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public class StockPrediction {

    // Example historical data (day vs. stock price)
    static double[] days = {1, 2, 3, 4, 5}; // Day numbers
    static double[] prices = {100, 102, 104, 108, 110}; // Corresponding prices

    public static void main(String[] args) {
        double meanX = mean(days);
        double meanY = mean(prices);

        double numerator = 0, denominator = 0;

        for (int i = 0; i < days.length; i++) {
            numerator += (days[i] - meanX) * (prices[i] - meanY);
            denominator += (days[i] - meanX) * (days[i] - meanX);
        }

        double slope = numerator / denominator;
        double intercept = meanY - slope * meanX;

        System.out.println("Linear Regression Formula: y = " + slope + "x + " + intercept);

        // Predict future price
        double futureDay = 6;
        double predictedPrice = slope * futureDay + intercept;
        System.out.println("Predicted price on day " + futureDay + " = " + predictedPrice);
    }

    static double mean(double[] arr) {
        double sum = 0;
        for (double v : arr) sum += v;
```

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        return sum / arr.length;
    }
}
```

OUTPUT