

# Northern Trust Hackathon Documentation

## Team No. 1

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**Problem Statement:** Create a dashboard that will allow users to analyze the exchange rates between two currencies over a period of time. Users should have the option to select weekly, monthly, quarterly, and yearly charts. The dashboard should also display the date on which the rate was at its peak (highest) and the date on which it was at its lowest. Users should be able to print the data in a chart. Input will be a currency exchange rate dataset between a currency pair and will be provided in a file format Use USD as Base Currency where the first currency will always be USD and the second currency will be variable. For instance, currency pairs could be USD/INR, USD/GBP, USD/EUR, USD/CAD, etc.

## Front-End Development:

While making the UI of the project the following software stack was used :

- CSS
- HTML
- JavaScript

And the following dependencies were needed :

- csvjson: To convert a json file to a csvfile
- fs: To read and write files from and to the system
- chart.js: To accept and data and print the corresponding chart

Steps while creating the UI of the project were:

- First, we started with the basic JavaScript model, we then added a getData() function to fetch the individual CSV files and remove the first row in the file and store the first and second columns in arrays.
- We then passed the arrays as data labels, to an object of chart.js which then returned the corresponding graph.
- After the basic UI was ready we added a drop-down box to select the year, the format to print the data in i.e. - yearly, monthly, quarterly, and weekly, and the currency against which the graph is needed
- We then pre-processed the data into made separate sheets for yearly, monthly, quarterly, and weekly

- According to the user's choice then the data was accessed from the respective CSV files
- We deployed the page using GitHub and stored all the files in the repository

**Resources:**

<https://www.chartjs.org/>

<https://nodejs.org/en/>