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?

Answers :

1. **An empty dictionary's code looks like {}. It consists of curly braces with no key-value pairs inside.**
2. **The value of a dictionary value with the key 'foo' and the value 42 would be 42.**
3. **The most significant distinction between a dictionary and a list is their structure and purpose. A dictionary is an unordered collection of key-value pairs, where each key is unique and associated with a value. On the other hand, a list is an ordered collection of items, accessed by their position or index.**
4. **If you try to access spam['foo'] and spam is {'bar': 100}, it will raise a KeyError. This is because the key 'foo' does not exist in the dictionary spam.**
5. **If a dictionary is stored in spam, the expression 'cat' in spam checks if the key 'cat' exists in the dictionary spam. It will return True if the key is present and False otherwise.**

**On the other hand, the expression 'cat' in spam.keys() checks if the value 'cat' exists as a key in the dictionary spam. It has the same effect as 'cat' in spam.**

1. **If a dictionary is stored in spam, the expression 'cat' in spam checks if the key 'cat' exists in the dictionary spam. It will return True if the key is present and False otherwise.**

**The expression 'cat' in spam.values() checks if the value 'cat' exists as a value in the dictionary spam. It will return True if the value is found and False otherwise.**

1. **A shortcut for the code:**

**if 'color' not in spam:**

**spam['color'] = 'black'**

**is to use the setdefault() method of dictionaries:**

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

**This method checks if the key 'color' exists in the dictionary spam. If it doesn't, it adds the key-value pair 'color': 'black' to the dictionary. If the key already exists, it returns the existing value.**

1. **To "pretty print" dictionary values, you can use the pprint module and its pprint() function. This function displays dictionary values in a well-formatted and readable manner. You need to import the pprint module and then use the pprint() function, passing the dictionary as an argument. For example:**

**import pprint**

**my\_dict = {'key1': 'value1', 'key2': 'value2'}**

**pprint.pprint(my\_dict)**