

(A simplified banking operation)

Suppose that a certain bank keeps a data file "bank.dat", each record of which represents a customer request to make a deposit, withdrawal, or some other type of transaction. For example, a typical record in this file might look like:

10245 2 50.00 867.23

where the first field is a customer ACCOUNT NUMBER (integer), the second is a transaction CODE (integer) explained below, the third is the AMOUNT (float) involved in the requested transaction, and the fourth is the customer's current BALANCE (float).

Write a C++ program to loop through the data file and process (or deny) each transaction request according to the following rules:

(a). If code=1, this is a deposit request; update the customer's balance by the amount indicated, and output the customer's account number and updated balance.

(b). If code=2 (as in the example above), this is a withdrawal request. Check to see that the customer is not requesting to withdraw MORE than his/her balance. If so, write out the account number and the message "insufficient funds" and deny the transaction (go on to the next customer), else process the transaction, i.e., decrease the balance by the amount of the withdrawal. However, if a successful withdrawal results in the new balance being less than 100.00 dollars, assess an additional 10.00 dollar fee, i.e., decrease the balance by ten dollars and print out the message "balance below minimum -- \$10.00 fee assessed". For any successful withdrawal, output the customer's account number and updated balance.

(c). If code is anything other than 1 or 2, print out the customer's account number and the message "bad transaction code".

When you are done looping through the data file, PLEASE OUTPUT FOUR ADDITIONAL PIECES OF INFORMATION, namely:

- (i). total number of deposits made
- (ii). total amount (dollar value) of the deposits made
- (iii). total number of SUCCESSFUL withdrawals made
- (iv). total amount (dollar value) of the SUCCESSFUL withdrawals made.

As usual, please hand in a printed copy of your source code and your output.