**COMP 132 - Homework # 5**

**Static Fields and Static Methods**

1. This question refers to the **Candidate2.java** file and the **Student2.java** file from the “Source code examples” link on the main course webpage. Each question describes a new method to be added to the indicated class. For each method, indicate whether that method should be a static method or an instance method. Give a brief justification for your answer.

a. A method in the Candidate2 class that accepts a party name as a String parameter and determines if the Candidate2 is a member of that party.

b. A method in the Candidate2 class that accepts a party name as a String parameter and determines if that party name is an accepted party name as defined by one of the class constants.

c. A method in the Student2 class that changes the nextID field to the value specified by a parameter.

d. An accessor method in the Student2 class that returns the student’s id number.

2. Consider the following class definition, which includes one static field and one instance field.

**public class** Foo {

 **private** **static** **int** *x* = 1;

 **private** **int** y;

 **public** Foo(**int** y) {

 **this**.y = y;

 }

 **public** **void** bar() {

 *x*++;

 y=*x*;

 }

 **public** **void** baz(**int** z) {

 *x* = *x* + z;

 y = y + z;

 }

 **public** String toString() {

 **return** "x= " + *x* + " y= " + y;

 }

}

Give the output that would be produced by each of the following code snippets.

 a. Foo f1 = **new** Foo(2);

Foo f2 = **new** Foo(3);

f1.bar();

System.*out*.println("f1: " + f1);

System.*out*.println("f2: " + f2);

f2.bar();

System.*out*.println("f1: " + f1);

System.*out*.println("f2: " + f2);

b. Foo f1 = **new** Foo(2);

Foo f2 = **new** Foo(3);

f1.baz(3);

System.*out*.println("f1: " + f1);

System.*out*.println("f2: " + f2);

f2.baz(5);

System.*out*.println("f1: " + f1);

System.*out*.println("f2: " + f2);