Requirement Gathering and Analysis Phase
Technology Stack (Architecture & Stack)

Date	06 July 2024
Team ID	SWTID1720110658
Project Name	Book Store
Maximum Marks	-

Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2

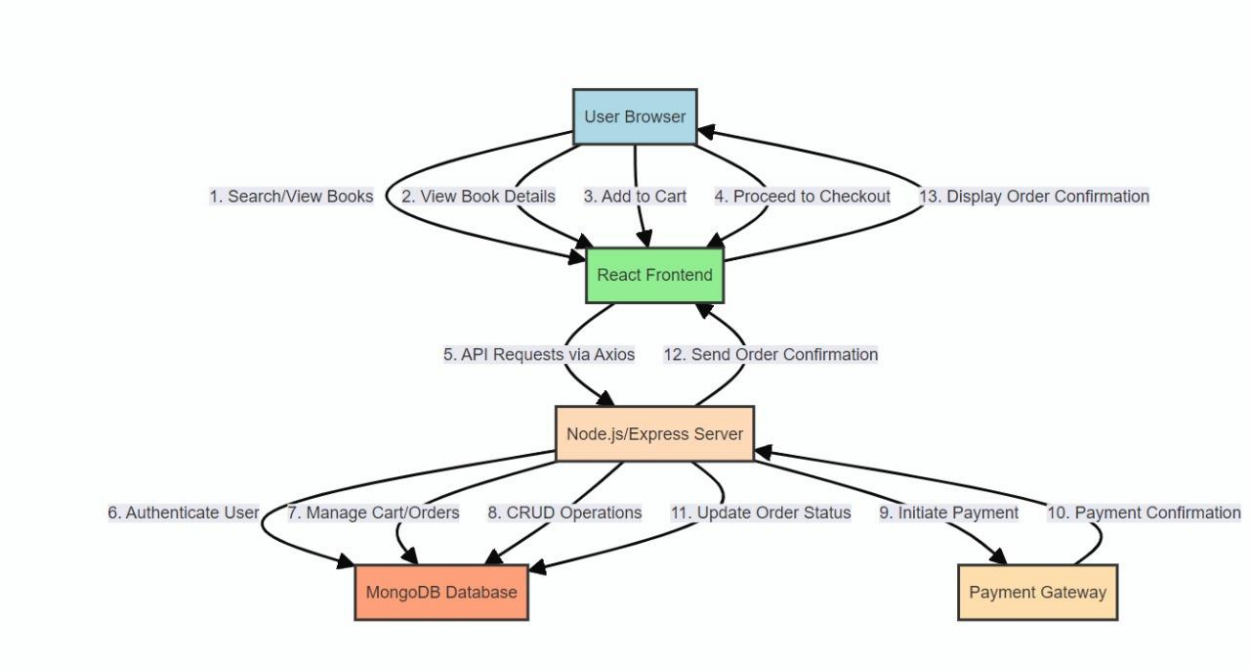

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	How user interacts with application e.g. Web UI.	HTML, CSS, JavaScript, React.js, Tailwind CSS
2.	Application Logic-1	User Authentication	Node.js, Express.js, Passport.js
3.	Application Logic-2	Book Data Operations	Node.js, Express.js
4.	Application Logic-3	Search & Filter Functionality	Elasticsearch
5.	Database	Storing user and book data	MongoDB, Mongoose
6.	Cloud Database	Database service on the cloud	MongoDB Atlas
7.	File Storage	Storing book covers and media	AWS S3
8.	External API-1	Fetching book details	Google Books API
9.	External API-2	Fetching additional book data	Open Library API
10.	Infrastructure	Application deployment	Local: Docker, Cloud: Heroku, Vercel
11.	CI/CD	Continuous Integration and Deployment	GitHub Actions

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Using free and open-source frameworks to build the application	React.js, Node.js, Express.js, Mongoose
2.	Security Implementations	Measures to protect the application from security threats such as user authentication	Passport.js
3.	Scalable Architecture	Designed to handle increasing user loads and data volume efficiently	Horizontal Scaling: Node.js and Express.js Database Scalability: MongoDB Cloud Scalability: Heroku
4.	Availability	Ensuring the application is available and operational	Heroku, MongoDB
5.	Performance	Ensuring the application runs efficiently and quickly by using fast NoSQL database and a efficient search functionality	Node.js, MongoDB, Elasticsearch