Group Members:

1. Tyreque Hibbert
2. Chloe Morris
3. Del-Piero Graham
4. Jelani Jackson

Introduction: As a group, our task was to create an application in Java that facilitates user login for three different roles: student, student advisor, and student advisor supervisor. The application also includes functionalities such as live chat between student advisor and student, making complaints as students and responding to them as advisors, and assigning complaints to advisors to respond to for the student advisor supervisor.

Learning Trails:

1. Tyreque Hibbert: Challenges:

* Understanding the requirements and functionalities of the application.
* Implementing the live chat feature between student advisors and students.
* Designing the complaint management system for students and advisors.

Steps taken to overcome challenges:

* Conducted thorough research on Java libraries and technologies for implementing live chat functionality.
* Collaborated with other group members to gather input and feedback on the complaint management system.
* Implemented appropriate error handling mechanisms to ensure smooth functioning of the application.

Lessons learned:

* Proper planning and communication among group members are crucial for a successful project.
* Research and exploration of available technologies can help overcome challenges.
* Clear understanding of requirements is essential to ensure accurate implementation.

1. Chloe Morris: Challenges:

* Designing and implementing the user login system for three different roles.
* Ensuring proper authentication and authorization mechanisms are in place.
* Integrating the complaint management system with the user login system.

Steps taken to overcome challenges:

* Designed a robust user login system using Java's built-in authentication and authorization features.
* Implemented role-based access control to restrict functionalities based on user roles.
* Integrated the complaint management system with the user login system to ensure proper assignment of complaints to advisors based on their roles.

Lessons learned:

* Proper authentication and authorization mechanisms are critical for maintaining security in an application.
* Role-based access control is an effective way to manage user permissions.
* Integrating different functionalities of an application requires careful planning and coordination among team members.

1. Del-Piero Graham: Challenges:

* Implementing the complaint management system for advisors to respond to student complaints.
* Ensuring proper communication and coordination between student advisors and the student advisor supervisor.
* Handling and resolving complaints efficiently and effectively.

Steps taken to overcome challenges:

* Developed a complaint management system that allows advisors to view and respond to student complaints.
* Implemented a notification system for advisors and the student advisor supervisor to communicate and coordinate effectively.
* Implemented proper error handling and logging mechanisms to track and resolve complaints efficiently.

Lessons learned:

* Effective communication and coordination among team members are vital for resolving complaints in a timely manner.
* Proper error handling and logging mechanisms can help track and resolve issues effectively.
* Regular updates and coordination with the student advisor supervisor are essential for smooth complaint management.

1. Jelani Jackson: Challenges:

* Designing and implementing the live chat feature between student advisors and students.
* Ensuring real-time communication and synchronization of chat messages.
* Handling edge cases and error scenarios in the live chat system.

Steps taken to overcome challenges:

* Researched and implemented appropriate Java libraries for real-time communication, such as WebSockets.
* Developed a chat management system that allows advisors and students to communicate in real-time.
* Implemented proper error handling and synchronization mechanisms to ensure smooth chat functionality.

Lessons learned:

* Real-time communication requires careful selection and implementation of appropriate technologies.
* Proper error handling and synchronization mechanisms are critical for a smooth chat system.
* Thorough testing and handling of edge cases are important for a reliable live chat feature.

Conclusion: In conclusion, our group successfully developed an application in Java that facilitates user login for different roles, live chat between student advisors and students, and a complaint management system