

Python 'Cheat Sheet'

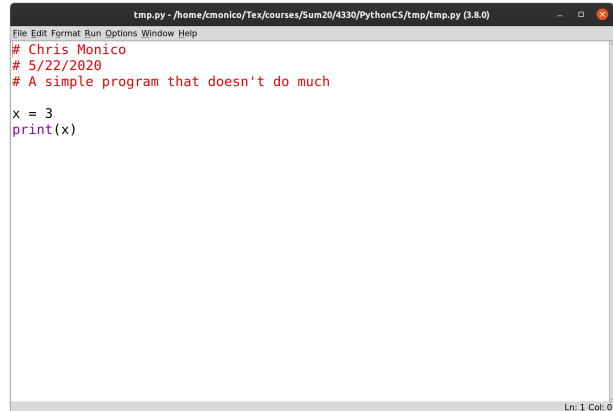
May 22, 2020, Chris Monico

This is just a very quick reference, with a couple of small examples illustrating each concept. Most of these are far more powerful than the examples illustrate, though!



```
Python 3.8.0 Shell
File Edit Shell Debug Options Window Help
Python 3.8.0 (default, Oct 28 2019, 16:14:01)
[GCC 9.2.1 20191008] on linux
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: /home/cmonico/Tex/courses/Sum20/4330/PythonCS/tmp/tmp.py
3
>>> |
```

IDLE shell window



```
tmp.py - /home/cmonico/Tex/courses/Sum20/4330/PythonCS/tmp/tmp.py (3.8.0)
File Edit Format Run Options Window Help
# Chris Monico
# 5/22/2020
# A simple program that doesn't do much

x = 3
print(x)
```

IDLE editor Window

IDLE

Start a new program	in shell window, <i>File</i> → <i>New File</i> , or CTRL+N
Open existing program	in either window, <i>File</i> → <i>Open File</i> , or CTRL+O
Run program	in editor window, <i>Run</i> → <i>Run Module</i> , or F5

Comments

This comments out a single line

Or surround with triple-quotes, for multi-line comments.

Variables

Variable names are case-sensitive, and can contain upper and lower case letters, digits, and the underscore character. They may **not** start with a digit. The following are valid and different variable names:

```
N = 10
n = 2
my_str = 'Monty'
my_str2 = "Python"
x2 = 1.2917
```

Numeric Operators

For numbers, the basic arithmetic operators are exactly what you would expect: + - * /, and parentheses group expressions as you would expect. Two additional operators that are often useful are:

```
x = 3
```

```
y = 2
```

#(1) The modulus operator % to compute the remainder of x divided by y:

```
z = x % y
```

*#(2) The exponentiation operator ** to compute x to the y power:*

```
u = x**y
```

```
v = (x+y)**(0.5)
```

Printing

```
n=5
```

```
pi=3.141592653589
```

#Simple positional formatting:

%d integer, %f float, %s string

```
print("n is %d and pi is about %1.5f" % (n,pi))
```

#The format method:

```
print("n is {} and pi is about {}".format(n,pi))
```

Input

#Prompt the user to enter a name

```
name = input("Enter a name: ")
```

#Prompt the user for an age, but convert to an int,

#in case we want to do arithmetic with it later.

```
age = int(input("Age: "))
```

```
print("Name: %s, Age: %d" % (name, age))
```