

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

An empty dictionary is represented by {}. Example:

```
empty_dict = {}
```

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

The dictionary would look like this: {'foo': 42}. The value associated with the key 'foo' is 42.

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

- A list is an ordered collection of elements accessed by their index.
- A dictionary is an unordered collection of key-value pairs, where values are accessed by their keys instead of by position.

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

Attempting to access spam['foo'] will raise 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()?

- 'cat' in spam: Checks if 'cat' is a key in the dictionary.
- 'cat' in spam.keys(): Does the same thing, as spam.keys() returns a view object of the dictionary's keys.

Both are functionally equivalent, but 'cat' in spam is more commonly used for simplicity.

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.

- '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'
```

The shortcut is:

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

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

To "pretty print" a dictionary, you can use the pprint module and its pprint function. Example:

```
import pprint
```

```
my_dict = {'name': 'Alice', 'age': 30, 'hobbies': ['reading', 'hiking']}
```

```
pprint.pprint(my_dict)
```