More Graphics

3-23-2011

Opening Discussion

- Minute essay comments:

  - Following along in class and little errors.

  - Animation suggestions

    - g.drawAnimation?

    - Importing movie files.

    - Doing gradient paints.

    - Add a Timer and cycle through images.

- IcP solutions.

Images

- We talked briefly last time about how to load images with ImageIO.

- We need to talk a bit more about the BufferedImage.

- It is a raster image, a 2-D grid of pixels.

- If you make a BufferedImage you can use createGraphics to get a Graphics2D that will draw to it.

Double Buffering

- The "proper" way to write the paint method is to have a BufferedImage that you draw to, then draw the image to the provided Graphics2D object.

- This is called double buffering and it prevents flicker and can make things run faster.

Mouse Events

- There are several types of events that relate to the mouse.

    - MouseClicked

    - MouseDragged

    - MousePressed

    - ...

- Listen to one of the publishers on a component.

    - mouse.clicks

    - mouse.moves

    - mouse.wheel

Key Events

- There are three event types for keys.
  - KeyPressed
  - KeyReleased
  - KeyTyped
- Listen to the keys object in a component to get these.
- Compare the key value in the event to values in the Key object.
  - if(e.key==Key.A) …
  - if(e.key==Key.Left) ...

TexturePaint

- Now that we can use images we can test out the TexturePaint.

Writing Transforms

- Last time we mentioned AffineTransforms, but didn't see what they can do.

- Let's take some time now to write code that uses an AffineTransform in our drawing.

Minute Essay

- Questions about graphics before we move to sorting?