CSE 142 Midterm 1 Topic List – January 26, 2004

Here is a brief checklist of the topics that have been covered so far this quarter and might appear on Monday's midterm. You are generally responsible for anything that has happened in lecture and sections, as well as related parts of the textbook (but you won't be tested on specific examples from that source).

- Algorithms and computation – how does an algorithm relate to a computation
- Objects, types, and values
    - Definitions of these concepts
    - Why are objects important in software design?
    - Properties and responsibilities of objects
- Objects and classes
    - What is a class?
    - What is the relation between a class and its instances (objects)?
- Class specification
    - What is it? Why is it important
    - Relationship between class specification and object properties/responsibilities
    - Use of basic JavaDoc to specify classes
- Class implementation
    - Relationship to specification – what's different?
    - Instance variables
    - Methods (queries/commands)
        - Return type
        - Parameters
    - Constructors
    - Public/private
- Statements and expressions
    - Assignment statement
    - Return statement
    - Arithmetic expressions
- Testing
    - Tracing code – simple statements as well as method calls
- Control flow
    - Boolean (logical) expressions
    - Conditional statements – if. Where and when do you use it?
    - Loops
        - Where/when would you use it?
        - While statement
        - For statement
- Pair programming