**Financial Forecasting**

**FinancialForecast.java**

import java.util.Scanner;

public class FinancialForecast {

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

if (years == 0) {

return presentValue;

}

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

}

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

double result = presentValue;

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

result \*= (1 + growthRate);

}

return result;

}

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

System.out.println("Financial Forecasting Tool");

System.out.print("Enter present value (₹): ");

double presentValue = sc.nextDouble();

System.out.print("Enter annual growth rate (e.g., 5 for 5%): ");

double growthRatePercent = sc.nextDouble();

double growthRate = growthRatePercent / 100.0;

System.out.print("Enter number of years: ");

int years = sc.nextInt();

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

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

System.out.printf("\n Future value after %d years:\n", years);

System.out.printf(" Recursive Method : ₹%.2f\n", recursiveResult);

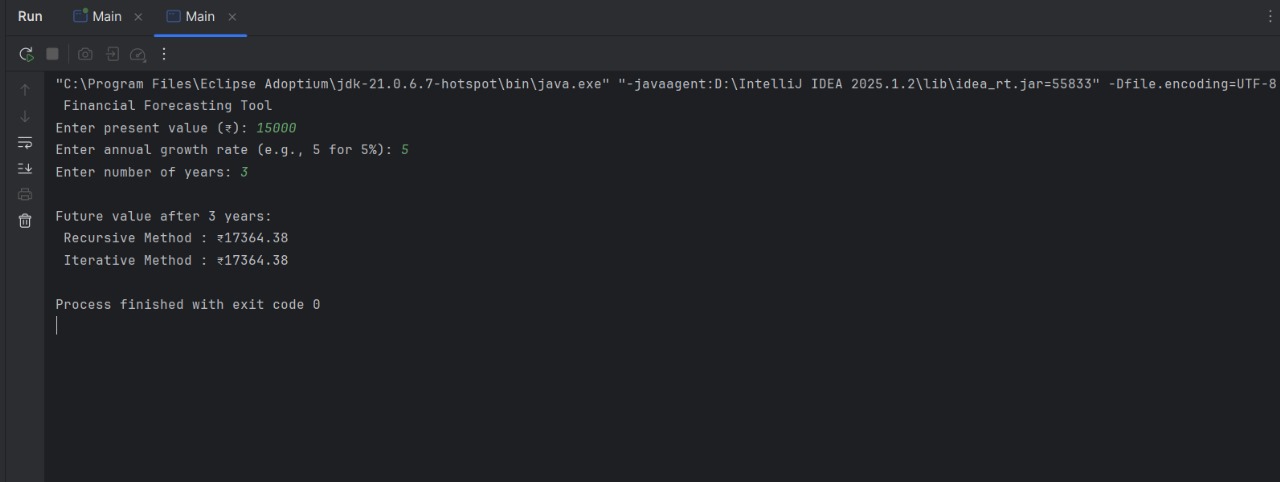
System.out.printf("Iterative Method : ₹%.2f\n", iterativeResult);

sc.close();

}

}

**OUTPUT:**

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