Final Project Proposal

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Project Programmer

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Web Pages from where the data will be extracted

I chose all the four different websites to extract all my data to have a better practice of webscrapping as it seems to be an interesting topic to me.

- **Cryptocurrency**
  - BTC Price
  - ETH Price
- **Stock**
  - MSFT Price
  - FB Price

Investigation Questions

- How have Bitcoin (BTC) and Ethereum (ETH) performed relative to each other in the past year?
- How have Microsoft Corporation (MSFT) and Meta Platforms Inc (FB)'s stocks performed relative to each other in the past year?
- Can we prdict the future prices of each stock/crypto? (tentative)

Rationale Explanation

Since the start of 2019, I have been interested in finaces and specially intrigued with the concept of Crypto and decentralization. I started investing in 2020, and I wanted to set a comparison between my most invested cryptos and stocks respectively. The comparison will be done for the last year. I copied the HTML of all the 4 data sets and made a file for each by pasting the HTML. This was done so that I can practice Webscraping (xpath).

I will be dividing my project in the following functions (not final):

- `btc_scrape`: The function that will be scraping BTC File
- `eth_scrape`: The function that will be scraping ETH File
- `msft_scrape`: The function that will be scraping MSFT File
- `fb_scrape`: The function that will be scraping FB File
- `sql_database`: The function that will create the SQL database
- `btc_table`: The function that will help me store all the values extracted from the BTC dataset as a SQL table
- `eth_table`: The function that will help me store all the values extracted from the ETH dataset as a SQL table
- `msft_table`: The function that will help me store all the values extracted from the MSFT dataset as a SQL table

- `fb_table`: The function that will help me store all the values extracted from the FB dataset as a SQL table
- A few sql commands to process the data. I am not suere if I will be using functions for this, but the code cells containing the code will be big part of my project.
- `df_convert`: Comvert all the data sets to DataFrames
- `btc_eth_volume_plot`: The volume comparision of cryptos with dates on a map
- `msft_fb_volume_plot`: The volume comparision of stocks with dates on a map
- `btc_eth_price_plot`: The price comparision of cryptos with dates on a map
- `msft_fb_price_plot`: The price comparision of stocks with dates on a map

A few observations

1. Most of the function building will be first done by just looking at the datasets with the human eye and then coding the desired results. What I mean by saying this is that I will already visualize the output in my head and then use the functions in parts to get the result.
2. The name of the functions can be changed.
3. More functions can be added in the final project.
4. Please let me know if I can clarify anything.
