Prelab07

1. Class v.s. object
Class is the definition of an object, a class specifies member functions and member variables that belong to an object; object is an instance of a class which could have many instances.

2. Member variable v.s. regular variable
The objects' state is stored in member variables. Member variable is similar to a field.

3.Member function v.s. regular function
Member function belongs to an object, it will access the internal state of an object when all it.
Regular function does not belong to any objects.
Self is a reference to a specific instance, and required for any member function. Self is needed to differentiate between all of the potential objects. So that state for a particular object can then be modified or accessed through the self reference.

4. relationship that expressed by inheritance
Inheritance expresses the IS-A relationship. A derived object can inherit from one or more base objects

5. Purpose of the constructor
A constructor is a special member function that is called to instantiate a class. The constructor is responsible for initializing the state of an object

6. define constructor in python
__init__(self, ...) Only once

7.
```
def pointlist (self):
    plist = [Point2D(x+1, y+1) for x in range(10) for y in range(10)]
    return plist
```

8.
```
def __str__(self):
    return "({},{})".format(self.x, self.y)
```

9.
```
class MyPoint2D(Point2D):
    def __init__(self, x=0.0, y=0.0):
        Point2D.__init__(self, x, y)

    def get_max_coord(self):
        return max(self.x, self.y)

    def get_min_coord(self):
        return min(self.x, self.y)
```