



# Introduction to Python

Version 1.1.5 (12/29/2008) [CG]

# Table of Contents

Introduction.....	6	Membership Statements.....	44
About Python.....	7	List Iteration.....	45
The Python Interpreter.....	9	List Enumeration.....	46
Exercises.....	11	Sequence Assignments.....	47
Python Compilation.....	12	Mutable vs Immutable Objects.....	49
Python Scripts in Linux/Unix & Windows.....	14	Multi Target Assignments.....	51
Exercises.....	16	Assignment Shorthand.....	52
Whitespace Significance.....	17	Exercises.....	54
Line Termination.....	19	Numeric Operations.....	55
Comments in Python.....	20	More About Numeric Types.....	56
Basic Output Generation.....	21	Numeric Tools.....	59
Simple User Input.....	23	The Decimal Module.....	60
Exercises.....	24	Operator Precedence.....	61
Python Modules.....	25	Exercises.....	62
Module Search Paths.....	28	String Types.....	63
Determining the System Search Path.....	29	Generating Strings.....	64
Exercises.....	30	Common String Methods.....	67
Working with Variables.....	31	Type Conversion.....	76
Python Variables.....	32	Exercises.....	78
Naming Conventions & Rules.....	37	Formatting String Output.....	79
Types as Objects.....	38	Variable Substitution.....	81
Variable References & Garbage Collection.....	40	String Slicing.....	82
Sequence Types.....	42	Exercises.....	83



Lists & Tuples.....	84	Controlling Output Location.....	127
Python Lists.....	85	Exercises.....	129
Common List Methods.....	86	Understanding Iterators.....	130
Other List Operations.....	89	Iterable Objects.....	131
The range() Function.....	91	The iter() Function.....	132
Multi-Dimensional Lists (Matrices).....	93	Using map With Iterators.....	133
Tuples.....	94	Exercises.....	134
Dictionaries.....	96	Python List Comprehension.....	135
Python Dictionaries.....	97	Basic List Comprehensions.....	136
Assigning Values to Dictionaries.....	98	Compound List Comprehensions.....	138
Dictionary Methods.....	101	Exercises.....	139
Dictionaries vs Lists & Tuples.....	105	Creating Python Functions.....	140
Exercises.....	106	Function Basics.....	141
Python Compound Statements.....	107	Defining Functions.....	143
Python Nesting Recap.....	108	Function Polymorphism.....	144
Comparison Operations.....	109	Argument Defaults.....	145
The if Statement.....	111	Lambdas.....	146
The if Ternary Expression.....	112	Local Variables.....	148
Using try To Handle Errors.....	113	Variable Masking.....	149
The while Loop.....	115	Understanding <code>__builtin__</code> .....	150
Exercises.....	117	Preventing Variable Modifications.....	151
The for Loop.....	118	Exercises.....	152
Traversing Parallel Sets.....	119	Argument Matching Methods.....	153
Exercises.....	121	Exercises.....	156
Basic Input/Output with Files.....	122	Modules & Packages.....	157
Opening Files.....	123	Module Basics.....	158
Working with Files.....	124	Packages.....	160

Using <code>__all__</code> and <code>_</code> Variables.....	163	Exception Classes.....	202
Using <code>__name__</code> .....	164	Exercises.....	203
Exercises.....	165	Python Generators.....	204
Object Oriented Python.....	166	About Generators.....	205
About OOP.....	167	Generator Syntax.....	206
The Class Statements.....	168	Communicating with Generators with <code>send()</code> .....	207
Class Inheritance.....	170	Exercises.....	209
Classes as Objects.....	172	OS Interfacing.....	210
Using Dictionaries.....	174	About the <code>sys</code> & <code>os</code> Modules.....	211
Understanding <code>self</code> .....	176	Gleaning More Using <code>__doc__</code> & <code>help()</code> .....	212
Overriding Inherited Methods.....	178	Common <code>sys</code> Module Attributes & Methods.....	213
More Inheritance.....	179	Working With the <code>os</code> Module & Files/Directories.....	215
Operator Overloading.....	180	File & Path Examples.....	218
The <code>__iter__</code> Method.....	182	Working with <code>os.path</code> .....	219
The <code>__getitem__</code> Method.....	184	<code>os</code> & <code>os.path</code> Module Examples.....	221
Empty Classes For Storage.....	185	Running Shell Commands.....	222
Pickling & Shelving Objects.....	186	Accessing Databases with Python.....	224
Exercises.....	188	About Database Access.....	225
Multiple Inheritance.....	189	About <code>psycopg2</code> .....	227
Exceptions.....	191	PostgreSQL Connect Strings.....	228
About Exceptions.....	192	Cursor Objects.....	231
Python's Default Exception Handler.....	193	PsychoPG2 Examples.....	233
Using Try/Except/Finally Exceptions.....	194	Exercises.....	236
Generating User Defined Exceptions.....	196	Python & the Web.....	237
More on Exceptions.....	197	About the Web.....	238
Exception Examples.....	198	Understanding HTTP.....	239
Using Asserts.....	201	Using the CGI Module.....	240



Questions?.....	242	Where to Get Answers/Next Steps.....	243
-----------------	-----	--------------------------------------	-----