1. An empty dictionary contains zero key-value pairs so empty dictionary is just an empty curly bracket {}.
2. {‘foo’:42}
3. The most significance difference between list and dictionary is that dictionary has key value pairs where we can access all elements of dictionary via keys whereas lists have no keys and we access elements using by default indexing 0 to n-1.
4. It gives a keyError bcoz there is no such key named foo in dictionary.
5. cat in spam means that cat is in the keys of dictionary spam and cat in spam.keys() also means spam is in the keys of the dictionary because .keys() lists out all the keys inside the dictionary, so both mean the same and give True and False if they are correct.
6. cat in spam means that cat is in the keys of dictionary spam and cat in spam.values() means cat is in the values of dictionary.
7. spam.setdefault('color', 'black').
8. We can pretty print dictionary in a more readable format using pprint() and json.dumps(), it prints dictionary in a more presentable and readable format and in both these modules, dictionaries are passed.