Tools Used

Development Environment

- VisualStudio Code
  - Java Extension Pack
  - Git for VSCode
- MySQL 8.0
  - Server
  - Workbench
- Apache-Maven 3.6.3
- JDK 11

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.

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

JDK 11 was the Java version used to develop the project.

Web Development Framework

- SpringBoot 2.4.4
- Spring Email 2.3.4
- Spring Security 5.4.6
- Hibernate JPA

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

Spring Email 2.3.4 was used to send billing statements over email to patients upon check-in

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 store the source code of the project so that everyone, including the next development team, can access it.

Diagram Tools

- Draw.io
- MySQL Workbench

Draw.io was used to edit existing project models and deliverables. This includes the supplementary diagrams, SystemModels.pdf, projectRequirements.pdf, and the ToolsUsed.pdf

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 to facilitate real time team communication, easily send links and attachments, and a meeting place for everyday work.

Microsoft Teams was used as our main source of communication with the Project Owner (Professor) including weekly Status Reports.

Jira was used for assigning tasks, organizing our workflow, and a secondary project schedule.