

```
In [5]: %cpaste
Pasting code; enter '--' alone on the line to stop or use Ctrl-D.
:>>> def donothing(x):
:....     return x
:--
```

These magic commands, like others we'll see, make available functionality that would be difficult or impossible in a standard Python interpreter.

Running External Code: %run

As you begin developing more extensive code, you will likely find yourself working in both IPython for interactive exploration, as well as a text editor to store code that you want to reuse. Rather than running this code in a new window, it can be convenient to run it within your IPython session. This can be done with the %run magic.

For example, imagine you've created a *myscript.py* file with the following contents:

```
#-----
# file: myscript.py

def square(x):
    """square a number"""
    return x ** 2

for N in range(1, 4):
    print(N, "squared is", square(N))
```

You can execute this from your IPython session as follows:

```
In [6]: %run myscript.py
1 squared is 1
2 squared is 4
3 squared is 9
```

Note also that after you've run this script, any functions defined within it are available for use in your IPython session:

```
In [7]: square(5)
Out[7]: 25
```

There are several options to fine-tune how your code is run; you can see the documentation in the normal way, by typing **%run?** in the IPython interpreter.

Timing Code Execution: %timeit

Another example of a useful magic function is %timeit, which will automatically determine the execution time of the single-line Python statement that follows it. For example, we may want to check the performance of a list comprehension:

```
In [8]: %timeit L = [n ** 2 for n in range(1000)]
1000 loops, best of 3: 325 µs per loop
```