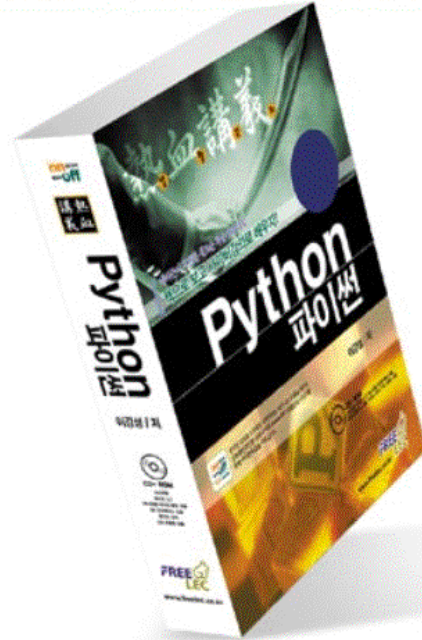


# 熱血講義

프리렉의 열혈강의 시리즈

## Python 파이썬



1

파이썬 (Python)

## Python

❖ 11

:

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1. ?
- 2.
- 3.
4. Import
- 5.
- 6.
- 7.

11-1

?

- ?
  - C
  - 
  - (client)
- - 
  - 
  -
- - .py

## 11-1



```
# FILE : mymath.py
mypi = 3.14

def add(a, b):
    return a + b

def area(r):
    return mypi * r * r
```

## 11-1



```
>>> import mymath
>>> dir(mymath)      # mymath

['__builtins__', '__doc__', '__file__', '__name__', 'add', 'area', 'mypi']
>>> mymath.mypi      # mymath          mypi
3.1400000000000001
>>> mymath.area(5)   # mymath          area
78.5
>>>
```

## 11-2

- ?
  - ( )
  -
- ,
  - (qualified variable)
    - X. Y
  - (unqualified variable)
    - W

7

## 11-2

- - **globals(), locals()**      **vars()**

```

a = 1
b = 2

def f():
    localx = 10
    localy = 20
    print '      :', globals()
    print '      :', locals()

f()
print '      :', globals()
print '      :', locals()

```

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## 11-2



- globals()

```
>>> globals()['c'] = 3
>>> c
3
```

## 11-2



- dir()

```
>>> import string
>>> dir(string)
```



- \_\_dict\_\_

```
>>> import string
>>> string.__dict__
```



,

,

,



가

## 11-3

## ● PYTHONPATH

- Windows (autoexec.bat)
  - set PYTHONPATH=c:\python22\mypythonlib
- Bash (~/.bash\_profile)
  - export PYTHONPATH=~/.mypythonlib
- C (~/.cshrc)
  - setenv PYTHONPATH ~/.mypythonlib

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## 11-3



```
>>> import sys
>>> sys.path
['C:\\PYTHON22\\Tools\\idle', 'D:\\dislin\\python ',
, 'C:\\PYTHON22\\lib\\site-
packages\\win32', 'C:\\PYTHON22\\lib\\site-
packages\\win32\\lib', 'C:\\PYTHON22\\lib\\site-
packages', ...]
>>>
>>> sys.path.append('C:\\PYTHON22\\mypythonlib')
```

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## 11-4 import

- **import**

1. `import sys`
2. `from sys import path`
3. `from sys import *`
4. `import sys as system`
5. `from sys import path as pythonpath`

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## 11-4 import

- **import**

```
# FILE : mymath02.py  
mypi = 3.14
```

```
def area(r):  
    return mypi * r * r
```

```
print area(4.0)
```



```
>>> import mymath02
```

```
50.24
```

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## 11-4 import

- - .pyc → .py
  - 
  - .
  - .pyc
  - .pyc가
- - decompyle
    - <http://www.goebel-consult.de/decompyle/>

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## 11-4 import

- 가
 

```
>>> modulename = 're'
>>> re = __import__(modulename)
>>> re
<module 're' from 'c:\python22\lib\re.pyc'>
```

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## 11-4 import



```
# file : teststring1.py
import string
print 'test string1'
string.a = 1

import teststring2
print 'test string1 done'
-----
# file : teststring2.py
import string

print 'test string2'
print string.a
print 'test string2 done'
```

```
test string1
test string2
1
test string2 done
test string1 done
```

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## 11-4 import



## reload

```
>>> import mymath
>>> mymath.mypi = 6.2
>>> import mymath          #          import
>>> mymath.mypi
6.2000000000000002

>>> reload(mymath)
<module 'mymath' from 'mymath.pyc'>
>>> mymath.mypi
3.14
```

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## 11-5

- \_\_name\_\_

```
# FILE : prname.py
print __name__
```

```
-----
>>> import prname
prname      <-----
-----
```

```
C:\Python22>python prname.py
__main__
```

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## 11-5

```
# file : name_attr_test.py
def test():
    print "Python is becoming popular."
```

```
if __name__ == "__main__"
    test()
```

```
-----
C:\Python22>python name_attr_test.py
Python is becoming popular.
-----
```

```
>>> import name_attr_test
>>> name_attr_test.test()
Python is becoming popular.
>>>
```

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## 11-6

- `getattr()`, `setattr()`, `hasattr()`, `delattr()`

## 11-7 (Packages)

- ?

➤

➤

➤

`__init__.py`

# 11-7 (Packages)

- Speech

Speech/

```

__init__.py
SignalProcessing/
    __init__.py
    LPC.py
    Cepstrum.py
    FFT.py
    FilterBank.py
Recognition/
    __init__.py
    HMM.py
    NN.py
    DTW.py
Synthesis/
    __init__.py
    Tagging.py
    ProsodyContro.py
    DBAccess.py

```

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# 11-7 (Packages)

- 

```

>>> import Speech.Recognition.HMM    #

>>> Speech.Recognition.HMM.Train()  #

>>> from Speech.Recognition import HMM
>>> HMM.Train()

>>> from Speech.Recognition.HMM import *
>>> LoadModel()
>>> SaveModel()

```

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# 11-7 (Packages)

## • `__init__`

```
>
from import *
```

## `__all__`

### ▪ : Recognition

```
__all__ = ['HMM', 'NN', 'DTW']
```

```
▪
from Speech.Recognition import *
```

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# 11-7 (Packages)

```
>
Speech/__init__.py
__all__=['Synthesis', 'Recognition', 'SignalProc
        essing']
import Recognition
import Synthesis
import SignalProcessing
-----
Speech/Recognition/__init__.py
__all__ = ['HMM', 'NN', 'DTW']
import HMM, NN, DTW
...
```

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# 11-7 (Packages)



```
>>> import Speech  
>>> Speech.Recognition.HMM.Train()
```