

The background is a dark gray with a complex, abstract pattern of white and light gray lines, dots, and geometric shapes. These elements are scattered across the frame, creating a sense of movement and complexity. The lines vary in thickness and direction, some forming loops or spirals, while others are straight and intersecting. Small dots and triangles are also visible, adding to the intricate design.

Collaborative Processing

Part 3
October 2016

Load and display images

The same way float is a type that can contain numbers, PImage is a type that can contain bitmap images, and PShape can contain vector images.

Loading JPG, PNG, GIF, TIF, TGA

```
// Declare a PImage variable
PImage catPhoto;

// Load an image into the variable
catPhoto = loadImage("cat.png");

// Display the image
image(catPhoto, 100, 100);
```

Loading SVG

```
// Declare a PShape variable
PShape logo;

// Load a vector image into the variable
logo = loadShape("logo.svg");

// Display the vector image
shape(logo, 200, 200);
```

Load and display images

To add an image to your Processing sketch you have two options:

1) drag and drop the image on top of your sketch window

or

2) use the "sketch/Add file..." menu option

A "data" folder will be created inside your sketch folder, and the file will be placed inside.

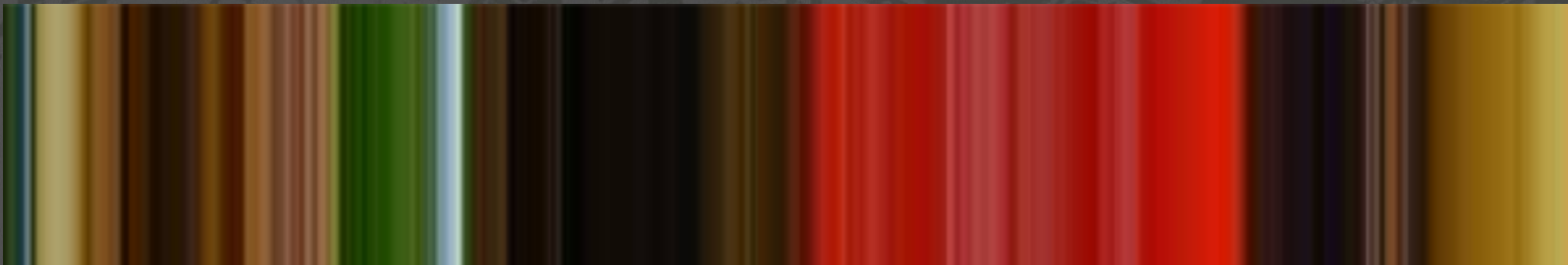
Right:	<code>loadShape("myfile.svg");</code>
Wrong:	<code>loadShape("data/myfile.svg");</code>

Exercise: write a program that loads an image once, then uses a for loop to display it 5 times on each animation frame.

Read image pixel color using .get()

```
// Use colors coming from an image to set the stroke color
PImage img;
size(600, 200);
// load a random image from a website
img = loadImage("http://lorempixel.com/600/600/#.png");
// cover the screen with vertical lines
for (int x=0; x<width; x=x+1) {
  // read the color of a pixel from the image
  color c = img.get(x, 300);
  stroke(c);
  line(x, 0, x, height);
}
```

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Read image pixel color using .get()

```
// Use colors coming from an image to control the sizes of circles
PImage img;
size(1200, 200);
background(#4c4c4c);
img = loadImage("http://lorempixel.com/1200/200/#.png");
for (int x=50; x<width-50; x=x+1) {
  color c = img.get(x, 100);
  float sz = brightness(c) / 4;
  ellipse(x, 100, sz, sz);
}
save("result.png");
```

