Dictionaries

Dictionaries

- A collection of unordered items that are accessed via keys and not via their position.

- They consist of (key, value) pairs such that each possible key appears at most once.

	Family_Name	First_name	age
Keys →			
Values →	Duchest	Ross	25

Dictionaries

Creation

```
dico = {
    "f_name": "Duchest",
    "l_name": "Ross",
    "age": 25
}
```

Dictionaries

Creation

```
dico = dict(f_name="Duchest", l_name="Ross", age=25)
```

Dictionaries

Length

```
print(len(dico))
```

Dictionaries

Accessing an item

```
item = dico["f_name"]
```

Dictionaries

Accessing an item

```
item = dico.get("f_name")
```

Dictionaries

Updating an item

```
dico["f_name"] = "Duchesttttt"
```

Dictionaries

Looping through a dictionary

```
for x in dico:
    print(x)
```

Prints out the keys !

Dictionaries

Looping through a dictionary

```
for x in dico:
    print(dico[x])
```

Prints out the values !

Dictionaries

Looping through a dictionary

```
for x in dico.values():
    print(x)
```

Dictionaries

Looping through a dictionary

```
for key, value in dico.items():
    print(key, value)
```

Dictionaries

Checking the existence of a key

```
if "f_name" in dico:
    print("It exists !!!")
else:
    print("It does not T.T")
```

Dictionaries

Adding items

```
dico["city"] = "Cergy"
```

Dictionaries

Removing items

```
dico.pop("city")
```

Using key names

Dictionaries

Removing items

```
dico.popitem()
```

Removing the last added item

Dictionaries

Deleting a dictionary

```
del dico
```

Dictionaries

Deleting a dictionary

```
del dico
```

Dictionaries

Emptying a dictionary

```
dico.clear()
```

Dictionaries

Copying a dictionary

```
dico_copy = dico.copy()
```

Dictionaries

Nested dictionary

A dictionary can contain other dictionaries

```
group = {
    "person1":
        {
            "f_name": "Duchest",
            "l_name": "Ross",
            "age": 25
        },
    "person2":
        {
            "f_name": "Danu",
            "l_name": "Dany",
            "age": 27
        },
}
```

Dictionaries

Exercise

Write a python program that asks a user to input a number and prints out each digit writing as a string.

Example:

Input : 12

Output : One Two

Dictionaries

Exercise

Given the following two lists, convert them into a dictionary.

Inputs: keys= [‘ten’, ‘Twenty’, ‘Thirty’]

values= [10, 20, 30]

Output: {‘ten’: 10, ‘Twenty’: 20, ‘Thirty’: 30}

Dictionaries

Exercise

Given dictionary create two lists, one containing the keys and the other containing the values.

Input: {‘ten’: 10, ‘Twenty’: 20, ‘Thirty’: 30}

Outputs : keys= [‘ten’, ‘Twenty’, ‘Thirty’]

values= [10, 20, 30]

Dictionaries

Exercise

Write a python program that merges two dictionaries.