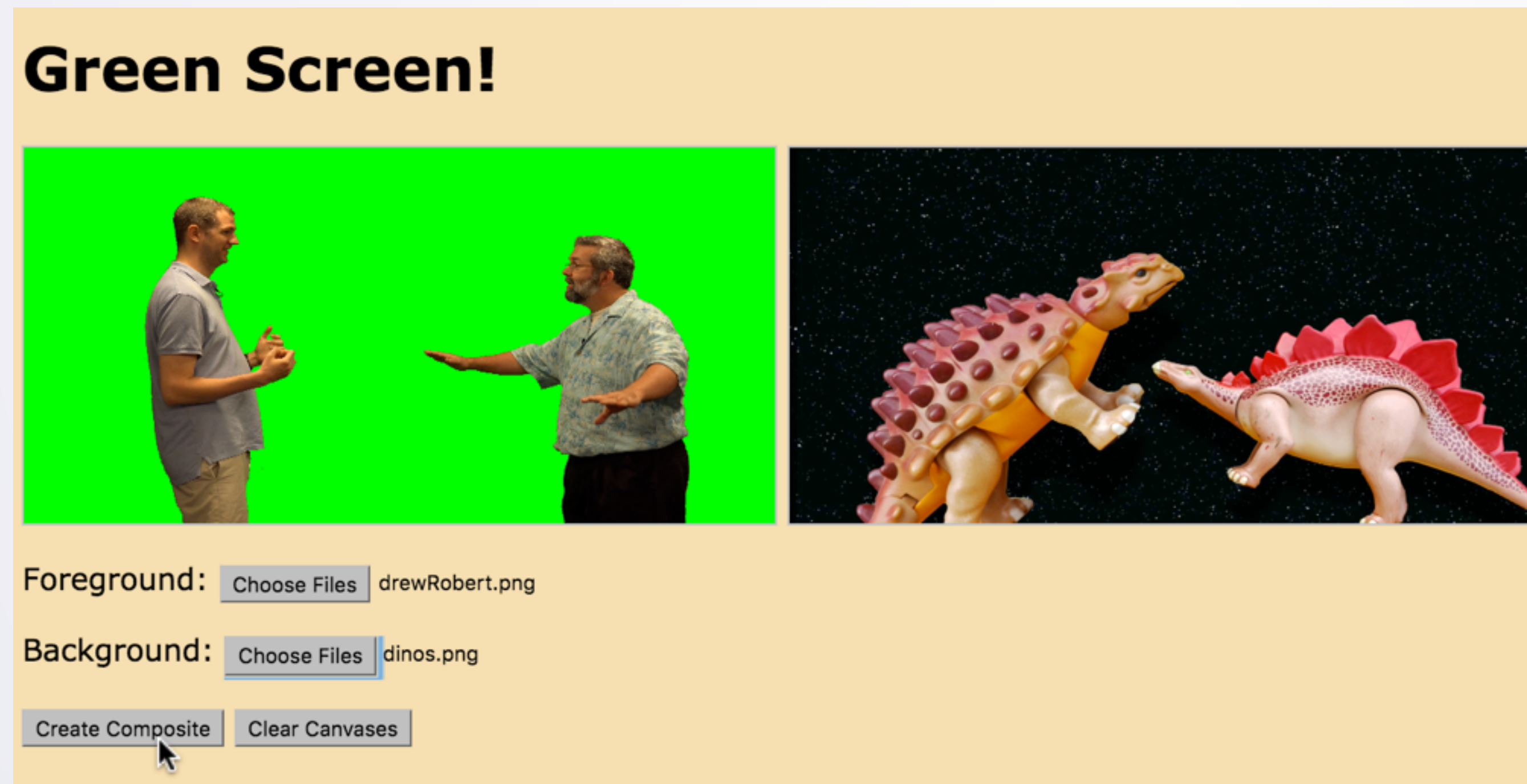# Green Screen Web Page

Moving to CodePen

Green Screen

- Use HTML elements to create an interactive green screen page

  - Load images — create composite!

