Programmieren in Python

Variablen

```
geli@geli-3950:/large_nfs/zukunfts_tag$ python
Python 3.10.12 (main, Sep 11 2024, 15:47:36) [GCC 11.4.0] on linux
Type "help", "copyright", "credits" or "license" for more information.
>>> a=1
>>> a
1
>>> b=2
>>> a+b
3
>>> c=a+b
>>> print(c)
3
>>>
```

If statements

```
>>> if a > 3:
...   print(a)
... else:
...   print("moo")
...
```

Schleifen

```
>>> for i in range(10):
...   print(i)
...
0
1
2
3
4
5
6
7
8
9
```

Funktionen

```
>>> def foo():
...   print("hallo von foo")
...
>>> foo()
hallo von foo
>>> def bar(i):
...   print(i + i*2)
...   return i + i*2
...
>>> v=bar(2)
6
>>> v
6
```

Markt API

```
geli@geli-3950:/large_nfs/zukunfts_tag/rtg$ python
Python 3.10.12 (main, Sep 11 2024, 15:47:36) [GCC 11.4.0] on linux
Type "help", "copyright", "credits" or "license" for more information.
>>> import rtg
>>> rtg.login('user', 'user', 'http://localhost:8080')
>>> rtg.get()
(State(zurich=Venue(apples=Fruit(ask=Side(price=100, qty=6), bid=Side(price=96, qty=11)),
bananas=Fruit(ask=Side(price=125, qty=7), bid=Side(price=121, qty=9)),
tomatoes=Fruit(ask=Side(price=84, qty=8), bid=Side(price=80, qty=6))),
frankfurt=Venue(apples=Fruit(ask=Side(price=98, qty=7), bid=Side(price=96, qty=9)),
bananas=Fruit(ask=Side(price=132, qty=10), bid=Side(price=128, qty=8)),
tomatoes=Fruit(ask=Side(price=87, qty=10), bid=Side(price=83, qty=9))),
london=Venue(apples=Fruit(ask=Side(price=106, qty=10), bid=Side(price=101, qty=9)),
bananas=Fruit(ask=Side(price=132, qty=8), bid=Side(price=128, qty=8)),
tomatoes=Fruit(ask=Side(price=82, qty=11), bid=Side(price=76, qty=8)))), Inventory(cash=10000,
apples=0, bananas=0, tomatoes=0))
```

Markt API

```
>>> rtg.get()[0]
State(zurich=Venue(apples=Fruit(ask=Side(price=108, qty=6), bid=Side(price=105, qty=6)),
bananas=Fruit(ask=Side(price=124, qty=8), bid=Side(price=119, qty=8)),
tomatoes=Fruit(ask=Side(price=81, qty=7), bid=Side(price=78, qty=6))),
frankfurt=Venue(apples=Fruit(ask=Side(price=104, qty=10), bid=Side(price=102, qty=7)),
bananas=Fruit(ask=Side(price=127, qty=7), bid=Side(price=123, qty=7)),
tomatoes=Fruit(ask=Side(price=87, qty=6), bid=Side(price=81, qty=7))),
london=Venue(apples=Fruit(ask=Side(price=103, qty=7), bid=Side(price=101, qty=7)),
bananas=Fruit(ask=Side(price=129, qty=8), bid=Side(price=123, qty=8)),
tomatoes=Fruit(ask=Side(price=81, qty=7), bid=Side(price=78, qty=7))))

>>> rtg.get()[1]
Inventory(cash=10000, apples=0, bananas=0, tomatoes=0)
```

Markt API

```
>>> rtg.get()[0]['zurich']
Venue(apples=Fruit(ask=Side(price=103, qty=11), bid=Side(price=99, qty=8)),
bananas=Fruit(ask=Side(price=120, qty=6), bid=Side(price=115, qty=9)),
tomatoes=Fruit(ask=Side(price=80, qty=8), bid=Side(price=74, qty=5)))

>>> rtg.get()[0]['zurich']['apples']
Fruit(ask=Side(price=101, qty=7), bid=Side(price=97, qty=9))

>>> rtg.get()[0]['zurich']['apples'].ask
Side(price=102, qty=9)

>>> rtg.get()[0]['zurich']['apples'].ask.price
105
```

Markt API

```
>>> def apple_zurich_price():
...   return rtg.get()[0]['zurich']['apples'].ask.price
...
>>> apple_zurich_price()
103
>>> apple_zurich_price()
103
>>> apple_zurich_price()
100
>>>
...
```