Training Day-11 report

04 July, 2025

Today, I began building the core functionality for a **Collaborative Text Editor** — an application where multiple users can **create and edit a shared text document in real-time**. This marked my first experience working on a collaborative editing system.

Work-Undertaken:

• Developed the initial version of a **real-time text editing application** using WebSockets.
• Researched the concept and typical features of collaborative editors via **YouTube tutorials**, as I initially had no clear roadmap.
• Built the logic for users to **join a shared document** and edit it concurrently.
• Integrated basic **WebSocket communication** for collaboration handling.

Challenges Faced:

1. **Document-Save-Issue:**
   – Faced problems saving newly created documents to the database.
   – The issue was caused by setting the content field as **required**, which conflicted when a new document was created without initial content.

2. **Socket-Join-Logic:**
   – Encountered issues in allowing users to join collaborative sessions.
   – The problem was due to a **mismatch between the client-side socket payload and the server's expected format**, which caused join requests to fail.
   – Took time to debug and correct the communication flow between client and server.

Key-Learnings:

• Understood the intricacies of **real-time collaboration logic**, including session handling and data synchronization.
• Learned how **schema constraints** in databases can inadvertently block operations if not carefully considered.
• Gained better insight into **WebSocket message handling**, especially the importance of matching request structure on both ends.

Conclusion:

The foundation of the collaborative text editor is now in place. Despite some roadblocks, today was highly educational. I plan to build upon this base in the coming days by refining functionality, improving synchronization, and enhancing the user experience.