Dictionaries

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(Modified from Ethan Campbell and Katy Christensen's materials for UW's Ocean 215)

Python dictionaries

A dictionary is a collection of items, each with a key/value pair.

```
my_dict = { 'Name' : 'Katy', 'Email' : 'katyc4@uw.edu',
            'Office' : 'OSB331A' }

                { Key : Value }
```

To call a dictionary item, use its key!

```
print(my_dict['Name'])          'Katy'
```

Python dictionaries

```
1 hockey_teams = { 'Pennsylvania' : 'Flyers', 'Arizona' : 'Coyotes', 'Colorado' : 'Avalanche'}
2
3 print(hockey_teams)
```

```
{'Pennsylvania': 'Flyers', 'Arizona': 'Coyotes', 'Colorado': 'Avalanche'}
```

Get the keys and values from a dictionary...

```
1 print(hockey_teams.keys())
2 print(hockey_teams.values())
3
```

```
dict_keys(['Pennsylvania', 'Arizona', 'Colorado'])
dict_values(['Flyers', 'Coyotes', 'Avalanche'])
```

Python dictionaries

```
1 hockey_teams = { 'Pennsylvania' : 'Flyers', 'Arizona' : 'Coyotes', 'Colorado' : 'Avalanche'}
2
3 print(hockey_teams)
```

```
{'Pennsylvania': 'Flyers', 'Arizona': 'Coyotes', 'Colorado': 'Avalanche'}
```

Replace values using the key name.

```
1 hockey_teams['Pennsylvania'] = 'Penguins'
2
3 print(hockey_teams)
```

```
{'Pennsylvania': 'Penguins', 'Arizona': 'Coyotes', 'Colorado': 'Avalanche'}
```

Python dictionaries

```
1 hockey_teams = { 'Pennsylvania' : 'Flyers', 'Arizona' : 'Coyotes', 'Colorado' : 'Avalanche'}
2
3 print(hockey_teams)
```

{'Pennsylvania': 'Flyers', 'Arizona': 'Coyotes', 'Colorado': 'Avalanche'}

Replace values using the key name.

```
1 hockey_teams['Pennsylvania'] = 'Penguins'
2
3 print(hockey_teams)
```

{'Pennsylvania': 'Penguins', 'Arizona': 'Coyotes', 'Colorado': 'Avalanche'}

Create new keys/values by using square brackets to append them.

```
1 hockey_teams['Washington'] = 'Kraken'
2
3 print(hockey_teams)
```

{'Pennsylvania': 'Penguins', 'Arizona': 'Coyotes', 'Colorado': 'Avalanche', 'Washington': 'Kraken'}

Python dictionaries

```
1 hockey_teams = { 'Pennsylvania' : 'Flyers', 'Arizona' : 'Coyotes', 'Colorado' : 'Avalanche'}
2
3 print(hockey_teams)
```

```
{'Pennsylvania': 'Flyers', 'Arizona': 'Coyotes', 'Colorado': 'Avalanche'}
```

Remove keys (and their values) using pop( ).

```
1 third_place = hockey_teams.pop('Pennsylvania')
2
3 print('Third place:', third_place)
4
5 print('Remaining teams:', hockey_teams)
```

```
Third place: Flyers
Remaining teams: {'Arizona': 'Coyotes', 'Colorado': 'Avalanche'}
```

Or del

```
1 del hockey_teams['Pennsylvania']
2
3 print(hockey_teams)
```

```
{'Arizona': 'Coyotes', 'Colorado': 'Avalanche'}
```