

# Python Data Types

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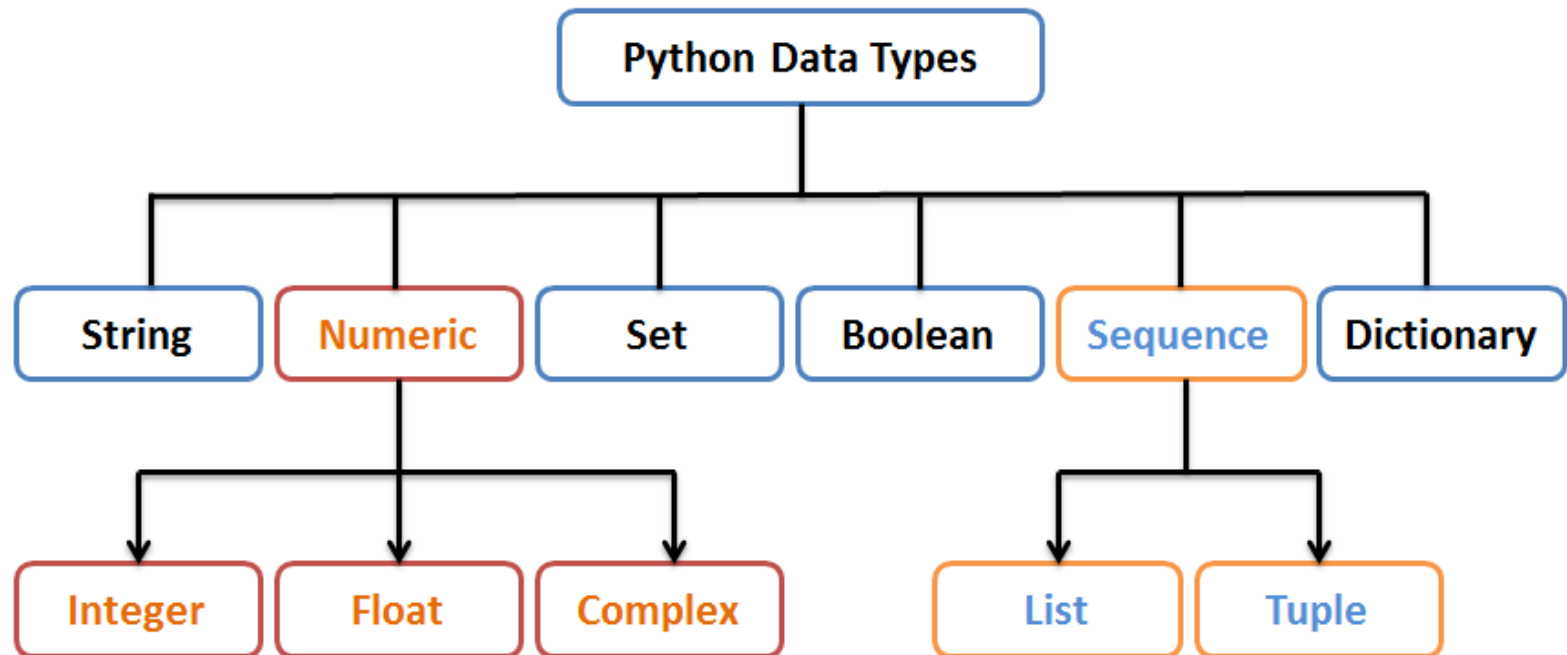
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# Python Data Types

- Python has the following data types built-in by default.



- Data types are actually **classes** and variables are **instance (object)** of these classes.

# Python Numbers

- **Integers**, **floating point** numbers and **complex** numbers fall under Python numbers category.
- They are defined as **int**, **float** and **complex** classes in Python.
- **int** or integer, is a whole number, positive or negative, without decimals, of unlimited length.
- **float** or "floating point number" is a number, positive or negative, containing one or more decimals.
- **complex** numbers are written with a "j" as the imaginary part:

```
x = 1      # int
y = 2.8    # float
z = 1j     # complex
```

# type() and isinstance()

- The **type()** function to know which class a variable or a value belongs to.
- The **isinstance()** function is used to check if an object belongs to a particular class.

```
a = 5
print(a, "is of type", type(a))
a = 2.0
print(a, "is of type", type(a))
a = 1+2j
print(a, "is complex number?", isinstance(1+2j,complex))
```

- **Output**

```
5 is of type <class 'int'>
2.0 is of type <class 'float'>
(1+2j) is complex number? True
```