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

empty\_dict = {}

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

my\_dict = {'foo': 42}

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

The main 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. In a list, elements are accessed by their position (index), while in a dictionary, values are accessed by their associated keys

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 spam.

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

Both expressions check if the key 'cat' is in the dictionary spam. The difference is that 'cat' in spam checks directly in the keys of the dictionary, whereas 'cat' in spam.keys() explicitly checks the keys of the dictionary. They will produce the same result.

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

'cat' in spam checks if 'cat' is a key in the dictionary spam, whereas 'cat' in spam.values() checks if 'cat' is a value in the dictionary spam. The former checks for the presence of 'cat' as a key, and the latter checks for 'cat' as a value.

7. What is a shortcut for the following code?

if 'color' not in spam:

spam['color'] = 'black'

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

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

import pprint

my\_dict = {'name': 'John', 'age': 30, 'city': 'New York'}

pprint.pprint(my\_dict)