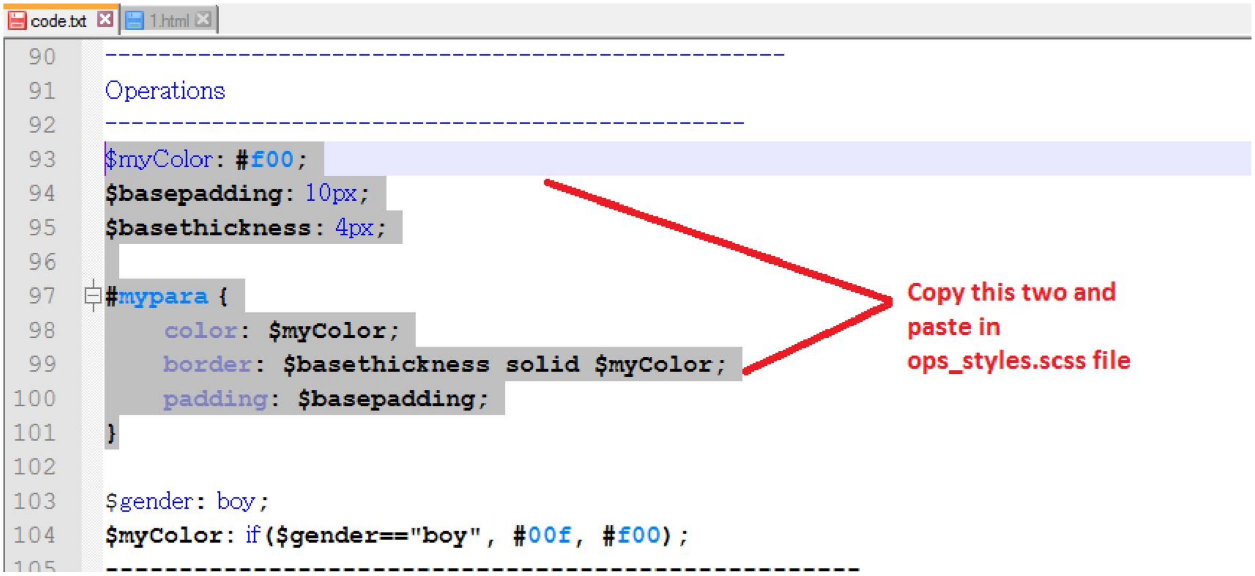
Using operators

One of the things missing from standard CSS is the ability to use mathematical operations and other logic control inside your style sheets, but Sass fixes this problem by letting you use math and other kinds of operations inside your styles. So let's take a look at how this works. You can see here in the code I've scrolled down to the section on Operations, and I'm going ahead and open up my ops_styles.scss file here. And let's go ahead and copy the example over.

Let’s start:-

1. Open code.txt file and copy some code for operator.



```
---------------------------------------------------
Operations
------------------------------------------------
$myColor: #f00;
$basepadding: 10px;
$basethickness: 4px;

#mypara {
     color: $myColor;
     border: $basethickness solid $myColor;
     padding: $basepadding;
}

$gender: boy;
$myColor: if($gender=="boy", #00f, #f00);
---------------------------------------------------------
```

Copy this two and paste in ops_styles.scss file

2. Open ops_styles.scss from exercise directory and paste above code and save it.

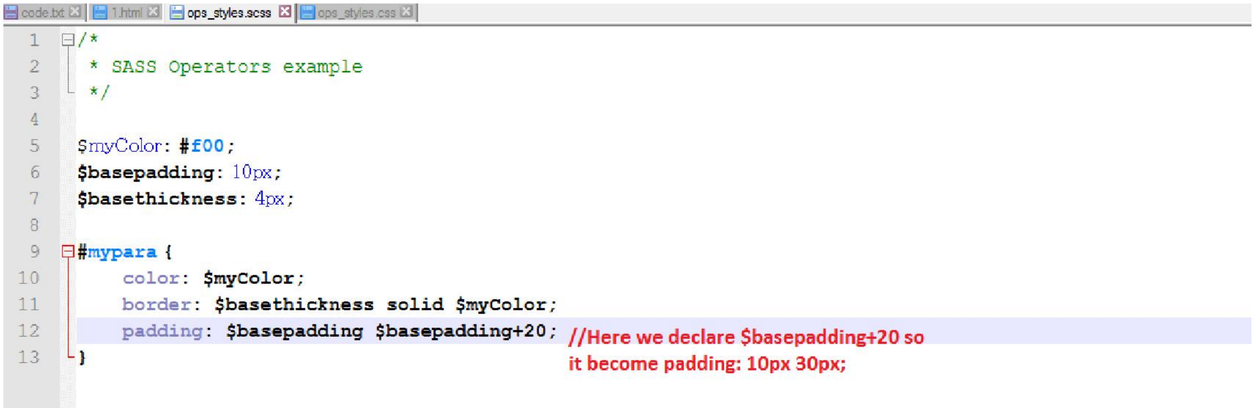
In above file we have couple of variable called $mycolor which is red
And have $basepadding and $basethickness each of which set padding 10px and 4px respectively.

