# Meeting the interpreter

The Python interpreter processes text-based program code, and also has an interactive mode where you can test snippets of code and is useful for debugging code. Python's interactive mode can be entered in a number of ways:

- From a regular Command Prompt – simply enter the command **python** to produce the Python primary prompt **>>>** where you can interact with the interpreter.
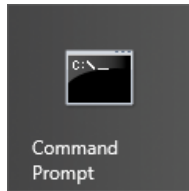
Command Prompt

```
Command Prompt - python                                    —    □    ✕
Microsoft Windows [Version 10.0.17134.81]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\Users\mike_>python
Python 3.7.0
[MSC v.1914 32 bit (Intel)] on win32
>>>
```

- From the Start Menu – choose "Python" (command line) to open a window containing the Python **>>>** primary prompt.

Python (command line)

```
Python 3.7 (32-bit)                                        —    □    ✕
Python 3.7.0
MSC v.1914 32 bit (Intel)] on win32
>>>
```

- From the Start Menu – choose "IDLE" (Python GUI) to launch a Python Shell window containing the Python **>>>** primary prompt.

IDLE (Python GUI)

```
Python 3.7.0 Shell                                         —    □    ✕
File  Edit  Shell  Debug  Options  Window  Help
Python 3.7.0
[MSC v.1914 32 bit (Intel)] on win32
Type "copyright", "credits" or "license()" for more
information.
>>> |
                                                    Ln: 3  Col: 4
```

…cont'd

Irrespective of the method used to enter interactive mode, the Python interpreter will respond in the same way to commands entered at its **>>>** primary prompt. In its simplest form, the interpreter can be used as a calculator.

1 Enter Python interactive mode, using any method outlined opposite, then type a simple addition and hit Return to see the interpreter print out the sum total

```
Python 3.7 (32-bit)                              —   □   ✕
[MSC v.1914 32 bit (Intel)] on win32
>>> 8 + 4
12
>>>
```

The Python interpreter also understands expressions, so parentheses can be used to give higher precedence – the part of the expression enclosed within parentheses will be calculated first.

2 Next, at the Python prompt enter an expression with three components without specifying any precedence order

```
Python 3.7 (32-bit)                              —   □   ✕
>>> 3 * 8 + 4
28
>>>
```

3 Now, at the Python prompt enter the same expression but add parentheses to specify precedence order

```
Python 3.7 (32-bit)                              —   □   ✕
>>> 3 * ( 8 + 4 )
36
>>>
```

Hot tip

Spaces in expressions are ignored, so 8+4 can be also be entered with added spaces for clarity – as illustrated here.

Don't forget

Interactive mode is mostly used to test snippets of code and for debugging code.

Beware

"IDLE" is an acronym for Python's Integrated DeveLopment Environment, but has limited features so is not used to demonstrate examples in this book.