1. What does an empty dictionary's code look like?  
**Answer:** my\_dict = {}

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

**Answer:** 42

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

**Answer:**

The most significant distinction between a dictionary and a list is how they store and retrieve data.

In a list, data is stored and retrieved by its position, or index, within the list. Each item in a list has a unique index that represents its position in the list. You can access an item in a list using its index, like this.

In contrast, a dictionary stores data as key-value pairs. Each key in a dictionary is associated with a value, and you can use the key to retrieve the corresponding value. You can add or modify items in a dictionary by specifying the key and its corresponding value, like this

In summary, the main difference between a dictionary and a list is that a list stores data by position, while a dictionary stores data as key-value pairs.

4. What happens if you try to access spam['foo'] if spam is {'bar': 100}?  
**Answer:** If you try to access spam['foo'] when spam is {'bar': 100}, a KeyError will be raised.

5. If a dictionary is stored in spam, what is the difference between the expressions 'cat' in spam and 'cat' in spam.keys()?  
**Answer:** There is no functional difference between the expressions 'cat' in spam and 'cat' in spam.keys() when spam is a dictionary.

6. If a dictionary is stored in spam, what is the difference between the expressions 'cat' in spam and 'cat' in spam.values()?  
**Answer:** The expression 'cat' in spam checks if the string 'cat' is a key in the dictionary stored in the variable spam. If 'cat' is a key in the dictionary, then the expression evaluates to True. Otherwise, it evaluates to False.

7. What is a shortcut for the following code?

if 'color' not in spam:

spam['color'] = 'black'  
**Answer:** The setdefault() method can be used as a shortcut for the given code. The setdefault() method returns the value of a key in a dictionary if it exists, otherwise it sets the key to a default value and returns that value.

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

**Answer:** To "pretty print" dictionary values, you can use the pprint module in Python. The pprint module provides a pprint() function that formats the dictionary in a more human-readable way, making it easier to read and understand.