Then have a rule #mypara that user sass variable to access css properties,

3. Here we use sass variables we discus before in variable section. But the deferent is sass understand math operator.

4. So, for example

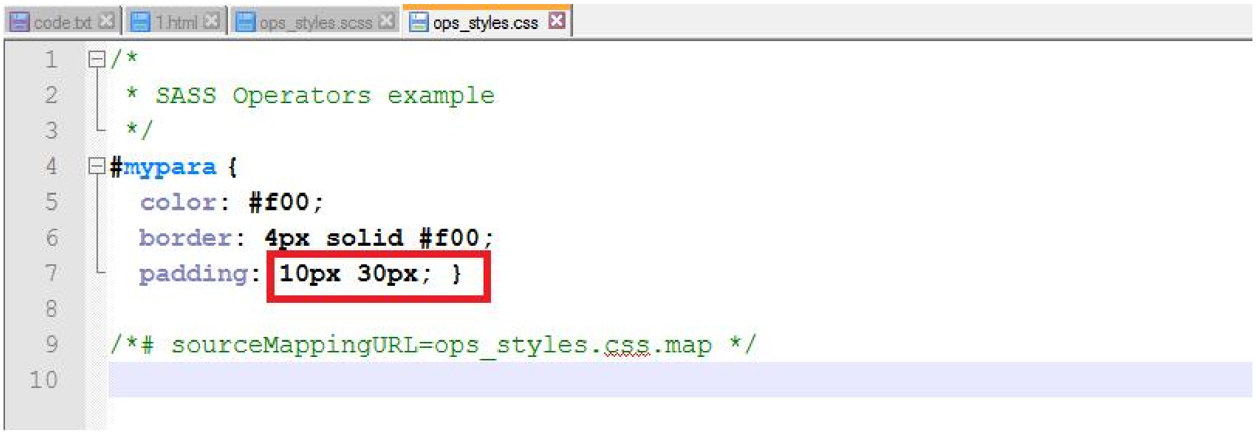
If I wanted to, say, does an operation on the base padding I could do, let's see, I could say basepadding, and I could say basepadding+20. Now, Sass is smart enough to realize that the base padding is 10 pixels, and I declared the unit of pixels here, so when it sees the +20, it's going to know that what I really mean is plus 20 pixels. So I'm going to save this, and let's bring up the generated CSS, so you can see what happened.



```
/*
 * SASS Operators example
 */

$myColor: #f00;
$basepadding: 10px;
$basethickness: 4px;

#mypara {
    color: $myColor;
    border: $basethickness solid $myColor;
    padding: $basepadding $basepadding+20;
}
```

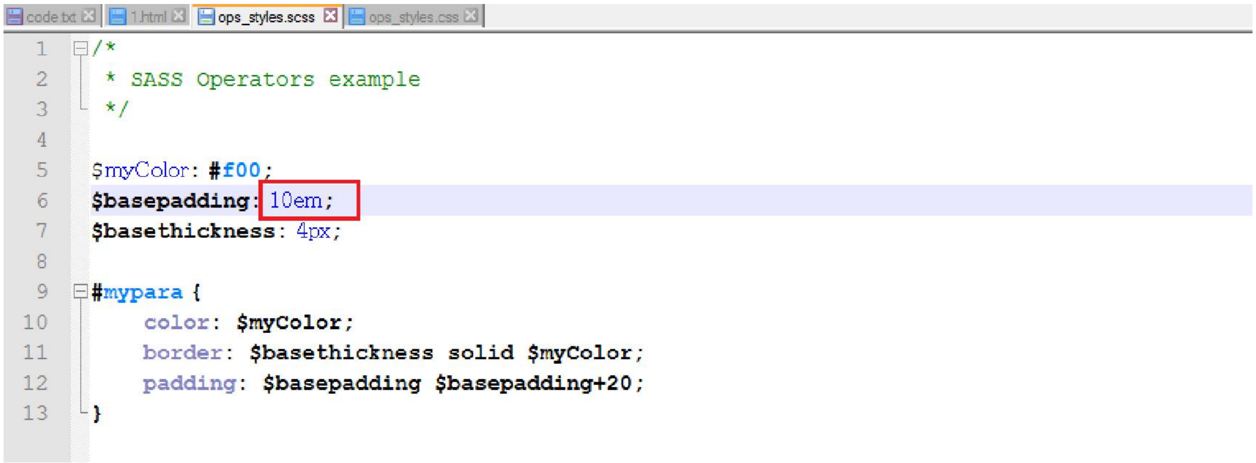
//Here we declare $basepadding+20 so it become padding: 10px 30px;

Now open ops_styles.css and see what happened.



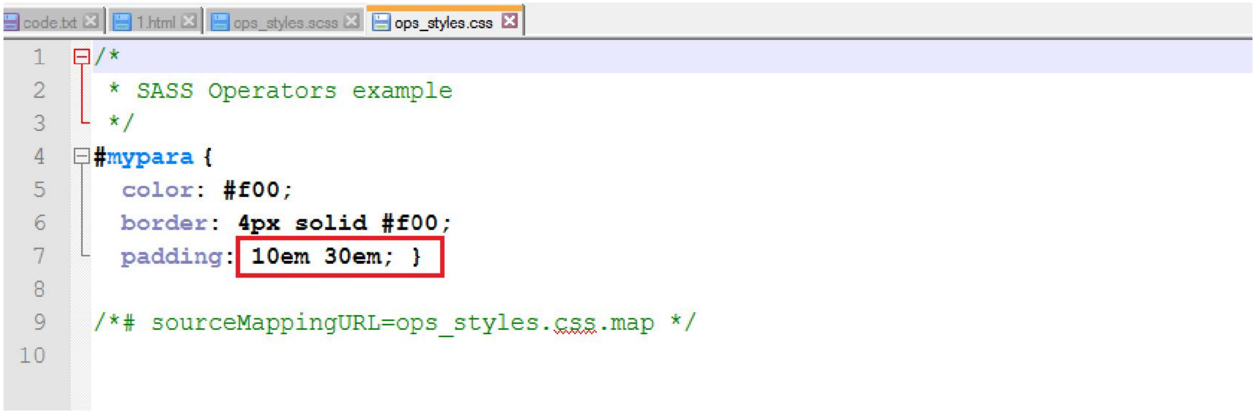
```
/*
 * SASS Operators example
 */
#mypara {
  color: #f00;
  border: 4px solid #f00;
  padding: 10px 30px; }

/*# sourceMappingURL=ops_styles.css.map */
```

If I change 10px to 10em so it’s converted in em.



```
/*
 * SASS Operators example
 */

$myColor: #f00;
$basepadding: 10em;
$basethickness: 4px;

#mypara {
    color: $myColor;
    border: $basethickness solid $myColor;
    padding: $basepadding $basepadding+20;
}
```

