

**Unit 7 Assignment 1:**

Write a BankAccount class that will respond to the following tasks of a Java client program (applet).

The first account # should be 101.

- 1 - Declare a variable to be of type BankAccount and initialize it with a random double less than \$1000.  
{Default constructor calling a mutator method - sets account # to one greater than the last assigned #}
- 2 - Declare a variable to be of type BankAccount and initialize it to \$1500.  
{Parametric constructor - sets account # to one greater than the last assigned #}
- 3 - Deposit money into the account.  
{Public member (instance) method - returns a String "Deposit Accepted" for values > 0 and "Deposit Rejected" for values <= 0 - updates balance if necessary}
- 4 - Withdraw money from the account.  
{Public member (instance) method - returns a String "Withdrawal Accepted" if the amount <= the balance and "Withdrawal Denied - Insufficient Funds" if the amount > the balance - updates balance if necessary}
- 5 - Calculate the interest earned by the account at a rate of 4%.  
{Public member (instance) method - calculates and returns a double equal to balance + interest}
- 6 - Get the number of the account.  
{Accessor method - returns the account #, it should be > 100}
- 7 - Get the balance of the account.  
{Accessor method - returns a double equaling the amount of money in the account}
- 8 - Returns the present interest rate used in the account.  
{Static method - returns rate as a percent (ie. 4%)}

Follow these instructions, in order, in the client program.

- 1 - Print a heading, "Account Information"
- 2 - Print the account # and initial balance for account #1
- 3 - Print the account # and initial balance for account #2
- 4 - Deposit \$300 in account #1 - Print returned String
- 5 - Deposit \$200 in account #2 - Print returned String
- 6 - Withdraw \$250 from account #1 - Print returned String
- 7 - Withdraw \$125 from account #2 - Print returned String
- 8 - Calculate the interest on both accounts
- 9 - Withdraw \$550 from account #1 - Print returned String  
(for the purposes of depositing it in account #2)
- 10 - Deposit \$550 in account #2 - Print returned String  
(coming from account #1, if withdrawal from step #9  
was successful)
- 11 - Calculate the interest on both accounts
- 12 - Print the account # and final balance for account #1
- 13 - Print the account # and final balance for account #2
- 14 - Print the present interest rate used in these accounts

Continue to execute this program until you have one applet in which all transactions were accepted and a second applet where the transferring of the \$550 from account #1 to account #2 was rejected. Your applets should look like the applets attached to this assignment. Paste both of these applets into a Word document and turn it in with the code for both the BankAccount class and the driver (client) class.