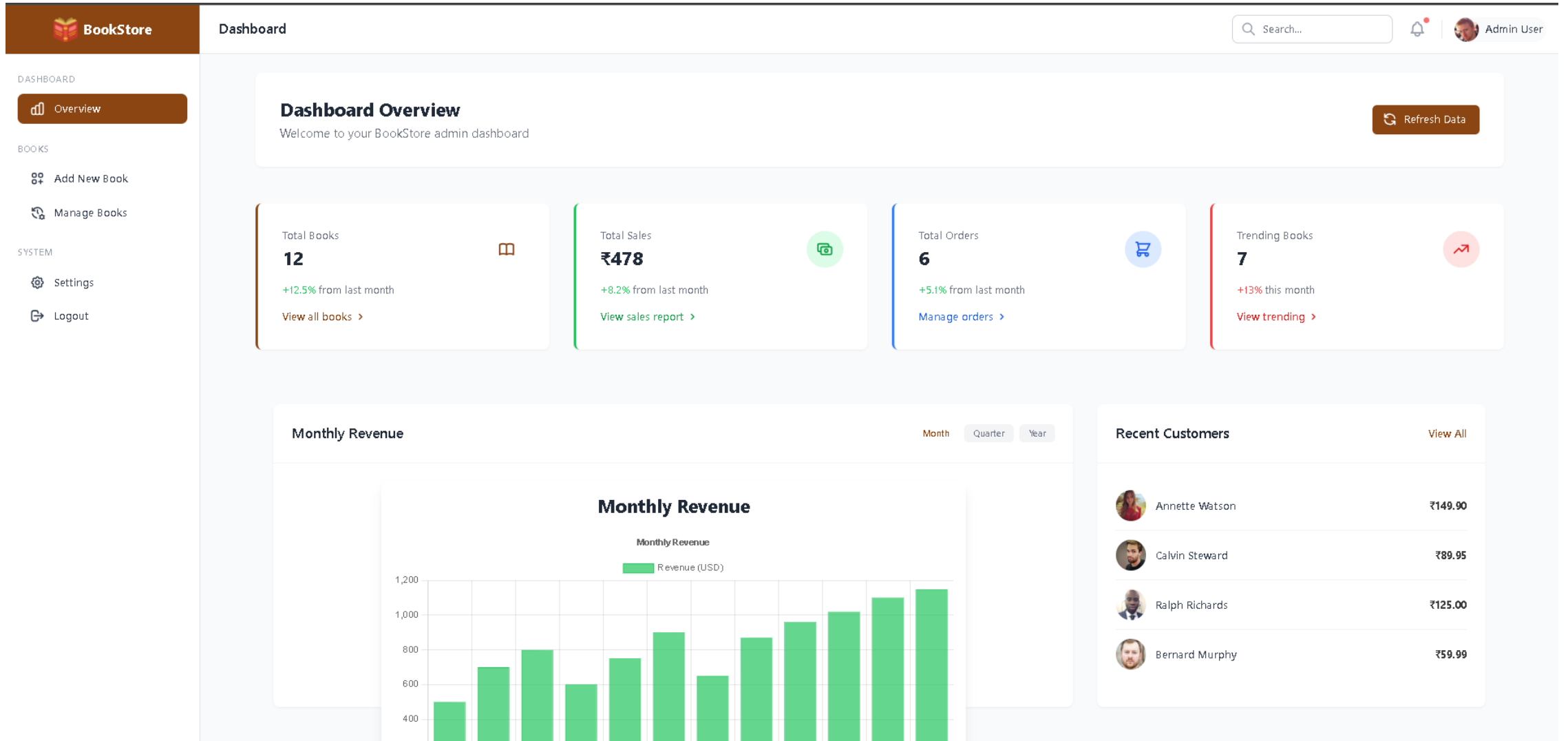
HYDERABAD, Telangana, India, 500008

Products Id:

6772c575ab90f6dd193417e5

Project – UI Screenshots


Admin Page for Store Administrator




Project – UI Screenshots

Adding new Books

[Dashboard](#)



 Admin User

Add New Book

Title

Enter book title

Description

Enter book description

Category

Choose A Category

☐ Trending

Old Price (₹)

Old Price in Rupees

New Price (₹)

