**Exercise 7: Financial Forecasting**

**CODE:**

import java.util.Scanner;

public class GoalForecast {

    public static void main(String[] args) {

        Scanner scanner = new Scanner(System.in);

        System.out.println("Goal-Based Financial Forecasting\n");

        System.out.print("Enter your savings goal (₹): ");

        double goal = scanner.nextDouble();

        System.out.print("Enter how much you can save per month (₹): ");

        double monthlySavings = scanner.nextDouble();

        System.out.print("Enter expected annual interest rate (%): ");

        double rate = scanner.nextDouble();

        double monthlyRate = rate / 100 / 12;

        double saved = 0;

        int months = 0;

        System.out.println("\nForecast Progress:");

        System.out.println("----------------------------");

        while (saved < goal) {

            saved = (saved + monthlySavings) \* (1 + monthlyRate);

            months++;

            System.out.printf("Month %2d: %.2f saved\n", months, saved);

            if (months > 600) {

                System.out.println("Goal may not be achievable. Check values.");

                break;

            }

        }

        System.out.println("----------------------------");

        System.out.printf(" You will reach your goal of ₹%.2f in %d months (%.1f years)\n", goal, months, months / 12.0);

        scanner.close();

    }

}

OUTPUT:

