

Tools Used

Development Environment

- VisualStudio Code
 - Java Extension Pack
 - Git for VSCode
- MySQL 8.0
 - Server
 - Workbench
 - Command Line Client
- Apache-Maven 3.6.3
- JDK 14.02

VisualStudio Code was used for the majority of code development, including building java data objects, developing back-end controller and front-end HTML views. Java Extension Pack helped integrate Java-constraints into the IDE to streamline the development process. Git for VSCode streamlined source control by directly connecting the development environment with the shared project repository.

MySQL 8.0 was used to develop the database and store data. MySQL Server hosts the database on the local machine, MySQL Workbench helped graphically displayed the database and made querying easier. MySQL Command Line Client helped by allowing quick single command adjustments to the database.

Apache-Maven was used to locally host the web app during development.

JDK 14.0.2 was the Java version used to develop the project.

Web Development Framework

- SpringBoot 2.4.4
- Spring Security 5.4.6
- Hibernate JPA

SpringBoot 2.4.4 was used to develop the project as a Java-based web application.

Spring Security 5.4.6 was used to develop a secure user authentication system as well as a user level authorization system.

Hibernate JPA was used to dynamically interface Java objects with associated table rows in the database.

Source Control

- Github

Github was used to collaborate on the project and access a shared repository of source code.

Diagram Tools

- Diagram.net
- DBdiagram.io
- MySQL Workbench

Diagrams.net was used to produce various diagrams over the course of the project including the Java Class Diagram and Process Flow Chart

DBDiagrams.io was used to produce the database ERD during the early development stages.

MySQL Workbench was used to produce the final database ERD representing the actual database structure.

Communication and Coordination

- Discord
- Microsoft Teams
- Jira

Discord was used as the primary point of contact between group members. Stand-up meetings were held in Discord voice calls and information was shared in Discord chat channels.

Microsoft Teams was used as a secondary means of communication and facilitated status update meetings.

Jira was used to keep track of major milestones and assign project tasks.