

## 07 Some Code To Try

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It's best to learn by doing. So, before learning more advanced coding concepts, let's try some code that uses these features.

### Growing Circles

```
int circleSize = 0;

void setup() {
  size(640, 360);
  background(255);
  noStroke();
  fill(0);
}

void draw() {
  // Draw only when mouse is pressed
  if (mousePressed == true) {
    circleSize += 5; // adds 5 to circleSize
    circle(mouseX, mouseY, circleSize);
  } else {
    circleSize = 0; // resets the circleSize when you stop pressing the mouse
  }
}
```

### Bouncing Off Walls

```
int x = 20;
int y = 300;
int w = 50;
int speed = 5;

void setup() {
  size(800, 600);
}

void draw() {
  background(0);

  circle(x, y, w);
  x += speed;

  if (x > width || x < 0) {
    speed = -speed;
  }
}
```

## Bouncing Around

```

int radius = 60;          // Width of the circle
float xpos, ypos;       // Starting position of shape

float xspeed = 2.8;     // Speed of the shape
float yspeed = 2.2;     // Speed of the shape

int xdirection = 1;     // Left or Right
int ydirection = 1;     // Top to Bottom

void setup()
{
  size(640, 360);
  noStroke();
  // Set the starting position of the shape
  xpos = width/2;
  ypos = height/2;
}

void draw()
{
  background(102);

  // Update the position of the shape
  xpos = xpos + ( xspeed * xdirection );
  ypos = ypos + ( yspeed * ydirection );

  // Test to see if the shape exceeds the boundaries of the screen
  // If it does, reverse its direction by multiplying by -1
  if (xpos > width-radius || xpos < radius) {
    xdirection *= -1;
  }
  if (ypos > height-radius || ypos < radius) {
    ydirection *= -1;
  }

  // Draw the shape
  circle(xpos, ypos, radius*2);
}

```

## Repeating Lines

```

void setup() {
  size(800, 600);
  background(255);
  for (int lineX = 25; lineX <= width; lineX += 25) {
    line(lineX, 0, lineX, height);
  }
}

```

## A Chess Board

```
int gridSize = 50;

void setup() {
  size(400, 400);
  background(255);
  for (int h = 0; h < height; h += gridSize) {
    for (int w = 0; w < width; w += gridSize) {
      if ((h+w) % 20 == 0) {
        fill(255);
      } else {
        fill(0);
      }
      noStroke();
      square(w, h, gridSize);
    }
  }
}
```

## Things to Try

1. Copy these codes and try changing the values. What happens?
2. If you don't understand anything in the code just ask!
3. Add comments to explain what you think each part of the code does.