

EXERCISES:

DATA

ENCAPSULATION

- apply "name mangling" to class variables in *Circle* class

Solution:

```
import copy
class Circle():
    __pi = 3.14
    def __init__(self, radius = 3):
        self.__r = radius

    def __str__(self):
        return "Circle with radius {}".format(self.__r)

    def __copy__(self):
        return Circle(self.__r)

    def set_radius(self, r):          # mutator
        self.__r = r                # (setter)

    def get_radius(self):             # accessor
        return self.__r             # mutator
```

```
    def area(self):
        return Circle.pi * self.__r**2

small_circle = Circle()
print(small_circle)

small_circle.set_radius(5)
print(small_circle)

small_circle.__r = 10 # creates a new variable
print(small_circle)
```

