CompSci 6
Programming Design and Analysis

February 27, 2007
Prof. Rodger
Announcements

• Thursday – TEST Booster
  – About 20 minutes during class
  – We will also have classwork

• Read for next time Chap. 13.5-13.7, 7.4

• Reading Quiz for next time
Abstract Class

- A class that cannot be instantiated
- Defines specifications for a class, but doesn’t have all the implementations
- Forces users to redefine methods
- Subclasses extend it
- May have abstract methods
  - There is no code
  - Subclasses that are not abstract must have a method of the same name with code
Inheritance hierarchy

- Mover and Bouncer are abstract classes
- Bouncer extends Mover
- BouncingBall and BouncingSmiley extend Bouncer
Polymorphism

- Ability to refer to objects of multiple types with varying behavior
- ArrayList<Mover> contains BouncingBalls and BouncingSmileys and RaceCars
- They are all subclasses of Mover
- Can’t create a new Mover. Why?
Classwork Today

• Finish Bouncing Smileys
• Write the RaceCar Class. Extends Mover.
  – RaceCars only move to the right
  – RaceCars are rectangular in shape
• Modify the Canvas class to create RaceCars