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

my\_dict = {}

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

my\_dict = {'foo': 42}

value = my\_dict['foo']

print(value)

The output of this code will be: 42

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

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 elements that can be of any data type.

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

If I try to access spam['foo'] and spam is {'bar': 100} in Python, I will encounter a KeyError. This error occurs because the key 'foo' does not exist in the dictionary spam.

1. **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 the variable spam, the expression 'cat' in spam checks whether the key 'cat' exists in the dictionary spam. It returns True if the key is present and False otherwise.

On the other hand, the expression 'cat' in spam.keys() checks whether the key 'cat' exists in the list of keys of the dictionary spam. It returns the same result as 'cat' in spam. In other words, it also returns True if the key is present and False otherwise.

Therefore, there is no practical difference between the expressions 'cat' in spam and 'cat' in spam.keys() when you are checking for the existence of a key in a dictionary. Both expressions yield the same result.

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

In Python, if a dictionary is stored in the variable spam, the expression 'cat' in spam checks if the string 'cat' is a key in the dictionary spam. On the other hand, the expression 'cat' in spam.values() checks if the string 'cat' is a value in the dictionary spam.

1. **What is a shortcut for the following code?**

if 'color' not in spam:

In Python, the expression 'color' not in spam is used to check if the string 'color' is not present as a key in the dictionary spam.

spam['color'] = 'black'

In Python, the code spam['color'] = 'black' is used to assign the value 'black' to the key 'color' in the dictionary spam.

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