**DATA STRUCTURES AND ALORITHM**

**Exercise 7**: Financial Forecasting  
**CODE:**

PROJECT NAME: FinancialForecasting

CLASS NAME: ForecastCalculator  
ForecastCalculator.java:  
public class ForecastCalculator {

// Recursive method to calculate future value

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

if (years == 0) {

return presentValue;

}

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

}

public static void main(String[] args) {

double presentValue = 10000; // ₹10,000

double rate = 0.1; // 10% growth rate

int years = 5;

double futureValue = futureValueRecursive(presentValue, rate, years);

System.out.printf("Future Value after %d years = ₹%.2f%n", years, futureValue);

}

}

**OUTPUT:**

