

Graphics Reference

```
canvas.create_line(x1, y1, x2, y2)
```

```
canvas.create_text(x, y, text)
```

```
canvas.create_text(x, y, text)
```

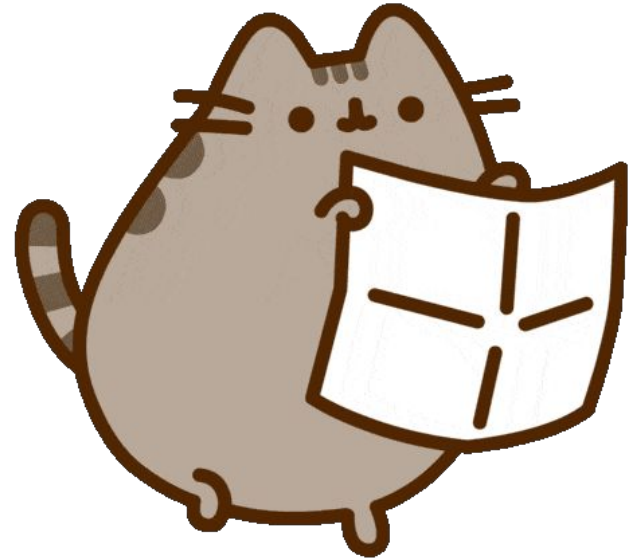
```
canvas.get_random_color()
```

```
canvas.get_canvas_height()
```

```
canvas.get_canvas_width()
```

```
canvas.set_fill_color(shape, color)
```

```
canvas.set_outline_color(shape, color)
```



Animations

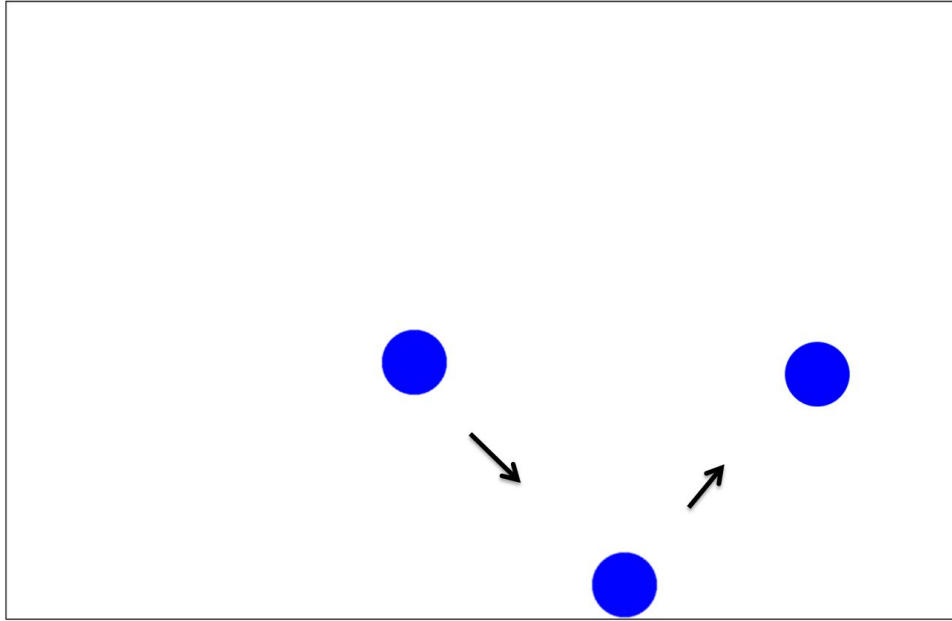
```
def main():  
    # create object  
    while True:  
        # update graphics  
        # Examples: canvas.move(),  
        # resetting color  
        canvas.update()  
        time.sleep(delay)
```

