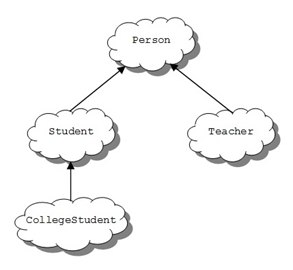
A HighSchool application has two classes: the Person superclass and the Student subclass. Using inheritance, in this lab you will create two new classes, Teacher and CollegeStudent. A Teacher will be like Person but will have additional properties such as *salary* (the amount the teacher earns) and *subject* (e.g. “Computer Science”, “Chemistry”,  “English”, “Other”). The CollegeStudent class will extend the Student class by adding a *year*(current level in college) nd *major* (e.g. “Electrical Engineering”, “Communications”, “Undeclared”).

The inheritance hierarchy would appear as follows:



1.         Add methods to “set” and “get” the instance variables in the Person class. These would consist of: getName, getAge, getGender, setName,  setAge, and setGender.

2.         Add methods to “set” and “get” the instance variables in the Student class. These would consist of: getIdNum, getGPA, setIdNum, and setGPA.

3.         Write a Teacher class that extends the parent class Person.

a.  Add instance variables to the class for *subject* (e.g. “Computer Science”, “Chemistry”,, “English”, “Other”) and*salary* (the teachers annual salary). *Subject* should be of type String and *salary* of type double. Choose appropriate names for the instance variables.

b.  Write a constructor for the Teacher class. The constructor will use five parameters to initialize myName, myAge, myGender, *subject*, and *salary*.  Use the super reference to use the constructor in the Person superclass to initialize the inherited values.

c.  Write “setter” and “getter” methods for all of the class variables. For the Teacher class they would be: getSubject, getSalary, setSubject, and setSalary.

d.  Write the toString() method for the Teacher class. Use a super reference to do the things already done by the superclass.

4.         Write a CollegeStudent subclass that extends the Student class.

a.   Add instance variables to the class for *major* (e.g. “Electrical Engineering”, “Communications”, “Undeclared”) and *year* (e.g. FROSH = 1,  SOPH = 2, …). *Major* should be of type String and *year* of type int. Choose appropriate names for the instance variables.

b.   Write a constructor for the CollegeStudent class. The constructor will use seven parameters to initialize myName, myAge, myGender,  myIdNum, myGPA, *year*, and *major*. Use the super reference to use the constructor in the Student superclass to initialize the inherited values.

c.   Write “setter” and “getter” methods for all of the class variables. For the CollegeStudent class they would be: getYear, getMajor, setYear,  and setMajor.

d.   Write the toString() method for the CollegeStudent class. Use a super reference to do the things already done by the superclass.  
5.         Write a testing class with a main() that constructs all of the classes (Person, Student, Teacher, and CollegeStudent) and calls their toString()  method