```java
/**************************************************************************
*
*       File: BankAccountUser.java
*
*       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);
        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();
    }
}
```