Aim: to Implement a financial forecasting system using data structures and algorithms.

Program:

using System;

using System.Collections.Generic;

using System.Linq;

public class FinancialForecasting

{

public static List<double> CalculateMovingAverage(List<double> data, int period)

{

List<double> movingAverages = new List<double>();

if (data == null || data.Count < period || period <= 0)

{

return movingAverages;

}

for (int i = period - 1; i < data.Count; i++)

{

double sum = 0;

for (int j = 0; j < period; j++)

{

sum += data[i - j];

}

movingAverages.Add(sum / period);

}

return movingAverages;

}

public static void Main(string[] args)

{

List<double> stockPrices = new List<double> { 10, 12, 15, 13, 17, 20, 18, 22, 25 };

int period = 3;

List<double> movingAverages = CalculateMovingAverage(stockPrices, period);

Console.WriteLine("Stock Prices:");

foreach (var price in stockPrices)

{

Console.Write(price + " ");

}

Console.WriteLine("\nMoving Averages:");

foreach (var average in movingAverages)

{

Console.Write(average + " ");

}

}

}

Output:

