I2PP4DA

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Quiz Time

List

Lists

In Python, lists are ordered collections of items that allow for easy use of a set of data.

List values are placed in between square brackets `[]`, separated by commas. It is good practice to put a space between the comma and the next value. The values in a list do not need to be unique (the same value can be repeated).

Empty lists do not contain any values within the square brackets.

```python
primes = [2, 3, 5, 7, 11]
print(primes)

empty_list = []
```

List

List Method `.append()`

In Python, you can add values to the end of a list using the `.append()` method. This will place the object passed in as a new element at the very end of the list. Printing the list afterwards will visually show the appended value. This `.append()` method is *not* to be confused with returning an entirely new list with the passed object.

```python
orders = ['daisies', 'periwinkle']
orders.append('tulips')
print(orders)
# Result: ['daisies', 'periwinkle', 'tulips']
```

List

List Indices

Python list elements are ordered by *index*, a number referring to their placement in the list. List indices start at 0 and increment by one.

To access a list element by index, square bracket notation is used: `list[index]` .

Determining List Length with `len()`

The Python `len()` function can be used to determine the number of items found in the list it accepts as an argument.

Dictionary

Syntax of the Python dictionary

The syntax for a Python dictionary begins with
the left curly brace ({), ends with the right curly
brace (}), and contains zero or more key : value
items separated by commas (,). The key is
separated from the value by a colon (:).

```
roaster = {"q1": "Ashley", "q2": "Dolly"}
```

Dictionary

Dictionary Key-Value Methods

When trying to look at the information in a Python dictionary, there are multiple methods that return objects that contain the dictionary keys and values.

- `.keys()` returns the keys through a `dict_keys` object.
- `.values()` returns the values through a `dict_values` object.
- `.items()` returns both the keys and values through a `dict_items` object.

get() Method for Dictionary

Python provides a `.get()` method to access a `dictionary` value if it exists. This method takes the `key` as the first argument and an optional default value as the second argument, and it returns the value for the specified `key` if `key` is in the dictionary. If the second argument is not specified and `key` is not found then `None` is returned.

Function

Function Parameters

Sometimes functions require input to provide data for their code. This input is defined using *parameters*.

Parameters are variables that are defined in the function definition. They are assigned the values which were passed as arguments when the function was called, elsewhere in the code.

For example, the function definition defines parameters for a character, a setting, and a skill, which are used as inputs to write the first sentence of a book.

```python
def write_a_book(character, setting, special_skill):
    print(character + " is in " +
        setting + " practicing her " +
        special_skill)
```

Tutorial

Tutorial

Tutorial

Tutorial

Any Questions?
Thanks for coming to the tutor session!