

# Study Guide for Final Exam

## Classes 101

1. How do you find what to make the classes out of?
2. How do you access public data members and methods?
3. What is a constructor used for?
4. What is a destructor used for?
5. How is the classes interface and implementation separated?
6. Why is it separated?
7. What should a method of a class never return?

## Classes, Part 2

1. Const and classes...know it in all it's many faceted goodness.
2. Member initializer list.
3. Friends...what are they and why do you need them?
4. Static members

## Pointers

1. What is a pointer?
2. What is a null pointer?
3. \* and &...what are they? How are they related?
4. Const pointers in all they're fun.
5. Arrays and pointer...how are they related?
6. Arrays of pointers
7. What is the this pointer?
8. How can you use this pointer?
9. Dot notation and pointers, what is the short cut?
10. How do you get dynamic memory?
11. How do you free memory?
12. What do you use to ensure getting null pointers?
13. Copy Constructors, Assignment Operators and Destructors
  - a. Why do you need them?
  - b. How do you write them?
14. Stacks and Queues
  - a. You coded 'em, you should know 'em
15. Command Line arguments and command line redirection

## Algorithm Analysis

1. Know how to do the basic analysis shown in the notes.