Quiz 09

Due Apr 1 at 10pm **Points** 10 **Questions** 6 **Time Limit** None

Instructions

Answer the following questions in your own words. Do NOT simply cut and paste the information from the slides. You will receive a score of 0 if you copy the prose from the slides.

Attempt History

	Attempt	Time	Score
LATEST	Attempt 1	84 minutes	10 out of 10

Score for this quiz: **10** out of 10
Submitted Apr 1 at 7:57pm
This attempt took 84 minutes.

Question 1 — 2 / 2 pts

You are responsible for measuring the performance of a critical Python production application. Specifically, you need to collect and log the date and time that each of three critical functions in the application is called. Your team has a logging module that will store the data, but how can you use decorators to cause the logging to occur without changing the implementation of the existing functions?

NOTE: You should **not** write the code for the decorator, just describe how decorators can be used to help to solve this problem.

Your Answer:

First, we can define the decorator by (@functionname), @log_it the use of this function is that it determines the current date and the time and then calls the logging module to log the function call. We can update the code by writing.

@log_it

def func1()

    pass

@log_it

def func2()

    pass

@log_it

def func3()

    pass

Define a decorator, @log_it, that determines the current date and time and then calls the logging module to log the function call. Update the source to wrap the functions:

```
@log_it
def func1():
    pass

@log_it
def func2():
    pass

@log_it
def func3():
    pass
```

Question 2

2 / 2 pts

Compare and contrast static methods and non-static methods in Python classes.

Your Answer:

The main difference between a static and a non static class is that a static class doesn't include 'self' as a parameter because the method applies to

a class definition rather than one specific instance of a class.

Whereas, on the contrary non-static methods have a 'self' parameter because the method is associated with a specific instance.

Non-static methods always include 'self' as the first parameter in the method. 'self' is used to access and/or modify the specific instance of the class.

Static methods don't include a 'self' parameter because the method applies to the class definition rather than a specific instance of the class.

Question 3

2 / 2 pts

Compare and contrast ***instance*** attributes and ***class*** attributes in Python classes.

Your Answer:

Instance attributes can be referred to as the replica of every instance in a class. Every instance has a distinct role in a class.

Whereas, a class is common across all the instances of a class and a single instance can be shared across every other instance of the class.

Each instance of a class C includes a copy of every instance attribute so changing the instance attribute in one instance of the class does not impact the value in any other instance of the class.

Class attributes are shared across all instances of the class so changing the class attribute in any one instance changes all of them.

Question 4

2 / 2 pts

Describe Duck Typing in Python. How does Python know to apply '+' appropriately with different types? E.g.

```
x = 1 + 2

y = "hello " + "world"
```

Your Answer:

Duck typing is a dynamic typing method that allows objects of different types to respond to the same methods. Duck typing is used to check the presence of the given method. Python decide on the appropriate class method based on the type of object at run time.

Python uses Duck Typing to support polymorphism without inheritance. Python checks the types of both the left and right operand to see if both are the same type and applies the magic method if that type defines the major method associated with the operand, e.g. '+' maps to '__add__'.

Question 5

2 / 2 pts

Describe the naming conventions used by Pythonistas to support public, protected, and private attributes and methods in Python code

Your Answer:

name (no _) tells the reader that name is public
_name (single _) tells the reader that _name is protected
__name (double _) tells the reader that __name is private and shouldn't be used

name (no _) tells the reader that name is public

_name (single _) tells the reader that _name is protected

__name (double _) tells the reader that __name is private and shouldn't be used

Question 6

0 / 0 pts

"I pledge on my honor that I have not given or received any unauthorized assistance on this assignment/examination. I further pledge that I have not copied any material from a book, article, the Internet or any other source except where I have expressly cited the source."

Correct!

- (•) True
- ( ) False

Quiz Score: **10** out of 10