MUTABLE AND IMMUTABLE OBJECTS IN PYTHON
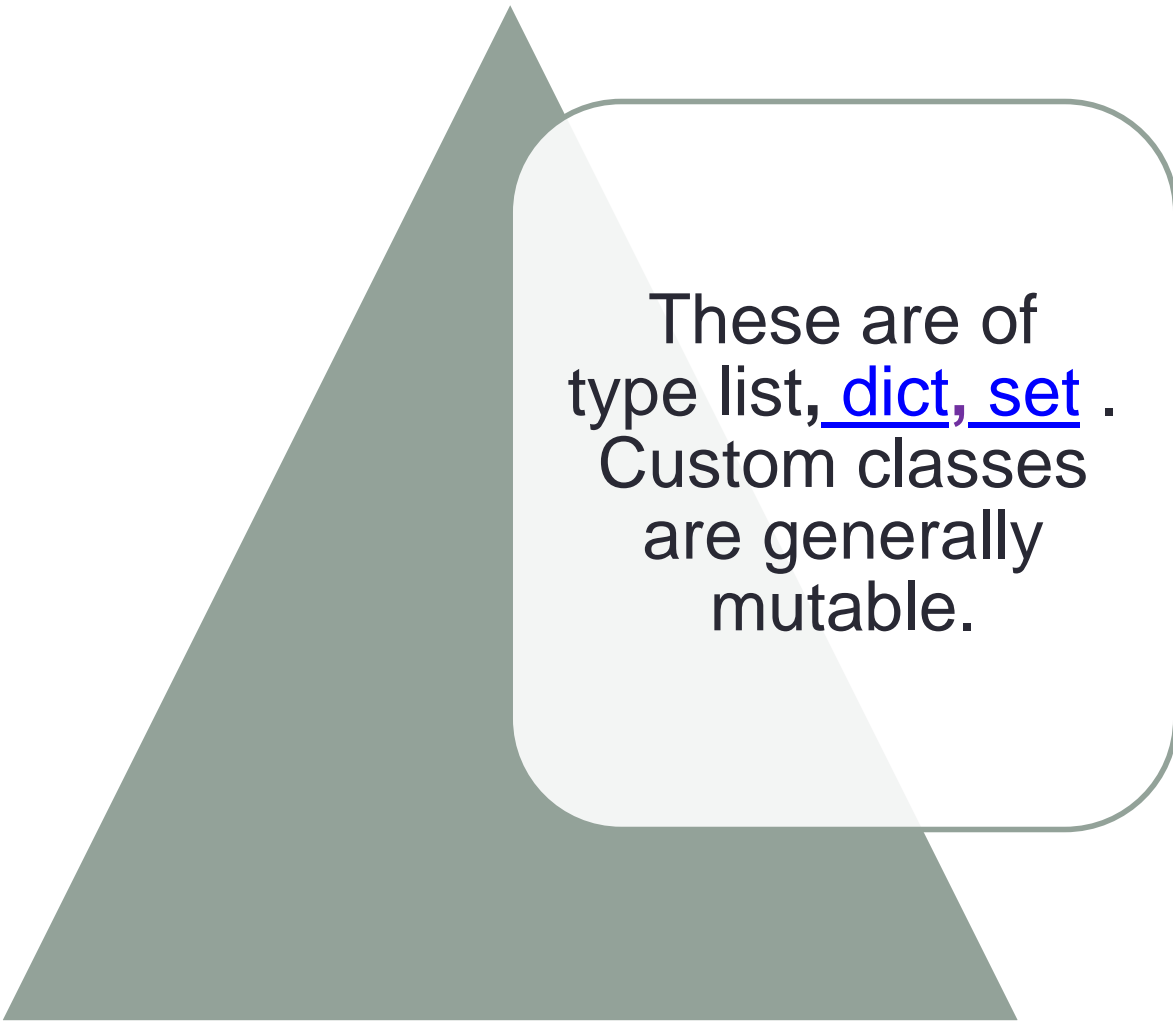
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Batch No:6

Mutable object

These are of type list, dict, set . Custom classes are generally mutable.

Dictionary

➢Dictionaries are used to store data values in key:value pairs.

➢A dictionary is a collection which is ordered*, changeable and does not allow duplicates.

➢Dictionaries are written with curly brackets, and have keys and values

NOTE:As of Python version 3.7, dictionaries are *ordered*. In Python 3.6 and earlier, dictionaries are *unordered*.

EX:

```
thisdict = {
  "brand": "Ford",
  "model": "Mustang",
  "year": 1964
}
```

List

➢Lists are used to store multiple items in a single variable.

➢Lists are one of 4 built-in data types in Python used to store collections of data, the other 3 are Tuple, Set, and Dictionary, all with different qualities and usage.

