TD Ameritrade Excel Parsing Solution.

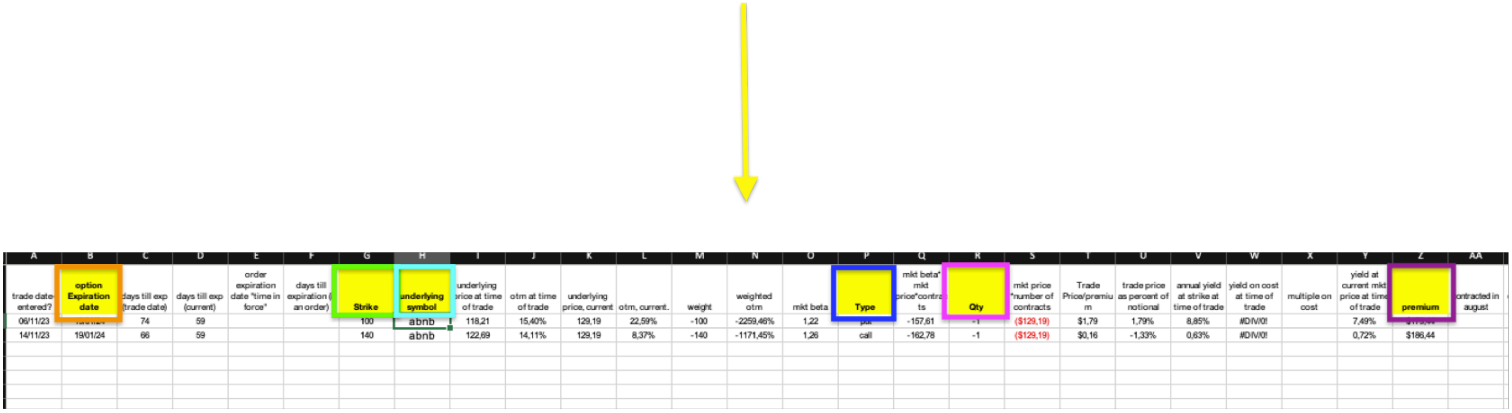
Project Overview:

The goal is create a custom python script for parsing data from an xlsx file and scraping data from a website.

Project Scope:

1. **Data Source:** .xlsx file with downloaded data from *TD Ameritrade &* data from cnbc Investing Club.
2. **Data Elements:**
   - **Input from TD Ameritrade:**
     - Date
     - Description
     - Quantity
     - Symbol
     - Premium
   - **Output:**
     - Option-Expiration Date
     - Strike
     - Underlying Symbol
     - Type
     - Quantity
     - Premium

DESCRIPTION	QUANTITY	SYMBOL	PREMIUM
Bought 1 ZM Dec 1 2023 76.0 Call @ 0.04	1	ZM Dec 1 2023 76.0 Call	-4,01
Bought 1 BABA Dec 15 2023 95.0 Call @ 0.14	1	BABA Dec 15 2023 95.0 Call	-14,56
Bought 4 PTON Dec 15 2023 4.0 Put @ 0.04	4	PTON Dec 15 2023 4.0 Put	-16,04
Bought 1 IAC Dec 15 2023 40.0 Put @ 0.1	1	IAC Dec 15 2023 40.0 Put	-10,56
Sold 1 CSCO Jan 19 2024 45.0 Put @ 0.32	1	CSCO Jan 19 2024 45.0 Put	31,44
Sold 1 BABA Dec 29 2023 70.0 Put @ 0.55	1	BABA Dec 29 2023 70.0 Put	54,44
Sold 1 HAL Dec 29 2023 35.0 Put @ 0.42	1	HAL Dec 29 2023 35.0 Put	41,44
Sold 1 HAL Dec 22 2023 42.0 Call @ 0.24	1	HAL Dec 22 2023 42.0 Call	23,44
Sold 1 HAL Feb 16 2024 45.0 Call @ 0.44	1	HAL Feb 16 2024 45.0 Call	43,44
Bought 1 BABA Dec 29 2023 105.0 Call @ 0.11	1	BABA Dec 29 2023 105.0 Call	-11,56
Sold 1 DVN Jan 19 2024 40.0 Put @ 0.57	1	DVN Jan 19 2024 40.0 Put	56,44
Sold 4 PTON Dec 29 2023 4.0 Put @ 0.07	4	PTON Dec 29 2023 4.0 Put	25,75
Sold 1 CART Jan 19 2024 22.0 Put @ 0.73	1	CART Jan 19 2024 22.0 Put	72,44
Sold 3 SAVE Dec 15 2023 10.0 Put @ 0.74	3	SAVE Dec 15 2023 10.0 Put	220,31



