Dictionaries

PIERIAN DATA

Complete Python 3 Bootcamp

- Dictionaries are unordered mappings for storing objects. Previously we saw how lists store objects in an ordered sequence, dictionaries use a key-value pairing instead.
- This key-value pair allows users to quickly grab objects without needing to know an index location.

Complete Python 3 Bootcamp

- Dictionaries use curly braces and colons to signify the keys and their associated values.

{'key1':'value1','key2':'value2'}

- So when to choose a list and when to choose a dictionary?

Complete Python 3 Bootcamp

- **Dictionaries:** Objects retrieved by key name.

Unordered and can not be sorted.

- **Lists:** Objects retrieved by location.

Ordered Sequence can be indexed or sliced.

Trusted | Python 3

File Edit View Insert Cell Kernel Widgets Help

```
In [1]: my_dict = {'key1':'value1','key2':'value2'}

In [2]: my_dict
Out[2]: {'key1': 'value1', 'key2': 'value2'}

In [ ]:
```

Trusted | Python 3

File Edit View Insert Cell Kernel Widgets Help

In [3]:
```
my_dict['key1']
```

Out[3]: 'value1'

In [4]:
```
prices_lookup = {'apple':2.99,'oranges':1.99,'milk':5.80}
```

In [ ]:
```
price
```

Trusted | Python 3

File Edit View Insert Cell Kernel Widgets Help

Out[3]: 'value1'

In [4]:
```
prices_lookup = {'apple':2.99,'oranges':1.99,'milk':5.80}
```

In [5]:
```
prices_lookup['apple']
```

Out[5]: 2.99

In [ ]:

Trusted | Python 3

File Edit View Insert Cell Kernel Widgets Help

Out[5]: 2.99

In [6]:
```
d = {'k1':123,'k2':[0,1,2],'k3':{'insideKey':100}}
```

In [7]:
```
d['k2']
```

Out[7]: [0, 1, 2]

In [ ]:

Trusted | Python 3

File Edit View Insert Cell Kernel Widgets Help

In [4]:
```
prices_lookup = { 'apple' :2.99, 'oranges' :1.99, 'milk' :5.80}
```

In [5]:
```
prices_lookup['apple']
```

Out[5]: 2.99

In [6]:
```
d = {'k1':123,'k2':[0,1,2],'k3':{'insideKey':100}}
```

In [7]:
```
d['k2']
```

Out[7]: [0, 1, 2]

In [9]:
```
d['k3']['insideKey']
```

Out[9]: 100

Trusted | Python 3

File Edit View Insert Cell Kernel Widgets Help

Out[9]: 100

In [11]:
```
d = {'key1':['a','b','c']}
```

In [12]:
```
d
```

Out[12]: {'key1': ['a', 'b', 'c']}

In [ ]:

Trusted | Python 3

File Edit View Insert Cell Kernel Widgets Help

Out[12]: {'key1': ['a', 'b', 'c']}

In [13]:
```
mylist = d['key1']
```

In [14]:
```
mylist
```

Out[14]: ['a', 'b', 'c']

In [ ]:
```
letter = mylist[2]
```

Trusted | Python 3

File Edit View Insert Cell Kernel Widgets Help

In [16]:
```
letter
```

Out[16]: 'c'

In [17]:
```
letter.upper()
```

Out[17]: 'C'

In [ ]:

Trusted | Python 3

File Edit View Insert Cell Kernel Widgets Help

In [18]:
```
d
```

Out[18]:
```
{'key1': ['a', 'b', 'c']}
```

In [21]:
```
d['key1'][2].upper()
```

Out[21]:
```
'C'
```

In [ ]:

Trusted | Python 3

File Edit View Insert Cell Kernel Widgets Help

Out[21]: 'C'

In [22]:
```
d = {'k1':100,'k2':200}
```

In [24]:
```
d
```

Out[24]: {'k1': 100, 'k2': 200}

In [ ]:
```
d['k3'] = 300
```

Trusted | Python 3

File Edit View Insert Cell Kernel Widgets Help

Out[24]: {'k1': 100, 'k2': 200}

In [25]:
```
d['k3'] = 300
```

In [26]:
```
d
```

Out[26]: {'k1': 100, 'k2': 200, 'k3': 300}

In [ ]:

Trusted | Python 3

File Edit View Insert Cell Kernel Widgets Help

```
Out[26]: {'k1': 100, 'k2': 200, 'k3': 300}

In [27]: d['k1'] = 'NEW VALUE'

In [28]: d
Out[28]: {'k1': 'NEW VALUE', 'k2': 200, 'k3': 300}

In [ ]:
```

Trusted | Python 3

File Edit View Insert Cell Kernel Widgets Help

```
Out[28]: {'k1': 'NEW VALUE', 'k2': 200, 'k3': 300}

In [29]: d = {'k1': 100, 'k2': 200, 'k3': 300}

In [30]: d.keys()

Out[30]: dict_keys(['k1', 'k2', 'k3'])

In [ ]: d.values()
```

Trusted | Python 3

File Edit View Insert Cell Kernel Widgets Help

```
In [31]: d.values()
Out[31]: dict_values([100, 200, 300])

In [32]: d.items()
Out[32]: dict_items([('k1', 100), ('k2', 200), ('k3', 300)])

In [ ]:
```