In [4]:
```python
import binance, pandas, mplfinance
```

In [5]:
```python
apikey = '7ZNFtEEhKStQJd6vLxOe98vT5iWK98KwaDXx5Zh61Q1Cx7fCQEO1DdYOcqiEmOrl'
secret = 'pxY0lAFVYvH31ct3LnZGMQujU2mXyNy8urnTFbtwnq4hS8FgaqgUFz5N6bGBo7GM'
```

In [6]:
```python
from binance import Client,ThreadedWebsocketManager,ThreadedDepthCacheManager
```

In [7]:
```python
import pandas as pd
```

In [8]:
```python
client = Client(apikey,secret)
```

In [9]:
```python
tickers = client.get_all_tickers()
tickers
```

Out[9]:
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In [10]:
```
tickers[1]
```

Out[10]:
```
{'symbol': 'LTCBTC', 'price': '0.00309400'}
```

In [8]:
```
tickers[2,2]
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
<ipython-input-8-7130bbda0198> in <module>
----> 1 tickers[2,2]

TypeError: list indices must be integers or slices, not tuple
```

In [11]:
```
tickers[2]['price']
```

Out[11]:
```
'0.01085400'
```

In [12]:
```
ticker_df = pd.DataFrame(tickers)
```

In [13]:
```
ticker_df.head()
```

Out[13]:

	symbol	price
0	ETHBTC	0.08074800
1	LTCBTC	0.00309400

Loading [MathJax]/extensions/Safe.js

	symbol	price
2	BNBBTC	0.01085400
3	NEOBTC	0.00057900
4	QTUMETH	0.00241700

In [14]:
```
ticker_df.tail()
```

Out[14]:

	symbol	price
1861	SPELLUSDT	0.02160000
1862	SPELLBUSD	0.02158000
1863	USTBTC	0.00002011
1864	USTBUSD	1.00140000
1865	USTUSDT	1.00100000

In [15]:
```
ticker_df.set_index('symbol',inplace=True)
```

In [16]:
```
ticker_df.loc['ETHUSDT']
```

Out[16]:
```
price    4017.64000000
Name: ETHUSDT, dtype: object
```

In [17]:
```
ticker_df.loc['BTCUSDT']
```

Out[17]:
```
price    49759.45000000
Name: BTCUSDT, dtype: object
```

In [18]:
```
ticker_df.loc['DOGEBNB'],ticker_df.loc['DOGEUSDT']
```

Out[18]:
```
(price    0.00015270
 Name: DOGEBNB, dtype: object,
 price    0.18670000
 Name: DOGEUSDT, dtype: object)
```

In [19]:
```
depth = client.get_order_book(symbol='BTCUSDT')
depth
```

Out[19]:

```
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```

In [20]:

```
depth_df = pd.DataFrame(depth['bids'])
depth_df.coloumns = ['Price','Volume']
depth_df.head()
```

```
<ipython-input-20-31b9cff4af92>:2: UserWarning: Pandas doesn't allow columns to be created
via a new attribute name - see https://pandas.pydata.org/pandas-docs/stable/indexing.html#
attribute-access
  depth_df.coloumns = ['Price','Volume']
```

Out[20]:

	0	1
0	49801.24000000	0.06544000
1	49795.91000000	0.00724000
2	49794.85000000	0.07961000
3	49794.84000000	0.01007000
4	49794.82000000	0.04209000

In [21]:

```
depth_df = pd.DataFrame(depth['asks'])
#depth_df.coloumns = ['Price','Volume']
depth_df.head()
```

Out[21]:

	0	1
0	49801.25000000	0.69000000
1	49801.26000000	0.07300000

	0	1
2	49805.22000000	0.03375000
3	49805.30000000	0.08490000
4	49806.06000000	0.03110000

In [22]:
```
depth_df.dtypes
```

Out[22]:
```
0    object
1    object
dtype: object
```

In [63]:
```
client.get_historical_klines?
```

In [23]:
```
historical = client.get_historical_klines("ETHBTC", Client.KLINE_INTERVAL_30MINUTE, "24-1
```

In [24]:
```
historical
```

Out[24]:
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```

In [26]:

```
hist_df = pd.DataFrame(historical)
```

In [27]:

