CompSci 6
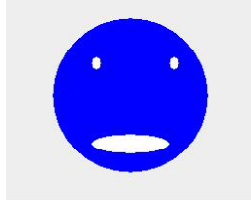# Programming Design and Analysis

March 2, 2010

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Announcements

- Review Chapter 6, loops
- No Reading Quiz for next time

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Random Numbers

- Create a random number generator

  ```
  Random generator;
  ```

- Initialize it

  ```
  generator = new Random();
  ```

- Generate Random Numbers from 0 to 8

  ```
  x = generator.nextInt(9);
  ```

- How do you get random numbers from 1 to 10?

Inheritance

- Allows you to reuse code
- Start with a Class (superclass)
- Create another class that extends the class (subclass)
- The subclass can use the methods from the superclass or override them (use the same name, but the code is different)
- If the subclass redefines a superclass method, can still call the superclass method with the word "super" added.

Access to Instance Variables(state)

- public
  - Any class can access
- private
  - subclasses cannot access
- protected
  - subclasses can access
  - other classes cannot access
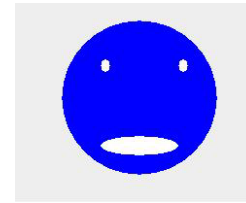
Classwork today

- Back to bouncing balls
- Create a new BouncingSmiley using inheritence
- Create an Arraylist of bouncing balls and smileys
- Use random numbers for generating the balls and smileys