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 1 /*
 2    Java 1           Basic Mortgage calculator
 3    Programmer:      Mike Brown
 4    Date:            March 31, 2009
 5    Program Name:    Motgage.java
 6    Purpose:         Calculate Monthly payments
 7 */
 8
 9 //import statements import basic imput capability
10 import java.io.*;
11
12 public class Mortgage
13 {
14
15     public static void main(String[] args)throws IOException
16     {
17         //declare variables
18         String totalLoan, percentInterest,numYears;
19         double loanAmount,interestRate,monthlyPayments;
20         int term;
21
22         BufferedReader dataIn = new BufferedReader(new
    InputStreamReader(System.in));
23
24         // print prompts and get input
25         System.out.println("\t       Basic Mortgage Calculator");
26         System.out.println();
27         System.out.print("\t\tPlease enter the total loan amount:
   ");
28             totalLoan = dataIn.readLine();
29             loanAmount = Double.parseDouble(totalLoan);
30         System.out.print("\t\tPlease enter the interest rate: ");
31             percentInterest = dataIn.readLine();
32             interestRate = Double.parseDouble(percentInterest);
33         System.out.print("\t\tPlease Enter the term of the loan in
   months: ");
34             numYears = dataIn.readLine();
35             term = Integer.parseInt(numYears);
36
37         //call payEachMonth method to get monthly payment amount
38         monthlyPayments =
    payEachMonth(loanAmount,interestRate,term);
39
40         //print results
41         System.out.println("\t\tYour total monthly payments are: "
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+ monthlyPayments);

    }//end main

    /**     payEachMonth method
     *      This method will take 3 parameters (totalLoan, rateOfInterest, and lengthOfLoan) and use them to calculate the
     *      total monthly payments. The parameters get passed by the caller in the form of payEachMonth(laonAmount,interestRate,term)
     *      The caller uses those variables to get the total monthly charges. The payEachMonth method returns the doulble, payPerMonth.
     *
     * @param totalLoan
     * @param rateOfInterest
     * @param lengthOfLoan
     * @return
     */

    public static double payEachMonth(double totalLoan, double rateOfInterest, int lengthOfLoan)
    {
        double interestPaid = (rateOfInterest/100)*totalLoan;
        double totalAmountOfLoan =  interestPaid + totalLoan;
        double payPerMonth = totalAmountOfLoan / lengthOfLoan;
        return payPerMonth;
    }//end payEachMonth

}//end class
```