Green Screen

- Use HTML elements to create an interactive green screen page
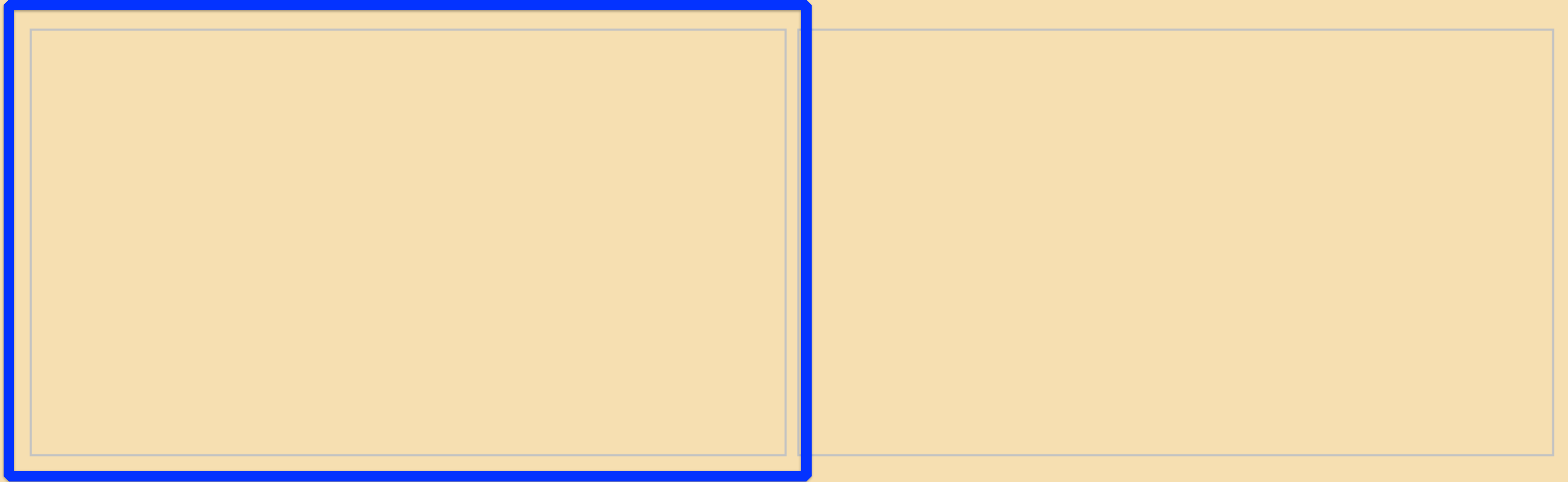
  - Load images — create composite!

Moving Code from DLTP to CodePen

Steps:

