

COP 3330 Exam 2 Review

<u>Chapter</u>	<u>Sections</u>	<u>Topics</u>
7	7.1 – 7.8	Classes, static vs. instance, this, references vs. objects, inherited methods, overriding, scoping rules, method overloading, generic classes
None	None	Aggregation
8	8.3 – 8.4, 8.8 – 8.11	Iterator, Array Processing, 2-D Arrays, Vector, Arraylist Collection Algorithms
9	9.1 – 9.2	Inheritance, Polymorphism, Visibility Modifiers

How to study:

- 1) Go through both of your programs. Make sure you understand how they work. I may ask questions based on your homework assignments.
- 2) Look over all of the sample program presented in class. For this semester, these contain a more thorough breakdown of the material covered in class than the notes.
- 2) Read the class notes. Make sure you understand the ideas presented.
- 3) Read the sections denoted above.
- 4) Peruse the problems at the end of the appropriate chapters in the text and plan out how you would attack them.

Exam Format

Here are the different types of questions I will have:

- 1) **Tracing:** Either through code segments or of an entire program that uses a class.
- 2) **Writing:** You may have to write a main method that uses a class, or write class methods.
- 3) You may have to find mistakes in a piece of code.
- 4) **Short Answer:** Some of the reading goes over general concepts in fairly non-technical manner. I may ask questions on this material that require a single sentence answer.
- 5) **Design Question:** I may give you the basic idea of a class to be written and then ask you general questions about the design of the class. (What methods should be included? What should be private, public, etc.?)

Exam Aids, etc.

The exam will be open book and **WILL NOT** consist of a multiple choice section like the previous exam. Make sure to bring your text. Notes will not be allowed.

Defining Classes

Remember when you are defining a class, you need to define two parts:

- 1) instance variables (these dictate the structure of an object of the class.)
- 2) instance methods (these dictate what operations are allowed on an object of the class.)

Generally instance variables are private, and all methods you want others to use are public. Other methods, such as the totalminutes method in the Time class need not be public.

Remember that there are three types of variables you could have when dealing with instance methods:

- 1) instance variables
- 2) formal parameters
- 3) local variables

Learn the difference between the three and do not call different types of variables with the same name.

Remember that anytime you refer to an instance variable in an instance method, you are referring to the instance variable OF the object the method was called upon.

Formal parameters are the information the method needs to complete it's task.

Local variables are declared as necessary, such as loop indexes.