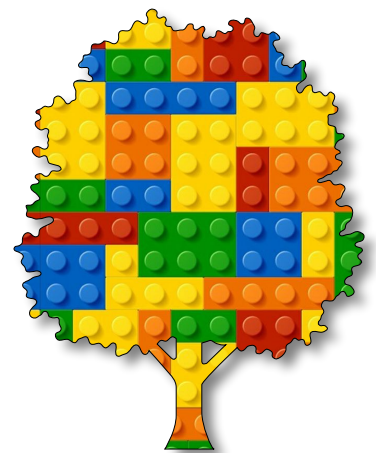


Algorithmic Art

Module F

Unit #8

local storage





Module F Unit #8 local storage

Sketch F8.1	sliders
Sketch F8.2	storing data
Sketch F8.3	getting the data
Sketch F8.4	replacing the values



Introduction

This may or may not be that useful for **algorithmic art**, but it does have potential other uses and applications. Either way, it is worth being aware of if you suddenly have a creative or interactive idea where you might need this feature.

You can store information and data on your machine and in your browser, calling it up at a later date.



Sketch F8.1 sliders

By sliding the **sliders**, we can change the background.

```
let rSlider
let gSlider
let bSlider

function setup()
{
  createCanvas(400, 400)
  rSlider = createSlider(0, 255, 0)
  gSlider = createSlider(0, 255, 0)
  bSlider = createSlider(0, 255, 0)
}

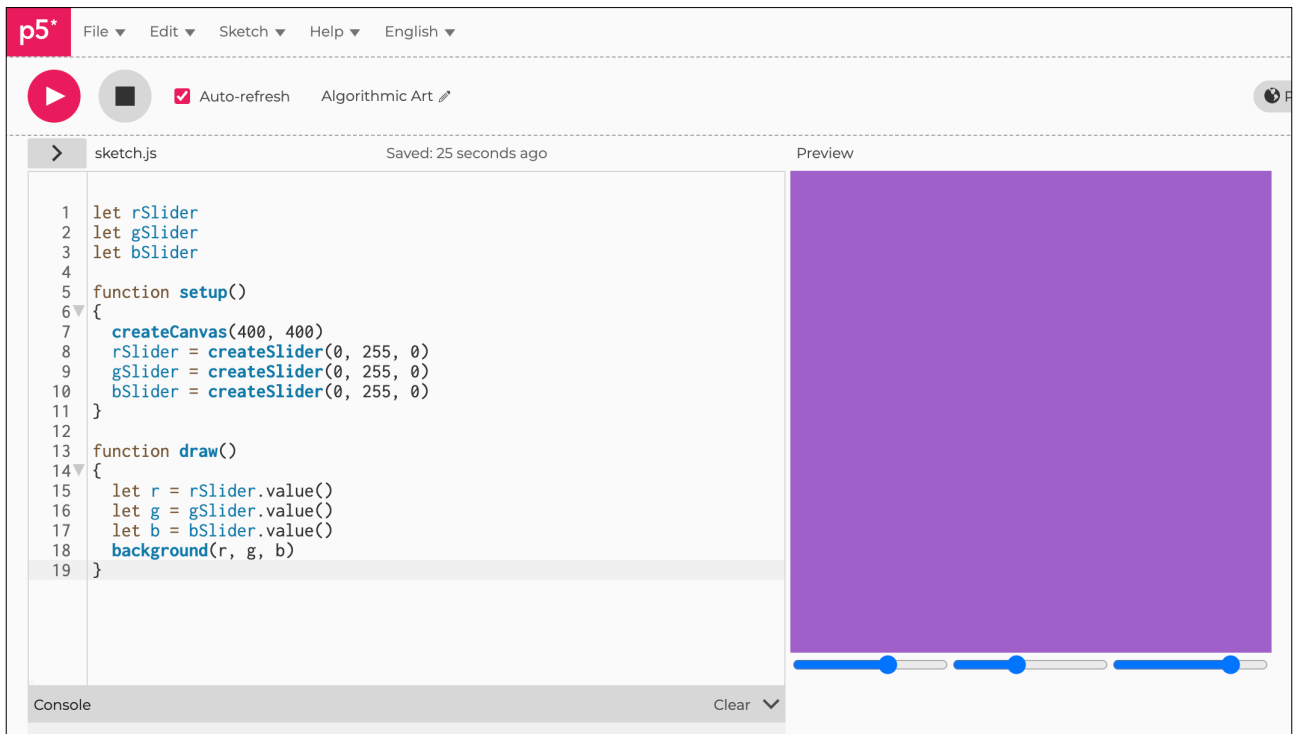
function draw()
{
  let r = rSlider.value()
  let g = gSlider.value()
  let b = bSlider.value()
  background(r, g, b)
}
```



