**03 - Inheritance and Polymorphism Questions**

**Resources**

[Video - lynda.com Object-Oriented Design](https://www.youtube.com/watch?v=oZcLmje8-fg)

1. Draw an inheritance diagram that shows the inheritance relationships between these

classes.

• Person

• Employee

• Student

• Instructor

• Classroom

• Object

2. In an object-oriented traffic simulation system, we have the classes listed below.

Draw an inheritance diagram that shows the relationships between these classes.

• Vehicle

• Car

• Truck

• Sedan

• Coupe

• PickupTruck

• Minivan

• Bicycle

• Motorcycle



3. Identify the superclass and subclass in each of the following pairs of classes.

a. Employee, Manager

**Superclass:** Employee

**Subclass:** manager

b. GraduateStudent, Student

**Superclass:** Student

**Subclass:** Graduate Studen

c. Person, Student

**Superclass:** Person

**Subclass:** Student

d. Employee, Professor

**Superclass:** Employee

**Subclass:** Professor

e. BankAccount, CheckingAccount

**Superclass:** BankAccount

**Subclass:** CheckingAccount

f. Vehicle, Car

**Superclass:** Vehicle

**Subclass:** Car

g. Vehicle, Minivan

**Superclass:** Vehicle

**Subclass:** Minivan

h. Car, Minivan

**Superclass:** Car

**Subclass:** Minivan

i. Truck, Vehicle

**Superclass:** Vehicle

**Subclass:** Truck