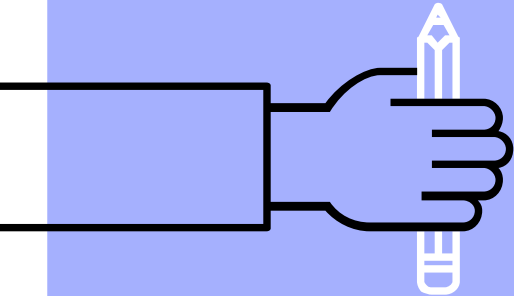
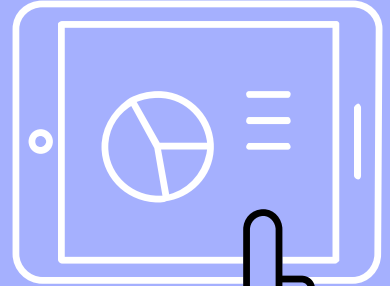
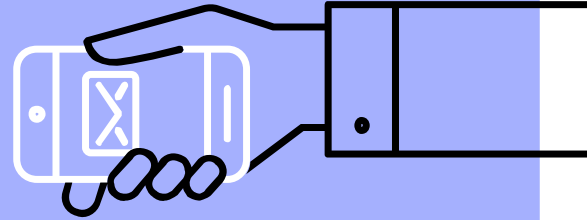
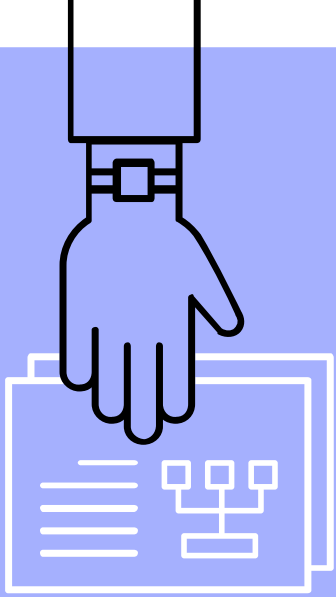


