

Introduction

You are required to develop a Widget for one of our clients. This widget will be used to display several currency exchanges rates and it will allow the user to exchange USD (Note #1) for Crypto (Note #2). The application consists of a React front-end client and a Node back-end service (Express.js).

Criteria

The application must meet all the following criteria:

Front-end must have a toolbar ([design here](#)) with two dropdowns and two input fields where you can pick the currency that you want to exchange from and the Crypto that you want to exchange to.

Front-end must have a table component ([design here](#)) to display historical data (Note #3).

Back-end service must consume the rates from the API (Note #4) every few minutes (configurable number), store the data in the Database (Note #5) and stream the data to the front-end using WebSockets.

Latest Node and React versions must be used.

You need to upload the repository to GitHub and share the link.

You need to create a short video to demo the application in a working state.

Assessment will be rejected if no readme file is provided with instructions on how to run the project.

Bonus points

Dockerize the application.

Documentation of the code with comments.

Unit-tests.

Add a Date Picker filter (any Date Picker can be used) on the table to filter data by time.

Add sorting for all columns on the table.

Mobile view must be exactly as the design provided (design here).

Notes

1. USD is mandatory. EUR, GBP and other fiat currencies are optional.
2. BTC and ETH are mandatory. Other Crypto are optional.
3. Table fields are “Date & Time”, “Currency from”, “Amount 1”, “Currency to”, “Amount 2”, “Type”.
 - a. There are two types of data, “Live Price” and “Exchanged”
 - b. “Live Price” indicates the rate coming from the API and it is the currency conversion of any currency to USD. For example, the live price of 1 BTC is 44000 USD.
 - c. “Exchanged” indicates the transaction happened when user clicked “SAVE” button. For example, the user exchanged 44000 USD to get 1 BTC.
4. Any API can be used or even a mock server that returns fake data. Possible solutions include CurrencyAPI, CoinLayer, CoinAPI and Coingecko.
5. You can use either Mongo or MySQL.