/\*

\* Justin Mendes

\* December 12, 2016

\* Unit 3 Activity 8 Program/Question 2

\* This program will ask the user to enter the number of years (up to 15 years), the amount invested per year and the interest rate.

\*/

import java.text.DecimalFormat;

import javax.swing.\*;

import javax.swing.table.DefaultTableModel;

public class CompoundInvesting

{

private static final Object[][] rowData = {};

private static final Object[] columnNames = {"Year", "Amount in Account","Interest", "Total"};

public static void main(String[] args)

{

//Variable Declarations and Initializations

double total = 0, invest = 0, interest = 0, investI = 0, interestI = 0;

int yearI = 0;

DefaultTableModel listTableModel;

JTable listTable;

JFrame frame = new JFrame();

listTableModel = new DefaultTableModel(rowData, columnNames);

investI = Double.parseDouble(JOptionPane.showInputDialog(null,"Welcome to the Compound Interest Calculator. This program will print out a titled table\nthat will display the amount of yearly investment over a period of up to 15 years.\n\nEnter the Yearly Investment Amount ($):", "Compound Interest Calculator", JOptionPane.QUESTION\_MESSAGE));

interestI = Double.parseDouble(JOptionPane.showInputDialog(null,"Please input the interest rate in percent (%):", "Compound Interest Calculator", JOptionPane.QUESTION\_MESSAGE));

yearI = Integer.parseInt(JOptionPane.showInputDialog(null,"Please enter the number of years for this investment:", "Compound Interest Calculator", JOptionPane.QUESTION\_MESSAGE));

listTableModel.addRow(columnNames);

DecimalFormat twoDigit = new DecimalFormat ("#,##0.00");

for(int year = 1; year <= yearI; year++)

{

/\*

\* interest = interest / 100 + 1;

\* invest = invest + interest

\*/

invest = investI + total;

interest = interestI / 100 \* invest;

total = invest + interest;

listTableModel.addRow(new Object[]{year, twoDigit.format(invest), twoDigit.format(interest), twoDigit.format(total)});

}//end loop

listTable = new JTable(listTableModel);

frame.add(listTable);

frame.setVisible(true);

frame.pack();

}//end main

}//end class