PYTHON

- Python can be used on a server to create web applications.
- Python can be used alongside software to create workflows.
- Python can connect to database systems. It can also read and modify files.
- Python can be used to handle big data and perform complex mathematics.
- Python can be used for rapid prototyping, or for production-ready software development.

Creating a Comment

Comments starts with a #, and Python will ignore them.

```
#This is a comment
print("Hello, World!")
```

```
"""
This is a comment
written in
more than just one line
"""
print("Hello, World!")
```

Variables :

- Variables are containers for storing data values.

Creating Variables

- Python has no command for declaring a variable.
  A variable is created the moment you first assign a value to it.

Variable Names

- A variable name must start with a letter or the underscore character
- A variable name cannot start with a number
- A variable name can only contain alpha-numeric characters and underscores (A-z, 0-9, and _)
- Variable names are case-sensitive (age, Age and AGE are three different variables)
- A variable name cannot be any of the Python keywords.

Built-in Data Types

In programming, data type is an important concept.
Variables can store data of different types, and different types can do different things.
Python has the following data types built-in by default, in these categories:

Text Type:	str
Numeric Types:	int, float, complex
Sequence Types:	list, tuple, range
Mapping Type:	dict
Set Types:	set, frozenset
Boolean Type:	bool
Binary Types:	bytes, bytearray, memoryview
None Type:	NoneType

Global Variables

Global variables can be used by everyone, both inside of functions and outside.

Local Variables

Local variables can be used inside of functions only.

Some methods of print:

1. Simple method
2. .format method
3. f ‘string method
4. % (modulo) method

Getting the Data Type

You can get the data type of any object by using the type() function:

There are three numeric types in Python:

- int
- float
- complex

Int

Int, or integer, is a whole number, positive or negative, without decimals, of unlimited length.

Example

Integers:

x = 1
y = 35656222554887711
z = -3255522

Float

Float, or "floating point number" is a number, positive or negative, containing one or more decimals.

Example

Floats:

x = 1.10
y = 1.0
z = -35.59

Complex

Complex numbers are written with a "j" as the imaginary part:

Type Conversion

You can convert from one type to another with the int(), float(), and complex() methods:

x = 3+5j
y = 5j
z =-5j