

# Advanced Web

# Tutorial 1

Editor – Brackets / Visual Code

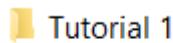
## Goals

Create a website showcasing the following techniques

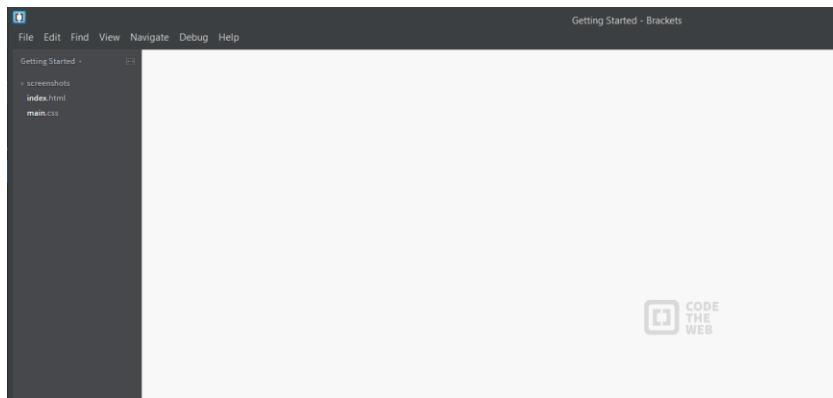
- Liquid Layout
- Z-index
- Visibility

## Website

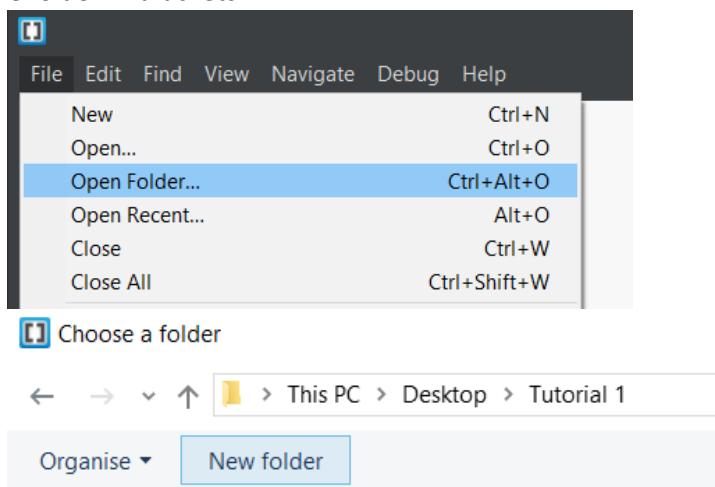
- Create a folder on the desktop called tutorial 1



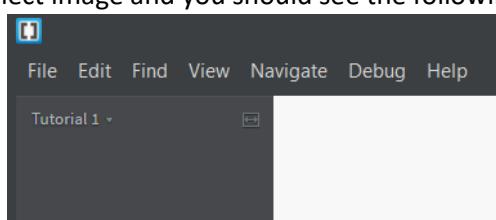
- Open Brackets



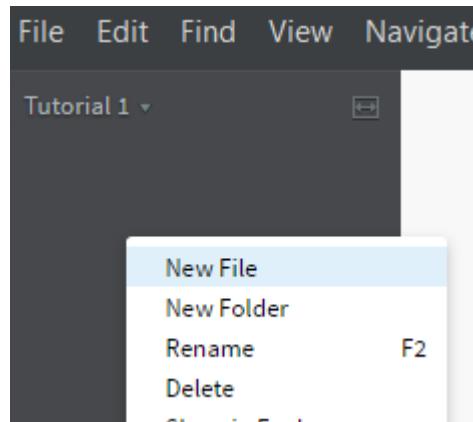
- Open the folder in brackets



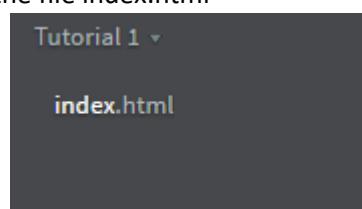
- Click Select image and you should see the following folder structure:



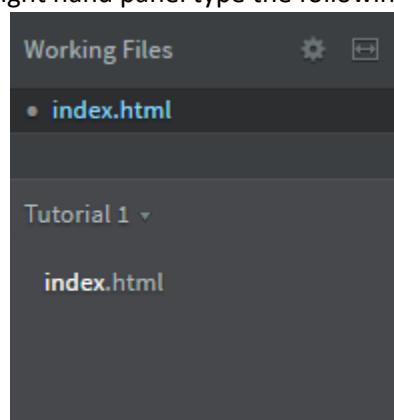
- Next we need to create a html file. Right click below the tutorial 1 folder and select new File



