

CMPE 230 Systems Programming

Homework 3

(this project can be done in groups of at most 2 students – Deadline: June 22th)

Develop a QT program that displays conversion rate information about crypto-currencies. Your Qt program should look like the following:

| | USD | EUR | GBP |
|----------|---------|---------|---------|
| Bitcoin | 32988 | 27092 | 23299 |
| Ethereum | 2300.58 | 2000.09 | 1900.22 |
| Ripple | 0.81964 | 0.79837 | 0.66771 |
| Litecoin | 145.83 | 141.39 | 135.0 |
| Monero | 154.35 | 149.07 | 141.49 |
| Zcash | 127.43 | 124.77 | 120.94 |

Documentation on how to get the information can be obtained from the web page:

<https://www.coingecko.com/api/documentations/v3>

For example: The http request :

`https://api.coingecko.com/api/v3/simple/price?ids=bitcoin,litecoin&vs_currencies=usd,eur,gbp`

returns you the following string from which you can extract the information you will display :

```
{"bitcoin":{"usd":32988,"eur":27092,"gbp":23299},"litecoin":{"usd":160.04,"eur":131.44,"gbp":13.04}}
```

Note that the list of crypto currencies that will be displayed should be read from a file (one crypto-currency name or symbol on each line). The name of the file should be obtained from environment variable named MYCRYPTOCONVERT.

Grading

Your project will be graded according to the following criteria:

| | |
|--|-----|
| Documentation (written document describing how you implemented your project) | 12% |
| Comments in your code | 8% |
| Implementation and tests | 80% |

Late Submission

If the project is submitted late, the following penalties will be applied:

- 0 < hours late ≤ 12 : 25%
- 12 < hours late ≤ 24 : 50%
- hours late > 24 : 100%

Timestamping

Project file should include your names in it. Please timestamp your project file using

<https://opentimestamps.org/> before you submit it. Keep the project file and its corresponding timestamp .ots file.