

# DICTIONARY

## 1. What is a dictionary in Python ?

A dictionary is a set of key-value pairs referenced by a single name

## 2. How to create a dictionary ?

The syntax to create a dictionary is as follows:

```
dictionaryName = {"keyOne": "valueOne", "keyTwo",  
"valueTwo"}
```

Example: Consider the following dictionary that stores the colour of fruits with key as the fruit name as value as its color.

```
colorOfFruits = {"apple": "red", "mango":  
"yellow", "orange": "orange"}
```

## 3. How to retrieve values from a dictionary ?

Values are retrieved from a dictionary by specifying the key associated to that value.

Syntax: `dictionaryName["key"]`

Example: To retrieve the color of mango, type the following line of code

```
colorOfFruits["mango"]
```

This will return 'yellow'

## 4. How to update a value associated to a dictionary key ?

A value can be reassigned by making use of the key corresponding to that value.

Syntax: `dictionaryName["key"] = "New Value"`

Example: `colorOfFruits["apple"] = "green"`

Our dictionary now becomes {'orange': 'orange', 'mango': 'yellow', 'apple': 'green'}

## 5. What are some of the operations of a dictionary ?

### 1. List all keys

`keys()` is used to list all the keys in a dictionary.

Syntax: `dictionaryName.keys()`

Example: `colorOfFruits.keys()` returns  
`['orange', 'mango', 'apple']`

### 2. List all values

`values()` is used to list all the values in a dictionary

Syntax: `dictionaryName.values()`

Example: `colorOfFruits.values()` returns  
`['orange', 'yellow', 'green']`

### 3. Delete a key-value pair

`del keyword` is used to delete a key-value pair from a dictionary

Syntax: `del dictionaryName["key"]`

Example: `del colorOfFruits["apple"]`. Our dictionary now returns `{'orange': 'orange', 'mango': 'yellow'}`

### 4. Copy a dictionary into another

`copy()` is used to copy the contents of one dictionary to another

Syntax: `dictionaryTwo = dictionaryOne.copy()`

Example: `copyOfColorOfFruits = colorOfFruits.copy()`  
`copyOfColorOfFruits` will now return `{'orange': 'orange', 'mango': 'yellow'}`

### 5. Clear a dictionary

`clear()` is used to clear the contents of a dictionary and make it empty

Example: `colorOfFruits.clear()`

`colorOfFruits` now returns `{}`, which is an empty dictionary