Online on Interpolation (Section A1, B1)

Find the closing index of Stock Exchange

Time: 50 Min

In this problem, you have been given a text file *stock.txt.* The first column represents the number of days passed in a fiscal year for Dhaka Stock Exchange (DSE). The second column represents the closing index of DSE of that particular day. As you can see, closing indexes are calculated in a five day interval, your task is to find the closing index of any particular day using Lagrange Polynomial Interpolation method.

- First you need to read the file from your program to store the values in an array.
- You need to take a day X as input from the user (the time will be between the range of given time points). Now you need to find the closing index (Y') of day X using Lagrange Polynomial Method for Cubic Interpolation.
- Also, find the absolute approximate relative.
- Finally, plot a graph for showing the closing index value over time and indicate the interpolated values in the graph.