**Exercise 7: Financial Forecasting**

package cognizantdeepskilling;

import java.util.Arrays;

import java.util.Comparator;

public class Main {

public static double calculateFutureValueRecursive(double presentValue, double growthRate, int years) {

if (years == 0) {

return presentValue;

}

return calculateFutureValueRecursive(presentValue \* (1 + growthRate), growthRate, years - 1);

}

public static double calculateFutureValueIterative(double presentValue, double growthRate, int years) {

for (int i = 0; i < years; i++) {

presentValue \*= (1 + growthRate);

}

return presentValue;

}

public static void main(String[] args) {

double presentValue = 10000;

double growthRate = 0.08;

int years = 5;

double futureValueRecursive = calculateFutureValueRecursive(presentValue, growthRate, years);

System.out.printf("Future Value (Recursive) after %d years: ₹%.2f%n", years, futureValueRecursive);

double futureValueIterative = calculateFutureValueIterative(presentValue, growthRate, years);

System.out.printf("Future Value (Iterative) after %d years: ₹%.2f%n", years, futureValueIterative);

}

}