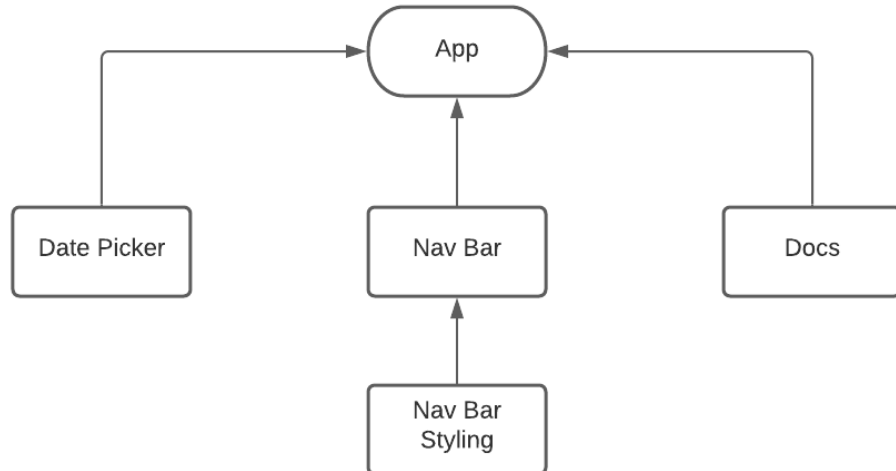# Behind the Curtains

Architecture for this currency conversion app is shown in the flowchart below:

Date Picker:

I have used Date picker available from Material UI library as it was easy to integrate and worked smoothly. Also because I am quite familiar with using Material UI so most of the styling components are from there.

So in date picker component itself I have implemented 'GET' functionality to get currency conversion Data from the API 'https://exchangerate.host/'.

Once the user selects the start date and end date and press submit button. The onClick event handler initiates the main work: First start date and end date are filtered to the required format "YYYY-MM-DD" as it is required for API. Then the whole API is concatenated to look like: https://api.exchangerate.host/timeseries?start_date=2020-01-01&end_date=2020-01-04&base=USD&symbols=EUR

Using XMLHttpRequest module App request the data and we await the response. Once app receive the data it is passed to Main App module. To pass data from Date picker component I have used Hooks because of you static nature of data and ease of implementation. Had it been the case of dynamic data implementation of Redux would be an ideal case.

Nav Bar:

Nav Bar is the top menu bar where we have 2 buttons Home and Doc. Home page the default page i.e the page that we land on once app is started. As we need to change the page between Home and Docs, I have implemented router here which provides the link to Default Home page and Docs.

For styling purpose I made separate component called Navbar elements which includes styling elements such as background color, color change on hovering, and dimension of the nav bar itself.

Doc:

Doc here is the simplest component of all. It just a simple page which displays the PDF file present in the component folder. Pdf file is loaded using React PDF module

APP:

Now that we know and understand all the components and its functionality. We just call all the components to the APP module.

One of the major task to do in APP component is Chart. As we have already sent data from Datepicker to App component we will use that data and plot the Chart. For Chart I have used ChartJS library for plotting line chart from the data. ChartJS is very standard and opensource library I found and seemed perfect for this app.

ChartJS requires array for line chart and we have JSON data, hence I have I extracted data and pushed into an array.

So JSON data we get looks like:

Rate: {[

        2021-08-26:{EUR: 0.864}

]}

And which I am converting it to

Days = [2021-08-26,....]

Currency = [0.864,.....]

Then this two array is passed to Chart() function and with Days on X-axis and Currency in Y-axis.

Lastly all the component are returned in APP fuction.

1. Header
2. Navbar [Home, Docs]
3. Datepicker
4. Graph