

Training Day-12 report

05 July, 2025

Today, I worked on adding **authentication functionality** to my **collaborative text editing application**. The goal was to ensure that only authenticated users could create, join, and edit documents. The implementation was focused on maintaining secure sessions using modern authentication practices.

Work Undertaken:

- Implemented **user authentication** using:
 - **JWT (JSON Web Tokens)** for secure token-based access.
 - **Cookies** to persist sessions across page reloads.
 - **bcrypt** for securely hashing and storing user passwords.
- Developed most of the **backend logic independently**, including route protection and token generation.
- Integrated token-based authentication in the frontend with the help of **AI-assisted guidance**, as handling token flow on the client side introduced some confusion.

Challenges-Faced:

- After successfully receiving the **access token** and user information (e.g., username and user ID) on the frontend, I **forgot to attach the token during the WebSocket connection**.
 - As a result, the socket connection lacked proper user authentication, which led to issues in identifying and authorizing users for collaborative editing.
 - Realized the issue after debugging the socket flow and cross-referencing with authentication state.

Key Learnings:

- Strengthened understanding of **end-to-end authentication workflows**, from login and token issuance to client-side usage.
- Learned how to **integrate JWT-based tokens into WebSocket connections**, which is essential for secure real-time applications.
- Gained confidence in designing secure backend flows independently and improved client-side handling with guided learning.

Conclusion:

The addition of secure authentication brings the collaborative editor one step closer to production-readiness. While backend development went smoothly, integrating tokens into WebSocket communication required extra attention. The system now supports user-based access control, and the next steps will focus on refining document-level permissions and improving user experience.