

CHAPTER 03

STARTED WITH PYTHON

Introduction to Python ⇒

- Python is a general-purpose, dynamically typed, high-level, compiled and interpreted, garbage-collected, and purely object-oriented programming language that supports procedural, object oriented, and functional programming.
- Python is a popular programming language. It was created by Guido Van Rossum, and released in 1991.
- Python is widely used programming language that offers several unique features and advantages compared to languages like Java & C++.
- Python is a Computer programming language often used to build websites and software, automate tasks, and analyze data.
- Python is a set of instructions that we give in the form of a Programme to our computer to perform any specific task.

● Python is used for!

- Web development (server-side).
- Software development.
- Mathematics.
- System Scripting.

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* Features of Python ⇒

- Python is a high level language. It is free and open source language.
- It is an interpreted language, as python programs are executed by an interpreter.
- Python programs are easy to understand as they have a clearly defined syntax and relatively simple structure.
- Python is case-sensitive. For example, NUMBER and number are not same in python.
- Python is portable and platform independent, means it can run on various operating systems and hardware platforms.
- Python has a rich library of predefined functions.

Working with Python

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To write and run (execute) a Python program we need to have a Python interpreter installed on our computer or we can use any online Python Interpreter.

The interpreter is also called python shell.

Execution Modes $\Rightarrow$ There are two ways to use the python interpreter:

a) Interactive mode

b) Script mode

Interactive mode allows execution of individual statement instantaneously. Whereas, script mode allows us to write more than one instruction in a file called Python source code file that can be executed.

— * —

- Python is also helpful in web development. Many popular web services and applications are built using Python. (174)
- Python uses indentation for blocks and nested blocks. if else

* Advantages of Python: ➤

- Easy to learn, read and understand.
- Versatile and open-source
- Improves productivity
- Supports Libraries
- Huge Library
- Strong Community
- Interpreted Language

* Disadvantages of Python: ➤

- Restrictions in design
- Memory inefficient

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Python keywords

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- Keywords are reserved words.
- Keywords can not be used as a variable name, function name or any other identifier.
- Python keywords are some predefined and reserved words in Python that have special meanings.
- Keywords are used to define the syntax of the coding.
- All keywords in Python are written in lowercase. Except True or False.

List of Python keywords →

and → This is a logical operator which returns true if both the operands are true else returns false.

This is a logical operator which returns

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if → This is used to make a Conditional Statement. (175)

elif → Elif is a Condition Statement used with an if statement. The elif statement is executed if the previous Conditions were not true.

Else → else is used with if and elif Conditional Statements. The else block is executed if the given Condition is not true.

for → This is used to create a loop.

while → This keyword is used to create a while loop.

break → This is used to terminate the loop.

or → This is used to create an alternative.

def → It helps us to define functions.

Lambda → It is used to define the anonymous function.

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