Quiz 09

Due Dec 13 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	12 minutes	0 out of 10 *

* Some questions not yet graded

Score for this quiz: **0** out of 10 *
Submitted Dec 13 at 2:16pm
This attempt took 12 minutes.

Question 1

Not yet graded / 2 pts

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

Your Answer:

Instance attribute belongs to only one object whereas the class attribute belongs to the class rather than a particular object.

The class attribute is shared across all instances 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 2

Not yet graded / 2 pts

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

Your Answer:

Non-static methods belong to an object of that class and we need to create an instance of the class to create it. They contain self parameter

Static methods do not have a self parameter. They are bound to class and not to object of that class.

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

Not yet graded / 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:

We can create a decorator @logtime around the function to get the current date and calls the logging module to log the function call

@logtime

def log():

@logtime

def signup():

@logtime

def createuser():

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 4

Not yet graded / 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:

You do not need to tell python what exactly needs to be done when the operation could yield different results for different data types.

Example: 1+2 will yield 3

"1"+"2" will yield "12"

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

Not yet graded / 2 pts

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

Your Answer:

public - var1(x_) is public
protected- _var1(_x) is protected
private-__var1(__x) is private

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: **0** out of 10