- Name the file index.html

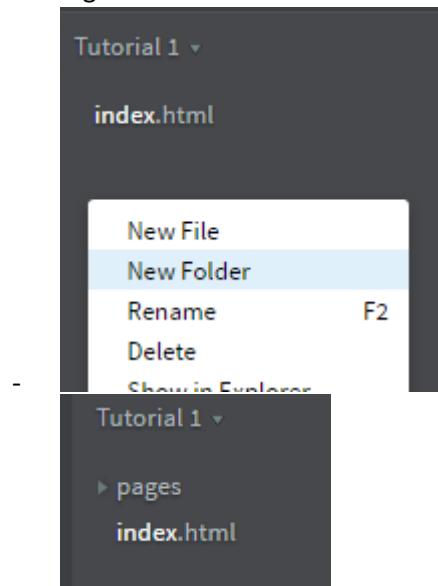


- In the right hand panel type the following



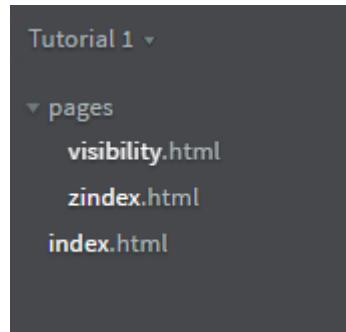
```
1  <!DOCTYPE html>
2  <html>
3  <head>
4      <title></title>
5      <style type="text/css">
6      </style>
7  </head>
8  <body>
9  </body>
10 </html>|
```

- The above is the structure of any webpage, and we can duplicate this page to build any other page.
- Right click under index.html and create new folder, call it pages



- Open the pages folder and create 2 new files:

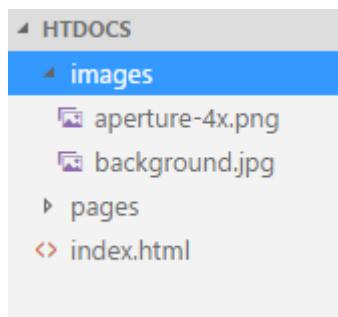
- o Zindex.html
  - o Visibility.html



- Next, copy the base code into each of the files (zindex.html and visibility.html) and save each file (ctrl+s or file → save)

## Index Page

Download the additional files from the site. Move the images into a new folder called images, it will look like this:



Now, within the body tags, add the following code and content. Lorem Ipsum text can be found at

<https://lipsum.com/feed/html>

```

8  <body class="bodyImage">
9    <nav>
10   
11
12   <div id="nav1" class="vis">
13     <ul>
14       <li>
15         <a href="index.html">Index</a>
16       </li>
17       <li>
18         <a href="pages/visibility.html">Visibility</a>
19       </li>
20       <li>
21         <a href="pages/zindex.html">Z-Index</a>
22       </li>
23     </ul>
24   </div>
25 </nav>
26 <div id="content">
27   <hr>
28   <p>Lorem ipsum dolor sit amet consectetur adipisicing elit. Nisi similique, dolorem eveniet cum dignissimos
29   provident aut et assumenda velit porro temporibus ducimus blanditiis eum aliquam laudantium amet magnam
30   doloribus rem optio nihil quae beatae facilis! Non animi in aut exercitationem, consequuntur quo voluptas
31   distinctio voluptatibus. Quas facilis inventore facere dolores quo expedita officiis in, optio harum alias.
32   Commodo exercitationem expedita aut molestias? Commodo quis, natus officia repellendus fugit iure iusto
33   laboriosam reprehenderit enim, exercitationem eveniet voluptatem quidem voluptatibus inventore alias saepe illo
34   rerum incidentum repellat. Optio tempore incidentum quas ducimus odio hic culpa harum animi! Explicabo blanditiis
35   veniam error fuga!</p>
36 <div class="im">
37   <h3>More Content</h3>
38   <p>Lorem ipsum dolor sit, amet consectetur adipisicing elit. Autem amet tempora ipsum, laboriosam eligendi
39   debitis nihil minus quidem. Iste illo hic maxime est ea magnam quae adipisci iusto ad sed excepturi
40   reprehenderit quas laborum, voluptatum dolor fugiat animi dicta commodi suscipit. Consequatur assumenda
41   eius blanditiis possimus. Officia animi exercitationem reprehenderit saepe quisquam hic sit, esse a ut
42   accusantium possimus similique corrupti minima fugiat minus nam perferendis impedit sequi beatae libero
43   error consectetur vitae. Ratione quo provident laboriosam est incidentum ullam, placeat delectus
44   exercitationem nisi voluptate eligendi at dolorum sapiente sequi molestias consequuntur unde blanditiis.
45   Commodo odio repellat expedita numquam doloribus!
46 </div>
47 </div>
48
49   <script>
50   </script>
51 </body>

```

Once this is in, save the page and load it, you should see the following:



- [Index](#)
- [Visibility](#)
- [Z-Index](#)

