Team CAN MP2 Project Plan

Stock market companies to focus on:

1. AP
2. CEB
3. CHIB
4. GTCAP
5. MBT
6. MEG
7. RLC

Per company, make 4 graphs using *Python*, with time t as the x-axis and the y-axes of each graph be:

- previous price (P_{prev})
- previous volume (V_{prev})
- 22-day momentum($m_{\Delta t=22}$)
- 7-day momentum ($m_{\Delta t=7}$)

*momentum is just derivative of price, use centered difference technique along with its specified Δt

Try to crop the graphs at different time windows (start time and end time), namely:

- 10 years
- 3 years
- 1 year
- 6 months
- 2 months
- 2 weeks

Final Product: Linear Regression (curve fitting) of the Current Stock Price (P_{today})

$$P_{today} = \alpha P_{prev} + \beta V_{prev} + \gamma m_{\Delta t=22} + \delta m_{\Delta t=7}$$

*The final product should be coded in *java*, and its results laid out in the poster

Distribution of work:

- Python Scripters
- Java Scripters
- Poster Layouters

PYTHON PROGRAM SPECS:
Takes a .csv file as input and outputs the 4 graphs

JAVA PROGRAM SPECS:
Takes a .csv file as input and outputs the calculated P_{today} function

POSTER SPECS:
Should have 4 figure graphs with each company having its own graph line and color in each figure.

Should also show the final P_{today} function that we calculated.

Column legend of .csv file:

column header	**meaning**
c	closing price
h	high price
l	low price
o	opening price
t	date
v	trading price
y	year
m	month
d	day
w	week
wd	day of week number
last	last price
change	price change from last to close
pchange	percent price change from last to close
symbol	company