**Lesson Handout**

# Inheritance Example

The following program uses a class Person to represent people you might find at a school. The Person class has basic information in it, such as name, age and gender. An additional class, Student, is created that is similar to Person, but has the Id number and grade point average of the student.

**public class** Person{

**private** String myName ; // name of the person

**private** **int** myAge; // person's age

**private** String myGender; // "M" for male, "F" for female

// constructor

**public** Person(String name, **int** age, String gender){

myName = name;

myAge = age;

myGender = gender;

}

**public** String getName(){

**return** myName;

}

**public** **int** getAge(){

**return** myAge;

}

**public** String getGender(){

**return** myGender;

}

**public void** setName(String name){

myName = name;

}

**public void** setAge(**int** age){

myAge = age;

}

**public void** setGender(String gender){

myGender = gender;

}

**public** String toString(){

return myName + “, age: “ + myAge + “, gender: “

+ myGender;

}

}

//-----------------End of Person Class-----------------//

**public** **class** Student **extends** Person{

**private** String myIdNum; // Student Id Number

**private double** myGPA; // grade point average

// constructor

**public** Student(String name, **int** age, String gender, String idNum, **double** gpa){

// use the super class' constructor

**super**(name, age, gender);

// initialize what's new to Student

myIdNum = idNum;

myGPA = gpa;

}

**public** String getIdNum(){

**return** myIdNum;

}

**public double** getGPA(){

**return** myGPA;

}

**public void** setIdNum(String idNum){

myIdNum = idNum;

}

**public void** setGPA(**double** gpa){

myGPA = gpa;

}

}

//-----------------End of Student Class-----------------//

**public class** HighSchool{

**public static void** main (String args[]){

Person bob = **new** Person("Coach Bob", 27, "M");

Student lynne = **new** Student("Lynne Brooke", 16, "F", "HS95129", 3.5);

System.out.println(bob);

System.out.println(lynne);

// The previous two lines could have been written as:

// System.out.println(bob.toString());

// System.out.println(lynne.toString());

}

}