

Instructions:

The problem below requires some kind of input. You are free to implement any mechanism for feeding input into your solution (for example, using hardcoded data within a unit test). You should provide sufficient evidence that your solution is complete by, as a minimum, indicating that it works correctly against the supplied test data. The solution should be created in C# using the .Net framework. Persistence storage / User Interface are not required for this test.

The focus of this test is three fold.

- To test your ability to design an object model.
- To test your ability to use a testing framework of your choice (Nunit,MbUnit,xUnit.Net,etc.)
- To test that the expected output is correct.

Scenario:

The world wide bank allows customers to create checking accounts. The checking account balance is always tracked in Canadian currency. Deposits and withdraws can be made in Canadian dollars, US dollars or Mexican Pesos. The applicable exchange rate is applied when depositing or withdrawing a foreign currency. Funds can be transferred between two different accounts.

Exchange Rates:

\$1.00 CAD = \$0.50 USD

\$1.00 CAD = \$10.00 MXN

Case 1:

Customer: Stewie Griffin

Customer ID: 777

Account Number: 1234

Initial Balance for account number 1234: \$100.00 CAD

Stewie Griffin deposits \$300.00 USD to account number 1234.

Case 2:

Customer: Glenn Quagmire

Customer ID: 504

Account Number: 2001

Initial balance for account number 2001: \$35,000.00 CAD

Glenn Quagmire withdraws \$5,000.00 MXN from account number 2001.

Glenn Quagmire withdraws \$12,500.00 USD from account number 2001.

Glenn Quagmire deposits \$300.00 CAD to account number 2001.

Case 3:

Customer: Joe Swanson

Customer ID: 002

Account Number: 1010

Initial balance for account number 1010: \$7,425.00 CAD

Customer: Joe Swanson

Customer ID: 002

Account Number: 5500

Initial balance for account number 5500: \$15,000.00 CAD

Joe Swanson withdraws \$5,000.00 CAD from account number 5500.

Joe Swanson transfers \$7,300.00 CAD from account number 1010 to account number 5500.

Joe Swanson deposits \$13,726.00 MXN to account number 1010.

Case 4:

Customer: Peter Griffin

Customer ID: 123

Account Number: 0123

Initial balance for account number 0123: \$150.00 CAD

Customer: Lois Griffin

Customer ID: 456

Account Number: 0456

Initial balance for account number 0456: \$65,000.00 CAD

Peter Griffin withdraws \$70.00 USD from account number 0123.

Lois Griffin deposits \$23,789.00 USD to account number 0456.

Lois Griffin transfers \$23.75 CAD from account number 0456 to Peter Griffin (account number 0123).

Output 1:

Account Number: 1234 Balance: \$700.00 CAD

Output 2:

Account Number: 2001 Balance: \$9,800 CAD

Output 3:

Account Number: 1010 Balance: \$1,497.60 CAD

Account Number: 5500 Balance: \$17,300.00 CAD

Output 4:

Account Number: 0123 Balance: \$33.75 CAD

Account Number: 0456 Balance: \$112,554.25 CAD