New Price in Rupees

Cover Image

Choose File

No file chosen

Add Book

Project – UI Screenshots

Managing/Modifying Book Details

All Books					SEE ALL
#	BOOK TITLE	CATEGORY	PRICE	ACTIONS	
1	Find a Sponser	business	₹499	Edit	Delete
2	The Future Is Faster Than You	technology	₹411	Edit	Delete
3	Right Behind You	horror	₹195	Edit	Delete
4	The Wind on Haunted Hill	horror	₹150	Edit	Delete
5	Standing Outwhile Blending In	business	₹1175	Edit	Delete
6	DANDADAN	fiction	₹270	Edit	Delete
7	VINLAND SAGA	fiction	₹580	Edit	Delete
8	BLEACH	adventure	₹370	Edit	Delete
9	Haikyu	adventure	₹350	Edit	Delete
10	NARUTO	fiction	₹450	Edit	Delete
11	ATTACK ON TITAN	fiction	₹1100	Edit	Delete
12	ONE PIECE	fiction	₹600	Edit	Delete

Project – UI Screenshots

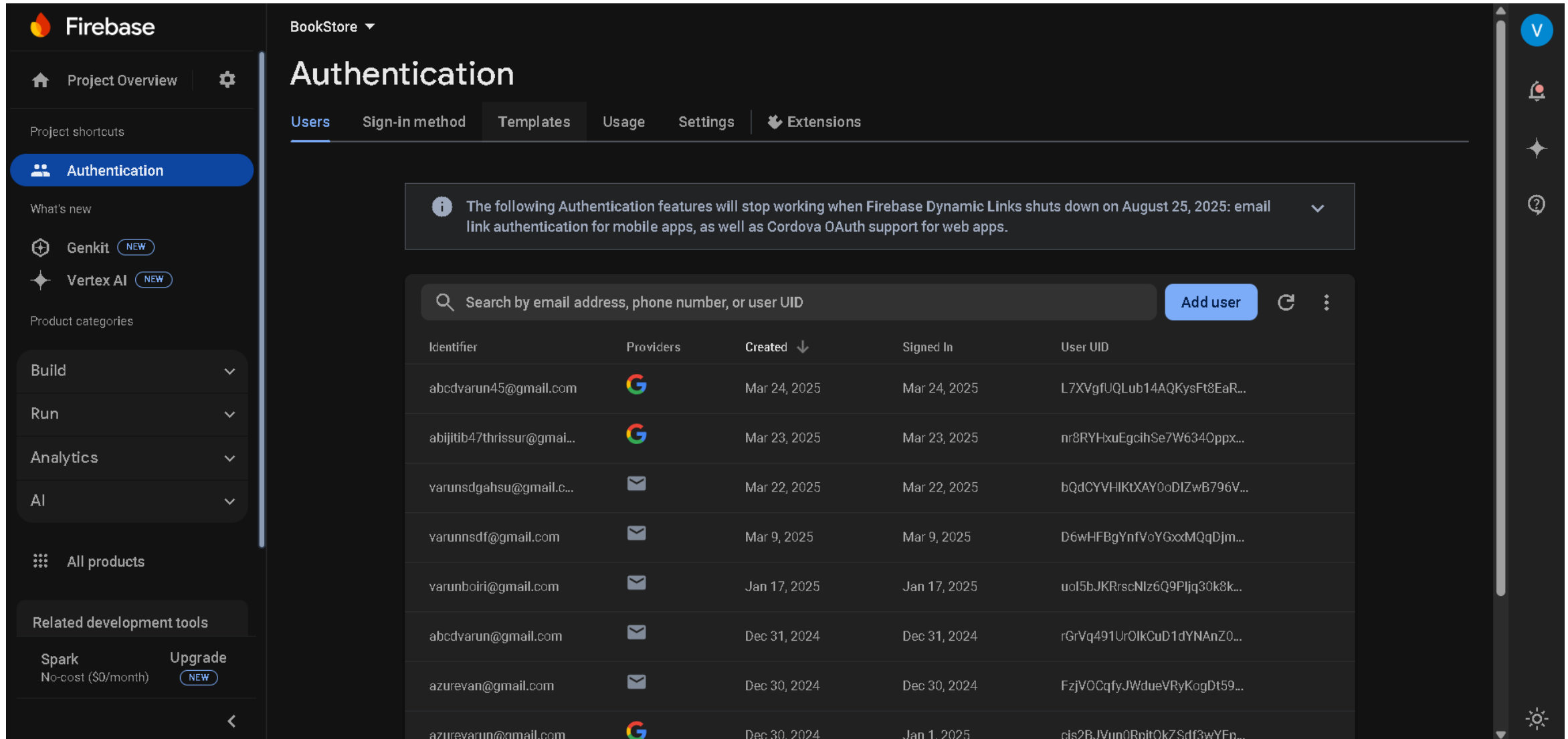
Database Management using MongoDB

The screenshot displays the MongoDB Atlas web interface. At the top, the Atlas logo is on the left, and navigation links for 'Varun's Org ...', 'Access Manager', and 'Billing' are in the center. On the right, there are links for 'All Clusters', 'Get Help', and a user profile 'Varun'. Below this, a breadcrumb trail shows 'book-store-mer...' followed by 'Data Services' and 'Charts'. The left sidebar contains a navigation menu with sections: 'Overview', 'DATABASE' (with sub-items 'Clusters', 'SERVICES', 'Atlas Search', 'Stream Processing', 'Triggers', 'Migration', 'Data Federation'), 'SECURITY' (with sub-items 'Quickstart', 'Backup', 'Database Access', 'Network Access', 'Advanced'), and 'Goto'. The main content area shows the path 'VARUN'S ORG - 2024-12-30 > BOOK-STORE-MERN-APP > DATABASES'. Below this is the 'Cluster0' header with 'VERSION 8.0.5' and 'REGION AWS Mumbai (ap-south-1)'. A horizontal tab bar includes 'Overview', 'Real Time', 'Metrics', 'Collections' (selected), 'Atlas Search', 'Query Insights', 'Performance Advisor', 'Online Archive', 'Cmd Line Tools', and 'In'. Below the tabs, it states 'DATABASES: 1 COLLECTIONS: 3' and provides buttons for 'VISUALIZE YOUR DATA' and 'REFRESH'. On the left of the main panel, there is