Dictionaries

- Uses key value pairs instead of index
- Similar to associative array (PHP), hash maps (Java) of other languages
- Mutable data structure => can change its values
- Uses “{“ and “}” to define its being and end

Dictionary

```
>>> a_d = {1:'January', 2:'February', 3:'March'}
>>> a_d
{1: 'January', 2: 'February', 3: 'March'}
>>> type(a_d)
<type 'dict'>
>>> a = [1,2,3,4,5,6,7]
>>> dict(a)

Traceback (most recent call last):
  File "<pyshell#525>", line 1, in <module>
    dict(a)
TypeError: cannot convert dictionary update sequence element #0 to a
sequence
>>> a = [[1,2],[3,4],[5,6]]
>>> dict(a)
{1: 2, 3: 4, 5: 6}
```

Dictionary – accessing elements

```
>>> a_d = {'name': 'Aditya', 'email' : 'sp.aditya@gmail.com'}
>>> len(a_d)
2
>>> a_d['name']
'Aditya'
>>> keystr = 'name'
>>> a_d[keystr]
'Aditya'
>>> a_d[keystr]="Aditya Prabhakara"
>>> a_d
{'name': 'Aditya Prabhakara', 'email': 'sp.aditya@gmail.com'}
>>> a_d['city'] = "Bangalore"
>>> a_d
{'city': 'Bangalore', 'name': 'Aditya Prabhakara', 'email':
'sp.aditya@gmail.com'}
```

Dictionary – combine dictionaries

```
>>> a_d = {'name': 'Aditya Prabhakara', 'email': 'sp.aditya@gmail.com'}
>>> update_d = {'name' : 'Aditya S P', 'city' : 'Bangalore'}
>>> a_d.update(update_d)
>>> a_d
{'city': 'Bangalore', 'name': 'Aditya S P', 'email':
'sp.aditya@gmail.com'}
```

Dictionary – Working with keys

```
>>> a_d
{'city': 'Bangalore', 'name': 'Aditya S P', 'email':
'sp.aditya@gmail.com'}
>>> 'city' in a_d
True
>>> a_d.keys()
['city', 'name', 'email']
>>> a_d.values()
['Bangalore', 'Aditya S P', 'sp.aditya@gmail.com']
```