CompSci 6
Programming Design and Analysis

February 28, 2006
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Announcements

• 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