Open ops_styles.css



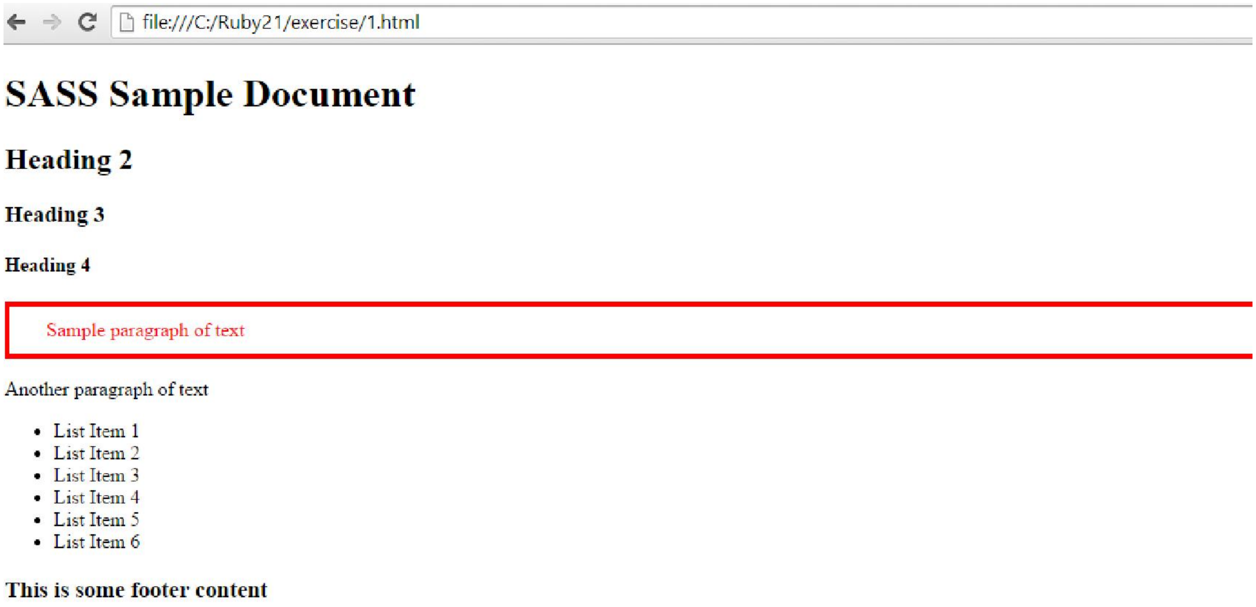
```
/*
 * SASS Operators example
 */
#mypara {
  color: #f00;
  border: 4px solid #f00;
  padding: 10em 30em; }

/*# sourceMappingURL=ops_styles.css.map */
```

Let’s back with to px

5. Now edit 1.html file in add ops_styles.css.

   <link rel="stylesheet" href="ops_styles.css" type="text/css">

6. Open 1.html file in your browser



SASS Sample Document

Heading 2

Heading 3

Heading 4

Sample paragraph of text

Another paragraph of text

- List Item 1
- List Item 2
- List Item 3
- List Item 4
- List Item 5
- List Item 6

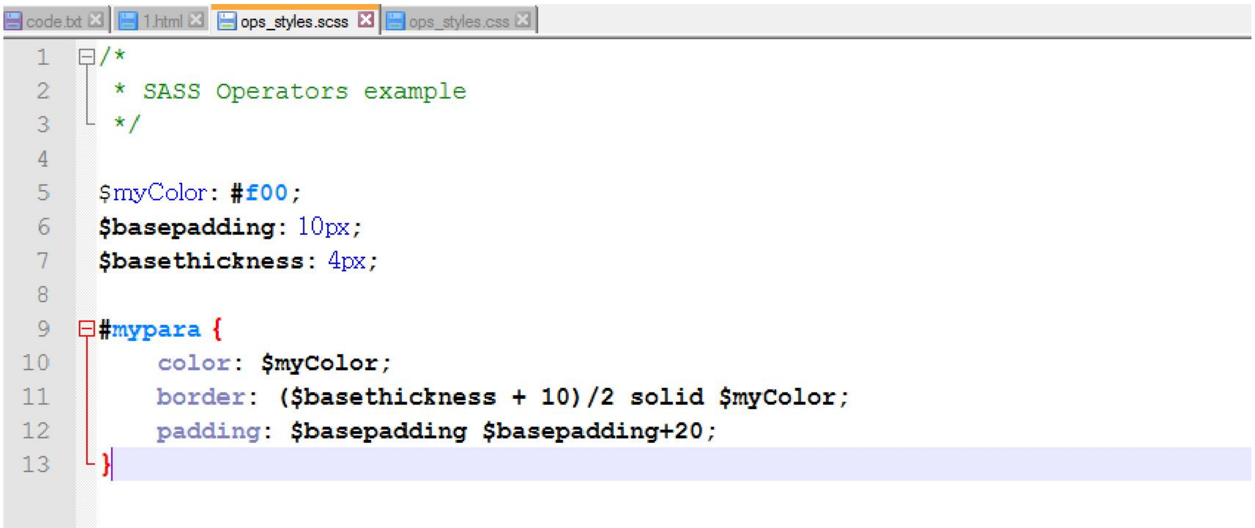
This is some footer content

Here you can see that there is a border around paragraph and font color is red.

And have some padding on left side along with basepadding and border thickness is 4px.

