Track User Login Attempts Function

Steps taken

1. Setup Project
   - Clone Project from https://github.com/Qualito/qualito-spring-auth-template.git
   - Docker installation and start docker on application file path.
   - Set up project on eclipse IDE.
   - Verified necessary dependencies such as Spring Security, Spring Data JPA, and Bootstrap were included in pom.xml.
   - Confirmed the application runs without errors by executing the main application.

2. Created LoginAttempt.java Entity class.
   - Assumption: Hibernate will handle table creation based on the entity structure.

3. Created a repository interface to interact with the database.

4. Implemented a service class to handle LoginAttempt records.

5. Security Configurations
   - Created Authentication success handler.
   - Created Authentication failure handler.
   - Updated the security configuration to use the custom handlers
   - SecurityConfig.java created for return BCryptPasswordEncoder.

6. Admin Page
   - Created a new template loginAttempts.html for the admin page.
   - Created bootstrap.min.css File for style page.

7. Implemented the admin controller to handle the behavior.

8. Testing
   - Success Test: Logged in with valid credentials and verified that successful attempts appear in the admin page with a green status.
   - Failure Test: Attempted login with invalid credentials and verified failed attempts appear with a red status.

- Admin Access: Ensured that only users with the ADMIN role could access the /admin/loginAttempts page.

Assumptions

1. Spring Security and JPA are pre-configured.
2. Database connection is properly set up.
3. The admin page requires only basic styling.

Deliverables

1. Code:
   - LoginAttempt entity and repository
   - LoginAttemptService.
   - Security configuration with custom handlers.
   - Admin controller and loginAttempts.html.
2. Testing:
   - Feature successfully tested for both successful and failed login attempts.