Notes

This is jumping straight in, but we have covered sliders already. Three sliders at the bottom for **red**, **green**, and **blue**. When you create your colour and refresh the canvas, you go straight back to the default settings.

Figure F8.1





Sketch F8.2 storing data

We cannot save these settings when we close down the programme and then reopen it later on the same machine. Yet we can if we use two `p5.js` functions. They do exactly as they say on the tin.

We create our own function called `storedData()`. Inside that function, we store the value of the red slider. We will call the variable `redValue` for the red slider colour setting for now; we will do all the slider colours later.

```
let rSlider
let gSlider
let bSlider

function setup()
{
  createCanvas(400, 400)
  rSlider = createSlider(0, 255, 0)
  gSlider = createSlider(0, 255, 0)
  bSlider = createSlider(0, 255, 0)
  rSlider.changed(storeData)
}

function storeData()
{
  storeItem('redValue', rSlider.value())
}

function draw()
{
  let r = rSlider.value()
  let g = gSlider.value()
  let b = bSlider.value()
  background(r, g, b)
}
```

Notes

This stores the data for the red slider, but when you refresh the page, it simply reverts back to the default settings. We need to get the stored value. The key functions are:

`storeItem()` which, as it suggests, stores the data we want stored
`getItem()` this retrieves the said data



Sketch F8.3 getting the data

The `redValue` has been saved. Now we add the `getItem()` function. We only want to get the value if a value exists, hence the conditional `!==` if statement.

```
let rSlider
let gSlider
let bSlider

function setup()
{
  createCanvas(400, 400)
  rSlider = createSlider(0, 255, 0)
  let r = getItem('redValue')
  if (r !== null)
  {
    rSlider.value(r)
  }
  gSlider = createSlider(0, 255, 0)
  bSlider = createSlider(0, 255, 0)
  rSlider.changed(storeData)
}

function storeData()
{
  storeItem('redValue', rSlider.value())
}

function draw()
{
  let r = rSlider.value()
  let g = gSlider.value()
  let b = bSlider.value()
  background(r, g, b)
}
```



Notes

Save the sketch, now change the red slider (make sure that auto-refresh is off), and close the sketch; you can even close the browser. Open it up again and you should have the same red value for the slider and background.



Challenge

You can check by changing the other sliders and you will see the difference!



Sketch F8.4 replacing all the values

Putting the other values for the background colour into the local storage.

```
let rSlider
let gSlider
let bSlider

function setup()
{
  createCanvas(400, 400)
  // get the red value
  rSlider = createSlider(0, 255, 0)
  let r = getItem('redValue')
  if (r !== null)
  {
    rSlider.value(r)
  }
  // get the green value
  gSlider = createSlider(0, 255, 0)
  let g = getItem('greenValue')
  if (g !== null)
  {
    gSlider.value(g)
  }
  // get the blue value
  bSlider = createSlider(0, 255, 0)
  let b = getItem('blueValue')
  if (b !== null)
  {
    bSlider.value(b)
  }
  // store the values of the red, green and blue
  rSlider.changed(storeData)
  gSlider.changed(storeData)
  bSlider.changed(storeData)
}
```

```
function storeData()
{
  storeItem('redValue', rSlider.value())
  storeItem('greenValue', gSlider.value())
  storeItem('blueValue', bSlider.value())
}

function draw()
{
  let r = rSlider.value()
  let g = gSlider.value()
  let b = bSlider.value()
  background(r, g, b)
}
```



Notes

I've put in the `//` to help break up the code into the three separate colour sliders. Now when you refresh it will save all three slider positions.

Figure F8.4

