Problem 4

Based on object-oriented programming, design and implement each class for geometry objects on the next page.

1. **Implement and test the class on each object**
2. **Place those classes into a geometry module. Then write a program that prints a result for the chosen object depending on a user's values.**

In [4]:

```
from math import pi

class geometry_area:
    def rectangle(self, a, b):
        return a*b

    def circle(self, r):
        return r ** 2 * pi
    # and other methods..

class geometry_perimeter:
    def rectangle(self, a, b):
        return 2 * (a+b)
    def circle(self, r):
        return r * 2 * pi
    #and other methods..

class geometry_volume:
    def rectanglar_box(self, a, b, c):
        return a*b*c
    def sphere(self, r):
        return r ** 3 * 4/3 * pi

g_a = geometry_area()
g_p = geometry_perimeter()
g_v = geometry_volume()

print("3 * 4 rectangle area : %f" % g_a.rectangle(3,4))
print("3 circle perimeter : %f" % g_p.circle(3))
print("2,3,4 rectanglar volume : %f" % g_v.rectanglar_box(2,3,4))
```

```
3 * 4 rectangle area : 12.000000
3 circle perimeter : 18.849556
2,3,4 rectanglar volume : 24.000000
```