import sqlite3\_forex as db

import pandas as pd

import matplotlib.pyplot as plt

import datetime

# plt.plot([1, 2, 3, 4])

# plt.ylabel('Hello')

# plt.show()

# retrieve table from database

df = db.sql\_to\_df()

# export to .csv file

df.to\_csv('historical\_forex\_rates.csv', index=False)

# sort by date

df['date'] = pd.to\_datetime(df['date'])

df = df.sort\_values(by='date')

# reset indexing

df = df.reset\_index(drop=True)

print(df)

# check for missing dates between the 1999-01-01 and 2004-12-01 date in dataframe

dates = df['date']

missing\_dates = []

curr\_date = dates.min()

end\_date = datetime.datetime(2004, 12, 1)

dates = [str(i) for i in dates]

while curr\_date < end\_date:

if str(curr\_date) not in dates:

missing\_dates.append(curr\_date)

curr\_date += datetime.timedelta(days=1)

# there are no missing dates between 1999-01-01 and 2004-12-01

# convert EUR base to USD

def change\_base\_to\_USD(row):

if row['base'] == 'USD':

row['changed\_base'] = False

else:

row['changed\_base'] = True

num = row['USD']

row['base'] = 'USD'

row['USD'] = row['USD'] / num

row['EUR'] = row['EUR'] / num

row['JPY'] = row['JPY'] / num

row['GBP'] = row['GBP'] / num

row['CHF'] = row['CHF'] / num

return row

df = df.apply(change\_base\_to\_USD, axis=1)

print(df.head(20))