```java
/**
 * BankAccount class stores information about a person's
 * bank account and implements actions of withdrawing
 * and depositing money.
 * VERSION 2:
 *          - instance variables are private
 *          - add get and set methods
 *          - add equals method
 *          - add toString method
 *
 * @author Tammy VanDeGrift, updated by Rajaa Alqudah
 * @version 2
 */
public class BankAccount {

    // instance variables
    private String name;     // person's name associated with account
    private int number;      // account number
    private double balance;  // total dollars in account


    /** updateName
     * changes name associated with account
     * @param newName    new name associated with account
     */
    public void setName(String newName) {
        name = newName;
    }

    /** getName
     * returns the name associated with the bank account
     * @return name associated with account
     */
    public String getName() {
        return name;
    }

    /** getNumber
     * returns the account number
     * @return  number associated with account
     */
    public int getNumber() {
        return number;
    }

    /** getBalance
     * returns the balance associated with account
     * @return balance of account
     */
    public double getBalance() {
        return balance;
    }


    /** equals
     * determines if the BankAccount objects are equal
     * @param account BankAccount object that is part of
     * the comparison
     * @return true if the two BankAccounts are equal and
     * false, otherwise
     */
    // example of writing an equals method - it is a good
    // idea to write an equals method for each class you
    // create

    // this.name refers to the instance variable name for
    // the current object to which this method is applied

    public boolean equals(BankAccount account) {
```

```
        return ((this.name.equals(account.name)) &&
                (this.number == account.number) &&
                (this.balance == account.balance));
    }

    public String toString() {
        return "BankAccount [ Name = " + name + ", Number = " +
            number + ", Balance = " + balance + " ]";
    }

    ////////////////////////////////////////////////////////
    //          The following methods are from the first
    //          version of the BankAccount class
    ////////////////////////////////////////////////////////


    /** initialize
     * initializes the BankAccount name and number
     * and sets balance to 0.0
     * @param  holdersName   person's name associated with account
     * @param  accountNumber  account number
     */
    // we will see a new way to initialize BankAccount objects
    // in a few lectures
    public void initialize(String holdersName, int accountNumber){
        // assign instance variables
        name = holdersName;
        number = accountNumber;
        balance = 0.0;  // initialize balance to 0 dollars
    }

    /** deposit
     * puts in money to account balance
     * @param amount   deposit amount
     * @return true if deposit was successful and
     * false if the deposit could not take place
     */
     public boolean deposit(double amount) {
         if (amount < 0) {
             return false;
         } else {
             balance = balance + amount;
             return true;
         }
    }

    /** withdraw
     * removes money from account if balance is available
     * @param   amount   withdrawal amount
     * @return  true if withdrawal completed successfully
     * and false if withdrawal could not take place
     */
     public boolean withdraw(double amount) {
         if (amount < 0) {
             return false;
         } else if (amount <= balance) {
             balance = balance - amount;
             return true;
         } else {
             return false;
         }
    }

    /** transferFrom
     * transfers amount from another BankAccount object
     * @param account  the account from which money is transferred
     * @param amount   the amount of money to transfer
     * @return true if transfer was successful and false if not
     */
```

```
    public boolean transferFrom(BankAccount account, double amount) {
        boolean withdrawalOK;
        withdrawalOK = account.withdraw(amount);
        if (!withdrawalOK) {
            return false;
        }
        boolean depositOK = this.deposit(amount);
        if (!depositOK) {
            return false;
        }
        return true;
    }


    /** printAccountInfo
     * prints information associated with account object
     */
    public void printAccountInfo() {
        System.out.print("BANK ACCOUNT INFO [" );
        System.out.print("Name: " + name);
        System.out.print(", Number: " + number);
        System.out.println(", Balance: " + balance + " ]");
        System.out.println();
    }
}
```