Python Fundamentals Part I

Module 3



By Letlaka
Tsotetsi

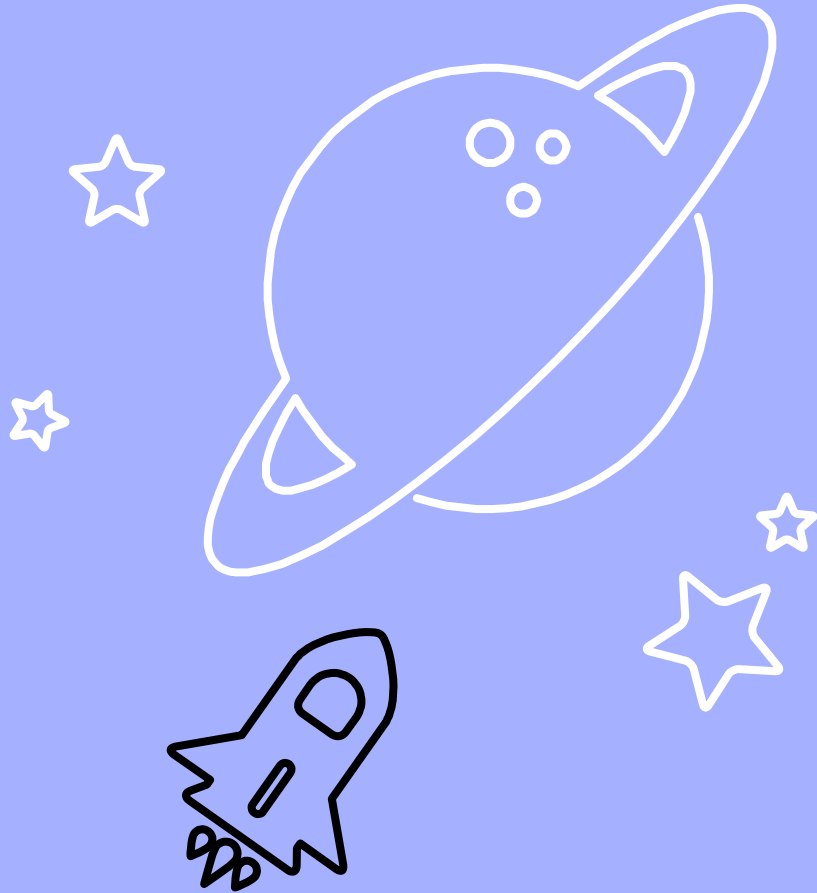
OBJECTIVES

- ▶ Create a Python dictionary
- ▶ Access values in an dictionary
- ▶ Modify the values stored in a dictionary
- ▶ Determine if a key exists in a dictionary
- ▶ Use common dictionary methods

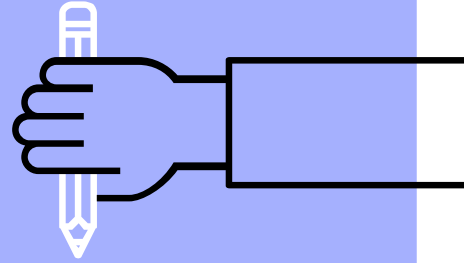
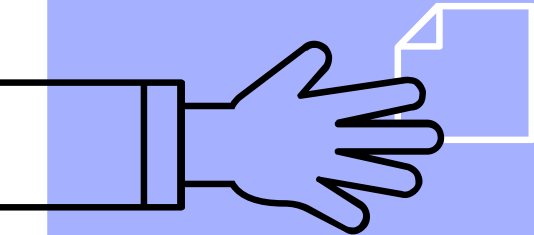


Programmer

A person who fixed a problem that you don't know you have; in a way you don't understand.

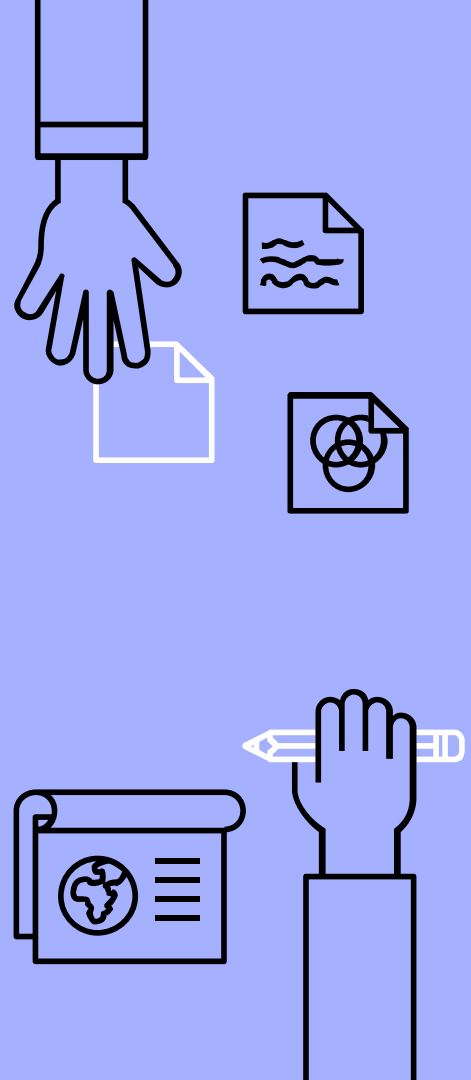


Python Dictionary



Dictionary

- ▶ Python dictionary is an unordered collection of items.
- ▶ Each item of a dictionary has a key/value pair.
- ▶ Dictionaries are optimized to retrieve values when the key is known.