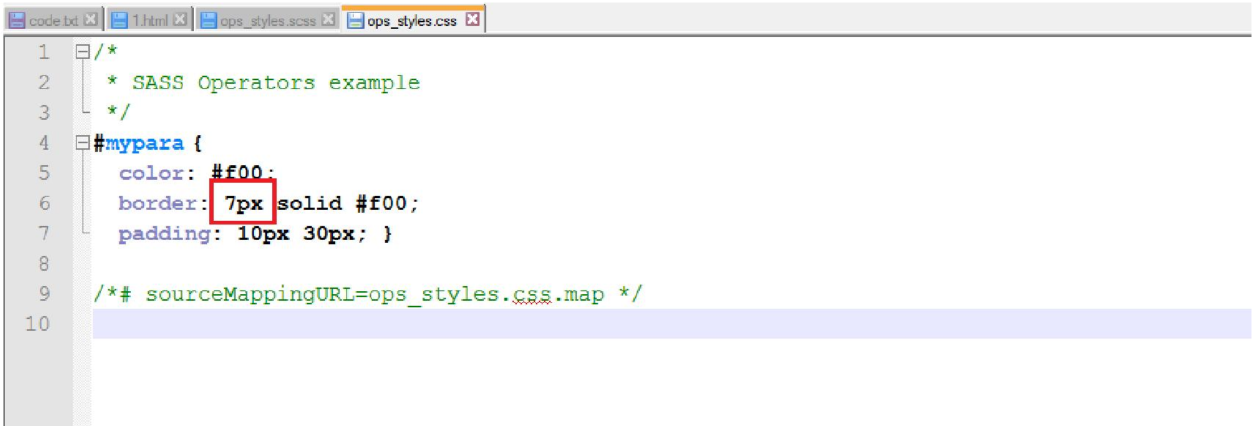
7. So back here in the code, let's do some more math. This time let's do some math on the base thickness

   I can do things like use parenthesis to group operators together. So, for example, I can say border is basethickness, let's see, plus -- let's choose a nice round number -- 10, and then I could say divide by 2. So, border thickness becomes 7(4+10/2).



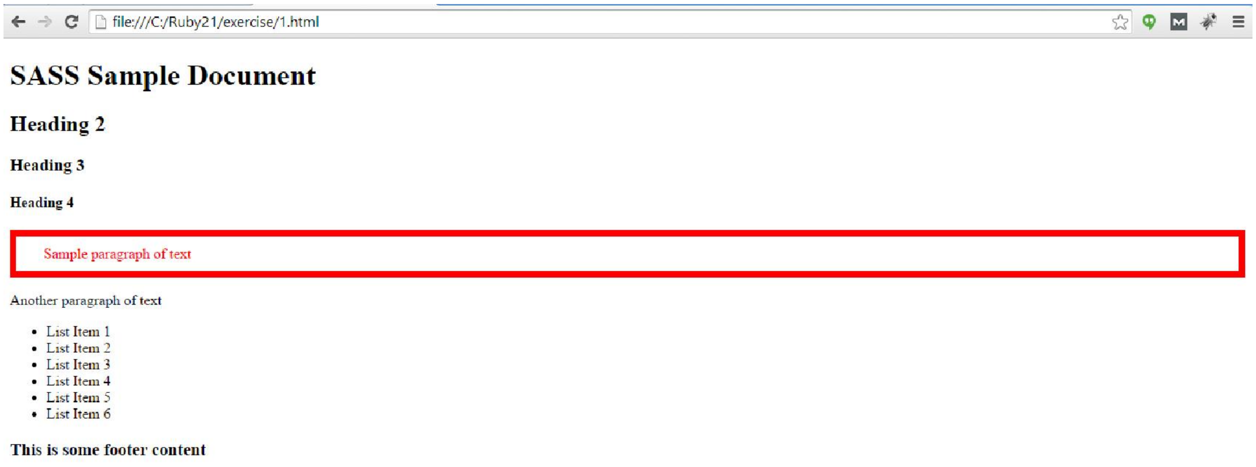
```
/*
 * SASS Operators example
 */

$myColor: #f00;
$basepadding: 10px;
$basethickness: 4px;

#mypara {
    color: $myColor;
    border: ($basethickness + 10)/2 solid $myColor;
    padding: $basepadding $basepadding+20;
}
```

Open ops_styles.css



```
/*
 * SASS Operators example
 */
#mypara {
  color: #f00;
  border: 7px solid #f00;
  padding: 10px 30px; }

/*# sourceMappingURL=ops_styles.css.map */
```

8. Now go to your browser and see border thickness is become 4px to 7px.



SASS Sample Document

Heading 2

Heading 3

Heading 4

Sample paragraph of text

Another paragraph of text

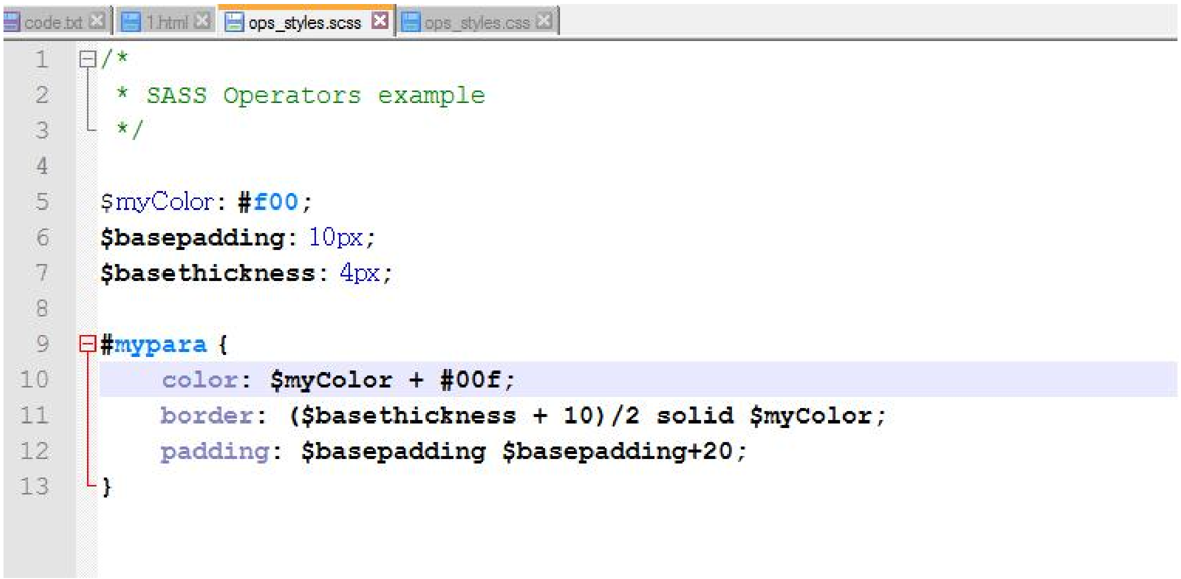
- List Item 1
- List Item 2
- List Item 3
- List Item 4
- List Item 5
- List Item 6

