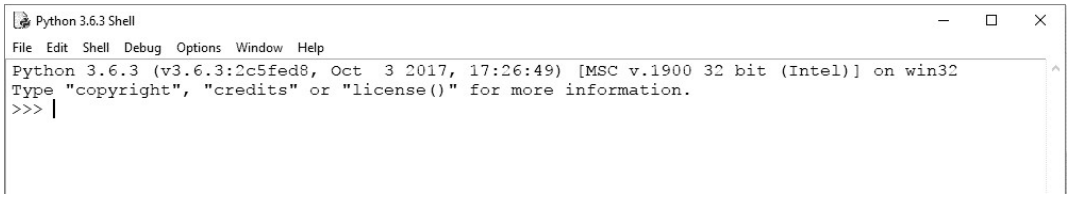
The Basics

Explanation

This is the **shell** window and is the first screen you see when you launch Python.

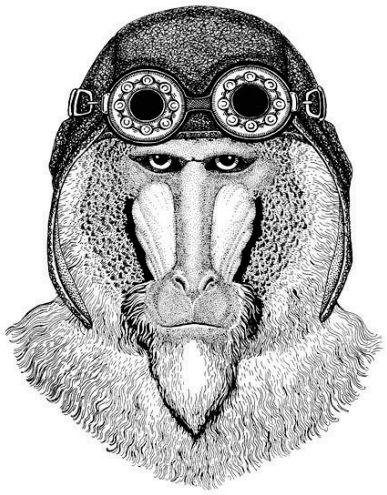


It is possible to write Python code straight into the shell, but as soon as you hit [Return] at the end of a line, it will run that line of code. This may be suitable for using Python as a quick calculator; for instance, you can type in **3*5** at the prompt and Python will show the answer **15** on the next line; however, this style of inputting is not useful for more complex programs.

It is much better to start a new window, create all the code in the new window, save your code and run it.

To create a new window in which to write your code, select **File** and **New**. Once you enter your code in this new window you can save it and run it all in one go. This will then run the code in the shell window.

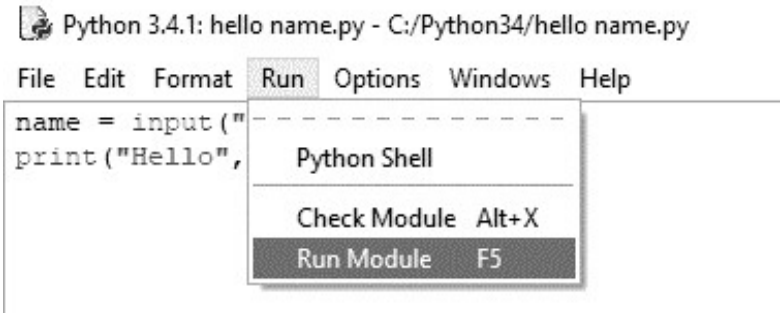
Alternatively, Python programs can be written using any text editor and must be saved with the file name extension .py in order to work. These programs can then be run from the command prompt by typing in the full directory root and file name.



Running Your Program

Every time you run the code your program will need to be saved afresh in case there have been any changes to it.

In this version of Python, you can run the program by selecting the **Run** menu and selecting **Run Module**. Alternatively, you can press the **[F5]** key. If this is the first time the program is saved, Python will prompt you to name and save the file before it will allow the program to run.



Important Things to Note When Writing Your Programs

Python is case sensitive so it is important that you use the correct case, otherwise your code will not work.

Text values need to appear in speech marks (") but numbers do not.

When naming **variables** (i.e. values that you want to store data in) you cannot use any dedicated words such as print, input, etc. otherwise your code will not work.

When saving your files **do not save them with any dedicated words** that Python already uses, such as print, input, etc. If you do this it will not run and you will need to rename the file before it works.

To edit a program you have saved and closed, right-click on the file and select **Edit with IDLE**. If you just double-click on the file it will only try to run it and you will not be able to edit it.

Example Code

num1 = 93
Set the value of a **variable**, if there is not a variable already created, it will create one. A variable is a container for a value (in this case the variable will be called "num1" and store the value 93). The value stored in the variable can change while the program is running. The variable can be called whatever you want (except Python dedicated words such as print, save, etc.) and it must start with a letter rather than a number or symbol and have no spaces.

answer = num1 + num2
Adds together num1 and num2 and stores the answer in a variable called answer.

answer = num1 - num2
Subtracts num2 from num1 and stores the answer in a variable called answer.

answer = num1 * num2
Multiplies num1 by num2 and stores the answer in a variable called answer.

answer = num1 / num2
Divides num1 by num2 and stores the answer in a variable called answer.

answer = num1 // num2
A whole number division (i.e. 9//4 = 2) and stores the answer in a variable called answer.

print ("This is a message")
Displays the message in the brackets. As the value we want displayed is a text value it has the speech marks, which will not be displayed in the output. If you wanted to display a numerical value or the contents of a variable, the speech marks are not needed.

print ("First line\nSecond line")
"\n" is used as a line break.

print ("The answer is", answer)
Displays the text "The answer is" and the value of the variable answer.

textValue = input("Enter a text value: ")
Displays the question "Enter a text value: " and stores the value the user enters in a variable called textValue. The space after the colon allows a space to be added before the user enters their answer, otherwise they appear squashed unattractively together.

numValue = int(input("Enter a number: "))
Displays the question "Enter a number: " and stores the value as an integer (a whole number) in a variable called numValue Integers can be used in calculations but variables stored as text cannot.