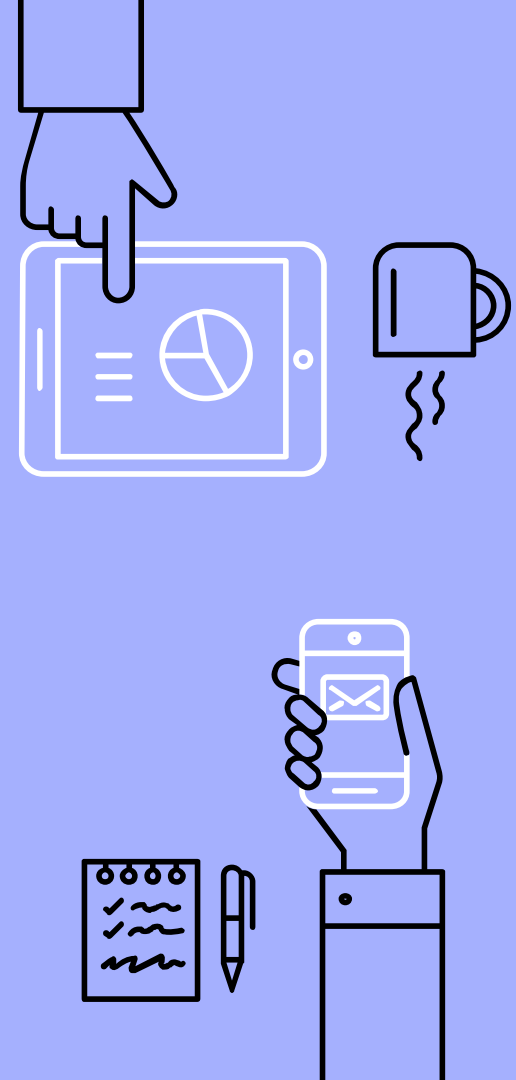


Creating Python Dictionary

Creating a dictionary is as simple as placing items inside curly braces {} separated by commas.

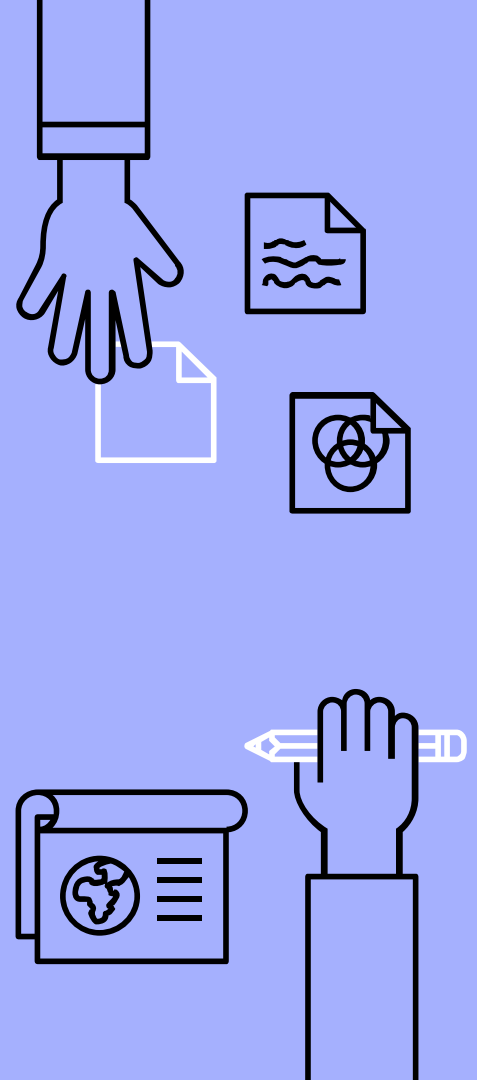
An item has a key and a corresponding value that is expressed as a pair (key: value).

While the values can be of any data type and can repeat, keys must be of immutable type and must be unique.