This is some footer content

9. Let’s back to the code and do one thing. We are going to color math.
10. So, in this case we have font color red in color: $mycolor variable I’m going to add another color blue.

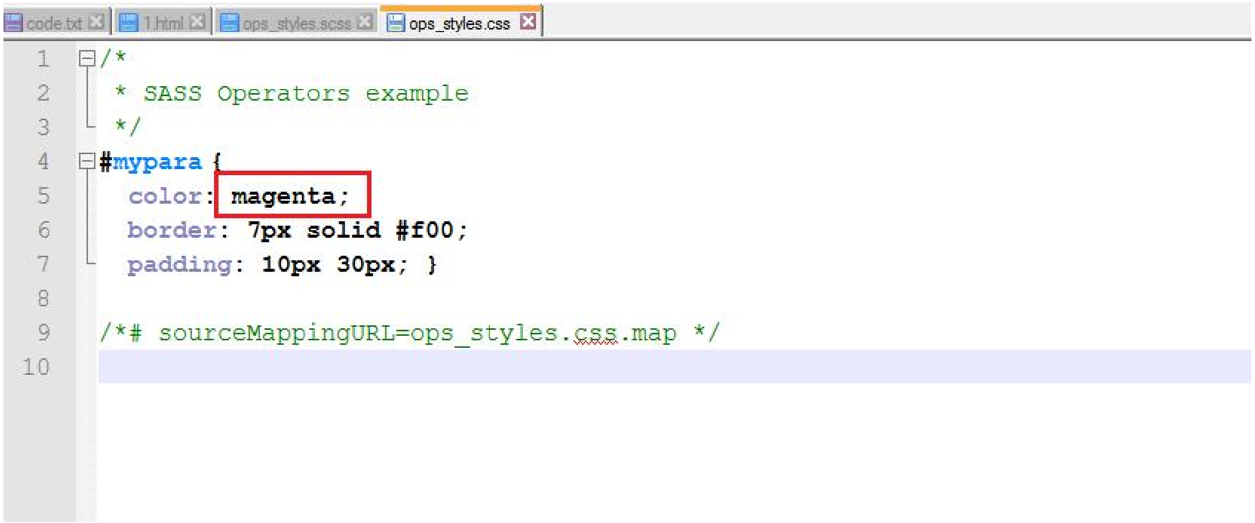
    So, sass is so smart to understand color combination by adding second color.

    Color: #myColor + #00f; so it becomes color magenta (red + blue).



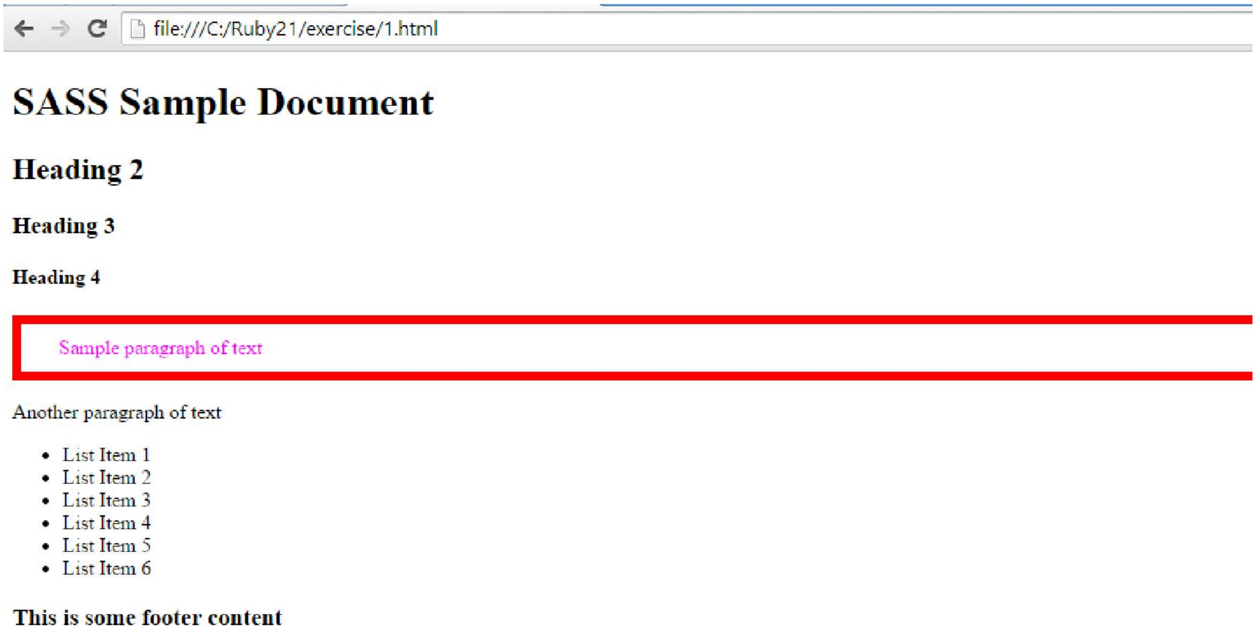
```
/*
 * SASS Operators example
 */

$myColor: #f00;
$basepadding: 10px;
$basethickness: 4px;

#mypara {
    color: $myColor + #00f;
    border: ($basethickness + 10)/2 solid $myColor;
    padding: $basepadding $basepadding+20;
}
```

Open ops_styles.css



```
/*
 * SASS Operators example
 */
#mypara {
  color: magenta;
  border: 7px solid #f00;
  padding: 10px 30px; }

/*# sourceMappingURL=ops_styles.css.map */
```

11.Go to your browser n\and refresh the page.



