

Libraries and Setup: The code uses the **requests** library to fetch data from an external API and **dash** along with its components to build the web dashboard.

1. API Request Function:

- The function **fetch_exchange_rates** reach out to an API hosted on RapidAPI to get the current exchange rates with the Indian Rupee (**INR**) as the base currency.
- The API returns data in JSON format, which includes various currencies and their equivalent value in INR.

2. Dash App Initialization:

- A new Dash app is initialized. Dash is a framework for building interactive web applications purely in Python.

3. Dashboard Layout:

- The layout of the app includes a title (**Exchange Rates Dashboard**), a dropdown menu for selecting a currency, and a display area where the exchange rate is shown.
- The dropdown is populated with currencies fetched from the API. It allows the user to select which currency they want to see the exchange rate for.

4. Interactive Update Feature:

- A callback function updates the display area based on the user's selection in the dropdown.
- When a currency is selected, the app displays how much 1 INR is worth in the chosen currency.

5. Server and Debugging:

- The **app.run_server(debug=True)** line starts the web server to serve the Dash app. The **debug=True** parameter allows the app to automatically reload during development when changes are made to the code.

```
import requests

url = "https://exchangeratespro.p.rapidapi.com/latest"
querystring = {"base": "USD"}

headers = {
    "X-RapidAPI-Key": "4b808134d4msh93ba78a1408db9bp16d163jsnd3939bab5190",
    "X-RapidAPI-Host": "exchangeratespro.p.rapidapi.com"
}

response = requests.get(url, headers=headers, params=querystring)
print(response.json())
```

`icy-policy', 'timestamp': 1713325440, 'date': '2024-04-17T03:44:00.000Z', 'base': 'USD', 'rates': {'ADA': 2.1798806194, 'AED': 3.6712204041, 'AFN': 72.265492`

```
pip install dash requests
```

Requirement already satisfied: dash in /usr/local/lib/python3.10/dist-packages (2.16.1)
Requirement already satisfied: requests in /usr/local/lib/python3.10/dist-packages (2.31.0)
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Requirement already satisfied: plotly>=5.0.0 in /usr/local/lib/python3.10/dist-packages (from d

```
import requests
import dash
import dash_core_components as dcc
import dash_html_components as html
from dash.dependencies import Input, Output

# Fetching the exchange rates data
def fetch_exchange_rates():
    url = "https://exchangeratespro.p.rapidapi.com/latest"
    headers = {
        "X-RapidAPI-Key": "",
        "X-RapidAPI-Host": "exchangeratespro.p.rapidapi.com"
    }
    response = requests.get(url, headers=headers, params={"base": "USD"})
    data = response.json()
    return data.get('rates', {})

# Create a Dash application
app = dash.Dash(__name__)

# Define the layout of the application
app.layout = html.Div([
    html.H1("Exchange Rates Dashboard"),
    dcc.Dropdown(
        id='currency-dropdown',
        options=[{'label': k, 'value': k} for k in fetch_exchange_rates().keys()],
        value='EUR'
    ),
    html.Div(id='rate-display')
])

# Callback to update the displayed rate based on the user's dropdown selection
@app.callback(
    Output('rate-display', 'children'),
    [Input('currency-dropdown', 'value')]
)
```

Exchange Rates Dashboard

USD

1 INR is equal to 0.011963835 USD

Exchange Rates Dashboard

CVE

1 INR is equal to 1.240873762 CVE

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Exchange Rates I

INR
1 USD is equal to 83.5881716304 IN

currency-dropdown

value

2
739 ms

rate-display

children

RAM Disk

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Callbacks

0 Errors

Server

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