

Midterm Study Guide – CS161

Classes and Objects

- Class, Object
- Abstraction
- State vs. behavior
- Instance variables and methods
- Constructors (multiple)
- Encapsulation
- toString()
- this
- overloading
- object equality

ArrayList

- Store any type of object
- Specify type
- Iterating
- Primitive vs. Wrapper

Inheritance

- Code reuse
- Extends
- Superclass vs subclass
- Only extend a single class
- Protected
- Overriding methods
- Constructors not inherited
- Subclass constructors
- Everything extends Object
- Casting
- Instanceof
- Binding
- Polymorphism
- Abstract class

Recursion

- Pre/post conditions
- Base case vs. recursive case
- Call stack
- Activation record
- Call tree
- Infinite recursion
- Memoization