**FSDS MAY BATCH 2022(Python Basics 5)**

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Q1. What does an empty dictionary’s code look like?

Ans: An empty dictionary in Python can be represented as follows:

**empty\_dict = {}**

In other programming languages, the syntax for creating an empty dictionary may be different, but the concept is the same.

Q2. What is the value of a dictionary value with the key ‘foo’ and the value 42?

Ans: The value of a dictionary with key 'foo' and value 42 would be 42.

Q3. What is the most significant distinction between a dictionary and a list?

Ans: The most significant distinction between a dictionary and a list is that a list uses an ordered index to access its elements, while a dictionary uses a key to access values. In a list, elements are ordered and have an index number assigned to them, starting from 0. In a dictionary, values are stored as key-value pairs and the key, not index, is used to access the corresponding value.

Q4. What happens if you try to access spam[‘foo’] if spam is {‘bar’: 100}?

Ans: If the dictionary stored in the variable 'spam' is defined as **{'bar': 100}**, then trying to access **spam['foo']** will raise a **KeyError** exception, as the key 'foo' is not present in the dictionary. The error message will look like this:

**KeyError: 'foo'**

Q5. If a dictionary is stored in spam, what is the difference between the expressions ‘cat’ in spam and ‘cat’ in spam.keys()?

Ans: The expression 'cat' in spam checks if the string 'cat' is a key in the dictionary stored in the variable 'spam', and returns a Boolean value (True if 'cat' is a key in the dictionary, False otherwise).

On the other hand, 'cat' in spam.keys() returns the same Boolean value, but it explicitly checks if 'cat' is in the list of keys returned by the .keys() method of the dictionary stored in 'spam'.

In other words, they both serve the same purpose, but the latter is more explicit and easier to understand.

Q6. If a dictionary is stored in spam, what is the difference between the expressions ‘cat’ in spam and ‘cat’ in spam.values()?

Ans: The expression 'cat' in spam checks if the string 'cat' is a key in the dictionary stored in the variable 'spam', and returns a Boolean value (True if 'cat' is a key in the dictionary, False otherwise).

On the other hand, 'cat' in spam.values() checks if the string 'cat' is one of the values in the dictionary stored in the variable 'spam', and returns a Boolean value (True if 'cat' is a value in the dictionary, False otherwise).

So, the difference between the two expressions is that the first checks for the presence of a key in the dictionary, while the second checks for the presence of a value in the dictionary.

Q7. What is a shortcut for the following code?

if ‘color’ not in spam:

spam[‘color’] = ‘black’

Ans: The code can be shortened to:

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

Q8. How do you ‘pretty print’ dictionary values using which module and function?

Ans: The "pretty print" of dictionary values in Python can be achieved using the **pprint** module and its **pprint** function.

For example:

**import pprint**

**data = {'name': 'John', 'age': 28, 'city': 'New York'}**

**pp = pprint.PrettyPrinter(indent=4)**

**pp.pprint(data)**