



PYTHON

programming language

tutorialspoint
SIMPLY EASY LEARNING

www.tutorialspoint.com



<https://www.facebook.com/tutorialspointindia>



<https://twitter.com/tutorialspoint>

About the Tutorial

Python is a general-purpose interpreted, interactive, object-oriented, and high-level programming language. It was created by Guido van Rossum during 1985- 1990. Like Perl, Python source code is also available under the GNU General Public License (GPL). This tutorial gives enough understanding on Python programming language.

Audience

This tutorial is designed for software programmers who need to learn Python programming language from scratch.

Prerequisites

You should have a basic understanding of Computer Programming terminologies. A basic understanding of any of the programming languages is a plus.

Disclaimer & Copyright

© Copyright 2017 by Tutorials Point (I) Pvt. Ltd.

All the content and graphics published in this e-book are the property of Tutorials Point (I) Pvt. Ltd. The user of this e-book is prohibited to reuse, retain, copy, distribute or republish any contents or a part of contents of this e-book in any manner without written consent of the publisher.

We strive to update the contents of our website and tutorials as timely and as precisely as possible, however, the contents may contain inaccuracies or errors. Tutorials Point (I) Pvt. Ltd. provides no guarantee regarding the accuracy, timeliness or completeness of our website or its contents including this tutorial. If you discover any errors on our website or in this tutorial, please notify us at contact@tutorialspoint.com.

Table of Contents

About the Tutorial.....	i
Audience	i
Prerequisites	i
Disclaimer & Copyright.....	i
Table of Contents	ii
1. PYTHON – OVERVIEW	1
History of Python	1
Python Features	1
2. PYTHON – ENVIRONMENT.....	3
Local Environment Setup.....	3
Getting Python	3
Installing Python	4
Setting up PATH	5
Setting path at Unix/Linux	5
Setting path at Windows	6
Python Environment Variables	6
Running Python.....	6
3. PYTHON – BASIC SYNTAX.....	9
First Python Program	9
Python Identifiers.....	10
Python Keywords	11
Lines and Indentation.....	11
Multi-Line Statements.....	13

Quotation in Python.....	13
Comments in Python.....	14
Using Blank Lines	14
Waiting for the User.....	15
Multiple Statements on a Single Line	15
Multiple Statement Groups as Suites	15
Command Line Arguments	15
Accessing Command-Line Arguments.....	16
Parsing Command-Line Arguments	17
getopt.getopt method.....	17
Exception getopt.GetoptError	17
4. PYTHON – VARIABLE TYPES	20
Assigning Values to Variables	20
Multiple Assignment	21
Standard Data Types	21
Python Numbers	21
Python Strings	23
Python Lists.....	24
Python Tuples	24
Python Dictionary	26
Data Type Conversion	27
5. PYTHON – BASIC OPERATORS.....	29
Types of Operators.....	29
Python Arithmetic Operators	29
Python Comparison Operators	31

Python Assignment Operators	34
Python Bitwise Operators	36
Python Logical Operators	38
Python Membership Operators.....	38
Python Identity Operators.....	40
Python Operators Precedence.....	41
6. PYTHON – DECISION MAKING.....	44
If Statement	45
If...else Statement	46
The <i>elif</i> Statement	48
Single Statement Suites.....	49
7. PYTHON – LOOPS	51
While Loop	52
The Infinite Loop	53
Using else Statement with Loops	54
Single Statement Suites.....	55
For Loop	56
Iterating by Sequence Index	57
Using else Statement with Loops	58
Nested Loops	59
Loop Control Statements.....	60
Break Statement	61
Continue Statement	63
Pass Statement	65