Panganiban, John Paolo D.

CS3C

1. Creation: Dictionaries in Python are mutable data structures that store key-value pairs. You can create a new dictionary by using curly braces {} or the dict() constructor.

2. Accessing: In a dictionary, you access items using their keys. Keys are unique within a dictionary and can be of any immutable data type (strings, numbers, tuples).

3. Changing values: You can change the value associated with a specific key by accessing the key and assigning a new value to it. This operation modifies the existing key-value pair.

4. Looping: Python provides various ways to iterate through the items in a dictionary. You can loop through the keys, values, or items (key-value pairs) using loops like for.

5. Checking key existence: To check if a specific key exists in a dictionary, you can use the in keyword. This allows you to determine whether a dictionary contains a particular key before attempting to access its value.

6. Dictionary length: The number of items (key-value pairs) in a dictionary can be obtained using the len() function, providing a quick way to determine its size or length.

7. Adding items: To add a new item to a dictionary, you simply assign a value to a new key. If the key already exists, its value will be overwritten with the new one; otherwise, a new key-value pair will be created.

8. Removing items: Python dictionaries provide several methods to remove items. You can use pop() to remove an item by key, popitem() to remove the last inserted item, or the del statement to remove an item by key.

9. Constructor: Besides using braces {} or the dict() function, you can create dictionaries using the dict() constructor by passing iterable objects like lists of tuples.

10. Methods: Dictionaries in Python come with built-in methods that provide various functionalities such as adding or updating items, clearing the dictionary, copying dictionaries, retrieving keys, values, or items, etc. These methods enhance the flexibility and utility of dictionaries in Python programming.