Design Programming

DECO1012 & DECO2011

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Introduction to Design Programming
Timetable

- Lectures: Tuesdays 2–3pm in ALT1
- Labs: Tuesdays 3–5pm in 262, 261, 269
- Assignments:
  - Weeks 3–5: Generating form and structure
  - Weeks 6–8: Animation and interaction
  - Weeks 9–13: Simulation and synthesis
Lecture Topics

- Introduction
- Programming
  - Drawing with code
- Functions
  - Animation and interaction
- Objects
  - Simulation and synthesis
Resources

› Unit of Study Web Page
  › http://www.arch.usyd.edu.au/~rob

› Processing Web Site
  › http://www.processing.org/

› Processing by Casey Reas and Ben Fry
  › Copies available for short-term loan in the library and to buy at the Co-op Bookstore on campus
Why are you here?
Design Programming?

- Design Computing is...
  - Doing creative things using computers
  - Doing creative things with computers
  - Getting computers to do creative things

- Design Programming gives you the skills to be creative with computers and (hopefully) to get computers to do creative things...
Why do designers program?

- Designing interactive products
  - Computer/video games
  - Multimedia authoring, e.g., DVDs
  - Web sites, e.g., using Javascript or Flash

- Exploring possible designs
  - Write software to explore the space of possible designs based on a set of rules

- TO BE CREATIVE
  - Learning to program is like learning to draw...
Soda

www.sodaplay.com
Lab Exercises

‣ Three programming games:
  ‣ Each game will involve the writing of a short “program” that will be followed by another member of the class
  ‣ Programs will be given
Lab Exercises

- Drawing 1: 20 mins
  - Using graph paper, create a series of instructions to write your user ID, backwards.
  - Instructions might include:
    - “draw up 2 units”
    - “move left 4 units”
Lab Exercises

› Drawing 2: 20 mins
   › Write a program to draw a complex pattern.
   › Instructions might include:
     › “flip a coin: heads = turn left”
     › “repeat until you hit the edge of the paper”
Lab Exercises

- Freeform: 40 mins
  - Write a program to produce a 3D form (origami)
  - Instructions might include:
    - “fold paper in half, and in half again”