

## **Pygame Assignment - pyGame Movement**

The appearance of movement is created by changing the position of where you draw an object from frame to frame. In this assignment you'll play around with displaying various types of movement.

### **Part A – Linear Movement**

Write a program that draws some shape (or set of shapes of your choosing) and moves them across the screen in a linear motion. To add some complexity, make the following adjustments:

1. Ask the user to enter the slope of movement.
2. Ask the user to enter the shape from some choices.
3. Create wrap around behavior so once the object goes off the screen, it comes back from the opposite side. (Hint: mod and or if are your friends.)

### **Part A – Bouncing**

Write a program that draws some shape (or set of shapes of your choosing) and moves them across the screen in a linear motion, but makes the object bounce off an edge when it hits it.

### **Part C (Optional) – Circular/Wave Movement**

Write a program that draws some shape (or set of shapes of your choosing) and moves them either around in a circle on the screen, or in a wavy pattern from left to right. (Hint: This will require some knowledge of trig functions.)

### **Part D – Random Movement**

Write a program that moves your object randomly. You get to define what “randomly” means. Here are a couple ideas:

1. Always move in a straight line, but every 100 pixels have some fixed probability of turning left or right.
2. Allow for diagonal movements, or even no movement between frames by a small amount.
3. Jump all over the place!