Additionally:

KEY STATS

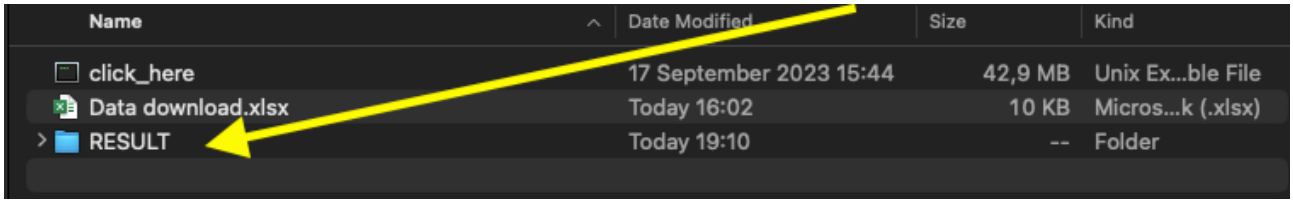
Open	190.33	Market Cap	2.971T
Day High	191.56	Shares Out	15.55B
Day Low	189.23	10 Day Average Volume	42.45M
Prev Close	189.95	Dividend	0.96
52 Week High	198.23	Dividend Yield	0.50%
52 Week High Date	07/19/23	Beta	1.31
52 Week Low	124.17	YTD % Change	47.08
52 Week Low Date	01/03/23		

These 2 data points (**Open** and **Beta**) will be retrieved through web scraping from the **CNBC Investing Club** website and inserted in the **same output .xlsx file**, in the columns **'underlying price at the time of trade'**(open) and **'mkt beta'** (beta).

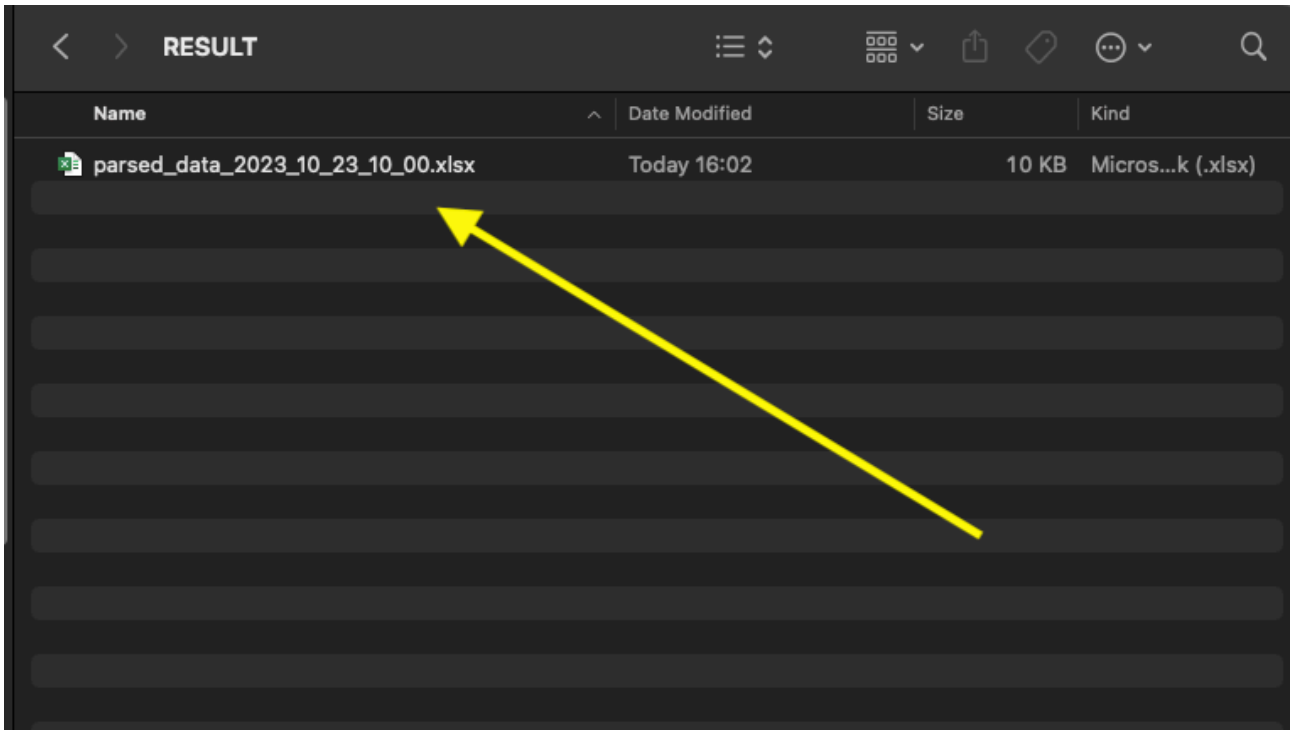
3. Structure:

