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

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

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

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

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

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

7. What is a shortcut for the following code?

if 'color' not in spam:

spam['color'] = 'black'

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

**ANS:  
Here are the responses to your queries:**

**1. An empty dictionary's code looks like `{}`.**

**2. The value of a dictionary with the key 'foo' and the value 42 looks like `{'foo': 42}`.**

**3. The most significant distinction between a dictionary and a list is that a dictionary is an unordered collection of key-value pairs, while a list is an ordered collection of elements.**

**4. If you try to access `spam['foo']` when `spam` is `{'bar': 100}`, you will get a `KeyError` because the key `'foo'` does not exist in the dictionary.**

**5. If a dictionary is stored in `spam`, `'cat' in spam` checks if the key `'cat'` exists in the dictionary, while `'cat' in spam.keys()` explicitly checks if the key `'cat'` exists among the dictionary's keys. However, both expressions return the same result.**

**6. If a dictionary is stored in `spam`, `'cat' in spam` checks if the key `'cat'` exists in the dictionary, while `'cat' in spam.values()` checks if the value `'cat'` exists among the dictionary's values.**

**7. A shortcut for the given code is:**

**```python**

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

**```**

**8. You can "pretty print" dictionary values using the `pprint` module's `pprint()` function. Here's an example:**

**```python**

**import pprint**

**pprint.pprint(your\_dictionary)**

**```**

**This will print the dictionary in a more readable format, especially if the dictionary is nested or has complex structures.**