

[一]

(1)

True, Constructor 的名稱必須與 Class 相同，因此不繼承。

(2)

False, is-a 代表 inheritance 非 composition.

(3)

False, Student 並非與兩者並非 is-a 關係，如果是的話 Student 應該會有 Course 或是 Faculty 的 member data 如 total number 或 course name，但事實並非如此，因此錯誤。

(4)

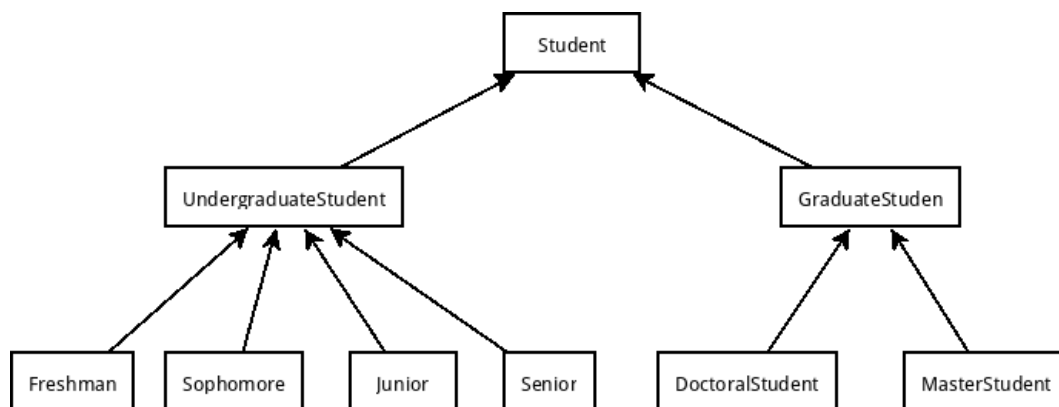
True, Private member 不論使用那種繼承方式，在 derived class 中皆為 hidden 狀態。

(5)

False, 錯在最後一個 "friends of the base class and its derived classes", 因為 Friendship is neither "inherited" nor transitive. 所以 Derived class 沒有存取權。

[二]

(1)



“Student” is the base class of other classes. In other word, all derived classes have “is-a” relation with Student class.

The classes derived from Student have the properties (data member) and methods (member function) of Student. For example, a student has properties such as student id and name; therefore, all derived classes including Freshman, Sophomore and DoctoralStudent have student id and name too.

The derived class can add some new properties and methods. For example, junior a new method, doProject().

Consequently, base class (class in upper layer) is “general”. The methods and properties will be held after inherited. And the derived class (class in lower layer) “customize” methods and properties inherited from the base class.