Dictionary Functions

This notebook demonstrates the dictionary functions that we will cover in this course. These are functions we have already seen in the context of lists. They are:

1. max(dict) - returns the key with the maximum key literal
2. min(dict) - returns the key with the minimum key literal
3. sorted(dict) - returns the keys of the dictionary in a sorted order
4. len(dict)

where dict is the name of a dictionary object.
Note that all of the above are functions on the keys of the `key:value` pairs of the Dictionary structure

The `max()` function returns the key with the max value. Note that all the keys in the dictionary must be of the same type, otherwise the use of the `max()` function will return an error.

In [1]:

```
dict1 = {'Name': 'Zara', 'Age': 7, 'Class': 'First', 'Gender':'Female'}
print(dict1)
print('max key is: ', max(dict1))
```

```
{'Name': 'Zara', 'Age': 7, 'Class': 'First', 'Gender': 'Female'}
max key is:  Name
```

In [2]:

```
dict1 = {'Name': 'Zara', 'Age': 7, 'Class': 'First', 'Type':[5,8,9]}
print(dict1)
print('max key is: ', max(dict1))
```

```
{'Name': 'Zara', 'Age': 7, 'Class': 'First', 'Type': [5, 8, 9]}
max key is:  Type
```

The `min()` function returns the key with the min value. Note that all the keys in the dictionary must be of the same type, otherwise the use of the `min()` function will return an error.

In [3]:

```
dict1 = {'Name': 'Zara', 'Age': 7, 'Class': 'First', 'Type':[5,8,9]}
print(dict1)
print('min key is: ', min(dict1))
```

```
{'Name': 'Zara', 'Age': 7, 'Class': 'First', 'Type': [5, 8, 9]}
min key is:  Age
```

In [4]:

```
dict1 = {'Name': 'Zara', 'Class': 'First', 'Gender':'Female'}
print(dict1)
print('min key is: ', min(dict1))
```

```
{'Name': 'Zara', 'Class': 'First', 'Gender': 'Female'}
min key is:  Class
```

The `sorted()` function returns the keys of the dictionary in a sorted order.

In [5]:

```
dict1 = {'Name': 'Zara', 'Age': 7, 'Class': 'First', 'Type':[5,8,9], 'Gender':'Female'}
print(dict1)
print('sorted keys: ', sorted(dict1))
```

```
{'Name': 'Zara', 'Age': 7, 'Class': 'First', 'Type': [5, 8, 9], 'Gender': 'Female'}
sorted keys:  ['Age', 'Class', 'Gender', 'Name', 'Type']
```

The `len()` function returns the number of key:value pairs in the dictionary.

In [6]:

```
dict1 = {'a':5, 'b':8, 'c':10}
print('length of dict: ', len(dict1))
```

```
length of dict:  3
```