a '+ Create Database' button and a search bar 'Search Namespaces'. Below the search bar, a tree view shows 'book-store' expanded, with 'books' selected. The main panel displays the 'book-store.books' collection with statistics: 'STORAGE SIZE: 36KB', 'LOGICAL DATA SIZE: 5.76KB', 'TOTAL DOCUMENTS: 12', and 'INDEXES TOTAL SIZE: 36KB'. It includes tabs for 'Find', 'Indexes', 'Schema Anti-Patterns', 'Aggregation', and 'Search Indexes'. A text input field for queries is present with a 'Filter' button and a 'Type a query: { field: 'value' }' placeholder. To the right of the input is an 'INSERT DOCUMENT' button. Below the input, it shows 'QUERY RESULTS: 1-12 OF 12' and a sample document:

```
{
  "_id": ObjectId('67dfe47b3882de601581533'),
  "title": "ONE PIECE",
  "description": "MANGA",
  "category": "fiction",
  "trending": true,
  "coverImage": "one_piece.jpg",
  "oldPrice": 500
}
```


Project – UI Screenshots

User Authentication using Firebase



BookStore ▾

Authentication

[Users](#) | [Sign-in method](#) | [Templates](#) | [Usage](#) | [Settings](#) | [Extensions](#)

Warning: The following Authentication features will stop working when Firebase Dynamic Links shuts down on August 25, 2025: email link authentication for mobile apps, as well as Cordova OAuth support for web apps.

Search by email address, phone number, or user UID [Add user](#) [Refresh](#) [More](#)

Identifier	Providers	Created ▾	Signed In	User UID
abcdvarun45@gmail.com		Mar 24, 2025	Mar 24, 2025	L7XVgfUQLub14AQKysFt8EaR...
abijitb47thrissur@gmai...		Mar 23, 2025	Mar 23, 2025	nr8RYHxuDgcihSe7W6340ppx...
varunsdgahsu@gmail.c...		Mar 22, 2025	Mar 22, 2025	bQdCYVHIKtXAY0oDIZwB796V...
varunnsdf@gmail.com		Mar 9, 2025	Mar 9, 2025	D6wHFBgYnfVoYGxxMQqDjm...
varunboiri@gmail.com		Jan 17, 2025	Jan 17, 2025	uoI5bJKRrscNlz6Q9PIjq30k8k...
abcdvarun@gmail.com		Dec 31, 2024	Dec 31, 2024	rGrVq491UrOIkCuD1dYNAnZ0...
azurevan@gmail.com		Dec 30, 2024	Dec 30, 2024	FzjVOCqfyJWdueVRyKogDt59...
azurevarun@gmail.com		Dec 30, 2024	Jan 1, 2025	cis2BJVun0RpitOkZSdf3wYFp...

THANK YOU