Accessing Elements

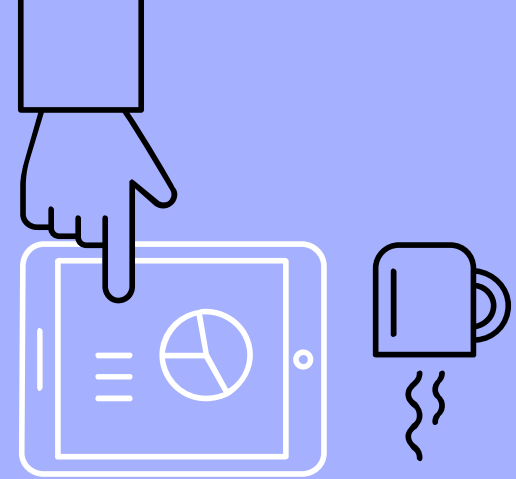
- ▶ While indexing is used with other data types to access values, a dictionary uses keys. Keys can be used either inside square brackets `[]` or with the `get()` method.
- ▶ If we use the square brackets `[]`, `KeyError` is raised in case a key is not found in the dictionary. On the other hand, the `get()` method returns `None` if the key is not found.



Changing and Adding elements

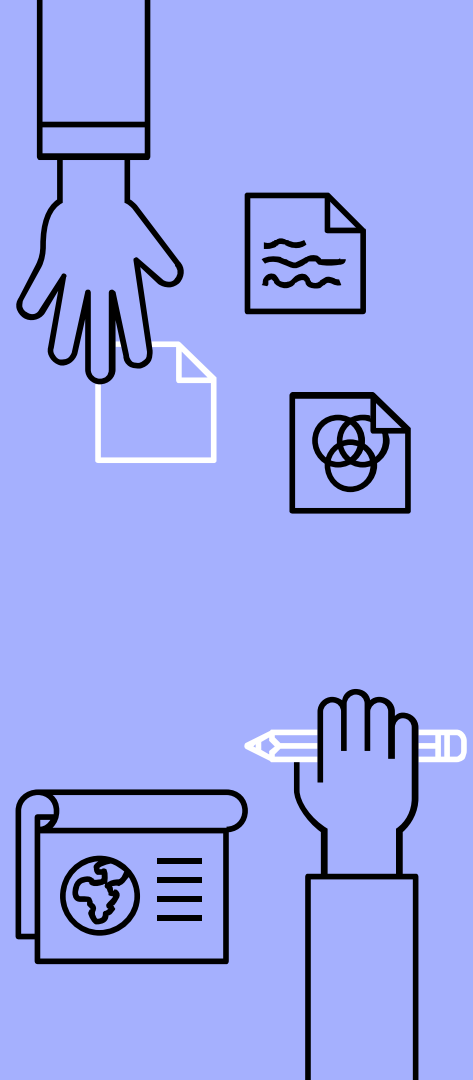
Dictionaries are mutable. We can add new items or change the value of existing items using an assignment operator.

If the key is already present, then the existing value gets updated. In case the key is not present, a new (key: value) pair is added to the dictionary.



Removing elements from Dictionary

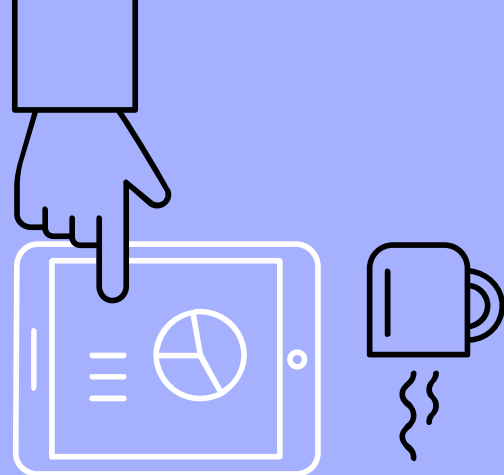
- ▶ We can remove a particular item in a dictionary by using the `pop()` method. This method removes an item with the provided key and returns the value.
- ▶ The `popitem()` method can be used to remove and return an arbitrary (key, value) item pair from the dictionary. All the items can be removed at once, using the `clear()` method.
- ▶ We can also use the `del` keyword to remove individual items or the entire dictionary itself.



Dictionary Methods

Dictionaries are mutable. We can add new items or change the value of existing items using an assignment operator.

If the key is already present, then the existing value gets updated. In case the key is not present, a new (key: value) pair is added to the dictionary.



THANKS!

Any questions?

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