

1. What does an empty dictionary's code look like?

`emptydict = {}`

2. What is the value of a dictionary value with the key 'foo' and the value 42?

`{'foo':42}`

3. What is the most significant distinction between a dictionary and a list?

**In Dictionary we can store data in key & value format, but in list we can store data directly.**

4. What happens if you try to access spam['foo'] if spam is {'bar': 100}?

**We get a `KeyError`.**

```
In [ ]: 1 spam = {"bar":100}
```

```
In [17]: 1 spam["foo"]
```

```
-----  
KeyError                                Traceback (most recent call last)  
<ipython-input-17-eb1d0efbede1> in <module>  
----> 1 spam["foo"]  
  
KeyError: 'foo'
```

5. If a dictionary is stored in spam, what is the difference between the expressions 'cat' in spam and 'cat' in spam.keys()?

**'cat' in spam gives the value of cat stored in dictionary.**

**spam.keys() gives the keys of the spam dictionary.**

6. If a dictionary is stored in spam, what is the difference between the expressions 'cat' in spam and 'cat' in spam.values()?

**'cat' in spam gives the value of cat stored in dictionary.**

**spam.values() gives the values of the spam dictionary.**

```
In [10]: 1 spam = {'cat':5}
```

```
In [11]: 1 spam['cat']
```

```
Out[11]: 5
```

```
In [12]: 1 spam.keys()
```

```
Out[12]: dict_keys(['cat'])
```

```
In [13]: 1 spam.values()
```

```
Out[13]: dict_values([5])
```

7. What is a shortcut for the following code?

if 'color' not in spam:

spam['color'] = 'black'

**spam.setdefault('color', 'black')**

```
In [6]: 1 spam.setdefault('color', 'black')
```

```
Out[6]: 'black'
```

```
In [7]: 1 spam
```

```
Out[7]: {'cat': 5, 'color': 'black'}
```

8. How do you "pretty print" dictionary values using which module and function?

**By importing pprint module with the function pprint.pprint()**

```
In [10]: 1 import pprint
```

```
In [12]: 1 pprint.pprint(spam)
{'cat': 5, 'color': 'black'}
```

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