Loop, update,
delay

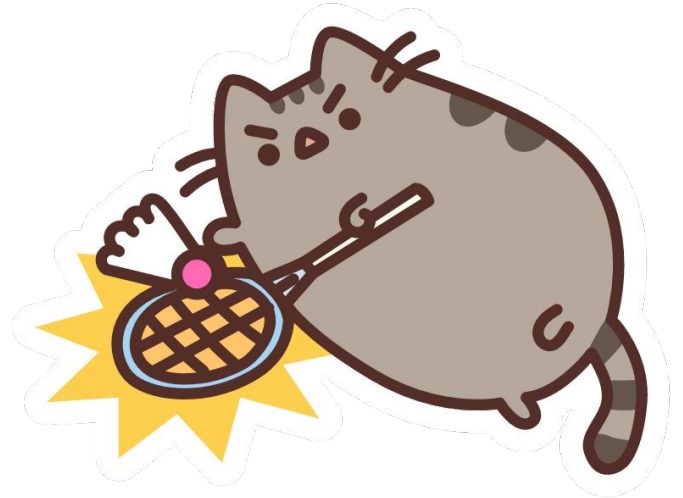


Section Problem

Bouncing Ball



- 1) Create ball
- 2) Animate ball
- 3) Check for collisions

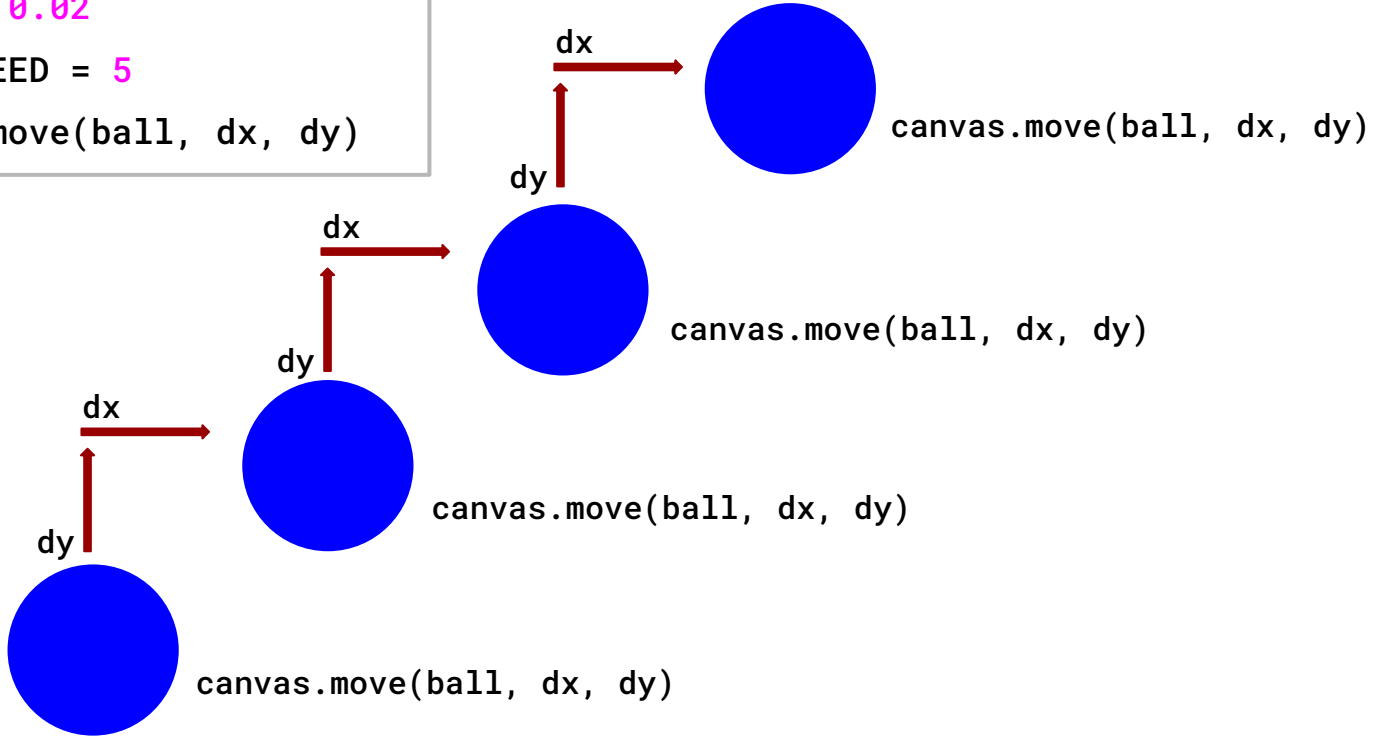


