The Open University of Sri Lanka

EEY4189 Software Design in Group 2024/25

Project Proposal

BookNet

Online Bookshop System

Group Members

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Himal 2025/08/29

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(Supervisor signature and the approval)

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1.Introduction and Background

With the rapid growth of e-commerce and digital services, people now expect convenience and integration in one place. Traditional bookshops and printing centers mostly depend on manual processes, which limits efficiency and accessibility. Customers often face difficulties because they have to visit different places for buying books, printing, typing, or editing services.

BookNet is proposed as an online system that brings all these services together in one platform. It is designed using **software engineering concepts** such as **modularity** (separating book sales, printing, and delivery tracking into components), **scalability** (supporting future growth like mobile apps), and **usability** (a simple and user-friendly interface). By following a structured **software development process**, this system aims to deliver a reliable, efficient, and maintainable solution that benefits students, professionals, and shop owners alike.

2.Problem Statement

At present, customers who need books, printing, typing, or editing services must visit different shops or use separate platforms. This creates inconvenience, wastes time, and sometimes leads to errors in managing orders.

The main users of this system can be identified as:

- **Students** – who often need textbooks, e-books, and printing/typing services for assignments.
- **Professionals** – who require quick printing, document editing, or stationery without spending time in physical queues.
- **General customers** – who buy books, stationery, or request small editing and printing jobs.
- **Shop owners and administrators** – who struggle to manage inventory, track orders, and provide smooth delivery using manual methods.

Currently, these users face challenges such as:

- Lack of a **centralized system** to place and track all service requests.
- **Limited accessibility**, since most local shops operate offline.
- **Poor order management**, leading to delays and miscommunication.
- **Difficulty in tracking deliveries**, making the service unreliable.
- **Use of separate informal platforms** (e.g., WhatsApp, Facebook Messenger, or email) for sending soft copies to shops for printing or editing. Since requests arrive from different channels, shop owners often lose track of them. Some requests are misplaced or pushed down in chat threads when new messages arrive, causing missed or delayed orders.
- Manual handling of files and orders, which increases the chances of errors, duplication, or lost documents.

Therefore, there is a clear need for an integrated online platform that connects customers and shop owners, making the process more efficient, transparent, and user-friendly.

3.Project Objectives

- Provide a centralized online platform for books, e-books, and stationery sales.
- Enable users to order printing, typing, and photo editing services online.
- Implement secure authentication with user accounts and profiles.
- Allow customers to track order status and delivery progress.
- Provide shop owners with an admin panel for managing stock, service requests, and deliveries.
- Add online payment method for the customer
- Ensure data consistency and scalability using PostgreSQL.
- Deliver a responsive, user-friendly web interface with React and Node.js/Express backend.

4.Introduction to Similar Type of Systems

Several existing platforms offer partial functionalities similar to BookNet.

- **Amazon Books & Kindle Store** – Provides a wide range of physical and e-books with secure transactions and delivery. However, it lacks localized services such as document printing, typing, or custom editing that students and professionals often require.