Lorem ipsum dolor sit amet consectetur adipisicing elit. Nisi similique, dolorem eveniet cum dignissimos provident aut et assumenda velit porro temporibus ducimus blanditiis eum aliquam laudantium amet magnam doloribus rem optio nihil quae beatae facilis! Non animi in aut exercitationem, consequuntur quo voluptas distinctio voluptatibus. Quas facilis inventore facere dolores quo expedita officiis in, optio harum alias. Commodo exercitationem expedita aut molestias? Commodo quis, natus officia repellendus fugit iure iusto laboriosam reprehenderit enim, exercitationem eveniet voluptatem quidem voluptatibus inventore alias saepe illo rerum incidentum repellat. Optio tempore incidentum quas ducimus odio hic culpa harum animi! Explicabo blanditiis veniam error fuga!

#### More Content

Lorem ipsum dolor sit, amet consectetur adipisicing elit. Autem amet tempora ipsum, laboriosam eligendi debitis nihil minus quidem. Iste illo hic maxime est ea magnam quae adipisci iusto ad sed excepturi reprehenderit quas laborum, voluptatum dolor fugiat animi dicta commodi suscipit. Consequatur assumenda eius blanditiis possimus. Officia animi exercitationem reprehenderit saepe quisquam hic sit, esse a ut accusantium possimus similique corrupti minima fugiat minus nam perferendis impedit sequi beatae libero error consectetur vitae. Ratione quo provident laboriosam est incidentum ullam, placeat delectus exercitationem nisi voluptate eligendi at dolorum sapiente sequi molestias consequuntur unde blanditiis. Commodo odio repellat expedita numquam doloribus!

Next we will add the styles to the site.

```

5   <style type="text/css">
6     #navMenuImg{cursor: pointer;}
7     .spin{
8       -webkit-transform: rotate(270deg);
9       transform: rotate(270deg);
10      -webkit-transition-duration: 1s; /* Safari */
11      transition-duration: 1s;
12    }
13    .resetSpin{
14      -webkit-transform: rotate(0deg);
15      transform: rotate(0deg);
16      -webkit-transition-duration: 1s; /* Safari */
17      transition-duration: 1s;
18    }
19    #nav1{width: 40%; border-radius: 15px; margin: 0 auto; float: right;}
20    .vis{display: none;}
21    .nvis{display: visible; }
22    .bodyImage{background-color: #rgb(24, 126, 209);}
23    #nav1 ul li{float: left; list-style:none; margin-right: 1em;}
24    #nav1 ul li a{font-size: 2em; text-decoration: none; color:#white;}
25    #nav1 ul li a:hover{color:#rgb(192, 188, 188);}
26    #content{clear: both; color: #white; margin-top: 40px;}
27    #content p{ font-size: 1.4em;}
28    .im{background-image: url('images/background.jpg'); background-size: contain; background-position: center; width: 80%; height: 500px; border-radius: 15px; padding: 10px;}
29    .imgLink{display: block; margin: 0 auto;}
30
31  </style>

```

Once applied the page should look like the following:



Now we will add some javascript to the page to allow for the navigation to work.

```

<script>
    var menuOpen = false;
    var content2Open = false;

    function exMenu(){
        console.log("exMenu");
        var i = document.getElementById("navMenuImg");
        var n = document.getElementById("nav1");
        if(!menuOpen){
            i.setAttribute("class","spin");
            n.setAttribute("class","nvis");
            menuOpen=true;
        } else{
            i.setAttribute("class","resetSpin");
            n.setAttribute("class","vis");
            menuOpen=false;
        }
    }

</script>

```

Once the javascript has been applied, the image of the aperture is a clickable item on the page. Once clicked, it will open the navigation section of the page.



This page is designed to reintroduce basic html, showcase some css and javascript.

The index page is now complete. From here we move onto the visibility page.

## Visibility Page

- Open the visibility page in brackets, you should see the following:

```
1  <!DOCTYPE html>
2  <html>
3  <head>
4      <title></title>
5      <style type="text/css">
6      </style>
7  </head>
8  <body>
9  </body>
10 </html>|
```

