Datatypes in Python – (Sets & Mapping)

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Five Types of Built-in Datatypes

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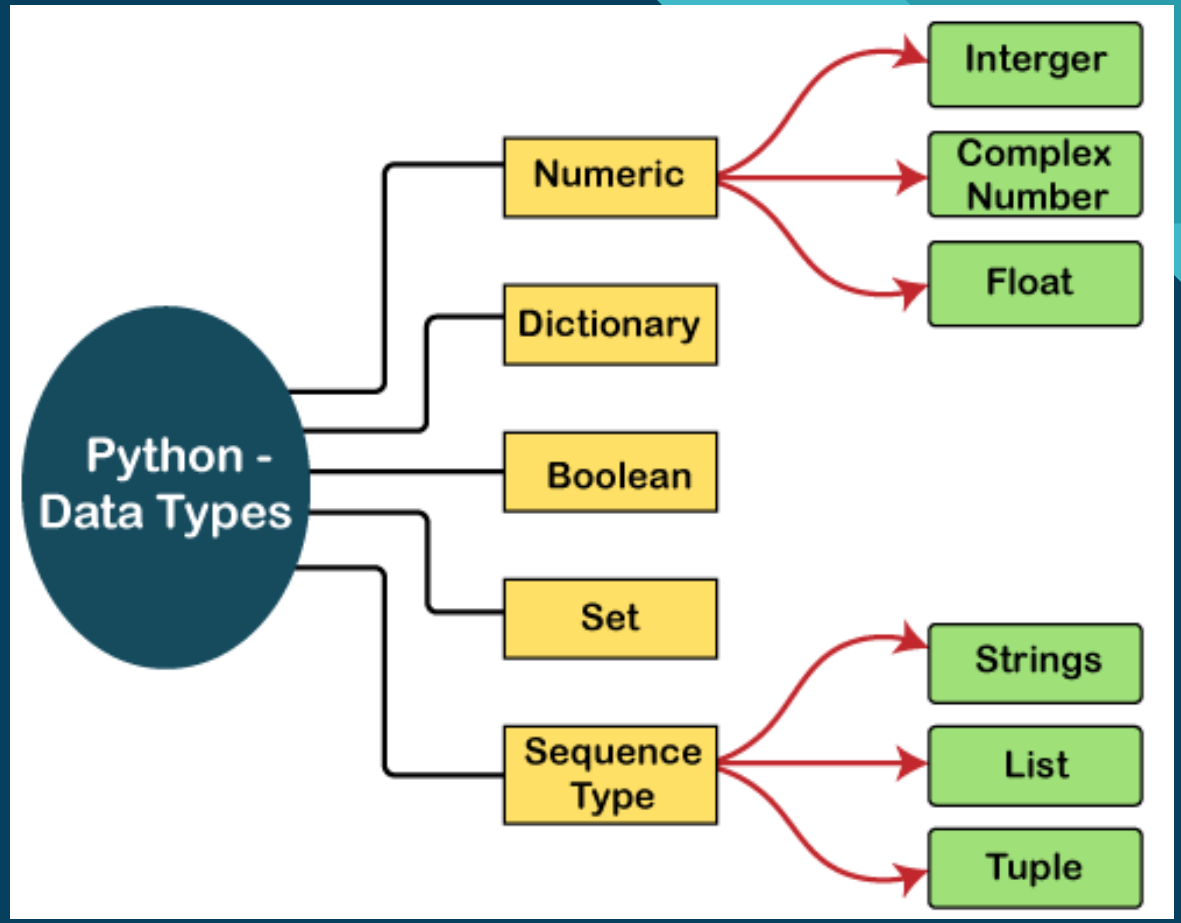
1. None Type
2. Numeric Type
3. Sets
4. Sequences
5. Mappings



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Sets

Unordered collection of elements.

Does not accept duplicate elements.

set Datatype

- To create a set, we should enter the elements separated by commas inside curly braces { }.
- We can use set( ) function to create a set.
- Example:

```
s={10, 20 , 30, 20, 50}
print(s)
ch=set("Hello")
print(ch)
```

```
#convert a list into set
l=[1,2,5,4,3]
s=set(l)
print(s)
```

set Datatype Contd.

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- We cannot retrieve the elements using indexing or slicing operations.
- The update( ) method is used to add elements to a set.
- The remove( ) method is used to remove any particular element from a set.
- Example:

```
#update() method is used to add elements to a set
s.update([50,23])
print(s)
s.remove(50)
```

frozenset Datatype

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- The elements of frozenset datatype cannot be modified.
- We can create a frozenset by passing a set to frozenset( ) function.
- Another way of creating a frozenset is by passing a string (a group of characters) to the frozenset( ) function.
- However, update( ) and remove( ) methods will not work on frozenset since they cannot be modified or updated.

