

Lab sheet 3: Inheritance in a Social Network Application

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Upcasting and Downcasting

Assume we have 4 classes:

1. **Person**
2. **Teacher**
3. **Student**
4. **PhDStudent**

Teacher and **Student** are both subclasses of **Person**. **PhDStudent** is a subclass of **Student**.

1. Draw a class inheritance tree.

myInheritanceTree

(1 mark)

2. Which of the following assignments are legal, and why or why not?

a) **Person p1 = new Student();**

Explanation: _____

b) **PhDStudent phd1 = new Student();**

Explanation: _____

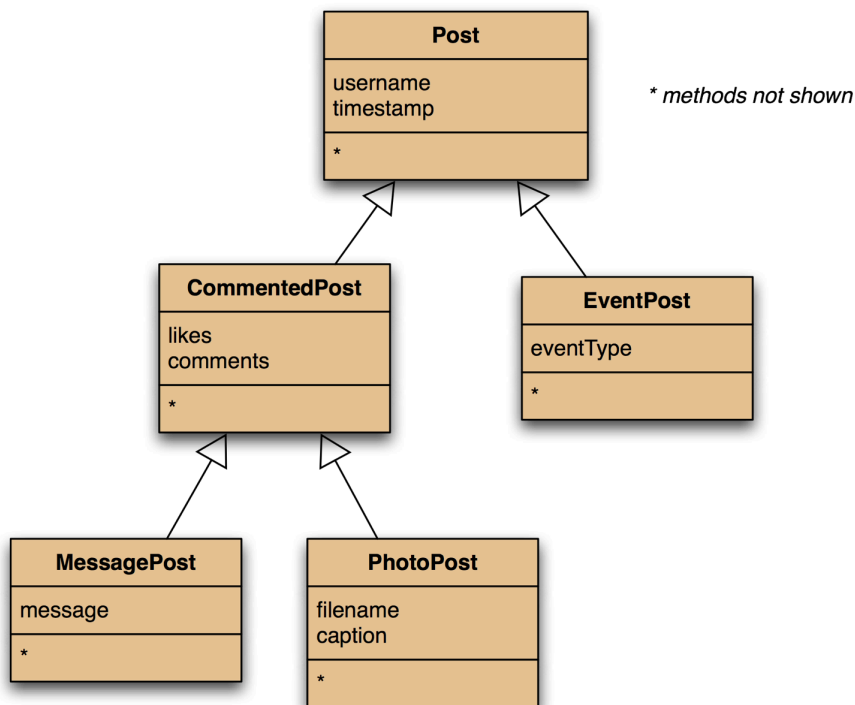
(1 mark)

Introducing Deeper Hierarchies

Use the code in **lab5.network3**.

Implement two new classes: **EventPost** and **CommentedPost**, and refactor the code to reflect the following inheritance hierarchy.

Think: which methods should go where?



(2 marks)