**Simple Banking Application - High-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. Basic Concepts**

The application covers the following basic concepts:

String: Used for displaying prompts and messages to the user.

Printing: The System.out.println() method is used to print messages to the console.

Variables: Variables are used to store and manipulate data, such as the user's balance and transaction amounts.

If/else Statements: Conditional statements are used to handle different scenarios based on the user's input.

Methods: Modularization is achieved by defining separate methods for each banking operation.

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

**4. Functionality**

The Simple Banking Application provides the following functionality:

**a. Check Balance**

Description: This operation allows the user to check their current balance.

Implementation: The checkBalance() method is called, which displays the user's balance.

b. Deposit

Description: This operation allows the user to deposit money into their account.

Implementation: The deposit(double amount) method is called, which prompts the user to enter the amount to deposit and updates the balance accordingly.

c. Withdraw

Description: This operation allows the user to withdraw money from their account.

Implementation: The withdraw(double amount) method is called, which prompts the user to enter the amount to withdraw and validates if sufficient funds are available before updating the balance.

d. Exit

Description: This operation allows the user to exit the application.

Implementation: The user's choice is checked, and if it matches the exit option, the application terminates.

5. 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.

**6. 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.

**7. 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.

This high-level document provides an overview of the Simple Banking Application, covering its purpose, functionality, implementation concepts, and possible future enhancements. It can serve as a reference for developing the application and understanding its key aspects.