
Technical Assignment

Frontend

As Einstein once said, “Imagination is more important than knowledge”, so the purpose of this assignment is to bring your imagination and creativity out while working on a challenging task. But remember the most important thing is that you enjoy doing it 😊

Almost every kid these days knows or has heard of Bitcoin. There are strong supporters such as Elon Musk who believe that it could be a revolutionary technology and perhaps it can reshape the financial ecosystem, while there are others like Bill Gates who feel that it's a bubble waiting to burst.



Well, we don't expect you to pick a side (*not yet* 😊), however, we do expect you to build a simple charting system using live trade data.

The Challenge

Binance, is one of the most popular crypto currency exchanges in the world. Your task is to connect to their freely available data feed and receive live trade events for bitcoin. A trade event takes place when a seller sells some coins to a random buyer. Each such transaction has a timestamp of occurrence, the amount of coin bought/sold and the price at which the transaction took place.

There are several thousands of transactions happening in a second which is difficult to analyze. So we would like to aggregate these events for a predefined time interval (say every 30 seconds) and show it on a chart.

You are required to plot these trades (price and quantity) on a chart during a 30 second interval.

The 30 second mark must happen according to the clock tick and **should not depend n the start time of the application** Some Valid 30 second marks are as follows:

hh:mm:ss

15:36:00

15:36:30

15:37:00

An example of such a chart would be as follows:



When a user hovers on the chart a detailed view of that coordinate should be displayed below the chart in a good User Interface.

Required Information

Documentation URL

<https://binance-docs.github.io/apidocs/spot/en/#aggregate-trade-streams>

Websocket URL

wss://stream.binance.com:9443/ws/btcusdt@trade

Example Code *(can be run in the browser console)*

The following snippet of code will help you connect to binance, subscribe to bitcoin trades and print the events.

```
const ws = new WebSocket( url: "wss://stream.binance.com:9443/ws/btcusdt@trade")

ws.onmessage = (event : MessageEvent ) => console.log(event)
```

Requirements

1. You can use VueJs (preferred) or any other frontend frameworks such as Angular/React
2. You are free to use any library for the websocket and for charting

Deliverables

1. Fully working solution to the given problem
2. Documentation about project-specific configurations needed to run the application
3. Sufficient tests to cover all use cases, corner cases and [code coverage](#) should be at least 80%
4. Zip your code and upload it to your google drive and share the link

Crucial Points

We expect these requirements can be delivered in a couple of hours. However, it is not a speed test. Your feedback on how much actual time you were needed to deliver the task will be very helpful but will not be used for the evaluation.

1. Deliver working solution
2. Clean and production-ready code
3. Error handling
4. Comments and documentation
5. Unit and integration tests
6. Avoid over-engineering

Good luck with this assignment! Try to make good use of this task to demonstrate and show off your ninja coding skills. If you have any questions, don't hesitate to ask. All the best! 😊👍