CMSC 131
Object-Oriented Programming I

Review I
Dept of Computer Science
University of Maryland College Park

This material is based on material provided by Ben Bederson, Bonnie Dorr, Fawzi Emad, David Mount, Jan Plane
If you have not complete these exercise in lab you must do it today
Notice your project grade is not complete unless you have done these exercises
Contact your teaching TA for assistance/additional information
Final Exam

- Information available on class web page
  - It includes practice material
  - *We do not post old final exams, sorry!*
- Make sure you know the day, time and location
Review (Variables/Methods)

- Java types
- Variables
  - Types – Primitives and reference
  - Locals
    - What is their scope?
  - Parameter
  - When are they created?
  - When are they destroyed?
  - Parameter vs. argument
- Methods
  - Types – static and non-static
  - How to call them
  - When to define a method as static or non-static
  - What is an auxiliary method?
  - Does order of method definition matter?
  - Can static method call non-static?
Review (Input/Output)

• What is import?
• System.out.println
• Scanner
  • next
  • nextInt
  • nextDouble
• JOptionPane
  • showMessageDialog
  • showInputDialog
• Integer.parseInt
• Double.parseDouble
Review (Iteration)

• Types
  • while loops
  • do whiles
  • for loops
• When you use while, do whiles, for loops
• Nested loops
• break and continue in loops
Review (Conditionals)

• If statement
• Cascaded if statements
• switch
• Ternary operator ? :
• Short-circuiting with boolean expressions
Review (Memory Organization)

- Memory maps
- What is the stack?
- What is the heap?
- Where do static final values reside?
- What the stack makes possible?
  - Creating and destroying local/parameters
Review (Classes)

• How to define classes
• What are instance variables?
• What are the default values of instance variables?
• What is the difference between a class and an object?
• Where are objects created?
• When are they destroyed?
• What is the garbage collector?
• How many classes can be in a Java file?
• What is public, protected, package, private access?
• Can every class have a main?
• What are command line arguments?
Review (Reference, Shallow, Deep Copy)

- Example: Car.java
Review (Arrays)

- Are arrays objects?
- One-dimensional array
  - Defining them
  - Initialization
  - length property
  - For loops and arrays
- Two-dimensional arrays
  - Defining them
  - Initialization
  - Length property
  - For loops and arrays