Exam 1 Review (First Pass)

- In general know all bold terms in each section
- Know information in slides used in class.
- Understand all Participation Activities and Challenge Activities.
- Understand any programming you did in Homework, Lab Work, and Challenge Activities. Be able to replicate it.
- The exam is made up of: short answer, hand execution and analysis of code, writing code and design.
- For any topic ask yourself
  - How is it done?
  - What does it do?
  - Why is it that way?

Intro to programming

- Design
- Problem Solving
- Computer Organization

First Program

- Basic IO
- Comments & Whitespace
- Errors and Warnings

Variables / Assignments

- Data types, representation and limitations
- Operators
- Assignment
- Definition vs. Declaration
- Type Safety
- Random Numbers
- Style
- Expressions
- References and Pointers

Selection

- Program Flow
- Selection (e.g. if, switch)
- Logical Operators
- Boolean data type

- Conditional Expressions
- Floating-point comparison
- Exceptions

Strings

- Comparisons
- Access
- Modify
- Character Operations

Iteration

- Iteration (e.g. while, for, do while)
- Loop conversion
- Nested Loops
- Incremental programming
- Enumerations

Compound Data

- Vector and its use
- Array vs. Vector
- Parallel Vectors (i.e. Multiple Vectors)
- Two dimensional Vectors
- Swapping two variables
- Search
- Sort