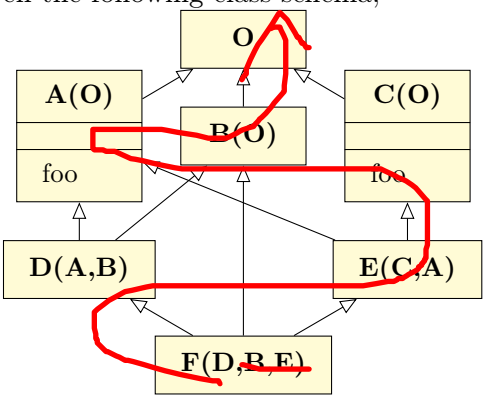
Tutorial
Object-Oriented Programming

Question 1.

Given the following class schema,



a) Apply method resolution order of Python 3 to find the class search path of each class in the above class schema? If there are errors in the class search path, please change the order of superclasses of some class to make all the class search path success.

b) If x contains an object of F, which will method foo be called by x.foo() using your successful class schema?

Question 2.

a) Rewrite class Rational (slide 19) using Python

b) Make sure that when creating a Rational object without any argument (Rational()), object Rational whose n is 0 and d is 1 is created.

c) Rewrite method + so that it can accepts parameter **that** in type **int**. Make sure that the new code calls recursively to the old code.

Question 3.

Redefine the example on Case class (slide 22) using Python

a) write method print for class **Number** to print the value of field **num** in **Number**.

b) make an object that represents the expression **(x + 0.2) * 3** and assign it to variable t.

c) write method eval that can evaluate an expression return a **Number** object. The operators which may be appeared in an expression are "+", "-", "*", "/". Assume that the value of all variables is 1. For example,
t.eval().print() ⇒ 3.6