Python
...für Anfänger

Unit 10

by

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for-1

```
def fak(n):
    res = 1
    for i in range(2, n+1):
        res = res * i
    return res

>>> print(fak(0), fak(1), fak(2))
1 1 2
>>> fak(3)
6
>>> fak(4)
24
>>> fak(5)
120
```

for-2

```
>>> for e in (”banana”, ”apple”, ”orange”):
...     print(e)
...
banana
apple
orange
>>> for e in ((1, ”banana”), (3, ”apple”), (2, ”ora
...     print(e[0], e[1])
...
1 banana
3 apple
2 orange
```

for-3

```
>>> for cnt, fruit in ((1, ”banana”), (3, ”apple”),
...     print(cnt, fruit)
...
1 banana
3 apple
2 orange
```

for-4

```
>>> for c in ”abcde”:
...     print(c)
...
a
b
c
d
e
```

Langzahlarithmetik

```
>>> fak(200)
7886578673647905035523632139321850
6229513597768717326329474253324435
9449963403342920304284011984623904
1772121389196388302576427902426371
0506192662495282993111346285727076
3317237396988943922445621451664240
2540332918641312274282948532775242
4240757390324032125740557956866022
6031904170324062351700858796178922
2227896237038973747200000000000000
00000000000000000000000000000000000
```

None

```
>>> None
>>> print(None)
None
>>> bool(None)
False
>>> def f():
...     print(42)
...
>>> res = f()
42
>>> print(res)
None
```

Module - 1

```
>>> import math
>>> math
<module 'math' from '/usr/lib/python3.4/lib-dynload
>>> type(math)
<class 'module'>
>>> dir(math)
['__doc__', '__file__', '__loader__', '__name__',
'__package__', '__spec__', 'acos', 'acosh',
'asin', 'asinh', 'atan', 'atan2', 'atanh', 'ceil',
'copysign', 'cos', 'cosh', 'degrees', 'e',...]
```

Module - 2

```
>>> import math
>>> pi
Traceback (most recent call last):
  File "<stdin>", line 1, in <module>
NameError: name 'pi' is not defined
>>> math.pi
3.141592653589793
>>> from math import pi
>>> pi
3.141592653589793
>>> from math import sqrt as squareroot
>>> squareroot(4)
2.0
```