SASS Sample Document

Heading 2

Heading 3

Heading 4

Sample paragraph of text

Another paragraph of text

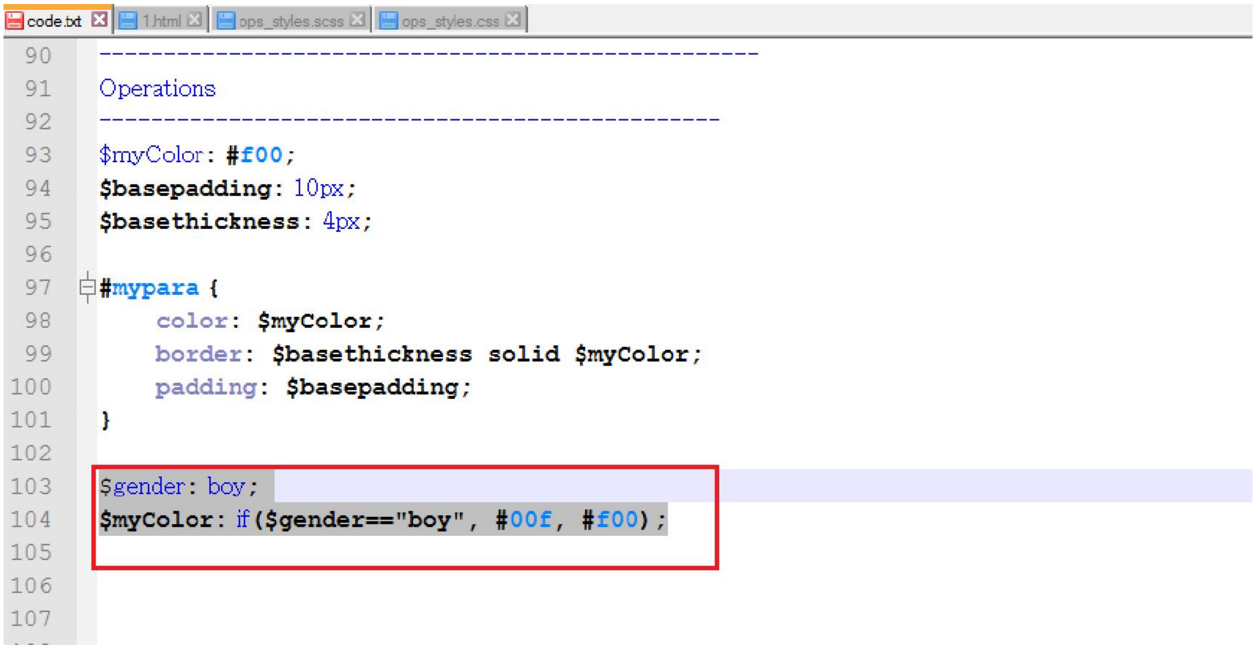
- List Item 1
- List Item 2
- List Item 3
- List Item 4
- List Item 5
- List Item 6

This is some footer content

Here you can see that font color is displaying in red to magenta color.

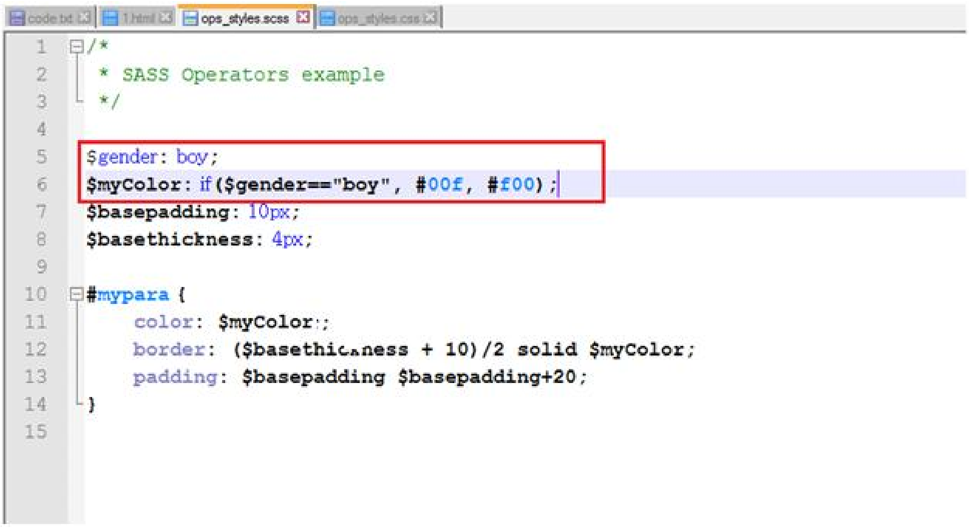
12. One last thing to show. Sass is provides a really cool conditional operator if condition.

