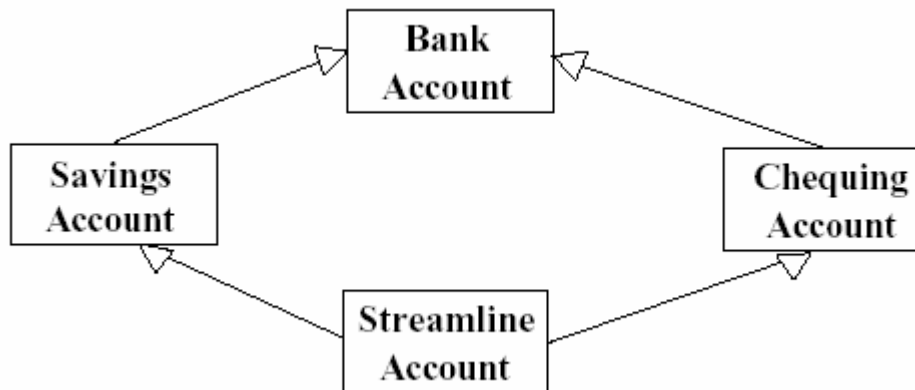# LAB # 15

2) Generalization

A "child" class is a special kind of its "parent" class. Sub typing means substitutability. Single or multiple inheritances is allowed.

Constraints:

Four constraints available:
1) complete
2) incomplete
3) disjoint (default semantics)
4) overlapping

Complete means
• every instance of parent must be an instance of one child class i.e. parent is abstract class (for simple case of single discriminator)
• no new child class anticipated

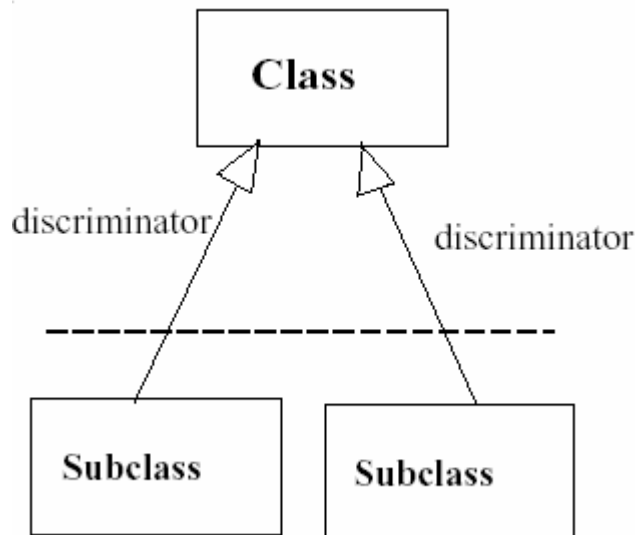### Incomplete is complement of Complete

Disjoint (default)
• No overlap between subtypes
• An object is an instance of one and only one subtype

Example of overlapping subtypes
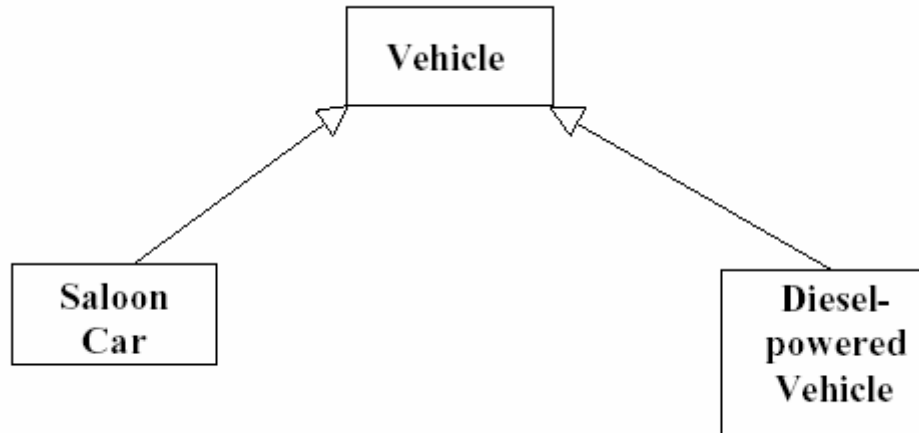
Discriminator:

Instead of overlapping, we could use an explicit discriminator. The total of all subclasses created by one discriminator is called a partition

Lab Work and Assignment:

Q 5.6
A: Three subclasses and their one super class. I also used discriminator.