Applets & picture drawing

Applet: small application that runs in browser; object that is instance of JApplet class

import java.awt.*;  // provides Graphics class
import javax.swing.*;   // provides JApplet class

public class AnotherApplet extends JApplet
// "extends" indicates inheritance: AnotherApplet has all the characteristics
// (data & methods) of JApplet
{
  public void paint(Graphics g)
  // method that specifies what should be displayed in applet window
  {
    g.setColor(Color.red);
    g.fillOval(100,100,100,100);
    // red circle in center of window (if window is 300x300)
    g.setColor(Color.black);
    g.drawOval(100,100,100,100);
    // black outline around red circle
    g.fillRect (140,140,20,20);
    // black square in middle of circle
  }
}

Variables & Expressions

Variable

- declaration
- initialization
- primitive vs.object

Data Types (primitive)

- integer types
  - int
  - short
  - long
- floating-point types
  - float
  - double
  - long double
- char
- boolean
Expressions

- Literal values
- initialized variables
- named constants
- method calls

Arithmetic expressions

- operators
  - *
  - /
  - +
  - -
  - %
- integer vs. floating-point operations
- precedence & parentheses

Assignment compatibility:

byte -> short -> int -> long -> float -> double

- mixed-type expressions
- type casting

Special arithmetic/assignment operators

- *=
- /=
- %=
- +=
- -=
- ++
- --
  - prefix vs postfix