153009012024

January 13, 2024

[1]:
```
import pandas as pd
import matplotlib.pyplot as plt
from ibapi.client import *
from ibapi.wrapper import *
import numpy as np
```

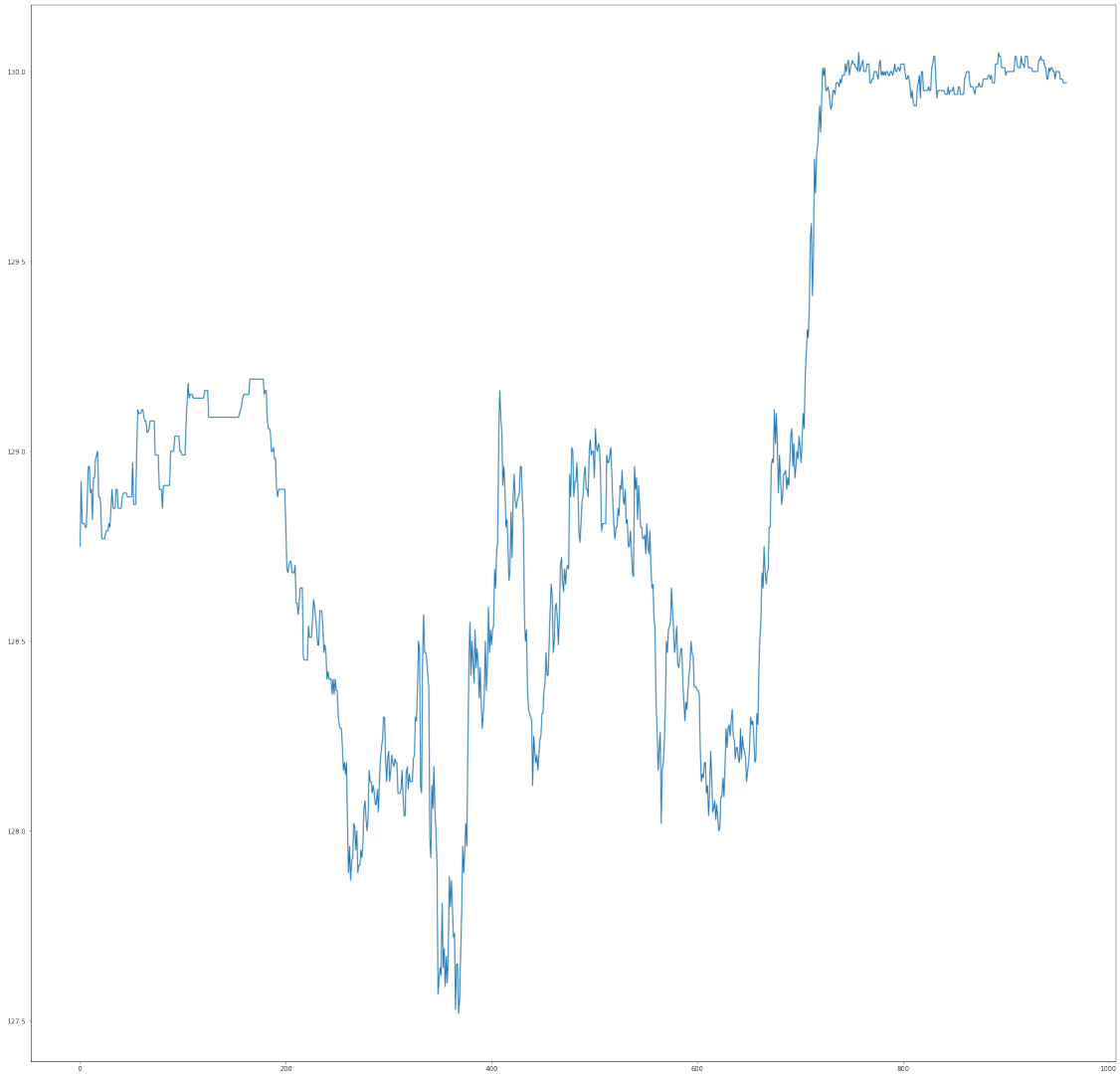
[13]:
```
class IBapi(EWrapper, EClient):
    def __init__(self):
        EClient.__init__(self, self)
        self.data = []

    def nextValidId(self, orderId: int):

        mycontract = Contract()
        mycontract.symbol = "AAPL"
        mycontract.secType = "STK"
        mycontract.exchange = "SMART"
        mycontract.currency = "USD"
        self.reqMarketDataType(3)

        self.reqHistoricalData(orderId, mycontract, '20230101 15:59:00 US/
 ↪Eastern', '1 D', '1 min', 'TRADES', 0, 1, 0, [])

    def historicalData(self, reqId, bar):
        self.data.append([bar.date, bar.close])
        app.disconnect()

app = IBapi()
app.connect('127.0.0.1', 7497, 123)
app.run()

df = pd.DataFrame(app.data, columns=['DateTime', 'Close'])
```

```
ERROR -1 2104 Market data farm connection is OK:usfarm.nj
ERROR -1 2104 Market data farm connection is OK:jfarm
ERROR -1 2104 Market data farm connection is OK:eufarm
ERROR -1 2104 Market data farm connection is OK:cashfarm
ERROR -1 2104 Market data farm connection is OK:usfarm
```

```
ERROR -1 2106 HMDS data farm connection is OK:euhmds
ERROR -1 2106 HMDS data farm connection is OK:ushmds
ERROR -1 2158 Sec-def data farm connection is OK:secdefil
```

[14]:
```
df['media mobile 1'] = df['Close'].rolling(window = 21, min_periods = 1, center␣
 ↪= False).mean()
df['media mobile 2'] = df['Close'].rolling(window = 100, min_periods = 1,␣
 ↪center = False).mean()
```

[15]:
```
ax = df['Close'].plot(figsize=(30, 30))
```



[16]:
```
df["buy"] = 0
buy_flag = False
```

```
for i in range(len(df)):
    if not buy_flag and df.loc[i, "media mobile 1"] > df.loc[i, "media mobile␣
 ↪2"]:
        df.loc[i, "buy"] = 'BUY'
        buy_flag = True
    elif buy_flag and df.loc[i, "media mobile 1"] <= df.loc[i, "media mobile␣
 ↪2"]:
        df.loc[i, "buy"] = 0
        buy_flag = False
```

[17]:
```
df["sell"] = 0
sell_flag = False

for i in range(len(df)):
    if not sell_flag and df.loc[i, "media mobile 1"] < df.loc[i, "media mobile␣
 ↪2"]:
        df.loc[i, "sell"] = 'SELL'
        sell_flag = True
    elif sell_flag and df.loc[i, "media mobile 1"] >= df.loc[i, "media mobile␣
 ↪2"]:
        df.loc[i, "sell"] = 0
        sell_flag = False
```

[18]:
```
df["x"] = 0

for i in range(len(df)):
    if df.loc[i, "buy"] == 'BUY':
        df.loc[i, "x"] = df.loc[i, "Close"]
```

[19]:
```
df["y"] = 0

for i in range(len(df)):
    if df.loc[i, "sell"] == 'SELL':
        df.loc[i, "y"] = df.loc[i, "Close"]
```

[ ]:
```
pd.set_option('max_rows', None)
print(df)
```

[20]:
```
comprato = df['x'].sum()
```

[21]:
```
comprato
```

[21]:
```
1160.3899999999999
```

[22]:
```
venduto = df['y'].sum()
```

[23]:
```
venduto
```

[23]: 1161.26

[ ]: