**Peer Review: Group 91 - Secure Programming UG-91 Chat System**

**Overview**  
Group 91 has developed a comprehensive WebSocket-based chat system with multiple security features and a well-structured project architecture. The implementation demonstrates good software engineering practices with proper documentation, dependency management, and database integration.

**Strengths**

* Excellent documentation with clear setup instructions and troubleshooting guidance
* Proper use of requirements.txt for dependency management
* Comprehensive feature set including file transfer and multiple messaging types
* Database integration with SQLite and proper initialization scripts
* Support for multiple server instances with configuration files
* Implementation of user authentication with password requirements
* Good project structure with separate server/client modules

**Security Concerns**

* **Critical**: README incorrectly states "Message encryption using SHA256" - SHA256 is a hashing algorithm, not encryption. This fundamental misunderstanding raises concerns about cryptographic implementation.
* Missing details on actual encryption methodology for message security
* Database initialization process could benefit from automated scripts rather than manual SQLite commands
* No mention of transport security (TLS/SSL) for WebSocket connections

**Areas for Improvement**

* Clarify the actual encryption approach used for message security
* Consider implementing automated database setup scripts
* Add transport layer security for production deployment
* Include more details about the cryptographic architecture in documentation

**Overall Assessment**  
Group 91 demonstrates strong software development practices with a well-documented, feature-complete chat system. The project shows good understanding of distributed systems with multi-server support. However, the cryptographic terminology confusion needs immediate clarification to ensure proper security implementation. The comprehensive documentation and structured approach suggest a professionally developed system that would benefit from enhanced security transparency.

**Recommendation**: Good implementation with minor security documentation issues to address.