13. Let’s copy two lines from code.txt file.



```
--------------------------------------------------
Operations
-----------------------------------------------
$myColor: #f00;
$basepadding: 10px;
$basethickness: 4px;

#mypara {
    color: $myColor;
    border: $basethickness solid $myColor;
    padding: $basepadding;
}

$gender: boy;
$myColor: if($gender=="boy", #00f, #f00);
```

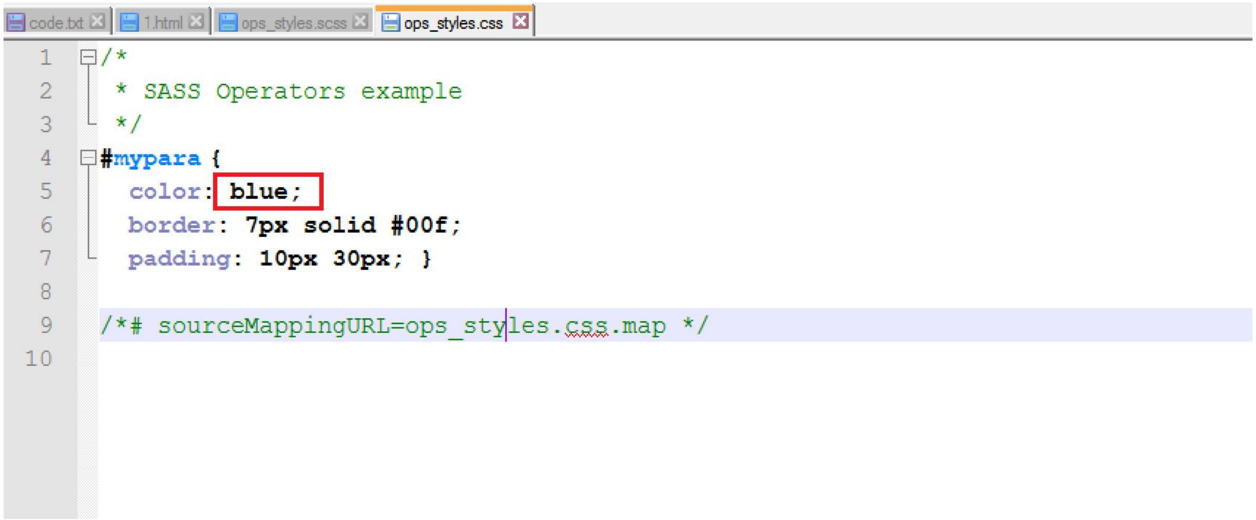
14. And paste in ops_styles.scss file and let's replace the color definition with this line.



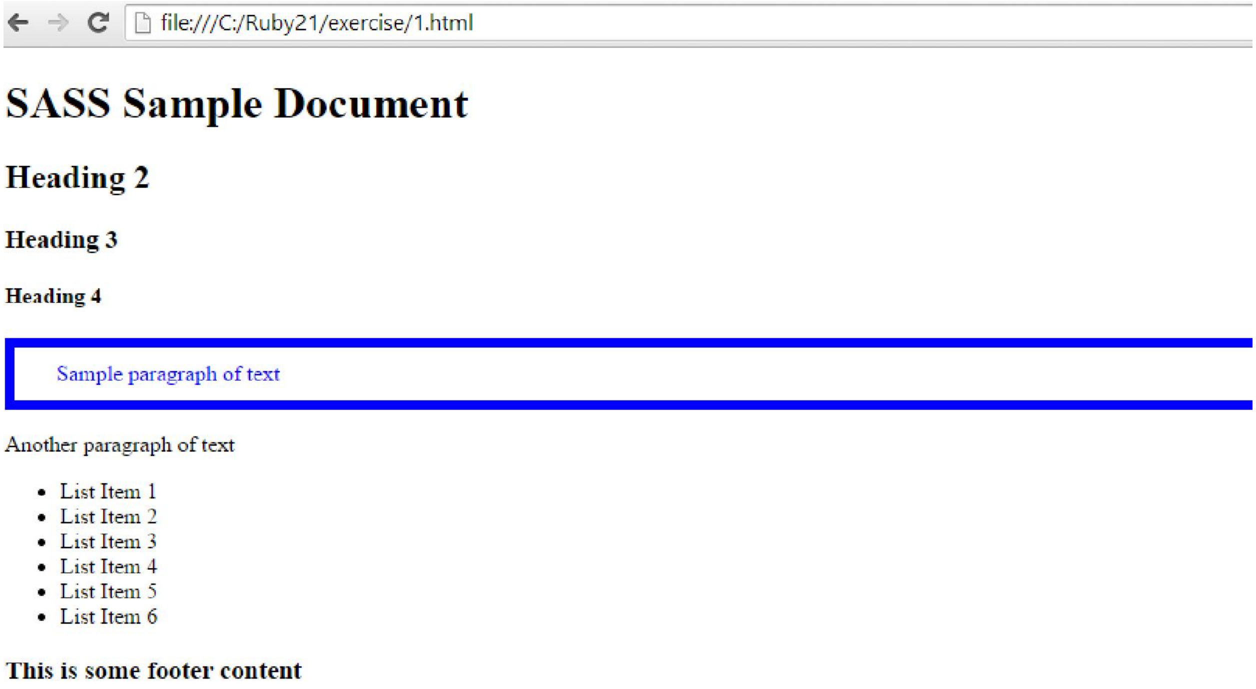
```
/*
 * SASS Operators example
 */

$gender: boy;
$myColor: if($gender=="boy", #00f, #f00);
$basepadding: 10px;
$basethickness: 4px;

#mypara {
     color: $myColor:;
     border: ($basethickness + 10)/2 solid $myColor;
     padding: $basepadding $basepadding+20;
}
```

15. So what I’m going to do here is I have variable name $gender and I give it value “**boy”** and Then I have **$myColor** variable and I give it condition is if gender is boy then apply color blue(**#00f**) otherwise red**(#f00)**.

