Project Design Phase-II
Technology Stack (Architecture & Stack)

Date	29-12-2025
Team ID	
Project Name	Bookstore (StoryShelf)
Maximum Marks	4 Marks

Technical Architecture:

The Online Bookstore platform is built using a scalable **3-tier architecture** consisting of the presentation layer (frontend), business logic layer (backend), and data storage layer. The frontend delivers an interactive and responsive user experience for customers, sellers, and administrators. The backend manages core business logic such as user authentication, book management, order processing, and role-based access control. The data storage layer securely stores user data, book inventory, orders, and transaction records. The architecture ensures high performance, robust security, and easy integration with third-party services such as payment gateways. It also supports scalability to handle growing users, books, and transactions efficiently.

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Web-based interface for users and admins to browse books, view details, and manage orders	HTML, CSS, JavaScript / React Js etc.
2.	Application Logic-1	Handles user authentication, book listing, search, cart management, and order placement	Node.js, Express.js
3.	Application Logic-2	Admin panel for managing books, categories, orders, users, and inventory	React js, Node js
4.	Database	Stores user data, book details, orders, reviews, and cart information	MongoDB

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
5.	Open-Source Frameworks	Frontend frameworks	React.js, Node.js, BootStrap
6.	Scalable Architecture	3-tier architecture with RESTful APIs	MVC