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// COSC 2430.001

// Project # 1

// Due: Feb. 4, 2015

// Calculates yearly interest and outputs the future value at 5, 10, and 20 years.

import java.util.Scanner;

public class Investments

{

private int year, inputInvest;

private double futureValue, calcInterest, calcPow, calcInvest, inputInterest, futureRound;

public static void main(String[] args)

{

Investments calcInterest = new Investments();

calcInterest.input();

calcInterest.calc();

}

public void input()

{

Scanner keyboard = new Scanner(System.in);

System.out.println("Enter how much will be invested");

inputInvest = keyboard.nextInt();

System.out.println("Enter interest rate in decimal form");

inputInterest = keyboard.nextDouble();

}

public void calc()

{

calcInvest = inputInvest;

calcInterest = 1 + inputInterest;

do

{

for (year=1; year<5; year++)

{

calcPow = Math.pow(calcInterest,year);

futureValue = calcInvest \* calcPow;

}

for (year=5; year<6; year++)

{

calcPow = Math.pow(calcInterest,year);

futureValue = calcPow \* calcInvest;

futureRound = Math.round(futureValue\*100.0)/100.0;

System.out.println("Your investment after " + year + " years: " + "$" + futureRound);

}

for (year=6; year<10; year++)

{

calcPow = Math.pow(calcInterest,year);

futureValue = calcInvest \* calcPow;

}

for (year=10; year<11; year++)

{

calcPow = Math.pow(calcInterest,year);

futureValue = calcPow \* calcInvest;

futureRound = Math.round(futureValue\*100.0)/100.0;

System.out.println("Your investment after " + year + " years: " + "$" + futureRound);

}

for (year=11; year<20; year++)

{

calcPow = Math.pow(calcInterest,year);

futureValue = calcInvest \* calcPow;

}

for (year=20; year<21; year++)

{

calcPow = Math.pow(calcInterest,year);

futureValue = calcInvest \* calcPow;

futureRound = Math.round(futureValue\*100.0)/100.0;

System.out.println("Your investment after " + year + " years: " + "$" + futureRound);

}

} while (year < 21);

}

}