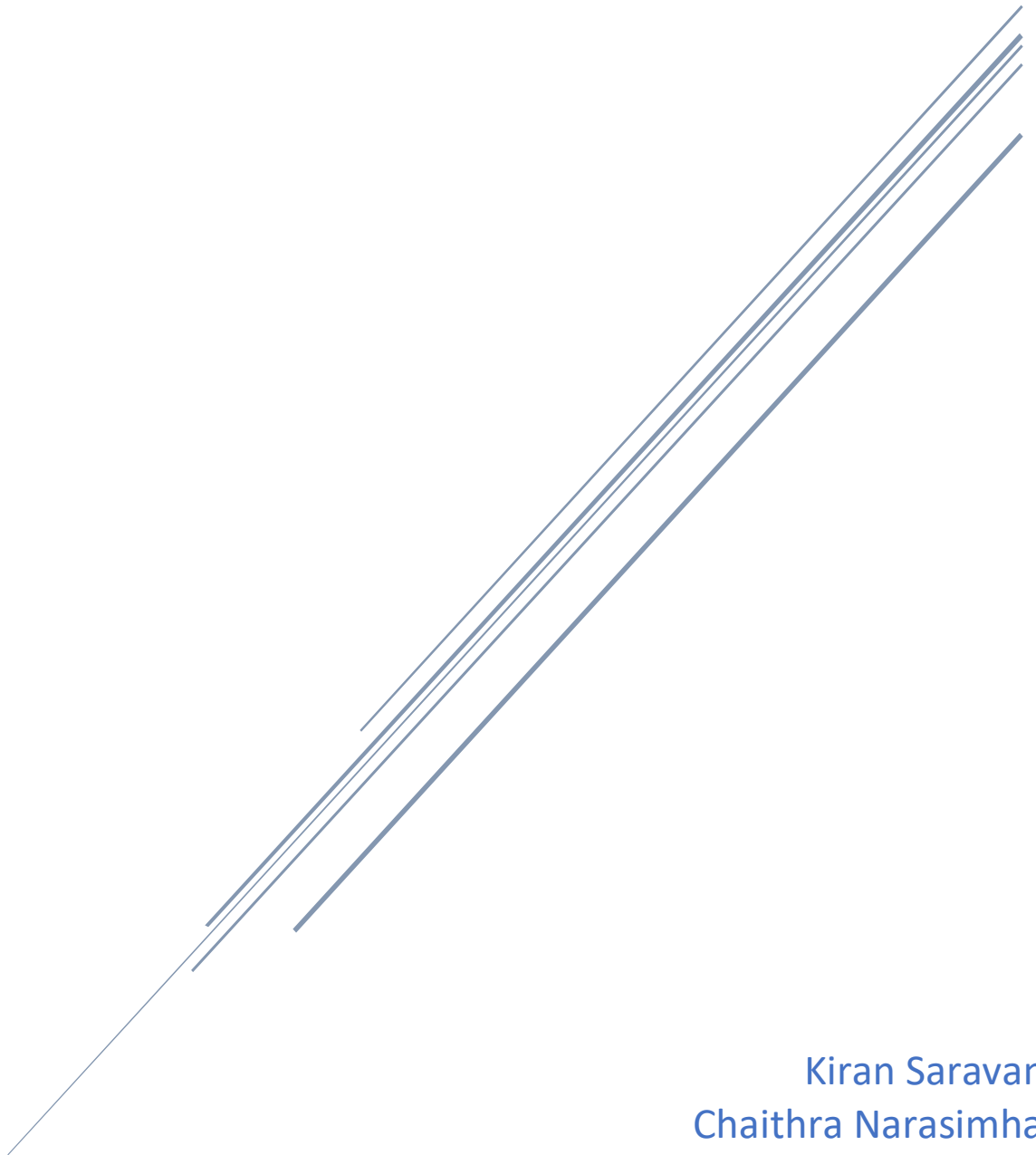# PYTHON PROJECT REPORT

Real Time Currency Converter

Kiran Saravana
Chaithra Narasimhan
Swathi S P

Abstract

Real Time currency convertor is a python-based application which can convert from one currency to any multiple currency exchange rate based on real time data. This project uses APIs to fetch the data in real time to collect and convert the currencies. Another feature of this project is the ability to get historical data to show us historical exchange rates by entering the year, month, and date. Along with the converted amount, the user also has the feature to view the trend of the currency on a chart by entering the number of many days to view the trend.

