F27SB Software Development 2

Lab sheet 3: Networks

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

(1M)

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

    a) Person p1 = new Student();

Explanation: _____

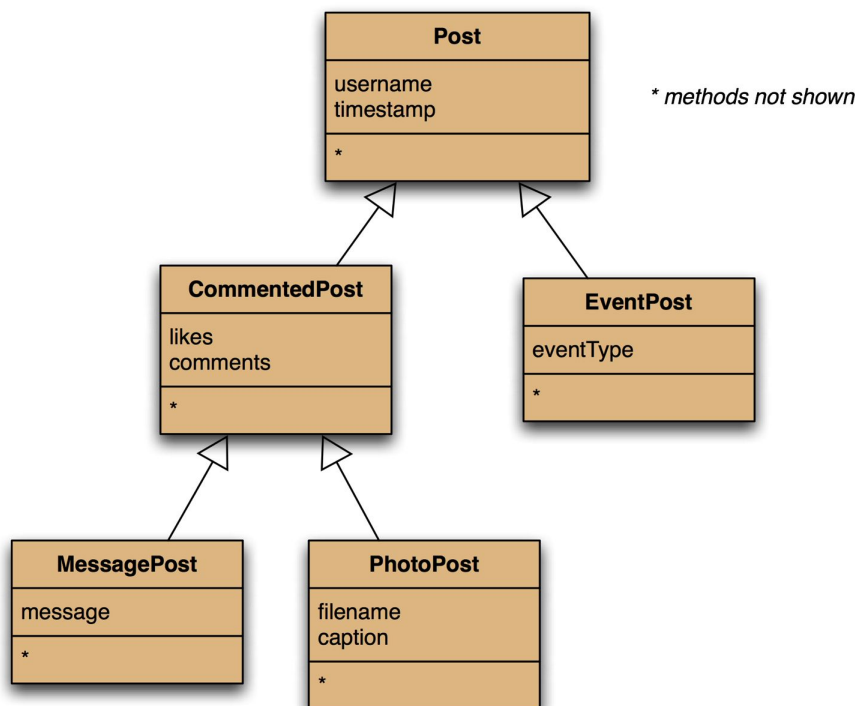   **b) PhDStudent phd1 = new Student();**

Explanation: _____

(1M)

Introducing Deeper Hierarchies

Using the source code provided, implement two new classes: **EventPost** and **CommentedPost,** and refactor the code to reflect the following inheritance hierarchy.
<u>Think:</u> which methods should go where?

(2M)