Foreign Exchange Currency App Exercise

Preparation

Before starting, you will need:

- Git
- ReactJS dev setup
- Docker for deployment
- 6 hours of your time

The Exercise

For this exercise, you will be creating a simple app that calculates a converted foreign exchange currency using the Foreign Exchange Rates API https://exchangeratesapi.io/.

Please use the following tech stack:

- ReactJS
- Docker for deployment

The app will consist of:

- A text input specifying the currency *input amount* of base currency, USD.
  - Initial default value is 1.00.
  - Base currency may be hardcoded to USD

- A list with the following values:
  - Target currency -- together with the details
  - Calculated converted amount. Note that the calculated amount should change whenever the *input amount* changes.
  - Current exchange rate
  - A (-) button to remove the target currency

- An option to add more currency to the list
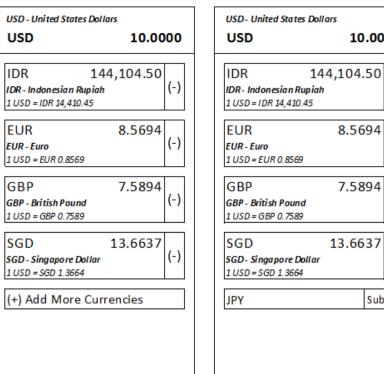 - Upon click, user can input their own currency code via dropdown menu and submit

List of currencies that have to be supported are as follows:

- USD
- CAD
- IDR
- GBP
- CHF
- SGD
- INR
- MYR
- JPY
- KRW

You may add more currencies if you'd like to.

Example

Using API provided in https://exchangeratesapi.io/api/latest, follow this mockup:

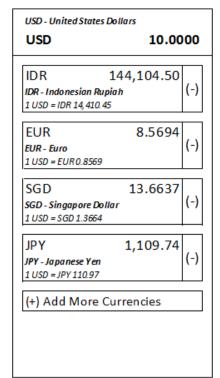| USD - United States Dollars	USD - United States Dollars	USD - United States Dollars	USD - United States Dollars
USD 10.0000	**USD** 10.0000	**USD** 10.0000	**USD** 10.0000
IDR 144,104.50 (-) *IDR - Indonesian Rupiah* *1 USD = IDR 14,410.45*	IDR 144,104.50 (-) *IDR - Indonesian Rupiah* *1 USD = IDR 14,410.45*	IDR 144,104.50 (-) *IDR - Indonesian Rupiah* *1 USD = IDR 14,410.45*	IDR 144,104.50 (-) *IDR - Indonesian Rupiah* *1 USD = IDR 14,410.45*
EUR 8.5694 (-) *EUR - Euro* *1 USD = EUR 0.8569*	EUR 8.5694 (-) *EUR - Euro* *1 USD = EUR 0.8569*	EUR 8.5694 (-) *EUR - Euro* *1 USD = EUR 0.8569*	EUR 8.5694 (-) *EUR - Euro* *1 USD = EUR 0.8569*
GBP 7.5894 (-) *GBP - British Pound* *1 USD = GBP 0.7589*	GBP 7.5894 (-) *GBP - British Pound* *1 USD = GBP 0.7589*	GBP 7.5894 (-) *GBP - British Pound* *1 USD = GBP 0.7589*	SGD 13.6637 (-) *SGD - Singapore Dollar* *1 USD = SGD 1.3664*
SGD 13.6637 (-) *SGD - Singapore Dollar* *1 USD = SGD 1.3664*	SGD 13.6637 (-) *SGD - Singapore Dollar* *1 USD = SGD 1.3664*	SGD 13.6637 (-) *SGD - Singapore Dollar* *1 USD = SGD 1.3664*	JPY 1,109.74 (-) *JPY - Japanese Yen* *1 USD = JPY 110.97*
(+) Add More Currencies	JPY Submit	JPY 1,109.74 (-) *JPY - Japanese Yen* *1 USD = JPY 110.97*	(+) Add More Currencies
		(+) Add More Currencies	
Fig 1: Homepage view of app	*Fig 2: Adding new currency (JPY)*	*Fig 3: Updated view with JPY added*	*Fig 4: Removed GBP from the list*

You can use any FE UI framework (Bootstrap / Material / Semantic UI) to build upon this mockup.

Evaluation Checklist

As this exercise is a very simple one, the functional correctness of this exercise is secondary. It should be a given that you will be able to get the correct outputs from above. Therefore, to make your work really stand out we look at the following things:

- Code quality & readability: Will any random engineer be able to understand the execution just by briefly scanning through the source code?
- Software design: Does the implementation make full use of classes, objects, functions, abstractions, interfaces, etc.
- Engineering best practices: Does it follow proper architectural patterns (like MVC), and SOLID principles?
- Any automated tests (e2e, integration, unit, etc.)

and *NOT*:

- Fancy UI.

Submission

Once you have completed the exercise, please push the git repository to a host of your choice, preferrably GitHub. Your Dockerfile and code should be sufficient for us to recreate and test your API.

Please submit the following items:

- Git repository for your code (including Dockerfile)
- Explanation on structure of your code, if needed