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?

{'foo': 42}

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

Dictionary: Uses key-value pairs to store data, where each value is associated with a unique key. The keys are used to access the corresponding values, and they can be of various data types, such as strings, integers, or tuples.

List: Stores elements in a linear order and allows access to elements using numeric indices. Lists are ordered and can contain duplicate values.

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

you will get a KeyError. This is because the key 'foo' does not exist in the dictionary spam

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

If a dictionary is stored in spam, the expression 'cat' in spam checks whether the string 'cat' is a key in the dictionary. It returns True if the key 'cat' exists in the dictionary, otherwise False.

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

If a dictionary is stored in spam, the expression 'cat' in spam.values() checks whether the string 'cat' is a value in the dictionary. It returns True if the value 'cat' exists in any of the dictionary's values, otherwise False.

7. What is a shortcut for the following code?

if 'color' not in spam:

spam['color'] = 'black'

use setdefault() method

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

You can "pretty print" dictionary values using the pprint module's pprint() function. The pprint() function prints the dictionary in a formatted and more readable way, especially when dealing with nested or complex dictionaries.