DICTIONARY IN PYTHON

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Introduction to dictionary

Dictionary is a collection of {key: value} pair

The key in a key value pair act as a unique identifier and the value can be any python object.

Dictionary allow us to store and retrieve values based on their keys providing away to map and organize data efficiently.

* Syntax dict\_name = {key1: value 1, key2: value 2,...}

let see how to create a dictionary

Data={'Name':'Yola', 'Age':18, 'University':'Buk'}

print(Data)

Output:{'Name': 'Yola', 'Age': 18, 'University': 'Buk'}

Characteristics of dictionary

* Cannot have two items with the same key: this means that duplicate are not allowed in dictionary.

E.g Data = {'Name':'Yola', 'Age':17, 'Age':18}

print(Data)

Output: {'Name':'Yola', 'Age':18}

Note:the key value pair which come later will always be available in the dictionary.

* Dictionary are mutable: you can change value of key or add elements

Data= {'Name':'Yola', 'Age':18}

Data['Name']= 'Zainab'

print(Data)

Output: {'Name':'Zainab', 'Age':18}

Length of a dictionary

Can be determine using the len() function.

Gives the count of key value pairs of a dictionary.

Data = {'Name':'Yola', 'Age':18, 'University':'Buk'}

print(len(Data))

Output:3

The dict() constructor

It provides Alternative way to create a dictionary

Data=dict(Name = 'Yola', Age = 18, University = 'Buk')

print(Data)

Output={'Name':'Yola', 'Age':18, 'University':'Buk'}

Note:here keys are not wrapped within single or double quotes also in place of columns we have equal sign.

Loop Dictionaries

A common task is to iterate over all the key:value pair in a dictionary

Way to iterate over all the key: value pairs in s dictionary is to use . key() or .items() method, this will give both the key and the value in each step of iteration.

A straight forward way to do this is to loop over all the keys, then get the value for each key.

Example of .keys() method

Data={'Name':'Yola', 'Age':18, 'University':'Buk'}

for key in Data.keys():

value=Data[key]

print(key, '=', value)

Output: Name = Yola

Age = 18

University = Buk

Example of.items()

Data={'Name':'Yola', 'Age':18, 'University':'Buk'}

for key, value in Data.items():

print(key, '=', value)

Output:

Name = Yola

Age = 18

University = Buk