Python Basic- Assignment- 05

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

Answer:

An empty dictionary is declared using curly brackets {}. For Example:

my_dict = {}

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

Answer:

The value of a dictionary value with the key 'foo' and the value 42 is 42.

#Input:

```
my_dict = {"foo":42}
my_dict["foo"]
```

#Output:

```
42
```

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

Answer:

The most significant distinction between a dictionary and a list is that dictionaries are unordered and use key-value pairs, while lists are ordered and contain only values.

Dictionaries are optimized for retrieving values when a key is known, while lists are optimized for searching for a value when the index is known.

Dictionaries are used to store data that can be referenced using a key, while lists are used for storing data that can be referenced using an index.

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

Answer:

If we try to access a key in a dictionary that doesn't exist, then Python will return a KeyError exception. In this case, if we try to access spam['foo'], a KeyError exception will be raised because there is no key 'foo' in the dictionary {'bar': 100}.

(1)

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

Answer:

The expression 'cat' in spam checks if the key 'cat' is present in the dictionary, whereas 'cat' in spam.keys() checks if the value 'cat' is present in the list of keys of the dictionary.

The expression 'cat' in spam checks if the key 'cat' is present in the dictionary spam. If 'cat' is present as a key, the expression returns True, else False.

#Input:

```
spam  ={"cat":"white"}
'cat' in spam
```

#Output:

```
True
```

On the other hand, the expression 'cat' in spam.keys() checks if the key 'cat' is present in the keys of the dictionary spam. If 'cat' is present as a key, the expression returns True, else False.

#Input:

```
spam  ={"cat":"white"}
'cat' in spam.keys()
```

#Output:

```
True
```

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

Answer:

The expression 'cat' in spam checks if the key 'cat' exists in the dictionary spam. If it does, it will return True.

#input:

```
spam  ={"cat":"white"}
'cat' in spam
```

#output:

```
True
```

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The expression 'cat' in spam.values() checks if the value 'cat' exists in the dictionary spam. If it does not exist in values then it will return False.

#input:

```
spam  ={"cat":"white"}
'cat' in spam.values()
```

#Output:

```
False
```

7. What is a shortcut for the following code?

if 'color' not in spam:

spam['color'] = 'black'

Answer:

The shortcut for this code would be:

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

This code uses the setdefault() method to set the value of the 'color' key in the spam dictionary to 'black' if the 'color' key does not already exist in the dictionary. This is a shorthand way of writing the if statement and assignment in one line.

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

The module for pretty printing is 'pprint' and the function is pprint(). The pprint() function is used to print dictionaries in an easy-to-read format. For example:

#input:

```
import pprint

my_dict = {'name': 'John', 'age': 25, 'job': 'Developer'}

pprint.pprint(my_dict)
```

#Output:

```
{'age': 25, 'job': 'Developer', 'name': 'John'}
```

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