Bouncing Ball Animation

```
DELAY = 0.02
```

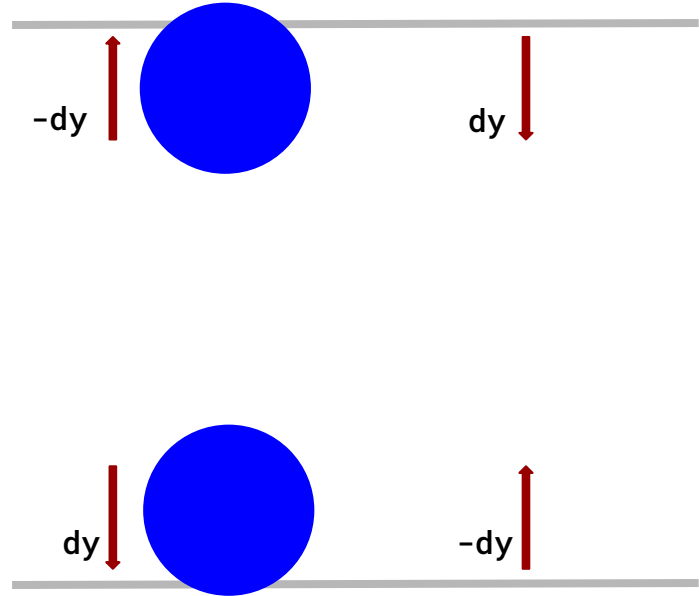
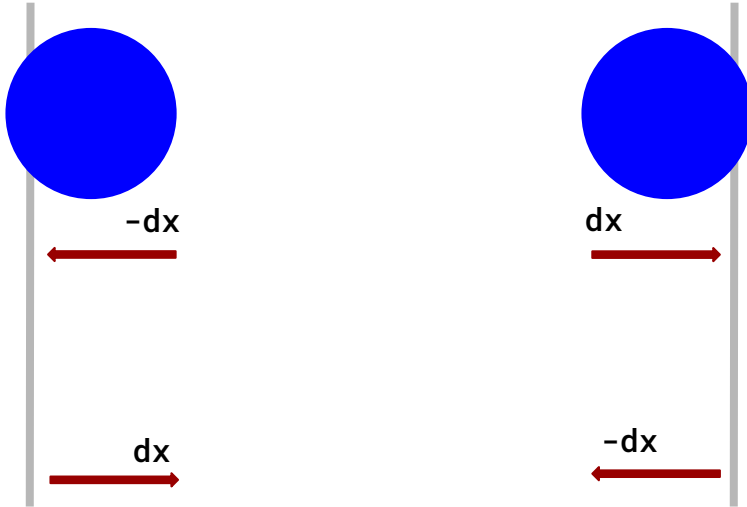
```
BALL_SPEED = 5
```

```
canvas.move(ball, dx, dy)
```