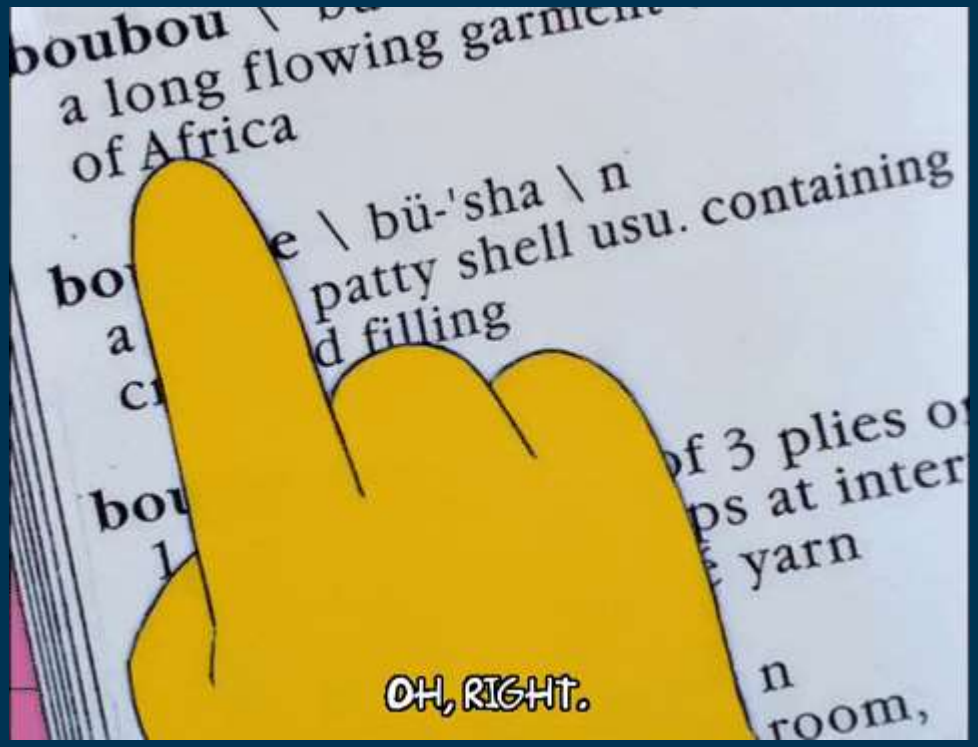
frozenset Datatype Contd.

```
s={50,40,30,20,90}
print(s)

#create frozenset
fs=frozenset(s)
print(fs)

#passing a string to frozenset()
fs=frozenset("abcdefg")
print(fs)
```

Mapping

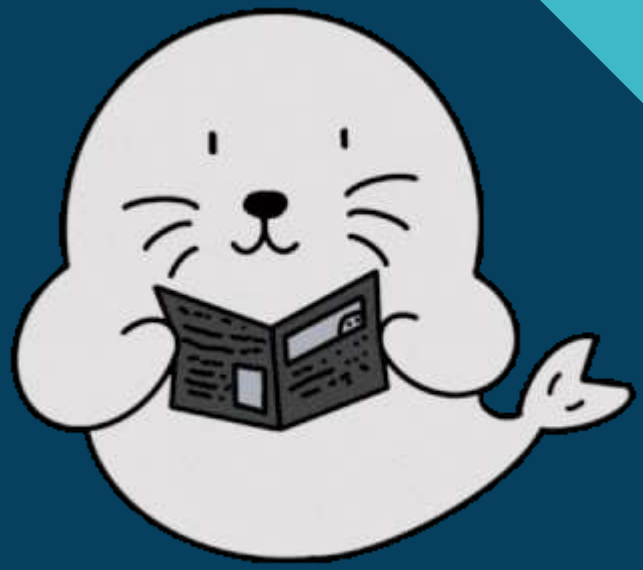
A map represents a group of elements in the form of key value pairs.


DICTIONARY
HMMM.


boubou
a long flowing garment
of Africa
e \ bü-'sha \ n
patty shell usu. containing
d filling
of 3 plies o
ps at inter
yarn
n
room,
OH, RIGHT.

Dictionary

- The dict datatype is an example for a map.
- The ‘dict’ represents a ‘dictionary’ that contains pairs of elements.
- The key and its value should be separated by colon(:).
- All the elements should be enclosed inside curly braces { }.



Operations on Dictionaries

- To retrieve value upon giving the key, we can mention d[key].
- To retrieve only keys from the dictionary, we can use the methods keys( ).
- To get only values, we can use the method values( ).
- We can update the value of a key, as: d[key] = newvalue.
- We can delete a key and corresponding value, using del module.

User Defined Datatypes

Created by programmers.

For example, an array, a class, or a module.