



Banking International Systems Ltd. currently provides accounts software to banks in Ireland and has requested you to develop a new banking program for them.

This program will create a database which will store the details of all the account holders. In addition to storing all the account holder data the application should allow account holder statistics to be generated.

Your program should create the database (which for your purpose will be implemented as a linked list) and be able to save, restore, retrieve, add, delete and update account details.

For each account holder, you will store the following personal details:

1. Account Number (Assume an integer – must be unique)
2. First Name
3. Second Name
4. Address
5. Initial Balance
6. Email Address (must contain an @, a full stop and a .com)
7. How would you rate the pace of service in the bank?
 - a. Excellent
 - b. Very Good
 - c. Satisfactory
 - d. Disappointing
 - e. Bad

The system is password protected and only the correct username and password details will allow the user to gain access to the system.

The username and password (6 characters in length) will be stored in a login structure which is read in from a login file which holds three login records. Ensure that when the user enters in the password that it cannot be seen on the screen. (It only shows an * for each character. E.g. *****)

Your program should initialise the linked list based on the account holders stored in the Bank.txt file. This file should be updated when the user terminates the program.

Your program should provide a menu as follows:

1. Add new account
2. Display all account whose balance is less than €100 to screen
3. Display account holder details
4. Lodge to Account
5. Withdraw from Account
6. Delete Account

7. Generate statistics (a – e) based on the criteria listed below:
 - a. % of people who felt the service was excellent
 - b. % of people who felt the service was very good
 - c. % of people who felt the service was satisfactory
 - d. % of people who felt the service was disappointing
 - e. % of people who felt the service was bad
8. Print all account holders into a report file.

Add New Account: This will add a new account in the linked list. The Account number must be unique.

Display all accounts whose balance is less than €100 to screen: Display the details of accounts whose balance is less than €100 to screen

Display Account Holder Details: Allow the admin to input either an Account number or an account holder's full name and display the details for that account.

Lodge to Account: Allows the account holder to lodge money to their account.

Withdraw from Account: Allows the account holder to withdraw money from their account. Note: The account cannot be overdrawn

Delete Account: Allows the admin to delete a account from the list by account number.

Print all account into a report file: Display an account report which outputs the following information of the accounts to file:

- All Account Details
- Account Statistics (based upon item 7 of the menu)

Validation:

Your program should perform validation on all menu inputs.

Project Submission

Each student should submit the code developed to support the game. In addition to the code, a screencast should be included in the submission, demonstrating the solution's complete functionality.

Submission Deadline Project

Submissions to be submitted to martin.hynes@gmit.ie by 11 pm on the 31st August 2021

Points to Note

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