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

An empty dictionary looks like "{}".

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

In [ ]:
```
1 {"foo":42}  # 'foo' is the key and 42 is value of the dictionary
```

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

Distinction between a dictionary and a list is given as follows:

1. In Lists data is stored in square brackets '[]' while in dictionary data is stored in curve brackets '{}'.
2. List is an ordered collection of elements and Dictionary is unordered collection of elements.
3. In a list, you access elements by their index position. On the other hand, dictionaries do not use index-based access.
4. Lists allow duplicate elements but in Dictionary duplicate keys are not allowed.

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

In [1]:
```
1 spam = {'bar':100}
2 spam['foo']  # there is no key such as 'foo' in given dictionary thatswhy
```

```
---------------------------------------------------------------------------
KeyError                                  Traceback (most recent call last)
Cell In[1], line 2
      1 spam = {'bar':100}
----> 2 spam['foo']

KeyError: 'foo'
```

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

In [14]:
```
spam = {'cat':'tom'}
'cat' in spam
'cat' in spam.keys()
# There is no difference between both the expressions as both of them will
```

Out[14]: True

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

In [15]:
```
spam={"cat":"tom"}
"cat" in spam
# In this case it will look for "cat" in all the keys of spam.
```

Out[15]: True

In [16]:
```
spam={"animal":"cat"}
"cat" in spam.values()
# In this case it will look for "cat" in all the keys of spam.
```

Out[16]: True

7. What is a shortcut for the following code? if 'color' not in spam: spam['color'] = 'black'

In [24]:
```
# A shortcut for the given code is to use the dict.setdefault() method.
spam = {'cat':'tom'}
spam.setdefault('color','black')
spam # It will check whether spam has key named "color" if not found, it w
```

Out[24]: {'cat': 'tom', 'color': 'black'}

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

In [34]:
```
import pprint

spam = [ {'Name': 'pradnesh', 'Age': '23', 'Country': 'India'},
  {'Name': 'hritik', 'Age': '22', 'Country': 'India'},
  {'Name': 'laxman', 'Age': '24', 'Country': 'India'},
  {'Name': 'swapnil', 'Age': '23', 'Country': 'India'}]
pprint.pprint(spam)
```

```
[{'Age': '23', 'Country': 'India', 'Name': 'pradnesh'},
 {'Age': '22', 'Country': 'India', 'Name': 'hritik'},
 {'Age': '24', 'Country': 'India', 'Name': 'laxman'},
 {'Age': '23', 'Country': 'India', 'Name': 'swapnil'}]
```