Project Abstract

Title: Multithreaded Bank Transaction Simulator

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The Multithreaded Bank Transaction Simulator is designed to simulate a realistic banking environment where multiple users can perform transactions, such as withdrawals and deposits, concurrently. The project leverages Java multithreading to mimic multiple clients accessing and modifying account information simultaneously. Key to this system is thread synchronization, which ensures safe access to shared resources like account balances, preventing race conditions and maintaining data integrity during concurrent transactions.

The project also integrates JDBC to store account details and transaction logs in a relational database, ensuring persistent storage of all operations. By combining multithreading with database connectivity, this simulation provides a robust and scalable solution that mirrors real-world banking systems, highlighting the importance of synchronization in concurrent environments.