The application will consist of an executable file and a .xlsx file with the data downloaded from TD Ameritrade.

Once the script starts it will parse the data from the **input .xlsx file** into the **output .xlsx file** (as shown in the image above).
Then it will go through the list of quotes in the **CNBC Investing Club** website and retrieve the data points mentioned above.



The new file is to be located in a subfolder named 'RESULT' and the file will be named **'parsed_data_%Y-%m-%d_%H-%M-%S'** (parsed_data + year, month, day, hour, minute and second)**.**



- Type to enter texttrade date-entered?
- **option Expiration date**
- days till exp (trade date)
- days till exp (current)
- order expiration date "time in force"
- days till expiration (if an order)
- **Strike**
- **underlying symbol**
- underlying price at time of trade
- otm at time of trade
- underlying price, current
- otm, current.
- weight
- weighted otm
- **Type**
- mkt beta* mkt price*contracts
- **Qty**
- mkt price *number of contracts
- Trade Price/premium
- trade price as percent of notional
- mkt beta
- annual yield at strike at time of trade
  yield on cost at time of trade
- multiple on cost
- yield at current mkt price at time of trade
- **premium**
- contracted in august
- contracted in september
- contracted in october
- contracted in november
- cash if exercised
- days >>
  3
- 10
- 24
- 31
- 38
- 59
- 87

4. **Frequency:** The script can be run as needed (daily, hourly, etc).

5. Maintenance: Required if the column names in the input .xlsx file change.

Project Objectives:

The primary objectives of this project are as follows:
1. Parse the information from the input .xlsx file to the output .xlsx file in a precise and accurate form.
2. Deliver the parsed data into a .xlsx file with the following columns. The highlighted titles will be filled with values, the others will remain empty to be filled in later:

3. Ensure that the parsing process runs reliably and efficiently.

Deliverables:

Upon completion of the project, the following can be expected:
1. Executable file
2. Documentation manual on how to use and maintain the parsing solution.
3. Ongoing support for any issues related to the parsing process.

Timeline:

The estimated project timeline in as follows:

- Project Kickoff: when proposal is approved and formalized on Upwork.
- Development and Testing: **4-7 business days.**
- Delivery: As soon as the testing is done.
- Ongoing maintenance and updates: for up to **6 months** after the delivery date.

Pricing:

Total Project Cost: The total project, including future maintenance cost will be based on my hourly rate **($20)** for a period of **2.7 full business days (22 hours)**, with each business day comprising **8 hours** of work.

Total Project Cost = 20 x 22 = 440

If you have any questions or require further clarification, do not hesitate do reach out. Thank you for considering my proposal, I look forward to working with you in this project.

Sincerely,

Beatriz Carvalheira

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https://www.upwork.com/freelancers/~01030b24802656e33e