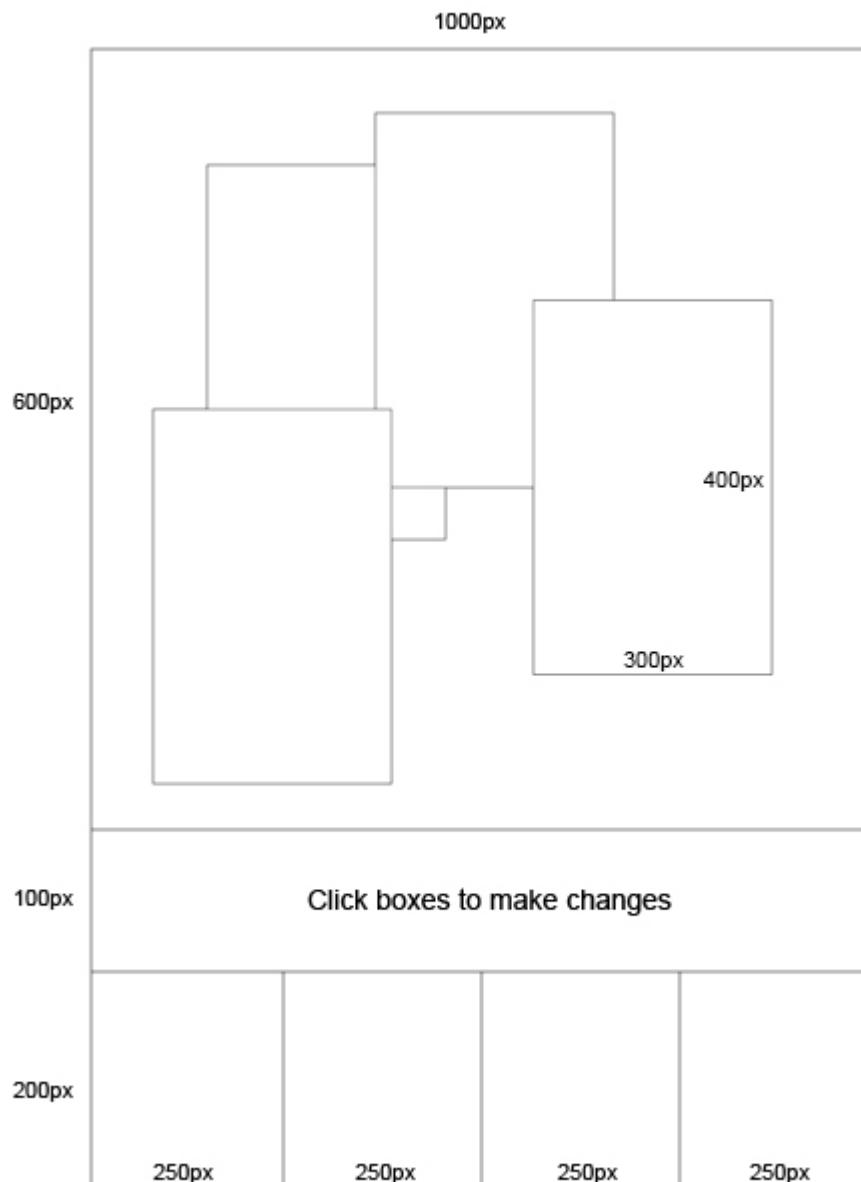
- Add visibility page to the title syntax and add a very simple link back to the index page.
- The code should look like this:

```
1  <!DOCTYPE html>
2  <html>
3  <head>
4      <title>Visibility Page</title>
5      <style type="text/css">
6      </style>
7  </head>
8  <body>
9      <p><a href="../index.html">Index Page</a></p>
10 </body>
11 </html>
```

- If you save the page and load it, you should now be able to click between the index page and visibility page.

Visibility will be controlled by Javascript, it will turn a normal div box into a clickable element on the page and then we will have code applied to each javascript call to make other div boxes appear and disappear.

The page design will look like this:



To start with, examine the design. We have 3 rows, in the top section we have rectangles that will sit together in the same space, overlapping each other. The middle row will be information and the third row will be the buttons needed to change the visibility of the rectangles in the top row.

So to start with; type up the following div code

```
1  <!DOCTYPE html>
2  <html>
3  |   <head>
4  |       <title>Visibility Page</title>
5  |       <style type="text/css">
6  |
7  |   </style>
8  | </head>
9  | <body>
10 |     <p><a href="../index.html">Index Page</a></p>
11 |     <div id="container">
12 |         <div id="topSection">
13 |             <div id="box1" class="topBox"></div><!-- eo box1 -->
14 |             <div id="box2" class="topBox"></div><!-- eo box2 -->
15 |             <div id="box3" class="topBox"></div><!-- eo box3 -->
16 |             <div id="box4" class="topBox"></div><!-- eo box4 -->
17 |         </div><!-- eo topSection -->
18 |         <div id="bottomSection">
19 |             <div id="bTop">Click boxes to make changes</div><!-- eo bTop -->
20 |             <div id="bBottom">
21 |                 <div id="colBox1" class="bottomBox" onClick="lightgreen()"></div><!-- eo colBox1 -->
22 |                 <div id="colBox2" class="bottomBox" onClick="sandybrown()"></div><!-- eo colBox2 -->
23 |                 <div id="colBox3" class="bottomBox" onClick="skyblue()"></div><!-- eo colBox3 -->
24 |                 <div id="colBox4" class="bottomBox" onClick="teal()"></div><!-- eo colBox4 -->
25 |             </div><!-- bBottom -->
26 |         </div><!-- eo bottomSection -->
27 |     </div><!-- eo container -->
28 | </body>
29 </html>
```

