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

An empty dictionary's code would be {}.

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

The value of a dictionary value with the key 'foo' and the value 42 would be 42. In the dictionary, it would look like {'foo': 42}.

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

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

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

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, what is the difference between the expressions 'cat' in spam and 'cat' in spam.keys()?

If a dictionary is stored in spam, 'cat' in spam checks if the string 'cat' is a key in the dictionary, while 'cat' in spam.keys() explicitly checks if 'cat' is a key in the dictionary by using the keys() method.

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, 'cat' in spam checks if the string 'cat' is a key in the dictionary, while 'cat' in spam.values() checks if 'cat' is a value in the dictionary.

7.What is a shortcut for the following code?

if 'color' not in spam:

spam['color'] = 'black'

A shortcut for this code is spam.setdefault('color', 'black'), which sets the value of the key 'color' to 'black' if it does not already exist in the dictionary.

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

You can "pretty print" dictionary values using the pprint module and the pprint() function. To use it, you would import the pprint module (import pprint), and then call the pprint() function, passing in the dictionary you want to pretty print as an argument. This function prints the dictionary in a nicely formatted way with each key-value pair on its own line, making it easier to read.