1. Flow

- In video games, software flows in a series of events
- At the beginning, people go through a process called ==Set-up!==

2. Setup() and Draw()

- You begin by using functions called Setup() and Draw()
- Setup + code Syntax
  a. Blocks of code are needed in order to use functions.
  b. These Blocks are enclosed by curly Brackets: {}

3. Exercise 1 Questions

1. There are four color values. We know that it is going to be red Because of 255 in the first space. the other numbers control the Shading. The fourth # Controls the transparency of the circle.
2. Setup() told the program

3. Draw() told the program to

4. MouseX and MouseY told the program to follow the ellipse

Exercise 2:

- When the white fill background() is Placed inside the Setup() loop, the Background is Continuously redrawn so

You only see the appearance of one red circle.

- When the Background() is placed inside of the Draw loop then the Background doesn't update while you are drawing red circles.

Exercise 3:

4. Adding New Functions: PMouseX and PMouseY

- PMouseX and PMouseY work with the previous mouse position - (Derived from X and Y coordinates)

Exercise 4:

I didn't really notice a difference between the functions

5. Controlling Parameters through Speed

- The speed at which something moves is calculated from analyzing how fast an object travels from one point to the next.

- In Processing, to get a number that represents the speed of your mouse, your first point is Mouse X and the second is PMouseY.

- The difference between these two points (expressed as absolute value) is the speed of your mouse.

- Absolute value is used to express something through code.
   - o. To do this, write: abs()

- To write code expressing speed, write: abs(MouseX-PMouseX)

6. More Function Tools

- Set-up() functions happen once
- Draw() functions continually loop.
- Event functions come next and tell the Program when to <mark>execute A specific action</mark>
- For interactive tools, use the following:
  a. Mouse Pressed();
  b. Key Pressed();

7. Animation - frameRate

- In animation, A speed is used to designate the speed that images flash across the screen. This is expressed as frameRate()
- For coding animation, add into your Programs Set-up() function the frameRate() function.
- We use frameRate() to make sure our sketch is consist across multiple computers.

Review:

Void Setup() {

~~~~~~~~~
~~~~~~~~~   ← Happens
~~~~~~~~~   ONCE! → Only @ Beginning
3

Void draw() {

~~~~~~~~~
~~~~~~~~~   → Happens Forever
                    (Loops)

3

Event." Also happens once.

```
Void Mouse Pressed (); {
  background (50); // When Mouse Clicked, Background clears
}

Void key Pressed () {
  background (0, 255, 0); // when key Pressed + held, green.
}
```
Background