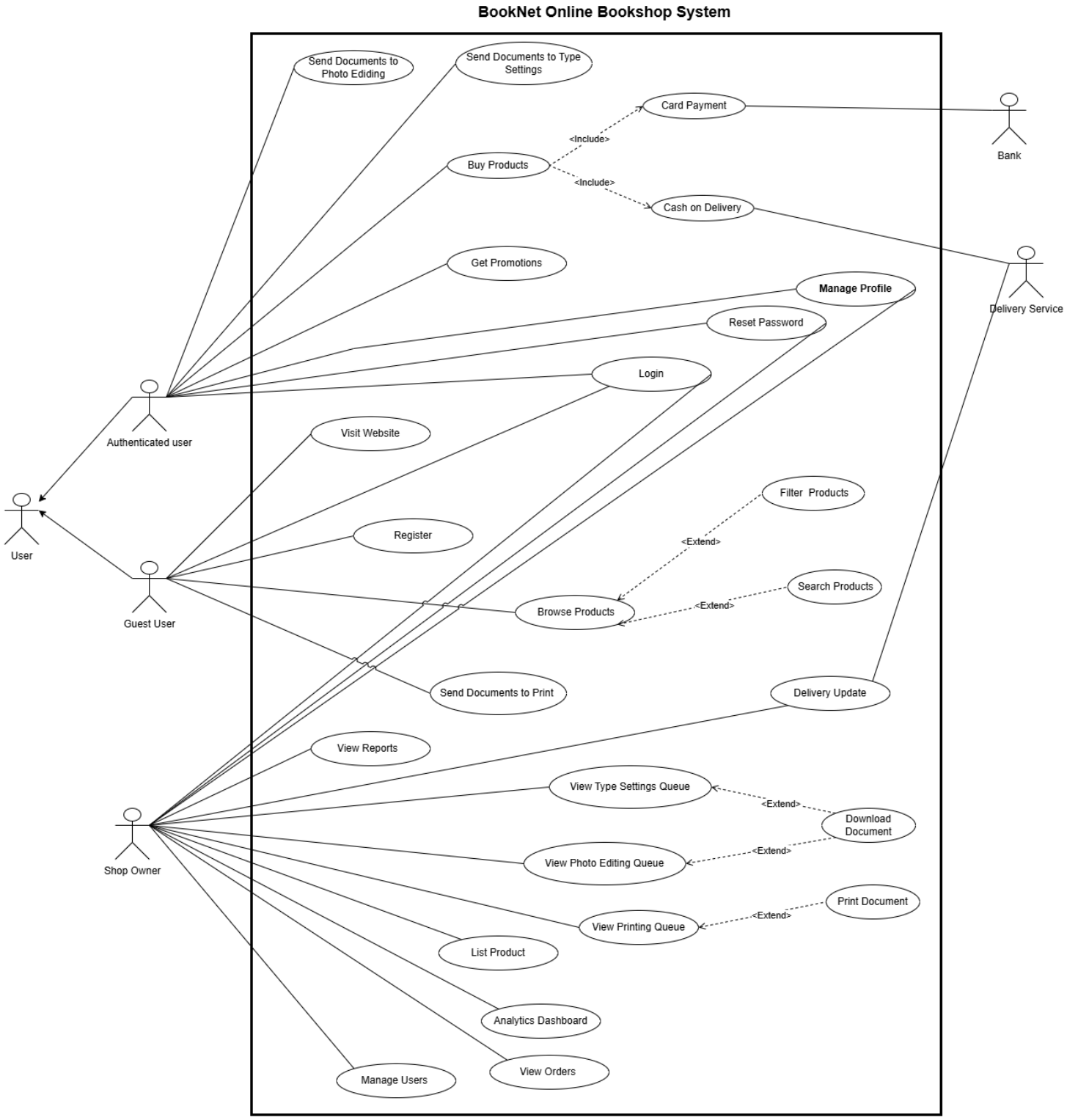
- **Goodreads** – Focused on book reviews, recommendations, and community engagement, but it does not provide e-commerce or service ordering features.

- **Local Online Printing Shops** – Many small businesses provide printing services through websites or social media, but these lack proper integration of user accounts, online payments, and delivery tracking.

- **Fiverr / Upwork (Freelance Services**) – Offers typing and photo editing services, but customers must rely on freelancers and external communication, which may not be efficient for day-to-day academic or professional needs.

BookNet differentiates itself by combining all these elements into a single integrated platform – offering books, e-books, printing, typing, photo editing, and shop items – with a centralized order and delivery management system. This makes it a one-stop hub for academic and digital service needs.

5.Proposed Solution



6.Technology planning to use

BookNet will be a **full-stack web-based system**:

Frontend : React.js with Vite + Tailwind CSS + MUI

- **React.js** – For building a dynamic and responsive user interface.
- **Vite** – Fast development and optimized builds.
- **Tailwind CSS** – Quick and clean UI styling.
- **Material-UI (MUI)** – Pre-built components for consistent design.

Backend : Node.js + Express.js

- **Node.js** – Scalable server-side JavaScript runtime.
- **Express.js** – Lightweight framework for handling server requests.

Database: PostgreSQL with Prisma

- **PostgreSQL** – Reliable relational database for storing data.
- **Prisma** – Simplifies database management with type-safe queries.

Authentication & Authorization: JWT (JSON Web Tokens)

JWT (JSON Web Tokens) – Secure login and user access control.

7.Project Timeline and Conclusion

Date	Task	Milestone
31st August 2025	Project Proposal Submission	Proposal document completed and submitted
13th September 2025	SRS Submission	Software Requirement Specification finalized
13th October 2025	Progress Report / Presentation Submission	Mid-term report & initial system demo
Last week of October 2025	Progress Review Presentation	Review feedback from panel
22nd January 2026	Final Report Submission	Full documentation ready
26th January 2026	Final Presentation	Project demonstration & viva