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/*****
*
*   File: BankAccount.java
*
*   Project:  BankAccount
*
*   Description:  This is part one of Lab3.  Its job is to provide methods
*                   and variables.
*
*   Author:  Joshua Wiley
*
*   Date:  2-15-15
*
*   Comments:  Specs were a little hard to follow.  Not sure if I am
*               testing the right things in main.
*
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public class BankAccount
{
    /*** Constants ***/
    private final double BALANCE = 0;
    private final double INTEREST_RATE = 2;

    /*** Class Variables ***/

    private double balance, begBalance = BALANCE;
    private double interestRate = INTEREST_RATE;
    private double interest = 0;

    /*** Constructors ***/

    public BankAccount( double balance, double interestRate )
    {
        this.balance = balance;
        this.begBalance = balance;
        this.interestRate = interestRate;
    }

    public BankAccount( double balance )
    {
        this.balance = balance;
        this.begBalance = balance;
        this.interestRate = INTEREST_RATE;
    }

    /*** Class Methods -- Accessors ***/

    public double getInterestRate()
    {
        return this.interestRate;
    }

    public double getInterest()
    {
        return this.interest;
    }

    public double getBalance()
    {
        return this.balance;
    }

    public double getbegBalance()
    {

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        return this.begBalance;
    }

    @Override
    public String toString()
    {
        return "        Beginning Balance: $" + this.getbegBalance() + " Interest Rate: "
            + this.getInterestRate() + "%";
    }

    /** Mutators/transformers */

    public void deposit( double amount )
    {
        this.balance += amount;
    }

    public void withdraw( double amount )
    {
        this.balance -= amount;
    }

    public void addInterest()
    {
        this.interest = this.balance * ( this.interestRate / 1200 );
        this.balance = this.balance + this.interest;
    }

    /** Application */

    public static void main( String[] args )
    {
        /** Local Variable */
        String space = "                ";

        /** Instantiate objects */
        BankAccount test = new BankAccount(500, 2);

        /** Prints Test objects */

        System.out.println( "\n----- Testing Objects ----- \n");
        System.out.println( space + "Balance: $" + test.getBalance() );

        test.deposit(20);
        System.out.println( space + "Deposit: $" + test.getBalance() );

        test.withdraw(10);
        System.out.println( space + "Withdrawal: $" + test.getBalance() );

        System.out.println( space + "Interest: " + test.getInterestRate() + "%" );

        System.out.println( space + "toString(): \n" );
        System.out.println( test.toString() );
    }
}

```