

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

Solution-

```
In [90]: a={}
```

```
In [91]: type(a)
```

```
Out[91]: dict
```

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

```
In [92]: a={'foo':'value'}
```

```
In [93]: a
```

```
Out[93]: {'foo': 'value'}
```

```
In [94]: a['foo']
```

```
Out[94]: 'value'
```

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

Solution-

A list is an ordered sequence of objects, whereas dictionaries are unordered sets. However, the main difference is that **items in dictionaries are accessed via keys and not via their position.**

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

```
In [95]: spam = {'bar': 100}

In [96]: spam
Out[96]: {'bar': 100}

In [97]: spam['foo']

KeyError Traceback (most recent call last)
/var/folders/4h/wey16h_52vddskz6x3xj296w0000gp/T/ipykernel_10426/3999281786.py 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()?

```
In [98]: spam= {'cat':100}

In [99]: 'cat' in spam
Out[99]: True

In [100]: 'cat' in spam.keys()
Out[100]: True
```

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

```
In [98]: spam= {'cat':100}

In [99]: 'cat' in spam
Out[99]: True

In [101]: 'cat' in spam.values()
Out[101]: False
```

7. What is a shortcut for the following code?

```
if 'color' not in spam:
```

```
    spam['color'] = 'black'
```

```
In [109]: spam
```

```
Out[109]: {'cat': 100}
```

```
In [110]: spam.setdefault('color', 'black')
```

```
Out[110]: 'black'
```

```
In [111]: spam
```

```
Out[111]: {'cat': 100, 'color': 'black'}
```

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

```
In [111]: spam
```

```
Out[111]: {'cat': 100, 'color': 'black'}
```

```
In [112]: import pprint
```

```
In [113]: pprint.pprint(spam)
```

```
{'cat': 100, 'color': 'black'}
```