HW1: Operator Overloading

CSS 342 – Data Structures, Algorithms, and Discrete Mathematics I

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Summary

For this first assignment, you are expected to demonstrate the basics of OOP in a C++ context. It is intentionally made "open ended" for you to explore possibilities.

Skills Expected

- Basics of OOP (interfaces, object design, etc.)
- Working with C++
  - Pointers
  - Operator overloads

Assignment Description

This assignment focuses on operator overloading but is non-prescriptive as to implementation. In other words, it's up to you to design a class with which to demonstrate the required operator overloads.

Note: You will need a "Driver" class to demonstrate your code's operations. A "Driver" class is "a program that does nothing but test a method." In other words, you need a class with a main() that is used to test your created object and actions (e.g. operator overloads).

Object Design (6 points total)

Design an object with at least the following:

- [2 Points] At least one arithmetic operand (+ - / *)
- [2 Points] At least one compound operand (+= -= /= *=)
- [2 Points] At least one comparison operand (== !=)

Driver Object (5 points total)

Demonstrate that the following works (e.g. display results to the screen in a coherent way)

- [2 Points] Object creation/instantiation
- [2 Points] At least one arithmetic operand (independent of the compound operand)
- [2 Points] At least one compound operand
- [2 Points] At least one comparison operand
- [2 Points] Object destructor

Grading Criteria

- [2 Points] Program compiles and runs
- [6 Points] Object Design
- [10 Points] Driver Object
- [2 Points] Invariants enforced, comments in code