The user can select to either get the latest exchange rate based on the present day or enter any date to get historical data to see the past exchange rates. It is an easy-to-use application based on Graphical User Interface for interacting with it.

Introduction

The currency converter application, called Real Time Currency convertor, converts amounts from one currency to two others. The user can choose to display any currency, and enter a value in one currency to be converted into the other selected currencies. The currency values fluctuate everyday so we use API's to fetch the data in Realtime and convert the amounts based on Realtime data so it is always extremely accurate. Once, the currencies are converted, the user can also choose to display the charts for the converted currencies to view the trends for any number of days in the past. This application also provides the feature of getting historical rates by manually entering whichever date the user wants to view.

The application provides the user with an easy to use Graphical User Interface (GUI) so the user can conveniently just open it and enter amount in the input fields and select the currencies from the dropdown and choose whether they want to convert based on the latest rates or historical rates to convert it with the click of a single button. The user interface also provides the user input fields to input number of days in the past they want to view the trends of the currencies in the for of charts.

Application

The application is built based on the Python Scripting language which is very efficient and powerful to use. This application utilizes python libraries such as:
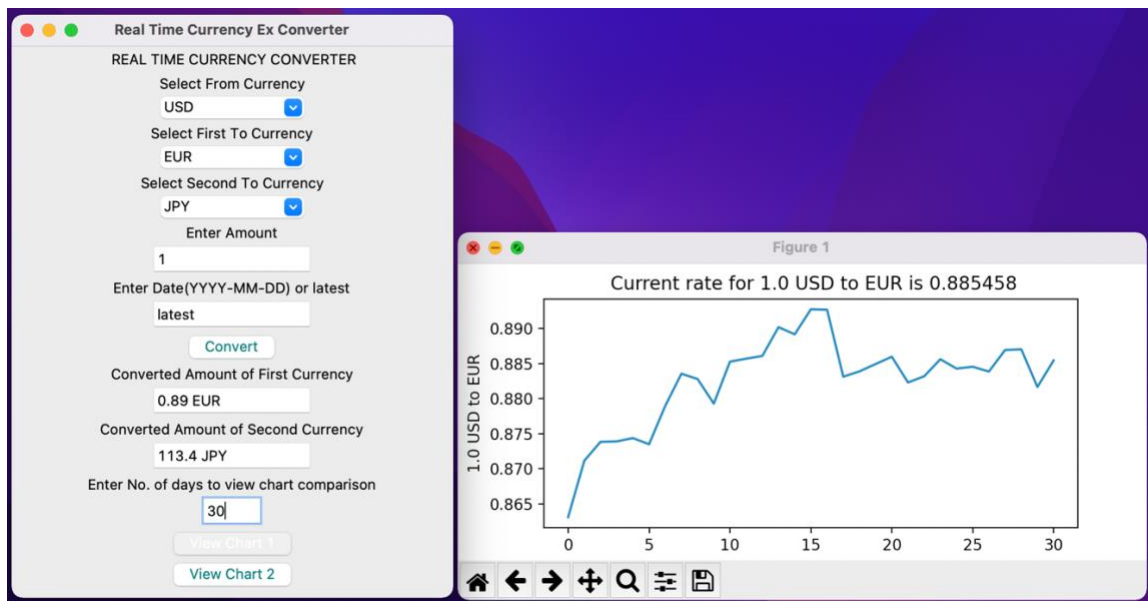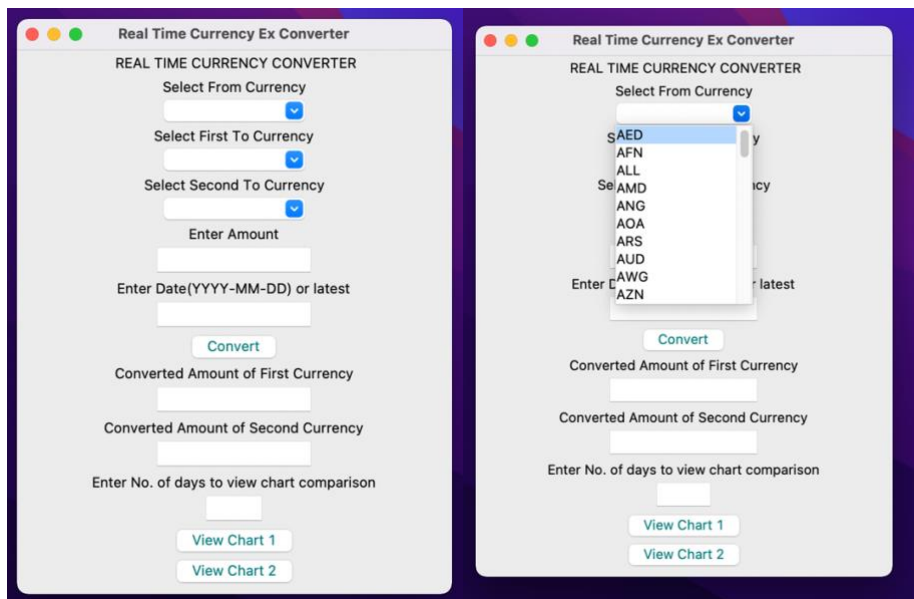
- **Requests** : used for getting HTTP requests for fetching the data from API's.
- **Pandas** : used for creating data frames and plotting the data.
- **Matplotlib** : used for plotting data and displaying them charts.
- **Datetime** : used for getting and the present dates to display in chart.
- **Tkinter** : this package is the core of GUI and used for implementing all user interface elements.
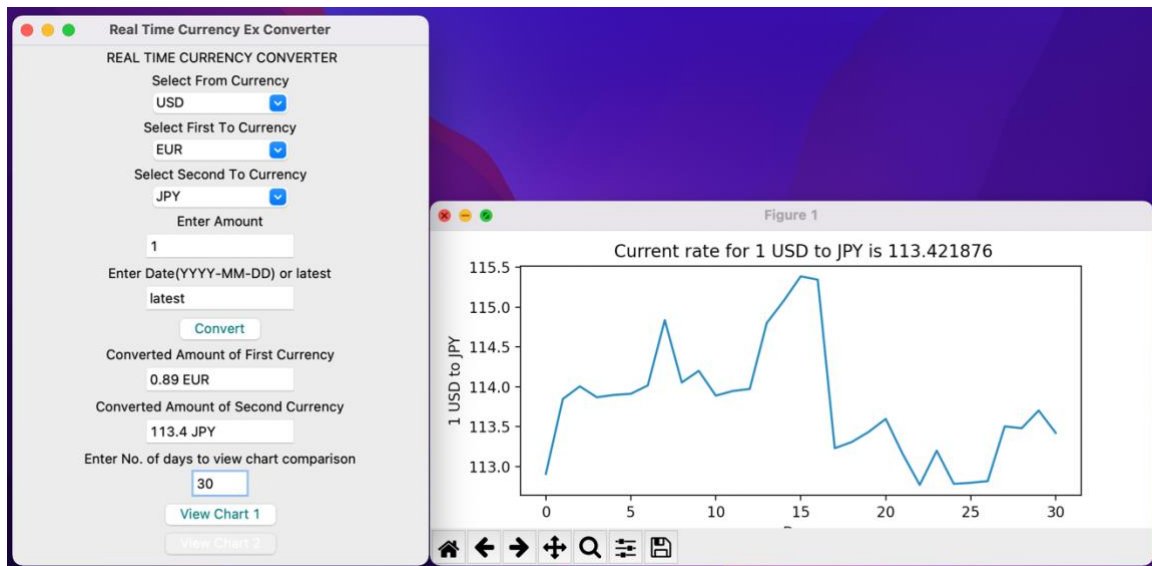
API used :

The following API links are used to fetch the real time data to convert and plot the currencies

- http://api.exchangeratesapi.io
- https://api.exchangerate.host/timeseries

Preview of the Application:

Conclusion

This report concludes the successful completion of the python application "Real Time Currency Converter" using python libraries and packages. The application has been tested multiple times on different platforms and the results are extremely accurate.