

CA2 Assignment

python assignment for Programming fundamentals

Libraries needed to run:

- > pip install pyfiglet
- > pip install tabulate
- > pip install requests

pyfiglet makes nice ascii art
tabulate makes data into tables
requests is for calling APIs

Program strcuture:

main.py(Main file)

subfiles:

start_end.py (Function for showing start screen and Decoding, encoding files)

display_crypto.py (Function for displaying crypto in a table and sorting them according to user inputted parameters)

add_crypto.py (Function for adding cryptocurrency and it's data manually or automatically)

ammend_crypto.py (ammending existing data)

cryptoportfolio_statement.py (Shows cryptoportfolio statement in a table)

dataset.csv (data is contained there)

backend files which have functions that may be referenced by sub files:

live_data.py

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Base requirement functions done by Wai Phyo: Ammend,add crypto

New functions by Wai Phyo:

1.General UI improvements in add_crypto.py

- >User's input will be validated for every input. Making it more convenient for the user and to reduce any errors that will be keyed.

2.Live data (found in live_data.py)

- >All cryptocurrencies data will be updated upon launch.(main.py)
- >The user can chose whether they want their portfolio to be updated with the latest market data(Market cap and market price) in add_crypto.py.
- >Additionally, if no coin has been found by the search function, the user can still manually enter cryptocurrency data.

>This is "back end" code that has been made so that it can be referenced in multiple functions.

>It uses 2 APIs, YahooFinance and Coinmarketcap(CMC). Yahoo finance searches for a crypto ticker when given a name. CMC takes that ticker and searches the livedata in it's dataset. CMC is used because they have a much wider range of cryptocurrencies available as the barrier to entry for being listed on CMC is much lower than say, Binance, which is an exchange.

3.Limitations:

While all efforts have been put into ensuring input validation works, the current version of the program can only validate Floats, Integers, Strings but not fractions($3/4$, $1/2$ etc..).

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Base requirement functions done by Terrence: crypto portfolio statement, remove crypto,display crypto(sorting)

New functions done by Terrence:

Improvements on presentation of data in display crypto

> Cryptocurrencies can be sorted by name,market price, market cap, buy in price in both increasing and decreasing order