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 enough 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#. **Persistent 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

-To test that the expected output is correct.

Scenario:

The world wide bank is a growing bank based in Canada that accepts money in North American currencies. The Bank's customers can create 1 or more checking accounts, including joint 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).

Case 5:
Customer: Joe Swanson
Customer ID: 002
Account Number:
1010 Initial balance for account number 1010: $7,425.00 CAD

Famous social engineer and thief John Shark (Customer ID 219) attempts to withdraw $100 USD from account 1010. The bank determines that the account is not John's and refuses to give him the money.

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

Output 5:
Account Number: 1010 Balance: $7,425.00 CAD