/\* Nicholas Carroll 19 November 2018

\* Write a Java program that displays the monthly and total payment based on interest rates incrementing by .125%

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**package** financialApplication;

**import** java.util.Scanner;

**import** java.lang.Math;

**public** **class** VariableDec {

**public** **static** **void** main(String[] args) {

Scanner input = **new** Scanner(System.***in***);

**int** loanPeriod = 0;

**int** loanAmount = 0;

*returnPowFuncValue*(loanPeriod, loanAmount, input); // declaring arguments

} // end of main program

**public** **static** **int** returnPowFuncValue(**int** loanPeriod, **int** loanAmount, Scanner input) { // creating for loop and declaring parameters

**for**(**double** interestRate = .05; interestRate <= .08; interestRate += .0125) {

System.***out***.println("Enter the loan period in years:");

loanPeriod = input.nextInt(); // notice that I am not redeclaring an object for memory purposes

System.***out***.println("Enter the loan amount in integer form with no commas or decimals:");

loanAmount = input.nextInt();

**double** monthlyPaymentNum = (loanAmount \* interestRate);

**double** monthlyPaymentDenom1 = Math.*pow*(1 + interestRate, loanPeriod \* 12);

**double** monthlyPaymentDenom2 = (1 - (1 / (monthlyPaymentDenom1)));

**double** monthlyPayment = (monthlyPaymentNum / monthlyPaymentDenom2);

**double** totalPayment = (monthlyPayment \* loanPeriod \* 12);

System.***out***.format("%-18s%-18s%-18s\n", "Interest Rate",

"Monthly Payment", "Total Payment");

System.***out***.format("%-18s%-18s%-18s\n", interestRate, Math.*round*(monthlyPayment \* 100.0) / 100.0, Math.*round*(totalPayment \* 100.0) / 100.0);

} // end of for loop

**return** 0;

} // end of returnPowFuncValue program

} // end of class