

**Assignment 1: Bank Account Code Conversion (75 points; due Tuesday, March 31<sup>st</sup> at 11:59 PM)**

The El Camino College Bank is in need of some help. It has some working software for handling bank accounts. However, it is out-of-date. It has been written in Java, but using Swing as the Graphical User Interface (GUI) base. It needs to be converted over to Java FX as part of a massive software upgrade. You are to take the existing code base and convert it over from Swing to Java FX. Here are the methods that exist, as well as a small description of what they do:

**File Menu**

- Open File
  - This method opens an existing file with accounts and loads them, overwriting any existing accounts that may already be loaded.
- Save File
  - This method saves all accounts to a file.

**Accounts Menu**

- Add New Account
  - This method allows the user to add a new account with a new name for the user, as well as an initial balance.
- List All Transactions
  - This method lists the current user's account information, including user name, current balance, the total amount of service charges, and all transactions, including checks, deposits, and service charges.
- List All Checks
  - This method lists the current user's account information, including user name, current balance, the total amount of service charges, and all checks, including check numbers and amounts.
- List All Deposits
  - This method lists the current user's account information, including user name, current balance, the total amount of service charges, and all deposits, including the amount deposited in cash for a transaction, the amount deposited in checks for a transaction, and the total for the transaction.
- List All Service Charges
  - This method lists the current user's account information, including user name, current balance, the total amount of service charges, and all service charge transactions.
- Find An Account
  - This method prompts the user to enter a name to find. If found, that user's account is loaded as the active account. If not found, the user is notified that there was no account with that user name.

- List All Accounts
  - This method lists all of the existing bank accounts loaded, including user name, current balance, and the total amount of service charges.

### **Transactions Menu**

- Enter Transaction
  - This method allows the user three options.
    - Option 0 displays the user name, current balance, and the total amount of service charges.
    - Option 1 prompts the user to enter a check number, then an amount of the check. This will debit from the account.
    - Option 2 prompts the user to enter amounts for the checks and cash to be deposited. This will credit the account.
  - After each option, a window is displayed.
    - Option 1 has service charges of \$0.15 per transaction, a one-time \$5.00 service charge when the total balance falls below \$500.00 after a check written or debit, a warning when the total balance falls below \$50.00, and a \$10.00 service charge for every check written or debit that causes the total balance to be negative, even if the account is already negative or overdrawn.
    - Option 2 has a service charge of \$0.10 per deposit.

In addition, the bank has asked for additional exception handling to be added, as they've found users over the years to be unknowledgeable when it comes to inputting certain amounts. Make sure to protect input fields against non-numerical amounts, as well as the attempted entry of negative amounts.

### **Turn It In**

You are turn in a .zip file with all of the existing class names intact. The zip file should have the following naming convention:

FirstInitialLastName-CS23-A1.zip (e.g. EAmbrosio-CS23-A1.zip)

They must build as a Java FX project. A strong suggestion is to create a new Java FX project, followed by copying all the .java files into that project, and then beginning the conversion.