Introduction to Processing

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Agenda

• 9:30 The Basics
• 10:30 Time to play
• 11:30 Show and Tell/Discussion
• 12:00 Lunch
• 12:45 Media
• 1:45 Time to play
• 2:45 Show and Tell/Discussion
The Basics - Perspective

- Interdisciplinary Computing:
  - Computer Science - Developers
  - Media Design - Designers
- Developing a Common Concept Base
  - Programming - the traditional stuff
  - Media - data that is fun to manipulate
- Approach:
  - Sustainable coding: re-use, remix, recycle
  - Reading to Write
  - Big picture concepts, not small detail memorization
The Basics - Resources

- Web References
  - http://processing.org/
  - http://processing.org/learning/gettingstarted/
  - http://processing.org/reference/
- Local References
Vector Graphics

- Functions
- Loops
- Color Picker
- 3D: Examples/ Form
- The Reference page!
- See Extras/Color

1. Face
2. Gradient
3. Three Gradients
4. GradientFlag
5. Primitives3D
6. RGBCube
Animation

• Event Loop
• Redraw the background (buffer)
• Physics!
• Math
• On your own try 7,8,9

1. FaceWinking
2. Linear - Remix example
3. LinearBox
4. Accelerating Box (Greenberg chpt 4)
5. fallingProjectile
6. CosTrail
7. toVanishingPoint
8. fromVanishingPoint
9. CosSinTrail
Abstraction

- Constants & Variables
- Arrays -- good and bad
- Processing produces a PApplet
- Java except Swing (different graphics model)
- Inner Classes
- Checkout Extras/Collisions

1. Box1
2. Box2
3. BoxParallelArraysBad
4. ClassyBox
5. ClassyBoxes
6. ClassyBoxes2
Mouse

• Almost Gesture
• Keys later
• System Calls
  • mouseX, mouseY
  • mousePressed
• Event Methods

1. SystemMouse
2. MouseEvent
3. Examples/Input MouseFunctions
Time to Play

- Pick a partner (or go it alone) and create a project -- take a challenge, remix a project, mix some projects together, but try not to start out with a clean slate.

- Get messy!

- Take an hour to play

- At 11:30 show and tell/description

- Lunch is at noon
Images

- Bitmap
- Load image
- Animate
- Save image
- Create image

1. YellowFlower00
2. YellowFlower01
3. Barney
4. BarkStudy01
5. BarkStudy02
6. BarkStudy03
7. imageFilter
8. pixellImage
Typography

• Pfont like Plmage
• If you can draw it you can animate and interface
• Keystrokes (so 80s)
• Check out the others and the HTML

1. _01BasicTypography
2. _02AnimatedTypography
3. _07TickerTape
4. _08KeyEventMethods
5. _11MouseExample
Video

- Libraries
- Make a movie
- Capture the cam
- Put them together

1. MakeMovie
2. VideoDemo
3. Movie2
What’s Left?

- Making Applets and Applications
- 3D ..... explore the Examples
- Sound, Network, Examples Libraries
Overload!
Time to Play

• Pick a project and a partner (or go it alone)
• Take an hour to play
• At 2:45 we will show and tell and discuss