Python Advance Assignment-2

Q1. What is the relationship between classes and modules?
Ans:- The difference between a class and a module in python is that a class is used to define a blueprint for a given object, whereas a module is used to reuse a given piece of code inside another program.

Q2. How do you make instances and classes?

Ans- This would create first object of Employee class"
emp1 = Employee("Zara", 2000)

Class creation
```
class ClassName:
   'Optional class documentation string'
   class_suite
```

Q3. Where and how should be class attributes created?
Ans- Every Python class keeps following built-in class attributes.

__dict__ − Dictionary containing the class's namespace.

__doc__ − Class documentation string or none, if undefined.

__name_ − Class name.

__module__ − Module name in which the class is defined. This attribute is "__main__" in interactive mode.

__bases__ − A possibly empty tuple containing the base classes, in the order of their occurrence in the base class list.

Q4. Where and how are instance attributes created?
Ans- An instance attribute is a Python variable belonging to one, and only one, object. This variable is only accessible in the scope of this object and it is defined inside the constructor function, __init__(self,..) of the class.

Q5. What does the term "self" in a Python class mean?
Ans-
self represents the instance of the class. By using the “self” keyword we can access the attributes and methods of the class in python. It binds the attributes with the given arguments.

Q6. How does a Python class handle operator overloading?

Ans- To perform operator overloading, Python provides some special function or magic function that is automatically invoked when it is associated with that particular operator. For example, when we use + operator, the magic method __add__ is automatically invoked in which the operation for + operator is defined.

Q7. When do you consider allowing operator overloading of your classes?
Ans- Operator Overloading mean**s giving extended meaning beyond their predefined operational meaning.** For example operator + is used to add two integers as well as join two strings and merge two lists. It is achievable because '+' operator is overloaded by int class and str class.

Q8. What is the most popular form of operator overloading?
Ans- A very popular and convenient example is the Addition (+) operator. It performs “Addition” on numbers whereas it performs “Concatenation” on strings.

Q9. What are the two most important concepts to grasp in order to comprehend Python OOP code?
Ans- Inheritance and creation of instance of class.