CompSci 6
Programming Design and Analysis

February 26, 2008
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Announcements

• Test 1 back today
• Read for next time Chap. 10.5-10.7, 6.4
• 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