**Guidelines and Tips:**

**Thanks for the Opportunity and the use case. It was a good experience bringing it to a solution.**

**Due to issues in virtualization setup and in the interest of time, I have provided a non-dockerized solution. Have briefed a few points below for better understanding and running the solution.**

* Make sure the following python packages are installed as pre-requisites,
  + pip install Django (>=3.2)
  + pip install schedule
  + pip install psycopg2
* **settings.py** fileis updated with the database entries, app entries and paths to make the app more scalable, simple and clean.
* **manage.py** and **schedule.py** need to be run. Use commands **python manage.py runserver** and

**python scheduler.py** to run these files. Schedule.py once initiated acts as a scheduler and fetches BTC against USD data on an hourly basis.

* **Postgres** needs a database named **bitcoinexchangerate.**
* Logging has been enabled in **scheduler** and **view** files for easy debugging and to know the run status of the solution.

Sample POST request to test through POSTMAN:

{

"from\_currency\_name":"Bitcoin",

"to\_currency\_name":"US Dollar",

"exchange\_rate":"254040.49686200",

"last\_updates\_ts":"2021-08-02 11:50:06",

"time\_zone":"UTC"

}

Sample CURL POST request for testing:

curl -X POST -H "Content-Type: application/json" http://127.0.0.1:8000/api/v1/quotes -d "{\"from\_currency\_name\":\"Bitcoin\",\"to\_currency\_name\":\"US Dollar\",\"exchange\_rate\":\"254040.49686200\",\"last\_updates\_ts\":\"2021-08-02 11:50:06\", \"time\_zone\":\"UTC\" }"

Sample GET request for testing:

curl -X GET http://127.0.0.1:8000/api/v1/quotes

* GET and POST APIs (/api/v1/quotes ) have been tested to insert and fetch values from Postgres DB.
* Solution uses AlphaVantage secure API key to fetch the values on an hourly basis.

Look forward to discussing in depth about this in the Technical discussion.