2 ways to run Python commands

Type	Description	Example
Interactive shell >>> Commands interpreted immediately	• Enter commands at the prompt • Press <enter> to run • … means that the command has not been fully entered	Python Shell File Edit Shell Debug Options Windows Help ActivePython 3.2.2.3 (ActiveState Software Inc.) based on Python 3.2.3 (default, Apr 11 2012, 07:15:24) [MSC v.1500 32 bit (Intel)] on win32 Type "copyright", "credits" or "license()" for more information. >>> print("hello world") hello world
Shell window commands saved in a file to be used again	• File/new window to open shell window • Enter python commands in to the file • File/save and give the program a meaningful file name (MUST be type .py) • Run/run module (or F5) • Output is shown in the Python shell	Python Shell File Edit Shell Debug Options Windows Help ActiveState Software I New Window Ctrl+N r 11 2012, 07:15:24) *sums.py - C:/Python32/sums.py* File Edit Format Run Options Windows Help

How to…	Explanation
Save a file (must be type .py)	File > Save
Run a program	Run > Run module or F5
Display the last command entered in the shell	alt p
Repeat the last command entered in the shell	alt n
Indent and dedent blocks of code	Select and use Format > Indent /Dedent
Interrupt a program that is running	control z or control c

Python data types

Data type	Python name	Explanation	Example
integer	int	A whole number.	45
string	str	A sequence of characters.	"Hello"
Float (real)	float	A number with a fractional part.	16.76
Boolean (logical)	bool	Boolean values can only have one of two values: True or False.	True False

Precedence   B E D M A S

Parentheses () control the order in which expressions are calculated.   The precedence order is: parenthesis (round **B**rackets), **E**xponential, **D**ivision and **M**ultiplication, **A**ddition and **S**ubtraction . B E D M A S

A **variable** is a named location in a computer's memory where data is stored.

Rules for variable names
Must begin with a letter (upper or lower case) followed by zero or more other letters or numbers.
Cannot have spaces in the name and cannot use reserved Python command words.
variableName = "a string of characters" variableName = 99 variableName = 87.54 variableName = True

Mathematical operator symbol	Operation	Example
/	divide	99 / 5
*	multiply	7 * 5
+	add	5 + 9
-	subtract	100 - 90
**	exponential	6 ** 2
//	integer division – how many times can 5 go into 27 exactly	27 // 5 (answer 5)
%	modulus (remainder after the division)	27 // 5 (answer 2)

IDLE colour coding	What does it show	Example
green	strings	"hello"
purple	functions	print()
black	variables and data	myName
orange	key commands	if
Dark red	comments	# This is a comment
red	Error messages	NameError: name 'jfkd' is not defined

Built-in functions		
Syntax	Description	Example
print()	Displays information on the screen.	print ("Hello world")
type()	Displays the type (int, bool, str or float) of a variable or value.	type (ans) <class 'float'>
int()	Converts a string or float value into an integer number.	ans=7.8 number = int (input ("Please enter number)
input("prompt")	Prompts for input. The data entered is assigned to a variable.	reply=input("Enter your name: ") Enter your name: Fred