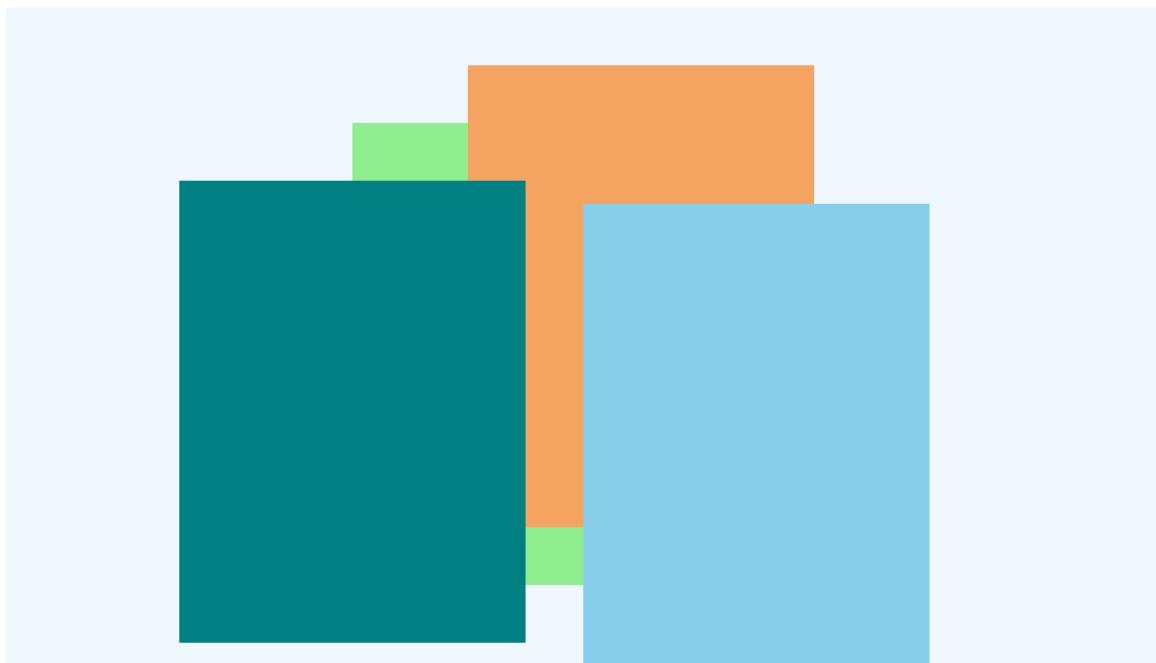
Notice that each div has an identifier, which is the id tag. The onClick code is Javascript, now this is all prep work, so for example if you save and load the page, you will see nothing, we have neither javascript or css code in place. Now, we put in the css code to view the div boxes.

Add the following css

```
1  <!DOCTYPE html>
2  <html>
3  <head>
4      <title>Visibility Page</title>
5      <style type="text/css">
6      #container {
7          width:1000px;
8          height:900px;
9          margin:0 auto; /* this will make it go center on the viewport */
10         background-color:lime;
11     }
12     /* Top section styles go here */
13
14     .topBox{width: 300px; height:400px; position: absolute;}
15
16     #topSection {
17         width:1000px;
18         height:600px;
19         background-color:aliceblue;
20         position:relative;
21     }
22     #box1 {
23         z-index:1;
24         background-color:lightgreen;
25         top:100px;
26         left:300px;
27     }
28     #box2 {
29         z-index:2;
30         background-color:sandybrown;
31         top:50px;
32         left:400px;
33     }
34     #box3 {
35         z-index:3;
36         background-color:skyblue;
37         top:170px;
38         right:200px;
39     }
40     #box4 {
41         z-index:4;
42         background-color:teal;
43         top:150px;
44         left:150px;
45     }
46     </style>
47     </head>
```

Then save and test, you should see

[Index Page](#)



