**# CA2 Assignment**

 python assignment for Programming fundamentals

 FOXTROT

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**# 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, endcoding 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)

   cryptoportfoilio\_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

**# ####################################################################**

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.

   >Additionaly, 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 funcitions.

   >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 avaiable 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..).

**# ####################################################################**

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

New functions done by Terence:

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