

파이썬 (Python)

Python

4 19

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```
파이센 (Python)

1.
2.
3.
4. / (fork/exec/wait)
5.
```

```
- os.getcwd()
- ( / )
- os.environ[' ']
- ID
- os.getpid() — id
- os.getppid() — id
- os.getuid(), os.getgid()
- os.geteuid(), os.getegid()
- 19-1 5
```

파이썬 (Python)

- os.system(command) unix, win
 - > subshell command
- os.startfile(path)
 - > path
- os.spawn**(mode, ...)
 - mode : os.P_WAIT, os.P_NOWAIT

```
>>> os.spawnl(os.P_WAIT,
'c:\\windows\\system32\\calc.exe')
0
>>> os.spawnl(os.P_NOWAIT,
'c:\\windows\\system32\\calc.exe')
204
```

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파이썬 (Python)

popen(command[, mode[, bufsize]])

```
>>> f = os.popen('dir', 'r')
>>> s = f.read() #
```

- popen2(cmd[, mode[, bufsize]])
- : (child_stdin, child_stdout)

```
>>> w,r = os.popen2('sort')
>>> w.write('aaa\n')
>>> w.write('zzz\n')
>>> w.close() #
>>> print r.read() # .
```

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```
Os.fork() — unix

pid

forkex.py

execl(path, arg0, arg1, ...) — unix, win

path

return

execex.py

wait() — unix

(pid, exit_status)

exit_status: exit_status(8bit)+ signale_no(8bit)

exitex.py
```

```
(orphan)

(orphan)

init フナ

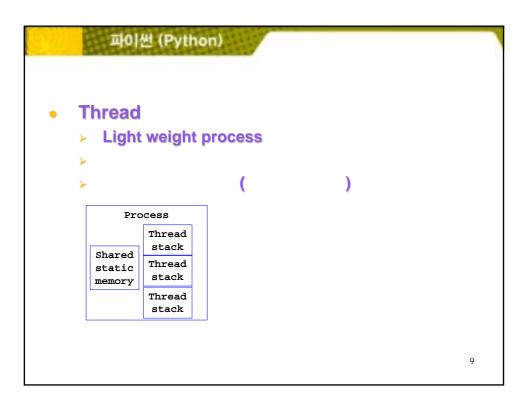
orphan.py

(zombie)

zombie.py

(daemon)

daemon.py
```




```
파이썬 (Python)

thread

allocate_lock()

acquire()

release()

threadex3.py

threadex4.py

threadex5.py
```

```
마이센 (Python)
threading

Concurrent processing

(threadex6.py)

run
(threadex7.py)
```

파이썬 (Python)

threading

- Lock, RLock
 - >
- Condition
 - >
- Semaphore
 - >
- Event
 - >

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파이썬 (Python)

Queue for multi-thread

- QueueQueue
 - class Queue([maxsize])
 - put(item[, block])
 - > get([block])
- (not reliable, because of multithreading semantics)
 - > qsize()
 - > empty()
 - > full()
- threadex12.py