Experiment No : 4

PRN : 22UAI021

Title: Create class SavingsAccount. Use a static variable annualInterestRate to store the annual interest rate for all account holders. Each object of the class contains a private instance variable savingsBalance indicating the amount the saver currently has on deposit. Provide method calculateMonthlyInterest to calculate the monthly interest by multiplying the savingsBalance by annualInterestRate divided by 12this interest should be added to savingsBalance. Provide a static method modifyInterestRate that sets the annualInterestRate to a new value.

Write a program to test class SavingsAccount. Instantiate two savingsAccount objects, saver1 and saver2, with balances of Rs 2000.00 and Rs 3000.00, respectively. Set annualInterestRate to 4%, then calculate the monthly interest and print the new balances for both savers. Then set the annualInterestRate to 5%, calculate the next month's interest and print the new balances for both savers.

PROGRAM :

```
import java.util.*;
class Savingaccount
{
    private double balance;
    private static double annualInterestRate;

    Savingaccount(double balance)
    {
        this.balance = balance;
    }
    public static void ModifyannualInterestRate(double newRate)
    {
        annualInterestRate = newRate;
    }
    public void monthlyInterest()
    {
        double monthlyInt = (balance * annualInterestRate /12)/100;
```

```
        balance+=monthlyInt;
    }
    public void print()
    {
        System.out.println(" Saving Balance : "+balance);
    }
    public static void main(String[]args)
    {
        Savingaccount saver1 = new Savingaccount(2000.0);
        Savingaccount saver2 = new Savingaccount(3000.0);

        saver1.ModifyannualInterestRate(4.0);
        saver1.monthlyInterest();
        saver1.print();

        saver2.ModifyannualInterestRate(5.0);
        saver2.monthlyInterest();
        saver2.print();

    }
}
```

Output: