# Python

Lu, Phil

**http://www.liaoxuefeng.com/**

## 1. Day One: Basics

### 1.1.

```
name = input('please enter your name: ')
print('hello,', name)
```

### 1.2.

```
n = 123               #
f = 456.789         #
a = True and False or True #
b = None              #
s1 = 'Hello, world'   #
s3 = r'Hello, "Bart"'    #r
s4 = r'''Hello,
Lisa!'''              #```
```

### 1.3.

```
#!/usr/bin/env python3
# -*- coding: utf-8 -*-
```

### 1.4. list & tuple

```
classmates = ['Michael', 'Bob', 1.23, ['asp', 'php']]     #list
len(classmates)
classmates[0]
classmates[-1]
classmates.append('Adam')     #
classmates.insert(1, 'Jack')    #
classmates.pop(1)       #
```

```
t = (1, 2)      #tuple   ,
t = ('a', 'b', ['A', 'B'])    #  list
t[2][0] = 'X'    #   list
```

### 1.5. if

```
age = 20              #nothing special
if age >= 6:
    print('teenager')
elif age >= 18:
    print('adult')
else:
    print('kid')
```

### 1.6.

```
names = ['Michael', 'Bob', 'Tracy']#  , for for...in...
for name in names:
    print(name)

while n > 0:#
  sum = sum + n
  n = n - 2
```

### 1.7. dict & set

```
d = {'Michael': 95, 'Bob': 75, 'Tracy': 85}  #dict
d['Michael'] = 80 #
'Thomas' in d  # False
d.get('Thomas')  # None
d.pop('Bob')   #
```

list dict

- key
-
- hash key
- Python key list key

set

### 1.8.

-

```
abs(-20)
int('123')
str(1.23)
a = abs #  a abs
a(-1)
```

•

```
import math

def move(x, y, step, angle=0):
    nx = x + step * math.cos(angle)
    ny = y - step * math.sin(angle)
    return nx, ny       #     tuple
```

return
return return None
tuple

•

```
d = {'Michael': 95, 'Bob': 75, 'Tracy': 85}  #dict
d['Michael'] = 80 #
'Thomas' in d  # False
d.get('Thomas')  # None
d.pop('Bob')   #
```

```
def f2(a, b, c=0, *args, d, **kw):
  print('a =', a, 'b =', b, 'c =', c, 'd =', d, 'kw =', kw)
f2(1, 2, d=99, ext=None)
a = 1 b = 2 c = 0 d = 99 kw = {'ext': None}  #output
```

- *args args tuple
- **kw kw dict