

Image Gallery

What are we aiming for?

A program that will load images from the internet, and then let us go to the source image on the net.

Why?

So we can learn about opening internet pages from processing, recap buttons, arrays and image loading.

Steps to make this app:

1. Introduce the `link()` function - how to open web pages from processing.
2. Loading images from the internet.
3. Recap of arrays and lists.
4. Add in buttons.

1: Introducing the link() function.

`link()` opens the address that pass it on a browser.

Note: you need the full address in the form of a string - therefore between two " and you need the start "`http://www.google.com`" works "`google.com`" doesn't.

1. Make a new program - start the file name: Lesson3Images_link
2. Enter the following code, and give it a try:

```
void draw() {} //need this for user input
void mouseReleased() {
  link("https://www.google.ie");
}
```

3. Customise the function so that you open a different website.
4. If you have time: open a different web page depending on what mouse button you press.

Extra task:

- Enter text from the user and then, when they click the mouse, open up that link.

2: Loading images from the net.

We have done this before in the movieGoogler.

Remember what you need to show an image in processing?

- An image variable. (`PImage`)
 - Load an external image into that variable. (Using `loadImage()` function)
 - Show that image variable on the screen. (Using `image()` function)
1. Find an image online - get the URL of that image: on google right click on image → view image.

- a. The line should end in .jpg, .png or similar.
2. Make a new program - file names starts with Lesson3Images_WebImage
3. Use the three steps above to show your image from the web in processing.
 - a. The image variable should be at the top of the program.
 - b. Load the image in `void setup()`.
 - c. Show the image in `void draw()`.
4. And more than one image - change what image is shown depending on user input.

3: Recap of arrays and using for loops.

Arrays and Lists are ways of storing multiple items. Below is an `String` array variable of image links:

```
String[] imagesURLs = {
    "https://i.imgur.com/JoF5FNd.jpg",
    "https://i.imgur.com/fQpmoXE.jpg"
};
```

We can then use while loops to go through these lists and do something to each item in it. But it is easier to use for loops. Below we load the image urls into a list of image objects:

```
ArrayList<PImage> images;
void setup() {
    images= new ArrayList<PImage>();
    for (int i = 0; i< imagesURLs.length; i++) {
        PImage img = loadImage(imagesURLs[i]);
        img.resize(80, 100);
        images.add(img);
    }
}
```

And then we can go through each of the images in the list of images and show them to the screen:

```
for (int i=0; i < images.size(); i++) {
    image(images.get(i), 100+ 100*i, 100);
}
```

Add this code into your program to show all multiple images from the web in your app!
Add in more image URLs and see what happens!