COSC 1337 – Fundamentals of Programming

Project 03 - Checkbook Balancing - Revised

Modify your checkbook balancing program from Project 02 as follows:

- The user enters the transaction type and amount (if required) on a single line. In other words, there should not be a separate prompt message for the transaction amount.

- Use a separate function to do check processing and another function to do deposit processing.

- Add additional service charges (see below).

The program commands are as follows (see the sample program dialog near the bottom of this page).

Transaction command	Meaning
C *amount*	Process a check for *amount* dollars, where *amount* is a floating-point number.
D *amount*	Process a deposit for *amount* dollars, where *amount* is a floating-point number.
E	End the program.

Service Charges

- There is a $0.35 service charge for each check written.

- If the account balance falls below $500.00 at any time during the month, there is a $15.00 service charge for the month. NOTE: This fee is only charged once at most!

- If processing a check results in a negative balance, there is a $35 service charge (insufficient funds charge). This $35 fee is charged for each check that results in a negative balance.

- Note: all service charges should be deducted from the account balance at the <u>end of the month</u>.

Output

For each transaction, print
- the command data (to confirm the transaction)
- the resulting account balance
- the total service charges accrued so far

At the end of the month, deduct the service charges and print the final balance. Your program dialog should look something like this example (user input is shown in bold). **Other requirements**
- Do not use global variables in any assignment. A global variable is a variable that is declared outside any function.
- All input should be checked for reasonable values.
- All dollar amounts should be printed with 2 decimal places.
- Write a separate function to process each of the transaction types (check or deposit).

SAMPLE RUN (User entry is in RED)

AllyBaba Bank

Enter the beginning balance: **900**

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Select Transaction Type:
C - Process a check
D - Process a deposit
E - Exit

Enter a transaction: **C 50.25**
Processing check for $50.25

Processed…
Balance: $849.75
Service charge: $0.25 for a check
Total service charges: $.25

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Select Transaction Type:
C - Process a check
D - Process a deposit
E - Exit

Enter a transaction: **C 250**
Processing check for $250.00

Processed…
Balance: $599.75
Service charge: $0.25 for a check
Service charge: $5.00 balance below $800.00
Total service charges: $5.50

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Select Transaction Type:
C - Process a check
D - Process a deposit
E - Exit

Enter a transaction: **D 200**
Processing deposit for $200.00

Processed…
Balance: $799.75
Total service charges: $5.50

Select Transaction Type:
C - Process a check
D - Process a deposit
E - Exit

Enter a transaction: **E**
Processing end of month

Processed…
Final balance: $794.25