

CS 12 - Assignment 2

Data Files

Due Wednesday, April 22

In this assignment you will be using data files. Be sure to include all necessary information at the top of your program and use good commenting and style throughout.

Write a program that allows a user to keep track of a balance in a checking account. Your program will be able to read a list of transactions from a file. The balance will be stored in a file called *balance.dat*. There should always be only one floating point number stored in the file and it should show 2 digits to the right of the decimal place.

The following is a list of transaction codes:

C Check - this amount should be subtracted from the balance.

D Deposit - this amount should be added to the balance.

S Service Charge - this amount should be subtracted from the balance.

You will give the user the following menu to choose from upon start of the program. The user should be able to continue choosing options until they decide to quit the program.

- Allow the user to perform a transaction. This options should allow the user to then choose one of the above transactions as well as specify the amount of that transaction. The new balance should be stored in *balance.dat*. Thus this file should first be opened as an input file so the current balance can be read. After performing the transaction, the new balance should be stored in the file (thus the file will then be opened in output mode).
- Show the balance. Print the balance stored in *balance.dat* to the screen nicely formatted.
- Read transactions from a file. Use the balance in *balance.dat* as the beginning balance and perform the transactions in the file, then store the new balance in *balance.dat*. The user should be able to specify the name of the file in which the list of transactions are stored. The following shows an example transaction file:

```
C 134.22
D 1200.67
C 56.80

C 34.34
```

There may be blank lines between transactions and at the end of the file.

You should use functions for this assignment. For example, the main of the program should display the menu of choices and read in the user's choice. Each choice should then call a separate function. Start with writing only one choice and thus one function at a time. This helps you find your bugs quicker and fix them before they cause larger problems as the program grows.