

Python decorators

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code

programming

python

I came across an interesting recent addition to the Python language (as of Python 2.4). They are called decorators. Decorators are Python objects that can register, annotate, and/or wrap a Python function or method. They are primarily used to achieve code reuse. This approach to programming struck me as being very similar to Aspect oriented programming. A decorator is a callable object (like a function) that accepts one argument—the function being decorated. The return value of the decorator replaces the original function definition. One use I found useful, was timing how long function calls actually take:

```
import time

def print_timing(func):

    def wrapper(*arg):
        t1 = time.time()
        res = func(*arg)
        t2 = time.time()
        print '%s took %0.3f ms' % (func.func_name, (t2-t1)*1000.0)
        return res

    return wrapper

# declare the @ decorator just before the function, invokes print_timing()

@print_timing
def myFunction(n):
```

The following page discusses a number of other uses of this pattern (well worth a read).

<http://www.phyast.pitt.edu/~micheles/python/documentation.html>

Downloaded from <https://www.gavinj.net/post/python-decorators>

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