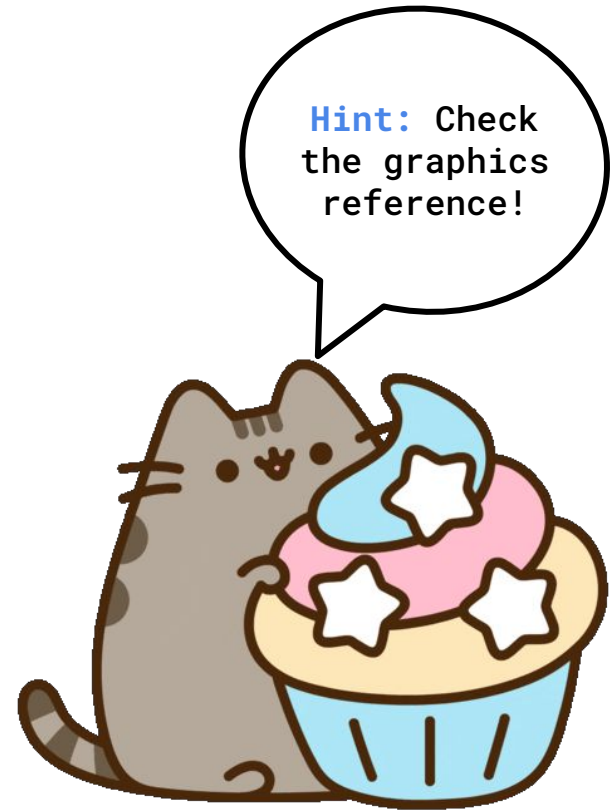
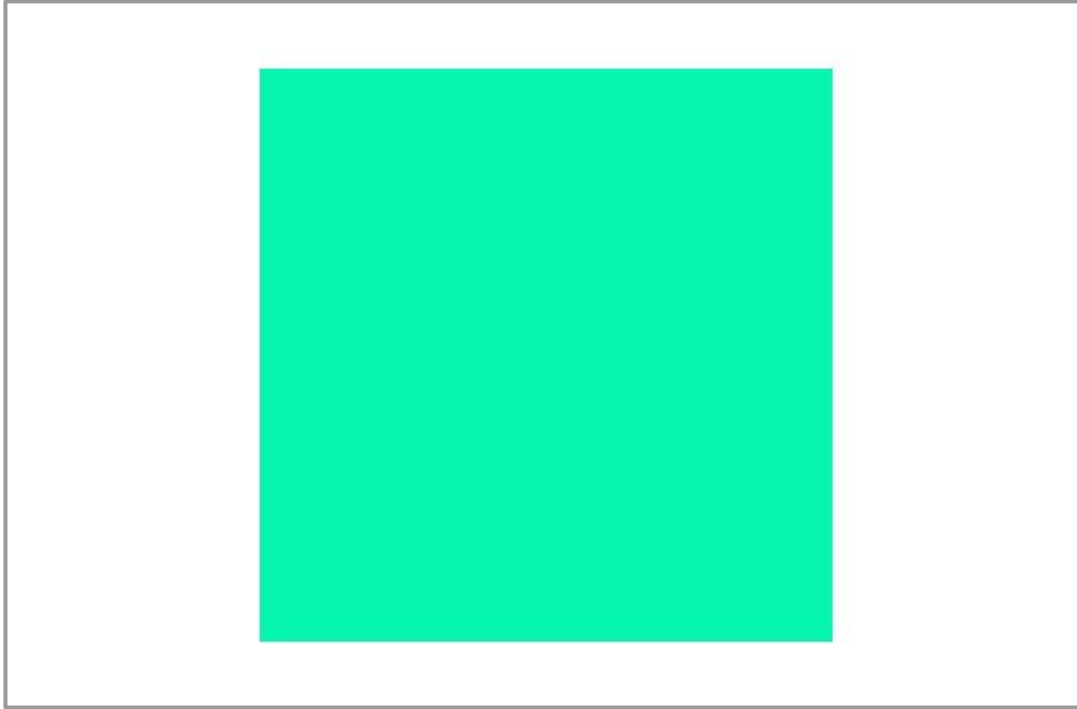
Bouncing Ball Collisions

```
canvas.get_left_x(ball)  
canvas.get_top_y(ball)
```



Quickstart

Mystery Square



Mystery Square

