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/*****
 *
 *   File: BankAccount.java
 *
 *   Project: BankAccount
 *
 *   Description: This is part one of Lab3. Its job is to provide methods
 *               and variables.
 *
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 *
 *   Date: 2-23-15
 *
 *   Comments: Specs were a little hard to follow. Not sure if I am
 *            testing the right things in main.
 *
 *****/
public class BankAccount
{
    /*** Constants ***/

    private final double BALANCE = 0;
    private final double INTEREST_RATE = 2;

    /*** Constructors ***/

    public BankAccount() //Parameterless Constuctor
    {
        private double balance, begBalance = BALANCE;
        private double interestRate = INTEREST_RATE;
        private double interest = 0;
    }

    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()
    {
        return this.begBalance;
    }
}
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    }

    @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() );

    }
}

```