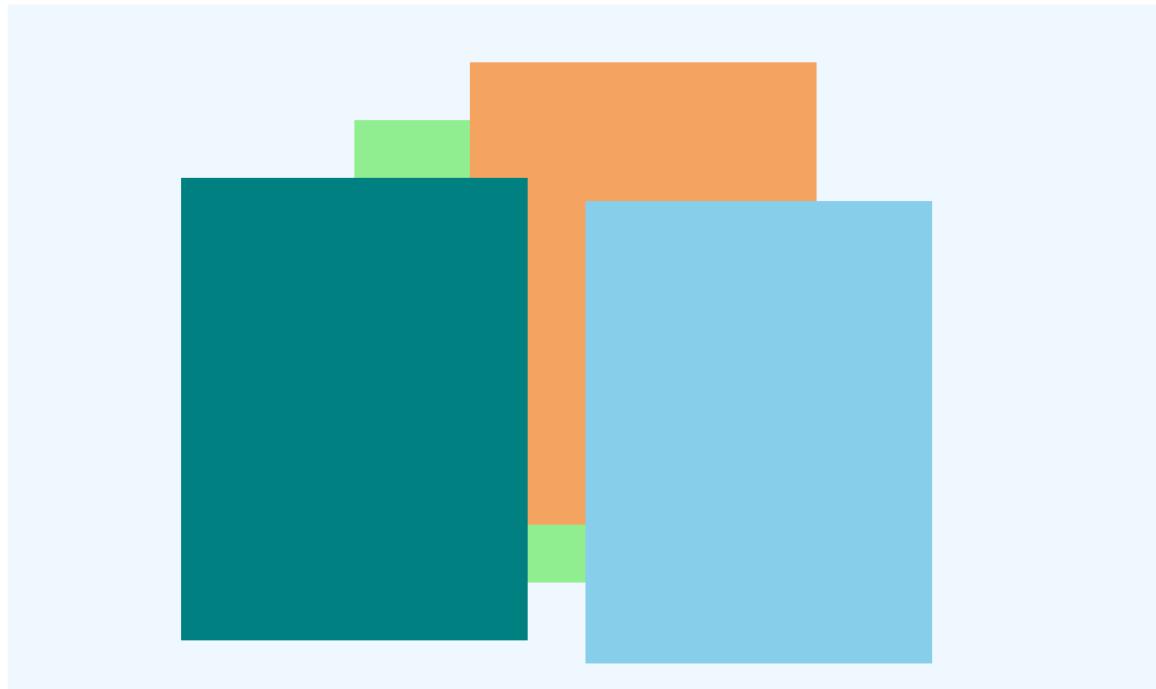
Click boxes to make changes

We have just done the css for the top part, now for the bottom section. Notice all css goes within the `<style></style>` syntax.

```
46      /* Bottom section styles go here */
47      .bottomBox{width: 250px; height: 200px;}
48  ▼      #bottomSection {
49      width:1000px;
50      height:300px;
51      background-color:silver;
52  }
53  ▼      #bTop {
54      width:1000px;
55      height:100px;
56      background-color:ivory;
57      font-family:arial;
58      font-size:40px;
59      text-align:center;
60      line-height:100px;
61  }
62  ▼      #bBottom {
63      width:1000px;
64      height:200px;
65      background-color:midnightblue;
66  }
67  ▼      #colBox1 {
68      float:left;
69      background-color:lightgreen;
70  }
71  ▼      #colBox2 {
72      float:left;
73      background-color:sandybrown;
74  }
75  ▼      #colBox3 {
76      float:left;
77      background-color:skyblue;
78  }
79  ▼      #colBox4 {
80      float:right;
81      background-color:teal;
82  }
83  }
84      </style>
```

Save and test, you should see

[Index Page](#)



Click boxes to make changes



This is the look of the page, now we need to add Javascript to the page to make each section/box click work.

The Javascript is located within the `<head></head>` tags and being placed after the `</style>` tag.

```
<script>
function lightgreen()
{
    if(document.getElementById("box1").style.visibility == "hidden")
    {   // do this if true
        document.getElementById("box1").style.visibility = "visible";
    }
    else
    {   // do this if false
        document.getElementById("box1").style.visibility = "hidden";
    }
}
function sandybrown()
{
    if(document.getElementById("box2").style.visibility == "hidden")
    {   // do this if true
        document.getElementById("box2").style.visibility = "visible";
    }
    else
    {   // do this if false
        document.getElementById("box2").style.visibility = "hidden";
    }
}
function skyblue()
{
    if(document.getElementById("box3").style.visibility == "hidden")
    {   // do this if true
        document.getElementById("box3").style.visibility = "visible";
    }
    else
    {   // do this if false
        document.getElementById("box3").style.visibility = "hidden";
    }
}
function teal()
{
    if(document.getElementById("box4").style.visibility == "hidden")
    {   // do this if true
        document.getElementById("box4").style.visibility = "visible";
    }
    else
    {   // do this if false
        document.getElementById("box4").style.visibility = "hidden";
    }
}
</script>
</head>
```

Now, once that is typed up save and reload the page. It will look exactly the same except this time, you should be able to click on the boxes on the bottom part of the screen and the corresponding box in the top will disappear. If this doesn't happen check to ensure all semi-colons are present and that a missing double quote hasn't occurred.

Now we move onto the Z-index page.

