Comp 271: Data Structures Name: Anissa Cristerna

1. Why is it not a good idea to store a counter for the number of people on earth as an ‘int’?

Because there is a limit to int, a max value, 31 bits or 2.1 billion.

Why not store monetary units as a ‘double’ or ‘float’ in a program?

Since monetary values will only have two places after the decimal, with a “double” and a “float” you would need to then round the output. With a “double” and a “float” you could then have many more decimals beyond the two you need. The values would be an approximation and not the exact monetary value.

2. Answer the questions in line 1, line 2, line 3, and line 4.

public class Dog {

String name;

public Dog (){

name=null;

}

public Dog(String p)

{

name =p;

}

public void foo(Dog d) {

//Line 2: What is the name of d object?

d= new Dog("Fifi");

//Line 3: What is the name of d object?

}

public void fluffy() {

Dog aDog = new Dog("Max");

foo(aDog);

// Line 1: What is the name of aDog object?

// Line 4: If I want Line 1’s answer to be “Flash” what one change I need to make to // the code foo(..)?

}

}// Write answers below

Line 1 = Fifi

Line 2 = Max  
Line 3 = Fifi

Line 4 =replace d = new Dog (“Fifi); with d.name = “Flash”;

3. In the code above, use one or more combined attributes from the list (local , object, class, reference, variable, method) to describe:

1. Name – object variable
2. foo() – object method
3. aDog – local reference variable
4. p - local reference variable
5. d - local reference variable
6. fluffy() – object method

4.. If a method or variable is for the entire class (as opposed to an individual instance of the class), it should be declared \_ static

5. Indicate below true or false with regard to the code on question (2) above.

(i) After call to foo (..) in fluffy(..) on Line 1, “Fifi” dog object is alive and well.

False

(ii) On a hypothetical call to fluffy(), after fluffy() returns aDog object is garbage collected.

True

(iii) After foo() is called the variable d in foo() is dereferenced (meaning it is no longer available).

True