```
hist_df
```

Out[27]:

	0	1	2	3	4	5	6
0	1640304000000	0.08089700	0.08101300	0.08067200	0.08083600	1449.87770000	1640305799999
1	1640305800000	0.08082800	0.08097600	0.08064900	0.08070500	1298.70500000	1640307599999
2	1640307600000	0.08070500	0.08072900	0.08050000	0.08052600	1496.04570000	1640309399999
3	1640309400000	0.08052900	0.08053000	0.08020000	0.08029500	1595.05050000	1640311199999
4	1640311200000	0.08027400	0.08035300	0.08011300	0.08027600	1268.30540000	1640312999999
...	...	...	...	...	...	...	...
101	1640485800000	0.08108700	0.08138000	0.08104600	0.08123900	1755.75260000	1640487599999
102	1640487600000	0.08124600	0.08140600	0.08119300	0.08125500	656.98440000	1640489399999
103	1640489400000	0.08125500	0.08139000	0.08073600	0.08079000	1878.97150000	1640491199999
104	1640491200000	0.08078700	0.08085500	0.08070000	0.08078300	972.17220000	1640492999999
105	1640493000000	0.08077500	0.08080600	0.08072300	0.08075100	148.58150000	1640494799999

106 rows × 12 columns

In [28]:

```
hist_df.columns = ['Open Time', 'Open', 'High', 'Low', 'Close', 'Volume', 'Close Time', '(
                    'Number of Trades', 'TB Base Volume', 'TB Quote Volume', 'Ignore']
hist_df.tail()
```

Out[28]:

	Open Time	Open	High	Low	Close	Volume	Close Time
101	1640485800000	0.08108700	0.08138000	0.08104600	0.08123900	1755.75260000	1640487599999
102	1640487600000	0.08124600	0.08140600	0.08119300	0.08125500	656.98440000	1640489399999
103	1640489400000	0.08125500	0.08139000	0.08073600	0.08079000	1878.97150000	1640491199999
104	1640491200000	0.08078700	0.08085500	0.08070000	0.08078300	972.17220000	1640492999999
105	1640493000000	0.08077500	0.08080600	0.08072300	0.08075100	148.58150000	1640494799999

In [29]:
```
hist_df.dtypes
```

Out[29]:
```
Open Time                int64
Open                    object
High                    object
Low                     object
Close                   object
Volume                  object
Close Time               int64
Quote Asset Volume      object
Number of Trades         int64
TB Base Volume          object
TB Quote Volume         object
Ignore                  object
dtype: object
```

In [30]:
```
hist_df['Open Time'] = pd.to_datetime(hist_df['Open Time']/1000, unit='s')
hist_df['Close Time'] = pd.to_datetime(hist_df['Close Time']/1000, unit='s')
```

In [31]:
```
numeric_columns = ['Open', 'High', 'Low', 'Close', 'Volume', 'Quote Asset Volume', 'TB Ba
```

In [32]:
```
hist_df[numeric_columns] = hist_df[numeric_columns].apply(pd.to_numeric, axis=1)
hist_df.tail()
```

Out[32]:

	Open Time	Open	High	Low	Close	Volume	Close Time	Quote Asset Volume	Nu T
101	2021-12-26 02:30:00	0.081087	0.081380	0.081046	0.081239	1755.7526	2021-12-26 02:59:59.999000072	142.599077	
102	2021-12-26 03:00:00	0.081246	0.081406	0.081193	0.081255	656.9844	2021-12-26 03:29:59.999000072	53.406235	
103	2021-12-26 03:30:00	0.081255	0.081390	0.080736	0.080790	1878.9715	2021-12-26 03:59:59.999000072	152.287468	
104	2021-12-26 04:00:00	0.080787	0.080855	0.080700	0.080783	972.1722	2021-12-26 04:29:59.999000072	78.527589	
105	2021-12-26 04:30:00	0.080775	0.080806	0.080723	0.080751	148.5815	2021-12-26 04:59:59.999000072	12.001198	

In [33]:
```
hist_df.dtypes
```

Out[33]:
```
Open Time               datetime64[ns]
Open                           float64
High                           float64
Low                            float64
                               float64
```

