

LAB 211 Assignment

Type:	Long Assignment
Code:	J1.L.P0005
LOC:	350
Slot(s):	N/A

Title

The Secret Bank.

Background

Mr. Quan wants to build a secret bank. Each person can create a bank account, deposit, withdraw, transfer or remove the account. In addition, this bank must support a login function. The password must be encrypted before saving to the database. Mr. Quan's Bank uses binary files as a database. File bank.dat is used to store all accounts and their money in the bank. The user.dat file is used to store all accounts and passwords.

Bank upgrade version.1: support more functions: change password, real-time update processing, synchronous processing - many people access the bank at the same time.

Program Specifications

Build a secret bank upgrade. With the following basic extent functions

1. Create new account
2. Login function
3. Withdrawal function
4. Deposit function
5. Transfer money
6. Remove account
7. **Change password**
8. **Real- time update processing**
9. **Hide password function**
10. **Write log**
11. **Show log history**

Others- Quit

Each menu choice should invoke an appropriate function to perform the selected menu item. Your program must display the menu after each task and wait for the user to select another option until the user chooses to quit the program.

Features:

This system contains the following functions:

Display a menu and ask users to select an option.

– Function 7: Change password – 50 LOC

- Login is required.
- Require enter the old password, new password and confirm new password.
- The program will check the constraints: the old must be correct. The new password must contain at least 6 characters: including uppercase letters, lower case letters, numeric characters and 1 special character. The two new passwords must be the same.
- All data must be validated. Otherwise, an error message will be displayed.
- Password must be encrypted before saving to the database.

- After create change password then logout this account and go back to the main menu.

– **Function 8: Real-time update processing – 100 LOC**

- Modify the above functions so that when each function is completed, the system must immediately update to the database.

– **Function 9: Hide password – 100 LOC**


- Modify the above functions so that when entering a password, the password will be displayed with star characters. Ex: *****


– **Function 10: Write log – 50 LOC**

- The system will record all user activities on the banking system: account id, Date Time, which functions are executed. Log data is saved in log.dat file.

– **Function 10: Write log – 50 LOC**

- Login is required
- Show the activities history within a month from now.

 The above specifications are only basic information; you must perform a requirements analysis step and build the application according to real requirements.

 The lecturer will explain the requirement only once on the first slot of the assignment.