Midterm 2 Review
Arrays

• Declaring and populating two-dimensional arrays
• Find the lengths of arrays in a two-dimensional array
• Looping through a two-dimensional array (both by rows and columns)
• passing arrays to methods
• multi-dimensional arrays
Processing

- How to set up a processing sketch
- Standard methods (main, settings, setup, draw) and what they do
- Drawing basic shapes, changing the colors, changing the background
- Keyboard and mouse interaction
Objects

- Identity, state and behavior of objects
- Creating and using classes
- Constructors, including multiple constructors, private ones, etc
- Instance variables (and null initialization)
- Static methods and data fields
- . (dot) operator to access data fields and methods
Objects

• Variable scope
• Hidden variables and the “this” keyword
• Class abstraction
Objects

- Relationships between classes (association, aggregation, composition)
- Basic UML of classes and relationships between classes
Objects

- Date class
- Random class
- Visibility modifiers
- Data field encapsulation (getters and setters)
- Passing objects to methods
- Array of objects
- Immutability
Strings and things

- Strings, StringBuilder, StringBuffer
- methods available in those classes
- Converting between Strings and numeric data types and between numeric data types
- Wrapper classes for numeric data types, boxing and unboxing (Primitive vs reference variables)
File I/O

- Using File objects to represent files on the system
- Reading and writing files
- reading from a URL