Language(s) Used:

Java: I chose Java for the backend implementation due to its robustness, platform independence, and extensive libraries. Java Servlets provide a convenient way to handle HTTP requests and responses, making it suitable for building web applications. Additionally, my familiarity with Java and its ecosystem, including JDBC for database connectivity, allows for efficient development and maintenance of the application.

HTML/CSS: For the frontend, I used HTML for structuring web pages and CSS for styling. HTML provides the necessary markup for content presentation, while CSS enhances the visual appeal and user experience. These technologies are standard for web development and allow for flexibility and customization in designing the user interface.

Software Platforms Used:

Tomcat Server: I selected Tomcat as the application server for deploying the web application. Tomcat is a widely used servlet container that provides support for Java servlets and JavaServer Pages (JSP). It offers scalability, reliability, and compatibility with Java EE specifications, making it a suitable choice for hosting Java web applications. Additionally, my familiarity with Tomcat simplifies deployment and management tasks.

Presentation of Code Modules:

The class/object structure defined in the documentation maps to various components in the codebase, such as servlets, DAOs (Data Access Objects), service classes, and entity classes.

Each servlet corresponds to a specific use case or activity identified in the requirements, facilitating the interaction between the frontend and backend components.

DAOs handle database operations, encapsulating the data access logic and promoting code reusability and maintainability.

Service classes contain the business logic related to various operations, ensuring separation of concerns and adhering to the principles of modular design.

Identification of Business Logic:

The code responsible for handling user authentication, registration, booking management, and equipment listing and management encapsulates the core business logic of the application.

This includes operations such as validating user credentials, updating user profiles, querying equipment listings, and processing booking requests.

The business logic ensures that the application functions correctly and fulfills the specified requirements, playing a crucial role in achieving the desired functionality and user experience.