

**Written Assignment 1**  
**Concepts of Object-Oriented Programming**

Due September 21, 2004

This assignment is worth 20 homework assignment points. Your grade will be based upon clarity and brevity. Your answers should be based on class lecture, the reading, and on any other reliable sources available to you. Include citations to all works used, other than course materials.

Answer the following questions in a few sentences:

1. (2 pt) Describe one reason why encapsulation increases the maintainability of a system.
2. (3 pts) Using multiple inheritance can lead to unexpected results if a programmer is not knowledgeable about how multiple inheritance is managed in a particular programming environment. Describe an example of such a problem.
3. (3 pts) Programmers should always be aware that their program will be changed, either by themselves or someone else. Describe how inheritance supports programming for change.
4. (4 pts) There are two forms of polymorphism generally available in programming languages: overriding methods and overloading methods. Describe each and discuss the primary difference between them.

Short Essay

5. (8 pts) Search around the web for discussion about Java's lack of inclusion of multiple inheritance. Form your own opinion on the subject and write an argument for or against changing this feature of the language, making certain to back your arguments with facts and references where applicable. Your argument should not be longer than one page.