**Simple Banking Application - Low-Level Document**

**1. Introduction**

The Simple Banking Application is a console-based Java application that allows users to perform basic banking operations such as checking their balance, depositing money, withdrawing money, and exiting the application.

**2. User Input**

The application uses the Scanner class to take input from the user. It prompts the user to enter their choice or provide necessary information for each operation.

**3. Implementation Details**

The Simple Banking Application is implemented using the following components and concepts:

a. Main Class

The SimpleBankingApplication class is the entry point of the application.

It contains the main method that initializes the application and controls the flow of operations.

b. Variables

balance: A static double variable to store the user's balance. It is initialized to 0 at the start of the application.

choice: An integer variable to store the user's choice for different banking operations.

c. Methods

checkBalance(): A method that displays the user's current balance.

deposit(double amount): A method that allows the user to deposit money into their account.

withdraw(double amount): A method that allows the user to withdraw money from their account.

d. Flow of Operations

The main method uses a do-while loop to repeatedly prompt the user for their choice until they choose to exit.

Inside the loop, the user's choice is captured using the Scanner class.

Based on the choice, the corresponding method is called to perform the selected operation.

e. Printing Messages

The System.out.println() method is used to display prompts, informational messages, and error messages to the user.

f. Error Handling

The application includes basic error handling for invalid inputs, insufficient funds during withdrawals, and other potential errors.

Error messages are displayed to the user to guide them appropriately.

4. Assumptions and Constraints

The application is designed to handle a single user account.

The user account and transaction details are not stored permanently and are only maintained in memory during the application's runtime.

5. Future Enhancements

The Simple Banking Application can be further enhanced with the following features:

Implementing user authentication and multiple accounts.

Adding a persistent data storage mechanism to store user account information.

Supporting additional banking operations such as transferring funds between accounts.

This low-level document provides a more detailed overview of the Simple Banking Application, including its components, methods, error handling, and flow of operations. It serves as a reference for developers to understand the implementation details and make necessary modifications or enhancements to the application.