

# Program Control and Intro to Pygame



# Outline

- Python Goodness
  - If statements
  - While loops
  - For loops
  - Continue and break
- Pygame Goodness
  - Initializing!
  - Making a screen!
  - Drawing Shit!

# If Statements

- If a given expression is true it evaluates some code
- If statements can have multiple clauses

```
if 1 != 1:  
    print("awesome!")
```

```
if x >= x_bound:  
    x *= -1  
else:  
    x += 1
```

```
if x == 'a':  
    print("a for apple!")  
elif x == 'b':  
    print("b for boy!")  
else:  
    print("unknown =(")
```

# While Loops

- While a given condition is true it evaluates some code

```
x = 0
while x < 100:
    print(x)
    x += 1
```

- Don't do this:

```
y = 0
while y < 100:
    print(y)
```

# For Loops

- Repeats a chunk of code for every item in a list

```
for i in range(10):  
    print("Hello" * i)
```

```
for c in 'apple':  
    print(c)
```

# Continue and Break

- Continue skips a iteration in the loop
- Break calls off the loop entierly

```
for x in "python":  
    if x == 'h':  
        continue  
    else:  
        print(x)
```

```
for x in range(100):  
    if x % 50 == 0:  
        print("Fifty!")  
        break
```



- Something about this being a game library
- Something about this being wrappers for a c library
- What it does
  - Events (keyboard, mouse, joystick)
  - Display
  - Images
  - Sound

# Pygame Initialization

- For pygame to work you need to import pygame and it's locals as well as start it

```
import pygame
```

```
from pygame.locals import *
```

```
pygame.init()
```



# Pygame Display

- Need to set up the display before making pretty pictures
- Pick a resolution and a title for your beautiful window (or make it `pygame.FULLSCREEN`)
- Flip the display to see updates

```
screen = pygame.display.set_mode((640,480))  
pygame.display.set_caption("AWESOME")
```

```
pygame.display.flip()
```

# Pygame Draw

- Comes with some functions to draw shapes and lines
- Functions can be found here:  
<http://pygame.org/docs/ref/draw.html>
- Draw on that screen you created before
- Don't forget to flip the screen to see the pictures!

```
pygame.draw.rect(screen, (255,255,0), (50,  
50, 60, 60))
```

```
pygame.display.flip()
```

# Workshop time!

- Demo!
- Questions?
- Homework!