

DOCSTRINGS

Python has a nifty feature called **documentation strings**, usually referred to by its shorter name **docstrings**. DocStrings are an important tool that you should make use of since it helps to document the program better and makes it easier to understand. Amazingly, we can even get the docstring back from, say a function, when the program is actually running!

Example (save as `function_docstring.py`):

```
def print_max(x, y):  
  
    Prints the maximum of two numbers.  
  
    The two values must be integers.  
  
    # convert to integers, if possible  
  
    x = int(x)  
  
    y = int(y)  
  
    if x > y:  
  
        print x, 'is maximum'
```

```
else:
```

```
    print y, 'is maximum'
```

```
print_max(3, 5)
```

```
print print_max.__doc__
```

Output:

```
$ python function_docstring.py
```

```
5 is maximum
```

```
Prints the maximum of two numbers.
```

```
The two values must be integers.
```

How It Works

A string on the first logical line of a function is the **docstring** for that function. Note that DocStrings also apply to modules and classes which we will learn about in the respective chapters.

The convention followed for a docstring is a multi-line string where the first line starts with a capital letter and ends with a dot. Then the second line is blank followed by any detailed explanation starting from the third line.

You are **strongly advised** to follow this convention for all your docstrings for all your non-trivial functions.

We can access the docstring of the `print_max` function using the `doc` (notice the **double underscores**) attribute (name belonging to) of the function. Just remember that Python treats **everything** as an object and this includes functions. We'll learn more about objects in the chapter on classes.

If you have used `help()` in Python, then you have already seen the usage of docstrings! What it does is just fetch the `doc` attribute of that function and displays it in a neat manner for you. You can try it out on the function above - just include `help(print_max)` in your program. Remember to press the `q` key to exit help.

Automated tools can retrieve the documentation from your program in this manner. Therefore, I **strongly recommend** that you use docstrings for any non-trivial function that you write. The `pydoc` command that comes with your Python distribution works similarly to `help()` using docstrings.

Source: <http://www.swaroopch.com/notes/python/>