Progress Report: Project Phase 2, Team 12

Arsh Parmar, jk2680

CS 301

For this project, I chose to implement a simple Banking Software. For Phase 2 of the project, I successfully designed, implemented, and tested the first layer of the project.

In this layer, I implemented CRUD (Create, Read, Update, Delete) operations that form the base of my project. These include the most essential banking operations.

For this layer, the functionalities implemented are as follows:

**Interface**

1. **Data Structure(s)**: Account (struct): Stores account information with 4 variables: Username, Account number, Password, Balance
2. **Helper Function(s)**: ID Verification, File, I/O:
   1. **ID Verification**: *bool* *checkAccountNumberClash(vector<Account>&, int) – To check if a generated ID is clashing with other bank IDs in the database.*
   2. **File**:
      1. *void readAccountsFromFile(string) – Reads accounts from text database to local account vector.*
      2. *void writeAccountsToFile(string, vector<Account>) – Writes account vector onto file.*
   3. **I/O**:
      1. *void displayAccounts(vector<Account>) – Displays accounts from account vector.*
3. **Accounting(s)**: Account functions (management, basic transaction):
   1. **Find Account**: *findAccount(vector<Account>, int) – To find an account for a given ID.*
   2. **Create Account**:
      1. *void createAccount(vector<Account>&, string) – Creates an account with details provided as input.*
      2. *void createAccountFromData(vector<Account>&, Account, string) – Creates an account from given account instance.*
   3. **Delete Account**:
      1. *void deleteAccount(vector<Account>&, string) – Deletes account from ID provided as input. Asks for password.*
      2. *void deleteAccountFromNumber(vector<Account>&, string, int) – Deletes account from given ID.*
   4. **Get Balance**: *void getAccountBalance(vector<Account>&) – Gets account balance from provided ID as input. Asks for password.*
   5. **Add Balance (Deposit):** *void depositBalance(vector<Account>&, string) – Deposits balance to account with ID input. Asks for password.*
   6. **Deduct Balance (Withdrawal):** *void withdrawBalance(vector<Account>&, string) - Withdraws balance from account with ID input. Asks for password.*

**This is the completed layer 1 for the project. The work was done sequentially and functions were built as required along the development cycle.**