1. **Problem Description**

In this assignment, we are asked to implement a QT program which displays conversion rates of crypto currencies. Crypto currencies will be given line by line in a file however we need to get the file from an environment variable which we have not done before. Before implementing the project one issue one can think is that in the given file crypto currencies can be denoted as their names or symbols. We describe how we get over this problem in the problem solution section.

2. **Problem Solution**

We have 5 classes for this project:main.cpp nettwork.cpp/h and table.cpp/h. Most of the process is being done in nettwork.cpp and creation of table is obviously done in table.cpp.

To start implementing first thing we did was to get the file from the environment variable with help of *getenv()* method in c++. Once we have the names or symbols for crypto currencies, we need to find the Ids of currencies to make the http request for conversion rate information.

We make a request to https://api.coingecko.com/api/v3/coins/list address to get the symbols, names and ids for all possible crypto currencies. In our implementation we declare a map which holds the name-id and symbol-id pairs for each coin. Then for each currency in the given file we find the corresponding id and append it with a string called names in order to make a second http request to get rates.

After we get our string with the second http request, with the help of regex we find the usd, eur, gpb rates for each coin and put this rates in a QVector object in the given order. Then put the name-QVector pairs in a map and at this point all we need to do is to create a table and put the found values.

3. **Conclusion**

All in all although the project was not difficult, dealing with a GUI and a different aspect of programming was a creative experience. One thing we can do better I think is the solution of name-symbol duality. There may be a better and more creative way to get over it but we think we did fine.

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