

I2PP4DA

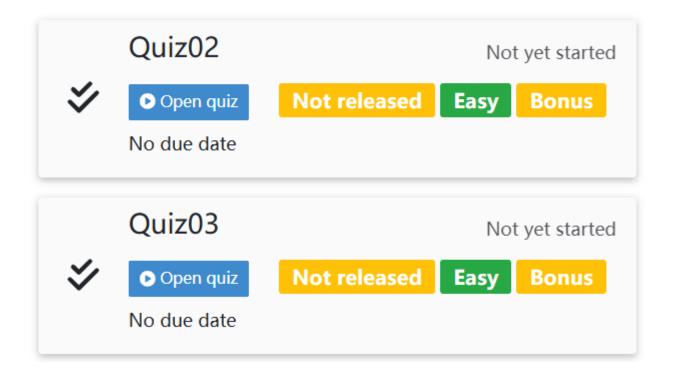
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Outline

- List
- Tuple
- Dictionary
- Function
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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.

```
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.

```
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 Ien() 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.

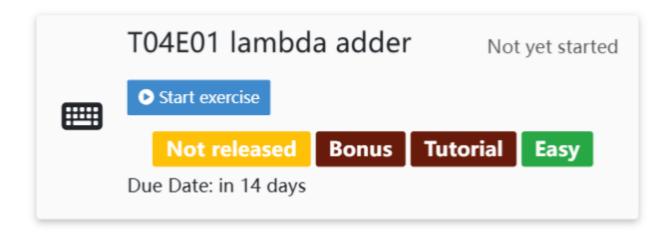
Parameters are variables that are defined in the function definition. They are assigned the values which were passed as arguments when the function was called, elsewhere in the code.

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.

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











Any Questions? Thanks for coming to the tutor session!