Hacking and Translation: Adapt Existing Scripts

Recap: the essential programming concepts we’ve learned

- expressions - operators, PEMDASR
- variables, data types - int, float, string, list, tuple, set, boolean
- conditions, loops - if, elif, else, for, while
- functions - def, parameters, return values
- classes - def, __init__, parameters, self.

Show some examples that do the exact same thing (multiple bouncing balls) in:

- maya python
- maya mel
- p5py
- processing
- paperjs
- unity

Look at code in another language and reverse engineer what it does based on what we know about python

- MEL: Animated Duplication, Challenge: edit this to group the objects when done
- Javascript + Canvas: Moving Multiple Items, Challenge: make them move vertically
- Javascript + Unity: Animal Class
- Java: Follow3 Example, Challenge: translate this to work in p5py

Workshop on Midterm project

Assignment

- Explore rosettacode
- Midterm Project - use the tools you’ve learned to make some art!
- Possibilities:
  - Procedural modeling
  - Procedural animation
  - Crowd simulation
  - Custom drawing tool
- Rubric (20 points total):
  - (4) Creativity - needs to be interesting and original
  - (2) Use a class - encapsulate some part of your project
  - (5) Complexity - something that couldn’t have easily been done by hand
  - (3) Completion - finish what you set out to do (you only have a week!)
  - (2) Comments & Docstrings - document your code
  - (4) Presentation - organization, mechanics, delivery, relating to your audience