## Z-Index Page

- Open the zindex.html page in brackets, you should see the following:

```
1  <!DOCTYPE html>
2  <html>
3  <head>
4      <title></title>
5      <style type="text/css">
6          </style>
7  </head>
8  <body>
9  </body>
10 </html>
```

- Add the text z-index to the title syntax and add a very simple link back to the index page.
- The code should look like this:

```
1  <!DOCTYPE html>
2  <html>
3  <head>
4      <title>z-index</title>
5      <style type="text/css">
6          </style>
7  </head>
8  <body>
9      <p><a href="../index.html">Index Page</a></p>
10 </body>
11 </html>
```

- If you save the page and load it, you should now be able to click between the index page and z-index page.

The z-index will be controlled by Javascript. When thinking of z-index think of it like layers in photoshop, the higher the number the closer to the viewer. So a z-index of 5 will appear on top of an element with a z-index of 1.

To speed up this section of the tutorial, copy and paste all of the code from visibility to the z-index page, then remove all of the Javascript.

The body code will look like this:

```
87 ▼  <body>
88      <p><a href="../index.html">Index Page</a></p>
89 ▼      <div id="container">
90 ▼          <div id="topSection">
91              <div id="box1" class="topBox"></div><!-- eo box1 -->
92              <div id="box2" class="topBox"></div><!-- eo box2 -->
93              <div id="box3" class="topBox"></div><!-- eo box3 -->
94              <div id="box4" class="topBox"></div><!-- eo box4 -->
95          </div><!-- eo topSection -->
96 ▼          <div id="bottomSection">
97              <div id="bTop">Click boxes to make changes</div><!-- eo bTop -->
98 ▼              <div id="bBottom">
99                  <div id="colBox1" class="bottomBox" onClick="lightgreen()"></div><!-- eo colBox1 -->
100                 <div id="colBox2" class="bottomBox" onClick="sandybrown()"></div><!-- eo colBox2 -->
101                 <div id="colBox3" class="bottomBox" onClick="skyblue()"></div><!-- eo colBox3 -->
102                 <div id="colBox4" class="bottomBox" onClick="teal()"></div><!-- eo colBox4 -->
103             </div><!-- bBottom -->
104         </div><!-- eo bottomSection -->
105     </div><!-- eo container -->
106 </body>
...
```

