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/*****
*
*   File: BankAccountUser.java
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*   Project:  BankAccount
*
*   Description:  Tests "all methods" of the program BankAccount
*
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*
*   Date:  2-21-15
*
*   Comments:  Specs were a little hard to follow. Assumed user input
*              was for all variables and a new balance was printed after
*              each method was tested. Not sure what you meant by put all
*              print statements in "main" as you showed us in class to use
*              helper method. Assume valid input!
*
*****/

import java.util.Scanner;

public class BankAccountUser
{
    /*** Class test Method ***/

    public void startBankTest()
    {
        /**local variables

        double begBalance;
        double interestRate;
        double withDrawAmount;
        double depositAmount;
        BankAccount BankAccount1 = null;
        BankAccount BankAccount2 = null;

        /*** Instantiate objects ***/

        BankAccount1 = new BankAccount( 500 );
        BankAccount2 = new BankAccount( 500, 10 );

        /*** Prints predefined Numbers ***/

        System.out.println("\n\n-----Predefined Values Test-----");
        displayBankAccount("Beginning Balance $500, Default Interest Rate of 2%, Deposit $20,
Withdrawal $40", BankAccount1,20,40);
        displayBankAccount("Beginning Balance $500, Interest Rate 10%, Deposit $20, Withdrawal $40",
BankAccount2,20,40);
        System.out.println();

        /*** Retieves User Defined numbers --- Assumes Valid Input ***/

        System.out.println("\n-----Beginning User Input Test-----");
        begBalance = getUserInput("Beginning Balance");
        interestRate = getUserInput("Interest Rate % for year ");
        depositAmount = getUserInput("Deposit Amount");
        withDrawAmount = getUserInput("Withdrawal Amount");

        /*** Resets beginning balance and interest rate ***/

        BankAccount1 = new BankAccount(begBalance,interestRate);
        BankAccount2 = new BankAccount( 500, 10 );

        /*** Prints User Defined numbers --- Assumes Valid Input ***/

        displayBankAccount("User Inputed", BankAccount1,depositAmount,withDrawAmount);

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        displayBankAccount("Beginning Balance $500, Current Interest Rate of 10%, Deposit $20,
Withdrawal $40", BankAccount2,20,40);
    }

    /** helper methods */

    private void displayBankAccount(String id, BankAccount testBank, double depositAmount, double
withDrawAmount)
    {
        /** Formats output --- Local Variables */

        String FormatString1 = "%25s %s %,9.2f%n%n";
        String FormatString2 = "%25s %,11.2f%s%n%n";

        /** Prints Bank Stuff out */

        System.out.println( "\n    ***Testing " + id + " State***\n");
        System.out.printf( FormatString1, "Beginning Balance:", "$", testBank.getBalance());
        System.out.printf( FormatString2, "Interest Rate:", testBank.getInterestRate(), "%");

        testBank.deposit(depositAmount);
        System.out.printf( FormatString1, "Deposit:", "$", depositAmount);
        System.out.printf( FormatString1, "New balance:", "$", testBank.getBalance());

        testBank.withdraw(withDrawAmount);
        System.out.printf( FormatString1, "Withdrawal:", "$", withDrawAmount);
        System.out.printf( FormatString1, "New balance:", "$", testBank.getBalance());

        testBank.addInterest();
        System.out.printf( FormatString1, "Added Interest:", "$", testBank.getInterest() );
        System.out.printf( FormatString1, "Final balance:", "$", testBank.getBalance() );
        System.out.println(testBank.toString());
        System.out.println();
    }

    private double getUserInput( String id)
    {
        /** Local Variables */

        Scanner input = new Scanner( System.in );
        double userInput;

        /** Recieves User Input & Prints the question */

        System.out.println();
        System.out.print("    Enter " + id + ": ");
        userInput = input.nextDouble();

        return userInput;
    }

    /** Application */

    public static void main( String[] args )
    {
        BankAccountUser test = new BankAccountUser();
        test.startBankTest();
    }
}

```