

# Final Study Guide

## Concepts

- Basic Java Syntax
- Basic Classes
  - Static Variables
  - Instance Variables
  - Static Methods
  - Instance Methods
  - Constructors
  - Overloads
  - Access Modifiers
  - Object Class Overrides
- Interfaces and Inheritance
  - Type Casting
  - Extends
  - Implements
  - Abstract classes
  - Overrides
  - Constructors
- Class Hierarchy Design
  - Redundancy
  - Single Responsibility Principle
- Lambda Functions and Streams
  - Functional Interfaces
  - Stream Pipelines
- Comparators and Comparable
  - Sorting
- A\*
  - General Algorithm
- Exceptions