CSCI 1321 (Principles of Algorithm Design II), Spring 2003

Review for Midterm Exam

1 Format of the exam

The exam will be in class March 5. You will have 50 minutes. You may use your textbook and any notes or papers you care to bring, but you may not use other books, each other's papers, or a calculator or computer, *except* that you may use a browser to look at Sun's documentation of the Java library.

The following are some kinds of questions that might be on the exam. It is *not necessarily an exhaustive list* of all types of questions on the exam, but should give you an idea of what to expect. The quizzes so far should also give you an idea of what kinds of questions I might ask.

- Given some Java code (possibly a complete program, possibly a fragment), answer one or more of the following questions:
  - Will it compile correctly? (You may be told that it does not.) If not, why not, and how would you fix it?
  - What does it print out? What does it (if a method) return? What value does it assign to a specified variable? Are these results correct? If not, what has gone wrong, and how would you fix it?
- Given a problem description, write a Java program, class, or method to solve it. You may be given some of the code and asked to "fill in the blanks", or you may be given descriptions of Java classes or methods to use in your solution.

2 Topics to review

You are responsible for all material covered in class or in the assigned reading, up to but not including linked lists. (See the schedule for a list of assigned reading, but note that if you understand the summaries at the end of the chapters you are probably in good shape.) You should review in particular the following topics.

- Basic Java syntax and semantics, including classes, `import`, and the difference between primitive types and objects.
- Inheritance and interfaces.
- Polymorphism.
- String processing — the Java `String` class and how to use it.
- Arrays in Java; sorting and searching of arrays.
- Stacks and queues — as ADTs, implementation using arrays.