16. Save scss file and go to generated ops_styles.css and see color is blue because we set gender value boy.



```
/*
 * SASS Operators example
 */
#mypara {
  color: blue;
  border: 7px solid #00f;
  padding: 10px 30px; }

/*# sourceMappingURL=ops_styles.css.map */
```



SASS Sample Document

Heading 2

Heading 3

Heading 4

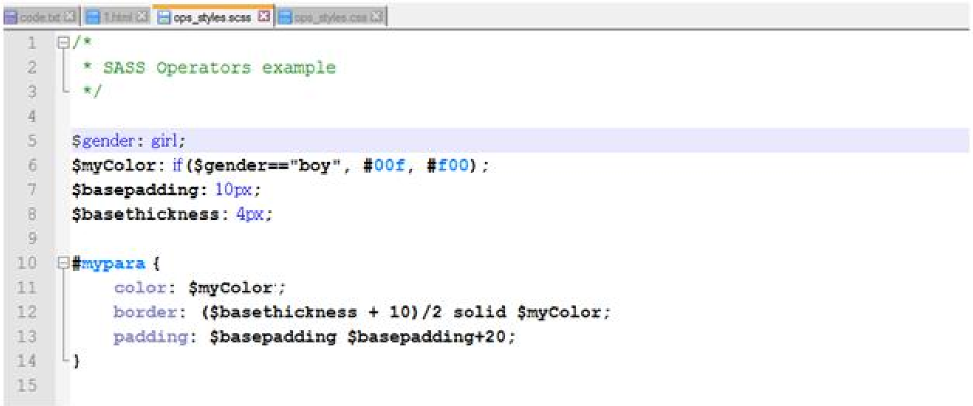
Sample paragraph of text

Another paragraph of text

- List Item 1
- List Item 2
- List Item 3
- List Item 4
- List Item 5
- List Item 6

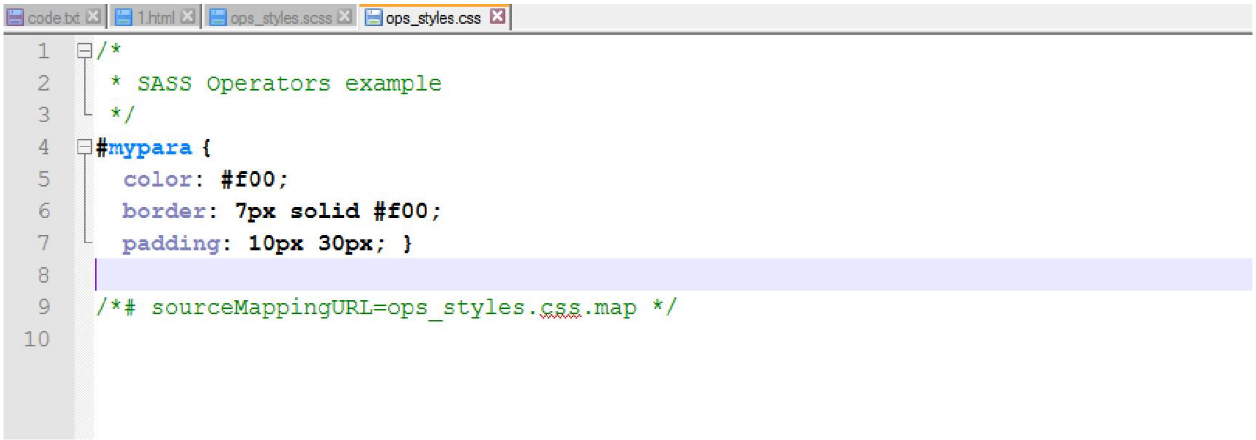
This is some footer content

17.Let’s change value to girl and see the result.



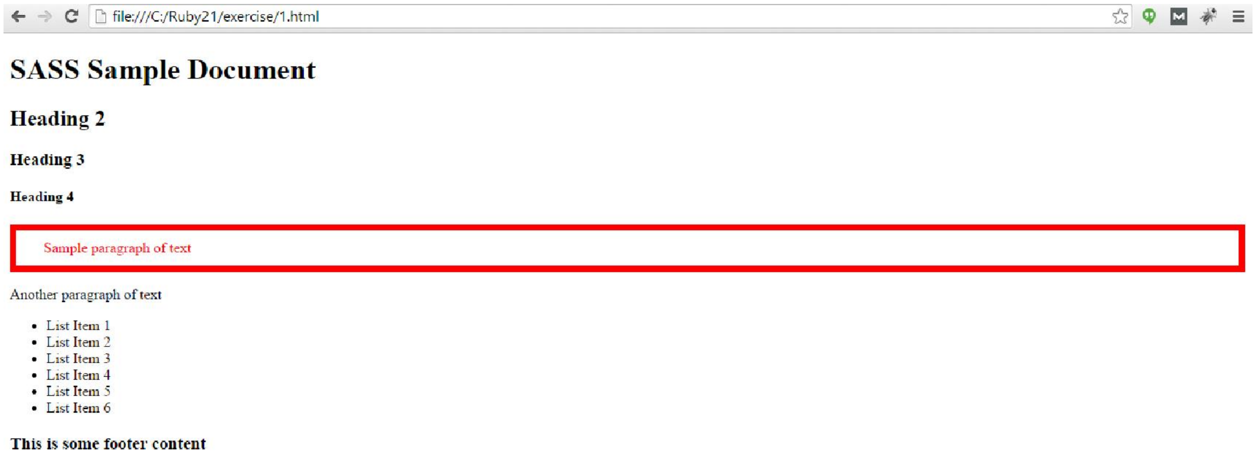
```
/*
 * SASS Operators example
 */

$gender: girl;
$myColor: if($gender=="boy", #00f, #f00);
$basepadding: 10px;
$basethickness: 4px;

#mypara {
    color: $myColor;
    border: ($basethickness + 10)/2 solid $myColor;
    padding: $basepadding $basepadding+20;
}
```

Open ops_styles.css



```
/*
 * SASS Operators example
 */
#mypara {
  color: #f00;
  border: 7px solid #f00;
  padding: 10px 30px; }

/*# sourceMappingURL=ops_styles.css.map */
```

18. Go to your browser and refresh page and see the result.



SASS Sample Document

Heading 2

Heading 3

Heading 4

Sample paragraph of text

Another paragraph of text

- List Item 1
- List Item 2
- List Item 3
- List Item 4
- List Item 5
- List Item 6

This is some footer content