Section 1: Introduction

Introduction to the Course

Data Structures and ADT's

- Arrays
- Lists
- Stacks
- Queues
- Hashtables
- Trees
- Heaps
- Sets

Algorithms

- Search Algorithms
- Sort Algorithms
- Recursion

Format

- Theory
- Simple Implementation
- What's in the JDK?

Introduction to Data Structures

Data Structure

- Organizes and stores data
- Each has strengths and weaknesses
- "The fact is, there aren't just two sides to any issue, there's almost always a range of responses, and 'it depends' is almost always the right answer in any big question" – Linus Torvalds

Algorithms

- There can be more than one algorithm for accomplishing a task
- An algorithm is not an implementation; an algorithm describes the steps you must perform, and implementation is the code that you have to write
- There can be many implementations of the same algorithm