```
Volume                       float64
Close Time            datetime64[ns]
Quote Asset Volume           float64
Number of Trades               int64
TB Base Volume               float64
TB Quote Volume              float64
Ignore                       float64
dtype: object
```

In [34]:
```
import mplfinance as mpf
```

In [35]:
```
hist_df.set_index('Close Time').tail(100)
```

Out[35]:

Close Time	Open Time	Open	High	Low	Close	Volume	Quote Asset Volume	Numbe (Trade
2021-12-24 03:29:59.999000072	2021-12-24 03:00:00	0.080298	0.080324	0.080157	0.080255	956.8586	76.794114	190
2021-12-24 03:59:59.999000072	2021-12-24 03:30:00	0.080255	0.080283	0.080080	0.080188	1350.3962	108.214506	225
2021-12-24 04:29:59.999000072	2021-12-24 04:00:00	0.080180	0.080315	0.080161	0.080250	907.9952	72.836360	203
2021-12-24 04:59:56.069999933	2021-12-24 04:30:00	0.080241	0.080297	0.080183	0.080278	116.1101	9.315710	39
2021-12-24 05:29:59.999000072	2021-12-24 05:00:00	0.080295	0.080346	0.080188	0.080195	384.9097	30.898674	149
...	...	...	...	...	...	...	...	.
2021-12-26 02:59:59.999000072	2021-12-26 02:30:00	0.081087	0.081380	0.081046	0.081239	1755.7526	142.599077	325
2021-12-26 03:29:59.999000072	2021-12-26 03:00:00	0.081246	0.081406	0.081193	0.081255	656.9844	53.406235	187
2021-12-26 03:59:59.999000072	2021-12-26 03:30:00	0.081255	0.081390	0.080736	0.080790	1878.9715	152.287468	437
2021-12-26 04:29:59.999000072	2021-12-26 04:00:00	0.080787	0.080855	0.080700	0.080783	972.1722	78.527589	230
2021-12-26 04:59:59.999000072	2021-12-26 04:30:00	0.080775	0.080806	0.080723	0.080751	148.5815	12.001198	39

100 rows × 11 columns

In [36]:
```
hist_df.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 106 entries, 0 to 105
Data columns (total 12 columns):
 #   Column              Non-Null Count  Dtype
---  ------              --------------  -----
 0   Open Time           106 non-null    datetime64[ns]
                         106 non-null    float64
```

```
 2   High                106 non-null    float64
 3   Low                 106 non-null    float64
 4   Close               106 non-null    float64
 5   Volume              106 non-null    float64
 6   Close Time          106 non-null    datetime64[ns]
 7   Quote Asset Volume  106 non-null    float64
 8   Number of Trades    106 non-null    int64
 9   TB Base Volume      106 non-null    float64
 10  TB Quote Volume     106 non-null    float64
 11  Ignore              106 non-null    float64
dtypes: datetime64[ns](2), float64(9), int64(1)
memory usage: 10.1 KB
```

In [69]:

```
mpf.plot(hist_df.set_index('Close Time').tail(100))
```

```
---------------------------------------------------------------------------
ValueError                                Traceback (most recent call last)
<ipython-input-69-f396067a59a3> in <module>
----> 1 mpf.plot(hist_df.set_index('Close Time').tail(100))

~\anaconda3\lib\site-packages\mplfinance\plotting.py in plot(data, **kwargs)
    299     config['type'] = _get_valid_plot_types(config['type'])
    300 
--> 301     dates,opens,highs,lows,closes,volumes = _check_and_prepare_data(data, config)
    302 
    303     config['xlim'] = _check_and_convert_xlim_configuration(data, config)

~\anaconda3\lib\site-packages\mplfinance\_arg_validators.py in _check_and_prepare_data(dat
a, config)
     73     for col in cols:
     74         if not all( isinstance(v,(float,int)) for v in data[col] ):
---> 75             raise ValueError('Data for column "'+str(col)+'" must be ALL float or
 int.')
     76 
     77     return dates, opens, highs, lows, closes, volumes

ValueError: Data for column "Open" must be ALL float or int.
```

In [37]:

```
mpf.plot(hist_df.set_index('Close Time').tail(120),
        type='candle', style='charles',
        volume=True,
        title='DOGEBTC HISTORICAL DATA',
        mav=(10,20,30))
```

DOGEBTC HISTORICAL DATA

In [ ]:

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