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

Ans: An empty dictionary in Python is represented using curly braces {} with no key-value pairs inside.

empty\_dict = {}

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

Ans: 42

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

Ans: The key distinction between dictionaries and lists is how they organize and access data. Lists are ordered and accessed by position (index), while dictionaries are unordered and accessed by keys. The choice between them depends on the specific requirements of your data and how you plan to access and manipulate it.

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

Ans: The KeyError is raised because Python cannot find the key 'foo' 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()?

Ans: Both expressions ultimately give you the same result in terms of whether the key 'cat' exists in the dictionary spam. However, using 'cat' in spam is generally more concise and is considered more Pythonic, as it directly checks the dictionary for the presence of the key without creating an intermediate view of keys.

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

Ans: The choice between these expressions depends on whether you want to check for the presence of a key ('cat' in spam) or the presence of a value ('cat' in spam.values()) in the dictionary.

7. What is a shortcut for the following code?

if 'color' not in spam:

spam['color'] = 'black'

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

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

Ans: To "pretty print" (format for better readability) dictionary values in Python, you can use the pprint module from the pprint library, which stands for "pretty-print." Specifically, you can use the pprint() function from this module.

pprint.pprint(my\_dict)

The pprint.pprint() function formats the dictionary in a visually appealing and indented way, making it easier to read, especially for dictionaries with nested structures. It's particularly useful for printing complex data structures like dictionaries and lists in a more human-readable format.