Task 3: NSE-Options-Trading-Analyzer

Objective:

Get the ist of share where option trading happen. Get the lots size details along with share name

for each share, find the 52w high and 52 low and find the percentile.. for example.. if 52 w high is 200 and 52 week low is 100, and the current price is 140 then the percentlie is (140-100)/(200-100) - 40%

get the nearest option price for PE on this price and CE
get the option premium..
calculate irr by dividing premium/nearest strike price for CE and PE seperately.

take 15% margin (configurable) and calculate the nearest option strike price. for example the nearest is 140 then 15% less is 140*(1-15%) = 140*.85 = 119 and nearest is 120, get premium and calculatre irr too..

put all this data in the xls..

Approach / Solution:
I used Python with tkinter for the interface and pandas for data handling. The program fetches stock prices, calculates the 52-week price percentile, finds optimal strike prices using a margin, and computes the option premiums and IRR. Also the result can be generated in the excel file or can be download.

Challenges Faced:
In getting accurate data and to ensure that the strike price and IRR calculations and all the values that will be display is correct or not.

Resolution:
I added checks for missing or inconsistent data and standardized the calculations so the results are reliable.

Outcome / Result:
The program runs smoothly, calculates optimal strike prices and IRR, and produces a clear, easy-to-read report that can be exported to Excel. Traders can now use it to analyse the market. I have attached readme file with the each task to know how the code works.