

User-Manual

Bank Account Management System (C++ with singly Linked List)

1. Introduction

The Bank Account Management System is a console based C++ program designed to manage customer bank accounts, it applies Object-Oriented Programming (OOP) principles and uses a singly Linked List for dynamic storage of accounts.

This system allows users:

- Create and manage multiple accounts.
- Perform deposit and withdrawals.
- Search for accounts by account number.
- Delete accounts when no longer needed.

2. System Requirements

- Software: Any C++ compiler.
- Operating System: Windows, Linux or macOS.
- Hardware: at least 2GB RAM and 100MB free disk space.

3. Features

1. Add New Account- Create new account with unique account number, customer name, and initial balance.
2. Display All Accounts- View a list of all existing accounts.
3. Deposit Money- Add funds to an account.
4. Withdraw Money- Remove funds with valid to prevent overdrafts.
5. Search Account- Locate an account using the account number.
6. Delete Account- Permanently remove an account from the system.
7. Exit- Safely close the program.

4. How to use the program

When the program starts, a menu will appear:

---MENU---

1. Add Account
2. Display Accounts
3. Deposit
4. Withdraw
5. Delete Account
6. Exit

Enter choice:

Step-by-Step-Instructions

4.1. Add Account

- Select option 1.
- Enter the account number (must be unique).
- Enter the customer's full name.
- Enter the initial deposit balance.
- The system confirms with "Account added".

4.2. Display Accounts

- Select option 2.
- The system shows all accounts in the format:
- Account No: 1001; Name: John Doe; Balance: 5000

4.3. Deposit Money

- Select option 3.
- Enter the account number.
- Enter the deposit amount (must be positive).
- System updates and shows the new balance.

4.4. Withdraw Money

- Select option 4.
- Enter the account number.
- Enter the withdrawal amount.
- Withdrawal only succeeds if sufficient funds are available.

4.5. Delete Account

- Select option 5.
- Enter the account number.
- The system removes the account and confirms with the message: "Account deleted".

4.6. Exit Program

- Select option 6.
- The system displays: "Exiting...." and closes safely.

5. Error Handling

- Duplicate Accounts → System prevents adding an account if the number already exists.
- Invalid Deposits/Withdrawals → Negative values are not allowed.
- Insufficient Funds → Withdrawal fails if the requested amount exceeds balance.
- Account Not Found → Any operation on non-existent account displays an error.