**INDIVIDUAL ROLE DOCUMENT**

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***Problem Statement:***

The organization requires an internal chat platform that is secure, user-friendly, and efficient, enabling real-time messaging and collaboration among employees. The platform should support private messaging, broadcasting messages to all users, and automated email notifications for new user additions. The current communication system lacks effectiveness, resulting in delays in information sharing, missed collaboration opportunities, and a lack of transparency. To address these challenges and ensure data security, the organization seeks to develop a comprehensive chat platform owned and controlled internally, utilizing a cloud-based database for secure message storage.

***Contribution:***

- Successfully developed Lambda functions for connecting, disconnecting, and sending messages privately and publicly within the chat application.

- Integrated the Lambda functions with the WebSocket API Gateway managed by AWS, enabling real-time bidirectional communication.

- Connected the Lambda functions to various DynamoDB tables to store user data and chat history securely.

- Developed the frontend using Node.js and integrated it with the backend API architecture.

- Ensured that all functionalities, including connecting, disconnecting, and sending messages, worked seamlessly in the front end.

These contributions played a crucial role in establishing the core functionality of the chat application, enabling real-time communication, secure data storage, and seamless integration between the frontend and backend components.