Dictionaries in Python

Dictionary in Python, aka $std::map$ in C++.

Key and Value

dictionary = {"cat": "chat", "dog": "chien", "horse": "cheval"}

phone\_numbers = {'boss': 5551234567, 'Suzy': 22657854310}

empty\_dictionary = {}

print(dictionary) # {'cat': 'chat', 'dog': 'chien', 'horse': 'cheval'}

print(phone\_numbers) # {'boss': 5551234567, 'Suzy': 22657854310}

print(empty\_dictionary) # {}

print(dictionary['cat']) # chat

Dictionaries in Python are not sorted.

dictionary = {"dog": "chien", "cat": "chat", "horse": "cheval"}

print(dictionary) # {'dog': 'chien', 'cat': 'chat', 'horse': 'cheval'}

How to get them sorted by the keys?

dictionary = {"dog": "chien", "cat": "chat", "horse": "cheval"}

for key in dictionary.keys():

    print(key, "->", dictionary[key])

# dog -> chien

# cat -> chat

# horse -> cheval

for key in sorted(dictionary.keys()):

    print(key, "->", dictionary[key])

# cat -> chat

# dog -> chien

# horse -> cheval

Iterating the items() gives you both the Key and the Value

dictionary = {"cat": "chat", "dog": "chien", "horse": "cheval"}

for english, french in dictionary.items():

    print(english, "->", french)

# cat -> chat

# dog -> chien

# horse -> cheval

Iterating the values() gives only the Value

dictionary = {"cat": "chat", "dog": "chien", "horse": "cheval"}

for french in dictionary.values():

    print(french)

# chat

# chien

# cheval

Modifying a value by its Key

dictionary = {"cat": "chat", "dog": "chien", "horse": "cheval"}

dictionary['cat'] = 'minou'

print(dictionary) # {'cat': 'minou', 'dog': 'chien', 'horse': 'cheval'}

Adding a new key

dictionary = {"cat": "chat", "dog": "chien", "horse": "cheval"}

dictionary['swan'] = 'cygne'

print(dictionary) # {'cat': 'chat', 'dog': 'chien', 'horse': 'cheval', 'swan': 'cygne'}

Deleting an element by its key

dictionary = {"cat": "chat", "dog": "chien", "horse": "cheval"}

del dictionary['dog']

print(dictionary) # {'cat': 'chat', 'horse': 'cheval'}

Popping the last element out of the dictionary (before Python 3.6.7, this pops a random element)

dictionary = {"cat": "chat", "dog": "chien", "horse": "cheval"}

dictionary.popitem()

print(dictionary) # {'cat': 'chat', 'dog': 'chien'}

In and not in

pol\_eng\_dictionary = {

    "zamek": "castle",

    "woda": "water",

    "gleba": "soil"

}

if "zamek" in pol\_eng\_dictionary:

    print("Yes") # triggered

else:

    print("No")

Copying a dictionary

from copy import copy

pol\_eng\_dictionary = {

    "zamek": "castle",

    "woda": "water",

    "gleba": "soil"

    }

copy\_dictionary = pol\_eng\_dictionary.copy()

print(copy\_dictionary) # {'zamek': 'castle', 'woda': 'water', 'gleba': 'soil'}