pygame intro

Basics

```
import pygame
pygame.init()
```

Setting up the screen

```
import pygame
pygame.init()
screen = pygame.display.set_mode((800, 600))
```

The game loop

```
import pygame
pygame.init()
screen = pygame.display.set_mode((800, 600))
done = False
while not done:
     for event in pygame.event.get():
         if event.type == pygame.QUIT:
             done = True
pygame.quit()
```

Setting the clock

```
import pygame
pygame.init()
screen = pygame.display.set_mode((800, 600))
clock = pygame.time.Clock()
done = False
while not done:
    for event in pygame.event.get():
        if event.type == pygame.QUIT:
            done = True
    clock.tick(60)
pygame.quit()
```

This limits redraws to 60 per second, or 60 frames per second (FPS)

Drawing to the screen

```
import pygame
pygame.init()
screen = pygame.display.set_mode((800, 600))
clock = pygame.time.Clock()
done = False
while not done:
    for event in pygame.event.get():
        if event.type == pygame.QUIT:
            done = True
    screen.fill((0, 0, 0)) # This is a tuple!
    pygame.draw.circle(screen, (255, 0, 0), (250, 100), 50, 0)
    pygame.display.update()
    clock.tick(60)

pygame.quit()
```

pygame.draw.circle

```
pygame.draw.circle(screen, (255, 0, 0), (250, 100), 50, 0)
```

Arguments

- surface (where to draw the circle)
- color
- position
- radius
- width (thickness of the edge)

RGB Colors

Red, Green, Blue

```
pygame.draw.circle(screen, (255, 0, 0), (250, 100), 50, 0)
```

```
(255, 0, 0)
# Red: 255
# Green: 0
# Blue: 0
```

Position

(x, y)

```
(250, 100)
```

Redraw the screen!

```
pygame.display.update()
```

Recap

```
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while not done:
    for event in pygame.event.get():
        if event.type == pygame.QUIT:
            done = True
    screen.fill((0, 0, 0)) # This is a tuple!
    pygame.draw.circle(screen, (255, 0, 0), (250, 100), 50, 0)
    pygame.display.update()
    clock.tick(60)
pygame.quit()
```

Making things move

```
import pygame
pygame.init()
screen = pygame.display.set_mode((800, 600))
clock = pygame.time.Clock()
ball_x = 100
ball_y = 100
ball_radius = 50
done = False
while not done:
    for event in pygame.event.get():
        if event.type == pygame.QUIT:
            done = True
    screen.fill((0, 0, 0)) # This is a tuple!
    pygame.draw.circle(screen, (255, 0, 0), (ball_x, ball_y), ball_radius, 0)
    pygame.display.update()
    clock.tick(60)
pygame.quit()
```

Making things move

```
import pygame
pygame.init()
screen = pygame.display.set_mode((800, 600))
clock = pygame.time.Clock()
ball_x = 100
ball_y = 100
ball_radius = 50
done = False
while not done:
    for event in pygame.event.get():
        if event.type == pygame.QUIT:
            done = True
    screen.fill((0, 0, 0)) # This is a tuple!
    pygame.draw.circle(screen, (255, 0, 0), (ball_x, ball_y), ball_radius, 0)
    pygame.display.update()
    clock.tick(60)
    ball_x = ball_x + 1
    ball_y = ball_y + 1

pygame.quit()
```