This material is based on material provided by Ben Bederson, Bonnie Dorr, Fawzi Emad, David Mount, Jan Plane
Overview

- Access Specifiers
- Get/Set Methods
- General Class Organization
- Midterm Review
Video

- History of Computing in 147 seconds
Access Specifiers

- We have seen public
- Two points of view that help us understand these specifiers
  - Programmer
  - User
- Let’s see package
  - All classes in the same package can access members defined as package
- Let’s see private
  - Only methods of the class can access private elements (instance variables/methods)
  - Private methods are methods that provide support to other methods and not intended for users of the class
- Let’s see an example based on get/set methods
  - If we define a field as private then we may need to provide methods that allow us to access (get method) or modify (set method) the field.
  - A set method can control the validity of data passed in
About main

- Every class can have a static main method
- It can be used for testing methods of the class
- Keep in mind that this method may not behave the same if placed in another class
  - Let’s see an example of a main method for a class that is copied to another class (driver)
  - Our main method accesses private elements
- Careful about main definition
  - It needs to have void as return type
  - It needs to be static otherwise you will not be able to run the application
Static vs. Non-Static Methods

- When should a method be defined static?
  - When it makes no references to the class instance variables
- Why would I like to define a method as static?
  - Because you don’t need to create an instance of the class in order to call it
  - Notice you can still call the method through a instance of the class
- Keep in mind that
  - Static methods can only call static methods
  - Static methods can not reference instance variables
- Let’s see some examples where static methods try to access instance variables and other methods
General Class Organization

- Constructors
  - Default constructor needed?

- Get/Set Methods
  - Notice that not every class needs to define get/set methods

- Class specific methods

- equals method

- static methods

- main method
Midterm Review

- Variables
- Conditionals
- Loops
- Static methods
- Others