**Python Data Types:**

* Integers : **int** : Whole numbers such as 3, 100, -29 etc.
* Floating point : **float** : Numbers with decimal point 2.3, -3.14, 100.0 etc.
* Complex numbers : **complex** : Complex numbers 1+23i
* Strings : **str** : Ordered sequence of characters “hello”, “2000”, “w”
* Lists : **list** : Ordered sequence of objects: [10, “hello”, 200.3]
* Dictionaries : **dict** : Unordered key, value pairs {“myKey”:”value”, “name”:”Sachin”}
* Tuples : **tup** : Ordered immutable sequence of objects (10, “hello”, 200.3)
* Sets : **set** : Unordered collection of unique objects {“a”, “b”}
* Booleans : **bool** : Logical value indicating **True** or **False**
* No value : **NoneType** : Represent the absent of value with **None**
* [**https://www.programiz.com/python-programming/variables-datatypes**](https://www.programiz.com/python-programming/variables-datatypes)

**Numbers:**

* [**https://docs.python.org/2/tutorial/floatingpoint.html**](https://docs.python.org/2/tutorial/floatingpoint.html)

**Strings:**

* Strings can be wrapped in single quotes or double quotes
* One type of quotes can be wrapped in other type of quotes in Python.
* Indexing and slicing operation can be done on string to get substrings and characters and obviously index starts with 0
* Python supports reverse indexing also
* Slicing has following syntax **[start:stop:step]**
* Built-in **len()** function is used to count the length of most command sequence data types including strings
* Python strings are immutable means it can’t be changed without changing the string object itself.
* [**https://www.programiz.com/python-programming/string**](https://www.programiz.com/python-programming/string)
* [**https://docs.python.org/2/library/string.html**](https://docs.python.org/2/library/string.html)
* [**https://docs.python.org/3/library/string.html**](https://docs.python.org/3/library/string.html)

**String Indexing and Slicing:**

* [**https://www.digitalocean.com/community/tutorials/python-slice-string**](https://www.digitalocean.com/community/tutorials/python-slice-string)
* [**https://www.w3schools.com/python/gloss\_python\_string\_slice.asp**](https://www.w3schools.com/python/gloss_python_string_slice.asp)

**String Properties and Methods:**

* Strings are immutable
* Strings supports concatenations
* [**https://www.programiz.com/python-programming/methods/string**](https://www.programiz.com/python-programming/methods/string)
* [**https://www.digitalocean.com/community/tutorials/python-string-functions**](https://www.digitalocean.com/community/tutorials/python-string-functions)
* [**https://docs.python.org/3/library/string.html**](https://docs.python.org/3/library/string.html)
* [**https://vegibit.com/python-string-properties-and-methods/**](https://vegibit.com/python-string-properties-and-methods/)

**Print formatting with strings:**

* String interpolation
* f string and format() method
* [**https://pyformat.info/**](https://pyformat.info/)
* [**https://realpython.com/python-formatted-output/**](https://realpython.com/python-formatted-output/)
* [**https://python-course.eu/python-tutorial/formatted-output.php**](https://python-course.eu/python-tutorial/formatted-output.php)
* [**https://realpython.com/python-string-formatting/**](https://realpython.com/python-string-formatting/)
* [**https://www.pythoncheatsheet.org/cheatsheet/string-formatting**](https://www.pythoncheatsheet.org/cheatsheet/string-formatting)

**Python Lists:**

* A Python list is a collection of zero or more elements. An element of the list can be any data.
* Lists are mutable objects
* <https://developers.google.com/edu/python/lists>
* [**https://docs.python.org/3/tutorial/datastructures.html**](https://docs.python.org/3/tutorial/datastructures.html)
* [**https://www.programiz.com/python-programming/list**](https://www.programiz.com/python-programming/list)

**Python List Properties and Methods:**

* [**https://www.programiz.com/python-programming/methods/list**](https://www.programiz.com/python-programming/methods/list)
* [**https://www.datacamp.com/tutorial/python-list-function**](https://www.datacamp.com/tutorial/python-list-function)

**Python Dictionaries:**

* Python dictionaries are key, value paired unordered sequence
* Dictionaries are mutable
* [**https://www.programiz.com/python-programming/dictionary**](https://www.programiz.com/python-programming/dictionary)
* [**https://docs.python.org/3/tutorial/datastructures.html**](https://docs.python.org/3/tutorial/datastructures.html)
* [**https://realpython.com/python-dicts/**](https://realpython.com/python-dicts/)

**Python Tuples:**

* Tuples are similar to list but are immutable and enclosed in parenthesis with coma separated.
* Supports any type of data and indexing and slicing
* <https://www.programiz.com/python-programming/tuple>
* <https://docs.python.org/3/c-api/tuple.html>
* <https://www.w3schools.com/python/python_tuples.asp>
* <https://www.w3schools.com/python/python_ref_tuple.asp>

**Python Sets:**

* Sets are unordered collection of unique objects
* [**https://docs.python.org/3.8/library/stdtypes.html#set-types-set-frozenset**](https://docs.python.org/3.8/library/stdtypes.html#set-types-set-frozenset)
* [**https://www.programiz.com/python-programming/set**](https://www.programiz.com/python-programming/set)
* [**https://www.datacamp.com/tutorial/sets-in-python**](https://www.datacamp.com/tutorial/sets-in-python)

**Booleans in Python:**

* [**https://www.programiz.com/python-programming/methods/built-in/bool**](https://www.programiz.com/python-programming/methods/built-in/bool)

**Input/Output with Basic Files in Python:**

* **https://www.programiz.com/python-programming/file-operation**

**Resources for More Basic Practice:**

* [**http://codingbat.com/python**](http://codingbat.com/python)
* [**https://projecteuler.net/archives**](https://projecteuler.net/archives)
* [**http://www.codeabbey.com/index/task\_list**](http://www.codeabbey.com/index/task_list)
* [**https://www.reddit.com/r/dailyprogrammer**](https://www.reddit.com/r/dailyprogrammer)
* [**http://www.pythonchallenge.com/**](http://www.pythonchallenge.com/)

**Variable Assignments:**

* A Python variable is a symbolic name that is a reference or pointer to an object.
* Rules for variable naming:
* <https://peps.python.org/pep-0008/>
* <https://realpython.com/python-variables/>
* <https://www.w3schools.com/python/gloss_python_variable_names.asp>