➢Lists are created using square brackets

➢EX:
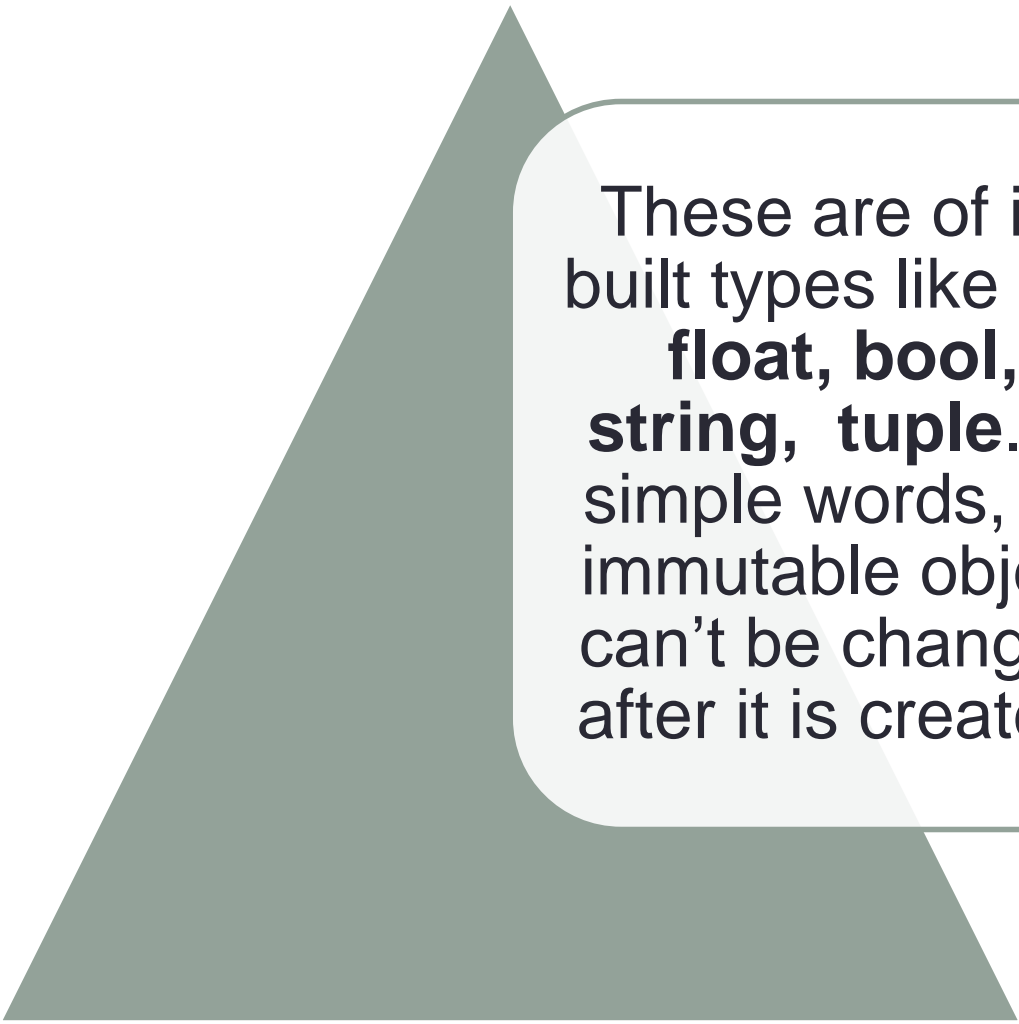
thislist = ["apple", "banana", "cherry"]
print(thislist)

Set

➢Sets are used to store multiple items in a single variable.

➢Set is one of 4 built-in data types in Python used to store collections of data, the other 3 are [List](#), [Tuple](#), and [Dictionary](#), all with different qualities and usage.

➢A set is a collection which is both *unordered* and *unindexed*.

➢Sets are written with curly brackets.

➢Ex:

```
thisset = {"apple", "banana", "cherry"}
print(thisset)
```

Immutable object

These are of in-built types like **int, float, bool, string, tuple**. In simple words, an immutable object can't be changed after it is created.

Int

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

x = 1

print(type(x))
print(x)

Float

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

Ex:

x = 1.10

print(type(x))
print(x)

Bool

➢ The bool() function allows you to evaluate any value, and give you True or False in return

String

➢Strings in python are surrounded by either single quotation marks, or double quotation marks.

➢Ex:

➢print("Hello")
print('Hello')

Tuple

➢Tuples are used to store multiple items in a single variable.

➢Tuple is one of 4 built-in data types in Python used to store collections of data, the other 3 are List, Set, and Dictionary, all with different qualities and usage.

➢A tuple is a collection which is ordered and **unchangeable**.

➢Tuples are written with round brackets.

➢Ex:

thistuple = ("apple", "banana", "cherry")
print(thistuple)