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

An empty dictionary in Python is defined using curly braces {} with nothing inside.

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

my\_dict is a dictionary where the key 'foo' maps to the value 42.

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

The most significant distinction between a dictionary and a list in Python lies in how they store and access data

**Ordered**: Lists maintain the order of items, meaning each element has a specific index.

**Access by Index**: You access elements using their index.

**Mutable**: Lists can be modified (add, remove, change elements).

**Syntax**: Defined using square brackets [].

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

If you try to access spam['foo'] when spam is defined as {'bar': 100}, you will encounter a KeyError because the key 'foo' does not exist in the dictionary.

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

When spam is a dictionary, the expressions 'cat' in spam and 'cat' in spam.keys() are equivalent in terms of their outcome, but there's a subtle difference in how they operate

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

When spam is a dictionary, the expressions 'cat' in spam and 'cat' inspam.values()` serve different purposes and perform distinct checks

7. What is a shortcut for the following code?

if 'color' not in spam:

spam['color'] = 'black'

The setdefault() method checks if the key 'color' exists in the dictionary. If it does not, it adds the key with the value 'black'. If the key does exist, it leaves the existing value unchanged.

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

To "pretty print" dictionary values in Python, you can use the pprint module and its pprint function. This module provides a capability to produce more readable representations of data structures, such as dictionaries, especially when they are complex or nested.