

Dictionaries, lists, tuples, set with an example.

Dictionaries

Dictionary in Python is an ordered collection of data values, used to store data values like a map, which, unlike other Data Types that hold only a single value as an element, Dictionary holds **key:value** pair. Key-value is provided in the dictionary to make it more optimized.

Below is a dictionary holding names of age of people
{‘Atul’: 27 , ‘Brian : 30 , ‘Chester’ : 31’}

Lists

Lists are just like dynamic sized arrays, declared in other languages (vector in C++ and ArrayList in Java). Lists need not be homogeneous always which makes it a most powerful tool in Python. A single list may contain DataTypes like Integers, Strings, as well as Objects. Lists are mutable, and hence, they can be altered even after their creation.

```
my_list = [1, "Hello", 3.4]
```

Tuples

A tuple in Python is similar to a [list](#). The difference between the two is that we cannot change the elements of a tuple once it is assigned whereas we can change the elements of a list.

```
("mouse", [8, 4, 6], (1, 2, 3))
```

Sets

A set is an unordered collection of items. Every set element is unique (no duplicates) and must be immutable (cannot be changed).

However, a set itself is mutable. We can add or remove items from it.

Sets can also be used to perform mathematical set operations like union, intersection, symmetric difference, etc.

`{1.0, "Hello", (1, 2, 3)}`