

# Currency converter

Currency converter is Python 3 CLI app with web API, based on Flask. It is parsing input parameters and return JSON object with values according to input currency, output currencies, amount.

## Requirements

All required libraries are in requirements.txt

- Python 3.6 with pip-tools is expected to be installed
- Install requirements Windows
  - pip install -r requirements.txt
- Install requirements Linux
  - pip install --user -r requirements.txt

Acquiring input currency symbols uses third party library named forex-python, this feathure is not implement for outut currency, because some currencies do not have symbol so if output currency is NULL it can match 'CLF' currency.

## Currency rates

- Rates are from free API <https://www.alphavantage.co/> which works with realtime stock data
- This currency converter is only using the free version of API key

so you can make only 5 requests per minute and 500 requests per day, but it can be easily by buying better API key.

- In program when you give None output\_currency, it will do only 4 forward set request, but if you want you can easily get all available currencies, you just have to uncomment two lines ( 85, 103) and comment out one line (86) in currency\_converter.py.
- Example of empty output\_currency from web API

input

amount 50.8

currency "CZK"

output

AED "7.66"

AFN "172.03"

ALL "244.02"

AMD "1067.66"

ANG "4.16"

ARS "31.86"

AUD "3.12"

AWG "3.99"

AZN "3.77"

BAM "3.56"

...

BSD "2.22"

BTN	"154.54"
...	
CNY	"13.83"
COP	"6077.87"
CUP	"57.05"
CVE	"218.29"
CZK	"50.8"
...	
EUR	"1.97"
...	

- All currencies names with their symbol can be found in `currencies.pdf`

## CLI app

- Required parameters
  - `-input_currency <symbol or 3 letter shortcut of currency name>`
  - `-amount <float>`
- Optional parameters
  - `-output_currency <None, 3 letter shortcut of currency name>`
  - `-help or -h <Help text>`

## Run CLI

- Windows

- Firstly you should have virtual environments on your computer
  - <https://www.techcoil.com/blog/how-to-create-a-python-3-virtual-environment-in-windows-10/>
- `python currency_converter.py --amount <float> --input_currency <symbol or 3 letter shortcut of currency name> --output_currency <None, 3 letter shortcut of currency name>`

```
python currency_converter.py --amount 150.9
--input_currency ¥ --output_currency AUD

{
  "input": {
    "amount": 150.9,
    "currency": "CNY"
  },
  "output": {
    "AUD": "30.78"
  }
}
```

- Linux

- With python3

- python3 currency\_converter.py --amount <float> --input\_currency <symbol or 3 letter shortcut of currency name> --output\_currency <None, 3 letter shortcut of currency name>

```
python3 currency_converter.py --amount 150.9 --input_currency ¥ --output_currency AUD
{
  "input": {
    "amount": 150.9,
    "currency": "CNY"
  },
  "output": {
    "AUD": "30.78"
  }
}
```

- With ./

```
./currency_converter.py --amount <float> --input_currency <symbol or 3 letter shortcut of currency name> --output_currency <None, 3 letter shortcut of currency name>
```

```
./currency_converter.py --amount 150.9 --input_curren
```

```
cy ¥ --output_currency AUD
{
  "input": {
    "amount": 150.9,
    "currency": "CNY"
  },
  "output": {
    "AUD": "30.78"
  }
}
```

## Web API

Usinf flask to create API.

## Run API

```
FLASK_APP=run.py
flask run
```

- Go to check

```
localhost:5000/currency_converter?amount=<>&input_currency=<>&output_currency=<>
```

- You can change it in your browser and use

GET /currency\_converter?amount=100.8&input\_currency=EUR&output\_currency=CZK HTTP/1.1

input

amount 100.8

currency "EUR"

output

CZK "2593.48"