

Administrivia

- Homework 6 due dates moved — design Thursday, code next Tuesday.
- Office hours today 4pm to 5pm.

Slide 1

Custom GUI Components, Recap/Review

- “Custom components” allow you to define what’s drawn, etc.
- Put code to draw what you want in `paintComponent` method; call `repaint` to regenerate image.
- Parameter to `paintComponent` is a `Graphics` object — a “graphics context”, or something you can draw on. As you know from your game, you can also get one of these for an `Image` object.
- So, you can look at the `Graphics` class ... However, the object is really a `Graphics2D` object, and `Graphics2D` has a lot more functionality.

Slide 2

Drawing and Filling Shapes

Slide 3

- “Draw” means draw outline only; “fill” to draw and fill.
- `Graphics` provides methods for doing simple shapes. `Graphics2D` provides more general methods. (Look at some shapes in `java.awt.geom`.)
- Use these to finish example from last time ...

Drawing and Filling Shapes, Continued

Slide 4

- You already know (from your game) about simple way to control color of what's painted.
- The `Graphics2D` class provides a lot more options. You can use:
 - `setPaint` to fill shapes with simple color, gradient fill, etc.
 - `setStroke` to draw outlines with different widths, etc.
 - `setFont` to draw text in different fonts. (This works for text components such as `JLabel` too.)
- And there's more — “clipping”, affine transformations (e.g., rotation — transformations in which parallel lines stay parallel), etc., etc.
- Look at another example ...

GUIs and the Project

Slide 5

- Overall layout of game is `BorderLayout`, with screen in middle and “game status panels” on four sides — returned by `getGameStatusPanel` (in `player`), usually a `JPanel`.
- Menu bar is in `GameSetup`, can be modified.
- Screen editor program has support for “editing properties” (of screens, blocks, entities) — `getEditPropertiesPanel`. Could use this to give slightly different properties to different instances (e.g., walls of different colors, enemies with different speeds).
- Homework 6 asks you to use these features to (1) display something, and (2) get input from the user (either in the game or in the screen editor).

Minute Essay

Slide 6

- None — sign in.