Java JDBC Banking Application - Project Overview

This Java-based console banking application demonstrates the integration of JDBC and MySQL for performing core banking operations such as login, balance inquiry, and fund transfer between accounts. It includes transaction control, savepoints, and secure PreparedStatement queries to ensure data integrity and safety.

Tools & Technologies Used:

1. Java (JDK 8+) – Logic implementation and OOP principles.
2. JDBC – Database connection and SQL execution.
3. MySQL – Storage and management of account data.
4. Eclipse/IntelliJ – Development and testing environment.
5. MySQL Workbench – Database design and management.

Need for the Project:

1. To simulate real-world banking processes programmatically.
2. To understand JDBC connectivity and transaction management.
3. To ensure data consistency using commit, rollback, and savepoints.
4. To practice secure SQL operations and exception handling.

Advantages:

1. Prevents SQL injection via PreparedStatement.
2. Demonstrates real-world transaction handling.
3. Provides rollback and savepoint support.
4. Enhances understanding of JDBC architecture.
5. Builds a foundation for enterprise-level systems.

Key Features:

1. Secure login using account number and PIN.
2. Balance inquiry functionality.
3. Fund transfer between two accounts.
4. Rollback if transfer is cancelled using savepoints.
5. Commit/rollback ensures transaction safety.

Conclusion:

This project effectively illustrates the use of JDBC in real-world database operations, ensuring secure, consistent, and efficient transactions. It provides a strong foundation for developers to build advanced financial or enterprise database-driven systems.