Mini Bank Loan System Using C

Using Array & Linked List for Loan Management

This presentation explains a simple C program managing bank loans using arrays and linked lists.

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Introduction to the Project

Project Concept

A mini bank system to track loan eligibility and active loans in C language.

Core Objective

Manage customers and loans efficiently using basic data structures.

Target Users

Beginners learning how to implement arrays and linked lists practically.

Objective

- To develop a basic Mini Bank Loan System using C language
- Demonstrate practical usage of Array and Linked List data structures.
- Simulate real-world loan management system

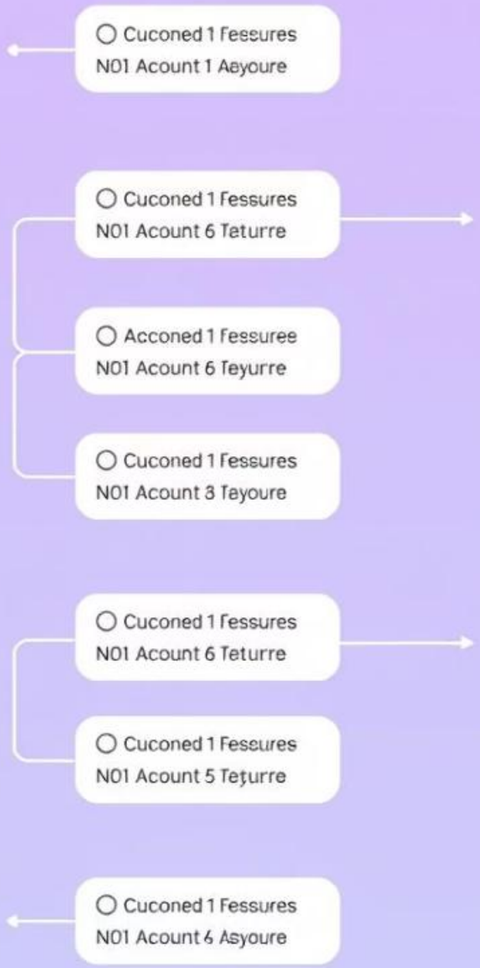
Eligible Customers Stored in Array

Use of Arrays

Store fixed-size customer lists eligible for loans efficiently in memory.

Sample Data

- Shabnam
- Geetha
- Vidya
- Khushitha



Active Loans Managed by Linked List

Why Linked List?

Dynamic memory allocation allows flexible handling of active loans.

Loan Fields

- Customer Name
- Loan Amount
- EMI (Equated Monthly Installment)
- Tenure

```
  addActivel
  addActiveLoan,
)
  displayAtttiiloans
)
```

Functions Used in the System

1. addEligibleCustomer(): Adds customer to array
2. addActiveLoan(): Creates and links new loan node
3. displayEligibleCustomers(): Prints eligible customers
4. displayActiveLoans(): Shows all active loans details

User Interaction in the Program

Input Mechanics

Program accepts user inputs to add customers and loans interactively.

Display Options

Users can view lists of eligible customers and active loan records anytime.

Code Structure Summary

Function Separation

Clear modular functions for adding and displaying data improve readability.

Data Structure Roles

Arrays hold static data; linked lists handle dynamic loan records.

```
-- Mini Bank Loan System ---
1. Add Eligible Customer
2. View Eligible Customers
3. Add Active Loan
4. View Active Loans
5. Exit
Enter your choice: 1
Enter customer name: Shabnam

--- Mini Bank Loan System ---
1. Add Eligible Customer
2. View Eligible Customers
3. Add Active Loan
4. View Active Loans
5. Exit
Enter your choice: 2

List of Customers Eligible for Loans:
1. Shabnam

--- Mini Bank Loan System ---
1. Add Eligible Customer
2. View Eligible Customers
3. Add Active Loan
4. View Active Loans
5. Exit
Enter your choice: 3
Enter customer name: Geetha
Enter loan amount: 5000
Enter EMI amount: 500
Enter tenure in months: 10

--- Mini Bank Loan System ---
1. Add Eligible Customer
2. View Eligible Customers
3. Add Active Loan
4. View Active Loans
5. Exit
Enter your choice: 4

Active Loans with EMI Details:
Customer: Geetha | Loan: 5000.00 | EMI: 500.00 | Tenure: 10 months

--- Mini Bank Loan System ---
1. Add Eligible Customer
2. View Eligible Customers
3. Add Active Loan
4. View Active Loans
5. Exit
```

Execution & Output Example

Compile Code

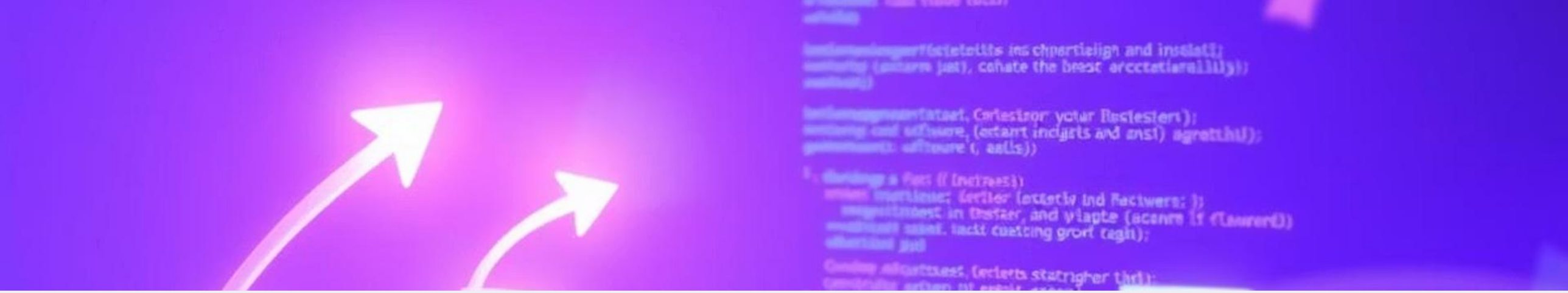
Use gcc compiler in VS Code to build the loan system program.

Run Program

Enter customer and loan details as prompted by the console interface.

View Outputs

Observe listed eligible customers and active loan information on screen.



Conclusion & Future Improvements

Benefits

Arrays and linked lists provide efficient and manageable data handling.

Possible Enhancements

- Add file storage for data persistence
- Implement dynamic array resizing
- Enhance user interface for ease of use

Thank You