

CSC 111:

Intro to Computer Science through Programming

Spring 2017
Prof. Sara Mathieson



Admin

- + Homework 5 due Tues after spring break
- + Lab this week will be like TA hours (optional time to ask questions and work on homework/studying)
- + Transcripts from now on: only successful output at the end
- + Office hours **tomorrow 11-1pm in Ford 355**

Outline: 3/8

- + Homework 3 examples
- + Idea of Object Oriented Programming
- + Begin: Graphics
- + While loops (probably Friday)

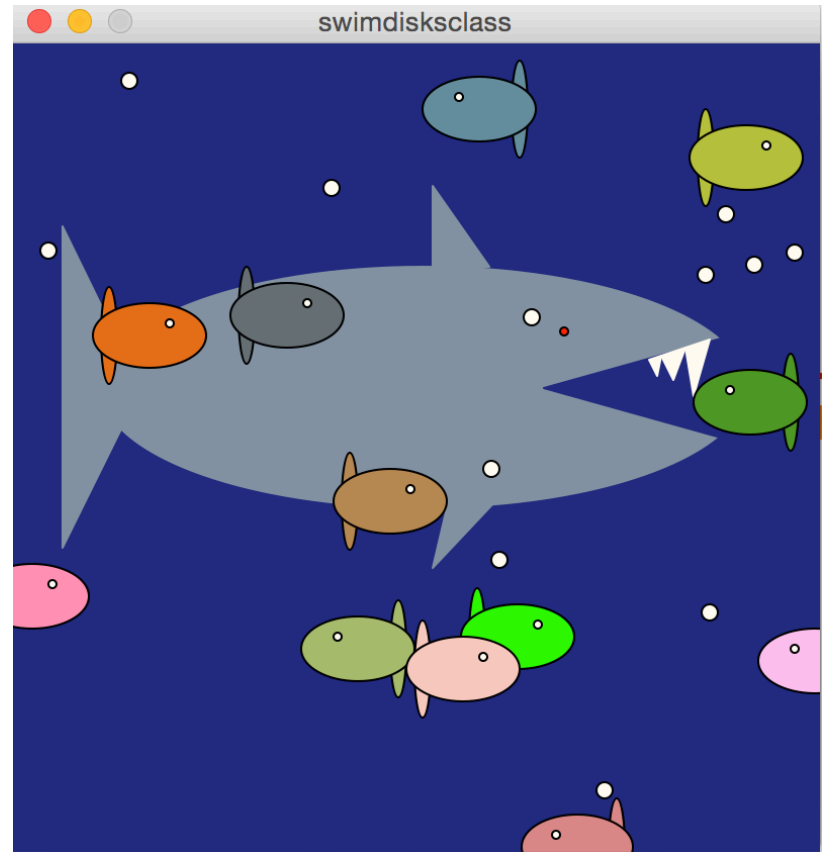
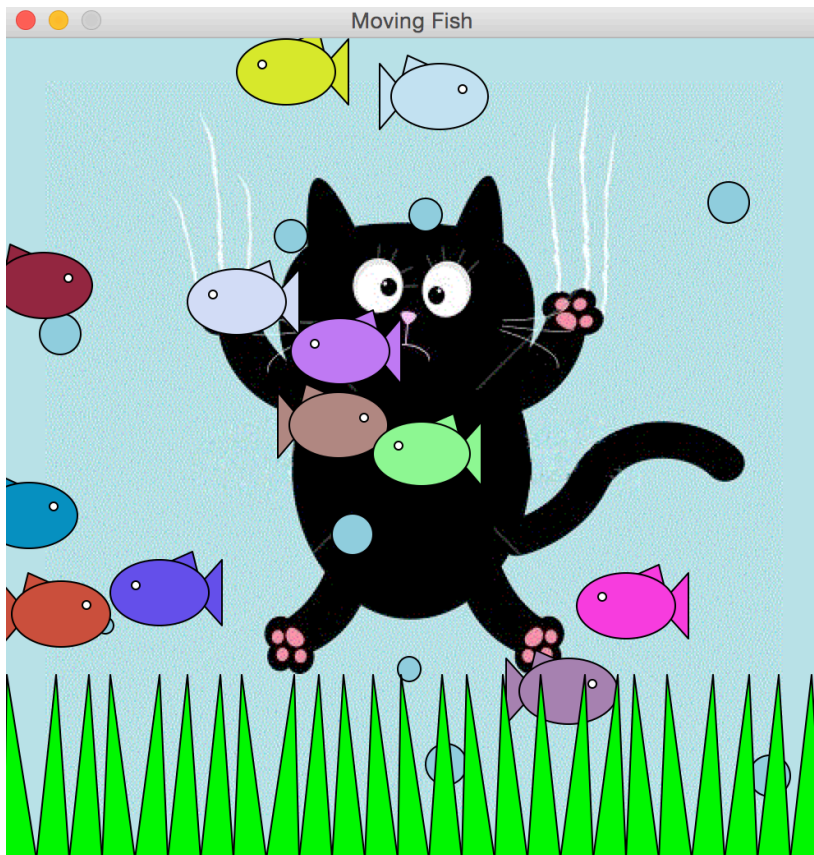
Homework 3 Examples (demo)

(selected by Ananya)

Begin: Graphics

Examples from last year

Isabella Zhu



Casey Armanetti

Object Oriented programming (OOP)

Objects have:

- * Data
- * Methods
- * Type

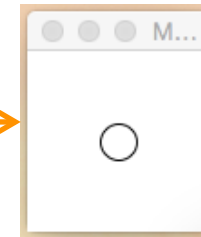
Important: objects belong to a class
Point is the class, and **p** is an object which is an *instance* of that class

```
>>> s = "boolean"  
>>> s.replace("b", "B")  
'Boolean'  
>>> type(s)  
<class 'str'>  
>>>
```

```
>>> p = Point(100,200)  
>>> p.setFill("red")  
>>> type(p)  
<class 'graphics.Point'>  
>>>
```

Starter Graphics program

```
from graphics import *  
  
def main():  
    win = GraphWin("My Circle", 100, 100)  
    c = Circle(Point(50,50), 10)  
    c.draw(win)  
    win.getMouse() # Pause to view result  
    win.close()   # Close window when done  
  
main()
```



- 1) Download graphics.py from the book website: <http://mcsp.wartburg.edu/zelle/python/>
- 2) Place graphics.py in the same folder as your code
- 3) Open graphics.py in IDLE
- 4) Copy over the starter program to a new file
- 5) Run the code and see the circle!
- 6) TODO: modify the code so the window is bigger
- 7) TODO: make the circle bigger but still in the center
- 8) TODO: make the background and the circle a different color

End goal: create a "pumpkin"

Color names:

<http://wiki.tcl.tk/37701>

Extra color methods:

```
win.setBackground("green")
```

```
c.setFill("red")
```

