



Multi-dimensional View of Python

standard library

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Data Processing Using Python

USEFUL FUNCTIONS IN STANDARD LIBRARY

Useful Function in *math* module

- A series of functions for computation.



```
>>> import math
>>> math.e, math.pi
>>> math.ceil(3.6), math.floor(3.6)
>>> math.pow(2, 3), math.log(3), math.sqrt(4)
>>> math.sin(x), math.sinh(x)
>>> math.degrees(3.14)
>>> math.radians(180)
```

Function in *os* module

- A series of functions handling files and directories



```
>>> import os
>>> os.getcwd()
>>> os.chdir(newdir)
>>> os.rename(current_file_name, new_file_name)
>>> os.remove(file_name)
>>> os.mkdir(newdir)
>>> os.rmdir(dirname)
```

Useful Functions in *random* module

- A series of functions to generate random numbers



```
>>> import random
>>> random.choice(['C++', 'Java', 'Python'])
>>> random.randint(1, 100)
>>> random.randrange(0, 10, 2)
>>> random.random()
>>> random.uniform(5, 10)
>>> random.sample(range(100), 10)
>>> random.shuffle(list)
```

Useful functions in *datetime* module

- A series of functions to represent and handle time and date



```
>>> import datetime
>>> from datetime import date
>>> from datetime import time
>>> tm = time(23, 20, 35)
>>> from datetime import datetime
>>> dt = datetime.now()
>>> print(dt.strftime('%a, %b %d %Y %H:%M'))
>>> dt = datetime(2017, 2, 3, 23, 29)
>>> ts = dt.timestamp()
>>> print(datetime.fromtimestamp(ts))
```