- Create input elements to select files

- Use event handlers

- Create functions to load images

- Create global variables for uploaded images

- Use drawTo method, instead of print

- Protect your code with checks

Green Screen Web Page

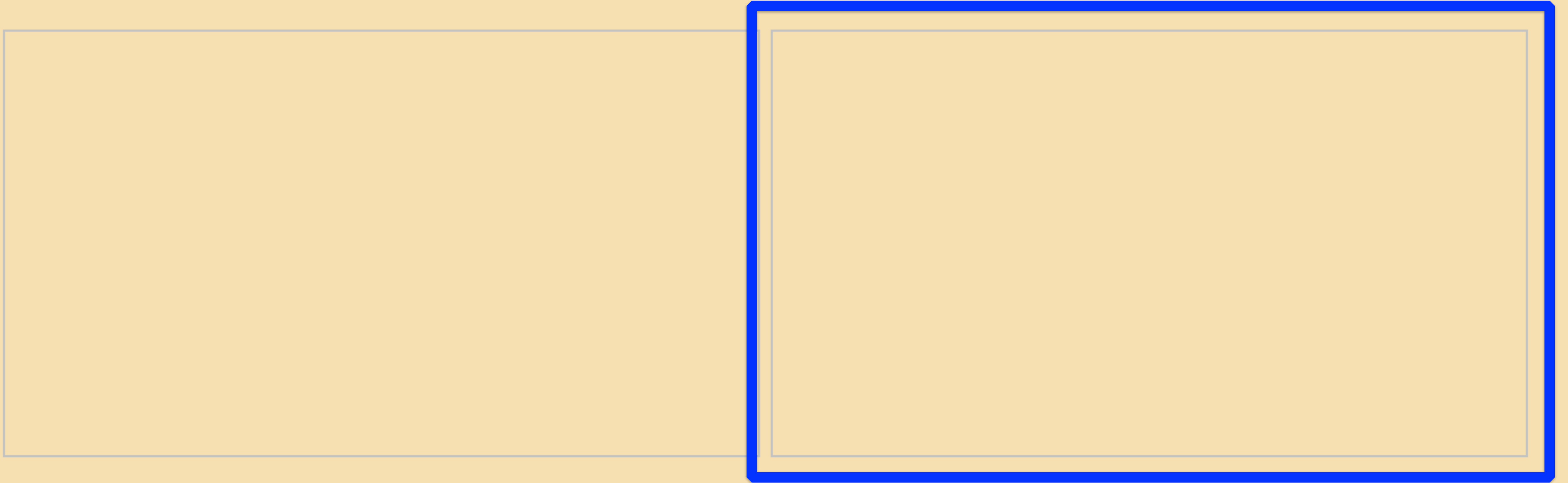Foreground: Choose Files drewRobert.png

Background: Choose Files dinos.png

Create Composite   Clear Canvases

Green Screen Web Page

Foreground: Choose Files drewRobert.png

Background: Choose Files dinos.png

Create Composite   Clear Canvases

Green Screen Web Page

Foreground: [Choose Files] drewRobert.png

Background: [Choose Files] dinos.png

[Create Composite] [Clear Canvases]

HTML File Elements


```
Foreground: <input type="file"

multiple="false" accept="image/*" id="fgfile"

onchange="loadForegroundImage()" >


Background: <input type="file"

multiple="false" accept="image/*" id="bgfile"

onchange="loadBackgroundImage()" >
```

HTML File Elements

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```

JavaScript to Load Images

```javascript
var fgImage = null;

function loadForegroundImage() {
  var imgFile =
document.getElementById("fgfile");
  fgImage = new SimpleImage(imgFile);
  var canvas =
document.getElementById("fgcan");
  fgImage.drawTo(canvas);
}
```

Green Screen Preliminaries

Green Screen Preliminaries

```
function greenScreen() {
  if (fgImage == null || ! fgImage.complete()) {
    alert("foreground not loaded");
    return;
  }
  if (bgImage == null || ! bgImage.complete()) {
    alert("background not loaded");
  }
  clearCanvas();
  […]
}
```

Green Screen Preliminaries

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Green Screen Programming
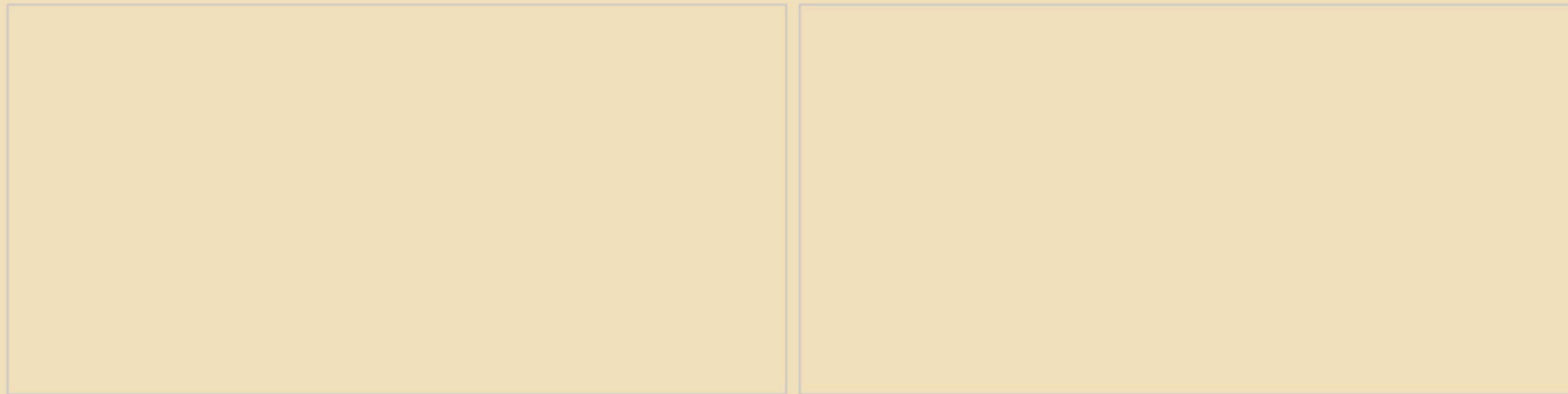
```
var output =
        new SimpleImage(fgImage.getWidth(),
                        fgImage.getHeight());
    for(var pixel of fgImage.values()) {
        var x = pixel.getX();
        var y = pixel.getY();
        if (pixel.getGreen() > greenThreshold) {
            var bgPixel = bgImage.getPixel(x, y);
            output.setPixel(x, y, bgPixel);
        }
        else {
            output.setPixel(x,y,pixel);
        }
    }
```

Finishing Green Screen

- Draw the resulting image to canvas

  - use .drawTo(canvas) to display image

  - clear canvases before drawing

Finishing Green Screen