Assignment 11 Solutions

Q1. What is the concept of a metaclass?

Ans: Metaclass in Python is a class of a class that defines how a class behaves. A class is itself a instance of Metaclass, and any Instance of Class in Python is an Instance of type metaclass. E.g. Type of of `int`, `str`, `float`, `list`, `tuple` and many more is of metaclass type.

Q2. What is the best way to declare a class's metaclass?

Ans: A way to declare a class' metaclass is by using **`metaclass`** keyword in class definition.

In [1]:

```
class meta(type):
    pass
class class_meta(metaclass=meta):
    pass
print(type(meta))
print(type(class_meta))
```

```
<class 'type'>
<class '__main__.meta'>
```

Q3. How do class decorators overlap with metaclasses for handling classes ?

Ans: Anything you can do with a class decorator, you can of course do with a custom metaclasses (just apply the functionality of the "decorator function", i.e., the one that takes a class object and modifies it, in the course of the metaclass's **`__new__`** or **`__init__`** that make the class object!).

Q4. How do class decorators overlap with metaclasses for handling instances?

Ans: Anything you can do with a class decorator, you can of course do with a custom metaclass (just apply the functionality of the "decorator function", i.e., the one that takes a class object and modifies it, in the course of the metaclass's **`__new__`** or **`__init__`** that make the class object!).