**Business Context**

In order to facilitate discretionary management fund managers are often interested in not only looking at prices of stocks today but what they have been previously to gain further insight into companies.

**User Story**

***As a*** fund manager

***I want*** a single page application where I can select stocks on the US Stock Exchange and a date range (from and to date)

***So that*** I can chart a time series of prices for the selected stocks and date range

**Acceptance Criteria**

* I can display the time series of prices of the selected stocks in the same chart
* I can’t select more than 3 stocks to display at the same time
* I can toggle between the following price types in the interactive chart (see Question 5 below)
  + Open Prices
  + High Prices
  + Low Prices
  + Close Prices
* I can change the date range in the interactive chart

**Frequently Asked Questions**

1. How much time should I spend on this?

There is no time limit. However, given we’d like to get a solution back within a week, we’ve tried to make this something that is doable in an evening.

1. What language can I use?

JavaScript and React are a must. You are free to also use anything else.

1. What is a stock?

In the context of this exercise, it’s a Company/Corporation e.g.

APPLE (Symbol AAPL)

MICROSOFT CORP (Symbol MSFT)

AMAZON (Symbol AMZN)

FACEBOOK (Symbol FB)

1. What is a time series?

<https://www.investopedia.com/terms/t/timeseries.asp#:~:text=Understanding%20Time%20Series-,What%20Is%20a%20Time%20Series%3F,points%20recorded%20at%20regular%20intervals.>

1. Is there a free stock market api that I can use to retrieve financial stock and price data for stocks on the US Stock Exchange?

Yes, Finnhub - <https://finnhub.io/docs/api#introduction>

For the purpose of this exercise you can limit the stocks available to select in the SPA to the US Stock Exchange. You can use this API for this:

<https://finnhub.io/docs/api#stock-symbols> (see **Example** for how to obtain a list of stocks on the US Stock Exchange)

for stock prices, you can use this API:

<https://finnhub.io/docs/api#stock-candles> (For the Price Type Acceptance Criteria in the User Story, see the api Response Attributes)

1. Can I use free third party/open source libraries?

Yes. See D3 or React Charts for visualisation options, but you are free to choose any that you feel is suitable.

<https://d3js.org/>

<https://react-charts.js.org/examples/line>

1. How should I submit my solution?

Click on the ‘Upload’ button in the Hired Assessment link and make sure all of your files are included in the zip that you upload, and optionally a readme text file explaining anything you think is relevant. Then click the ‘Submit’ button to submit.

We will run and review the code. (if you’re successful, please be prepared to talk through your solution).