New York University
School of Continuing and Professional Studies
Division of Programs in Information Technology

Advanced Python

Exercise Solutions, Session 4

Ex. 4.1 Create a class called **ThisClass** with the statement class **ThisClass(object):** and create one method inside the class with the statement **def report(self).**

```
class ThisClass(object):

    def report(self):
        print id(self)
```

Ex. 4.2 Create a class, **TimeStamp(object):** that can store the current timestamp in an instance attribute.

```
import datetime

class TimeStamp(object):

    def set_time(self):
        self.t = str(datetime.datetime.now())

    def get_time(self):
        return self.t
```

Ex. 4.3 Copy the above code, and this time replace the **set_time()** method with the constructor, **__init__(self)**.

```
import datetime

class TimeStamp(object):

    def __init__(self):
        self.t = str(datetime.datetime.now())

    def get_time(self):
        return self.t
```

[cont.]

Ex. 4.4 Create a class, Square, each of whose instances (i.e., each Square object) have an attribute which is an integer. Add methods to modify and report the integer value.

```
class Square(object):

    def __init__(self):
        self.val = 2

    def squareme(self):
        self.val = self.val ** 2

    def getme(self):
        return self.val
```

Ex. 4.5 Create a class, **MaxSizeList**, that allows for a list of a maximum size as configured in the constructor.

```
class MaxSizeList(object):
    def __init__(self, maxsize):
        self.maxsize = maxsize
        self.list = []

    def push(self, val):
        if len(self.list) == self.maxsize:
            self.list = self.list[1:]
        self.list.append(val)


    def get_list(self):
        return self.list
```