

## **Transaction History Upgrade – Description**

Initially, the bank account program was designed using random access files in C. The system supported basic operations like adding a new account, updating the balance, deleting an account and generating a text file for printing. In this version, only the latest balance of an account was stored in the file.

During execution, it was observed that whenever an account was updated, the previous transaction details were lost. There was no way to identify how the balance was changed or what transactions were performed earlier. This is a major limitation when compared to real banking systems.

To overcome this issue, a **transaction history feature** was added to the program. A separate file named transactions.dat was introduced to store all credit and debit operations. Instead of overwriting data, each transaction is appended to this file.

A new structure was created to store the account number, transaction amount and the balance after the transaction. Whenever the user performs an update operation, the program first validates the balance and then updates the account record. After this, the transaction details are written into the transaction file.

An additional menu option was also added to view the complete transaction history. This allows the user to see all past transactions performed in the system.

This upgrade improves the reliability of the program and makes it closer to real-world banking applications. It also helps in auditing, tracking account activity and debugging. By separating account details and transaction details, better file organization and data integrity are achieved.

Overall, the transaction history enhancement converts the program from a basic academic example into a more practical and realistic banking system.