

CISC181H Fall 2006 Lab10

- Write a program for each of the following problems. Be sure to save every separate program. All programs must be properly commented and indented (see Assignment Standards on the class website). Ask your TA for guidance.
- Expect versions of every lab question on the exam.
- Name each program lab10.n.c, where n is the number in the list below.

Programs

1. Overload addition, assignment, and put-to (;;) for the rational number example from class (but skip the name data member). Your system must be able to add rats to integers, integers to rats, and assign integers to rats. Have your constructors print messages. Run the following main, but first predict the number of constructors that will be called. What was the total number? In your main(), note with comments where each constructor is called.

```
int main() {  
  
    Rat a(3,2);  
    Rat b(5);  
    Rat c = a;  
    cout << c << endl;  
    c = a + b;  
    cout << c << endl;  
    Rat d = 6 + c;  
    cout << d << endl;  
    Rat e = 2;  
    cout << e << endl;  
  
    return 0;  
}
```

2. Read the interview with Scott Meyers at <http://www.artima.com/intv/meaningP.html>. According to Meyers, the existence of a non-virtual function asserts what?
- 3.

You should have a total of 3 programs. Make a single script file (see lab00 for the instructions) where you cat, compile, and run each one in its final form. Remove all object and executable files before scripting make.

Submit all 3 program files, makefiles, *and* your script on WebCT by midnight before your next lab. Give the paper version of the complete script file **only** on paper to your TA at the **beginning** of your next lab. Note: Cat, compile, and run each program in order - do *not* cat all programs, then compile, etc.