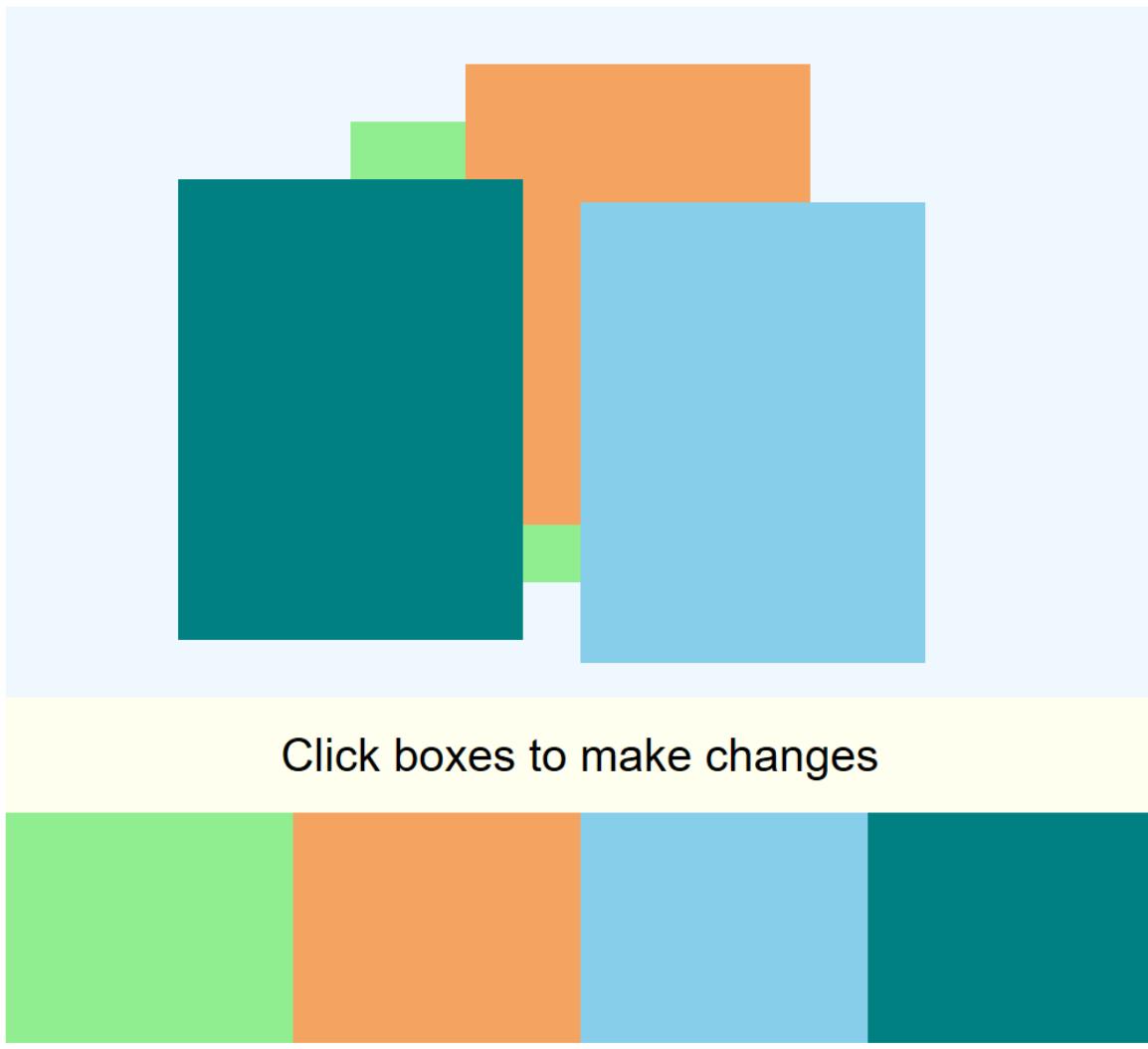
The css will look like this

```
5          <style type="text/css">
6 ▼          #container {
7              width:1000px;
8              height:900px;
9              margin:0 auto; /* this will make it go center on the viewport */
10             background-color:lime;
11         }
12         /* Top section styles go here */
13
14         .topBox{width: 300px; height:400px; position: absolute;}
15
16 ▼         #topSection {
17             width:1000px;
18             height:600px;
19             background-color:aliceblue;
20             position:relative;
21         }
22 ▼         #box1 {
23             z-index:1;
24             background-color:lightgreen;
25             top:100px;
26             left:300px;
27         }
28 ▼         #box2 {
29             z-index:2;
30             background-color:sandybrown;
31             top:50px;
32             left:400px;
33         }
34 ▼         #box3 {
35             z-index:3;
36             background-color:skyblue;
37             top:170px;
38             right:200px;
39         }
40 ▼         #box4 {
41             z-index:4;
42             background-color:teal;
43             top:150px;
44             left:150px;
```

```
46      /* Bottom section styles go here */
47      .bottomBox{width: 250px; height: 200px;}
48  ▼ #bottomSection {
49      width:1000px;
50      height:300px;
51      background-color:silver;
52  }
53  ▼ #bTop {
54      width:1000px;
55      height:100px;
56      background-color:ivory;
57      font-family:arial;
58      font-size:40px;
59      text-align:center;
60      line-height:100px;
61  }
62  ▼ #bBottom {
63      width:1000px;
64      height:200px;
65      background-color:midnightblue;
66  }
67  ▼ #colBox1 {
68      float:left;
69      background-color:lightgreen;
70  }
71  ▼ #colBox2 {
72      float:left;
73      background-color:sandybrown;
74  }
75  ▼ #colBox3 {
76      float:left;
77      background-color:skyblue;
78  }
79  ▼ #colBox4 {
80      float:right;
81      background-color:teal;
82  }
83  }
84  </style>
--
```

Once this has all been placed into the zindex html file and saved, view the file to confirm that it works. It should look like this

[Index Page](#)



Now we add the Javascript code.

This code will have two parts, the first part of the code will bring the clicked colour box to the front and the second part of the code will ensure that the other boxes are returned to the back. In this way, only one box will come forward at a time.

Use the following Javascript

```
85      <script>
86      function lightgreen()
87      {
88          document.getElementById("box1").style.zIndex = "5";
89          document.getElementById("box2").style.zIndex = "2";
90          document.getElementById("box3").style.zIndex = "3";
91          document.getElementById("box4").style.zIndex = "4";
92      }
93      function sandybrown()
94      {
95          document.getElementById("box1").style.zIndex = "1";
96          document.getElementById("box2").style.zIndex = "5";
97          document.getElementById("box3").style.zIndex = "3";
98          document.getElementById("box4").style.zIndex = "4";
99      }
100     function skyblue()
101     {
102         document.getElementById("box1").style.zIndex = "1";
103         document.getElementById("box2").style.zIndex = "2";
104         document.getElementById("box3").style.zIndex = "5";
105         document.getElementById("box4").style.zIndex = "4";
106     }
107     function teal()
108     {
109         document.getElementById("box1").style.zIndex = "1";
110         document.getElementById("box2").style.zIndex = "2";
111         document.getElementById("box3").style.zIndex = "3";
112         document.getElementById("box4").style.zIndex = "5";
113     }
114     </script>
115 </head>
```

Once this is done, save and test, each box should come to the front when its colour is selected.

This concludes tutorial 1. Save your work to USB, student drive, Onedrive, Dropbox or zip and email the folder to yourself.