

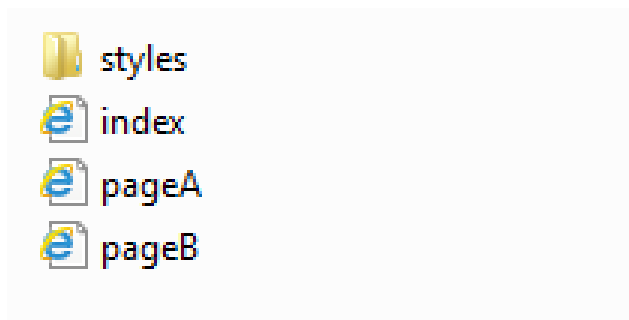
Accessibility Website Using Local Storage HTML5 and CSS

This website has 3 pages (Download the samples above or on www.mooict.com)

Note – This sample will work with FireFox, Chrome but not with Internet Explorer.

- 1. Index page** – it's the home page where we can change the style of the website
- 2. Test pages 1** – this page will have links to the CSS files and JavaScript files which we will need in order to double check whether the change is taking place
- 3. Test pages 2** – this has the same purpose as the page before it.

See the File structure below –



Inside the styles folder

Name	Date modified	Type	Size
one	16/01/17 13:51	Cascading Style S...	1 KB
two	16/01/17 13:51	Cascading Style S...	1 KB
three	16/01/17 13:52	Cascading Style S...	1 KB
four	16/01/17 13:53	Cascading Style S...	1 KB
style	16/01/17 14:00	Cascading Style S...	1 KB

There are **five style sheets** in styles folder.



The primary idea is to import all of the assets from styles.css which is the main style sheet and then change the background and font colour of the pages. Once the user clicks on one of them it will change the whole websites colours.

Index.html

Screen Shot –

[Home Page](#)
[Page A](#)
[Page B](#)

This is a accessibility Page

In this experiment we will be using Javascript and CSS to change the style of the existing page which can help people with poor eye sights to read our website. requirements for this experiment are:

- [Able to change the text size on all pages](#)
- [Able to change the background colour on all pages](#)
- [Able to change the font colour on all pages](#)



We have links to the two other pages and we are loading internal CSS files to the page. The trick is with the JavaScript programming which allows us to alter any css before the page is loaded.

Source Code –

```
<html>
<head>

<title>Javascript Web Accessibility Page</title>
<link id="pageStyle" rel="stylesheet" href="styles/style.css">
</head>
<body id="t">
<div class="main">
<div class="navigation">
<ul>
<li><a href="index.html">Home Page</a></li>
<li><a href="pageA.html">Page A</a></li>
<li><a href="pageB.html">Page B</a></li>
</ul>
</div>
<h1>This is a accessibility Page</h1>
<p>In this experiment we will be using Javascript and CSS to change the style of the existing page which can help people with poor eye sights to read our website.</p>
<p>requirements for this experiment are: </p>
<u>
<li>Able to change the text size on all pages</li>
```

1. CSS File linked with this line and notice the link tag has an ID called pageStyle which will be used to connect it to the JavaScript commands.

2. Body tag has its own id called t. this will help us connect it to the JavaScript later.

```

</li>Able to change the background colour on all pages</li>
</li>Able to change the font colour on all pages</li>
</u>

<div class="accessibility">

<div class="styleCats">

<ul class="boxxy">
<li id="blkW" class="box">Black on White
<button onclick="swapStyleSheets('styles/one.css', 'a')">Black on White</button>
</li>
<li id="whiteB" class="box">White on Black
<button onclick="swapStyleSheets('styles/two.css', 'b')">White on Black</button>
</li>
<li id="blackY" class="box">Yellow on Black
<button onclick="swapStyleSheets('styles/three.css', 'c')">Yellow on Black</button>
</li>
<li id="blackB" class="box">Black on Blue
<button onclick="swapStyleSheets('styles/four.css', 'd')">Black on Blue</button>
</li>
</ul>

</div>

<input type="text" id="TEXTBOX_ID" value="12">
<button id="button" onclick="changeSize()">Submit</button>

</div>

</div>

```

3. Each button is linked to a JavaScript function called swap style sheets.

4. This submit button is linked to a change size function. That function will allow us to change the websites font size across all pages.

```

<script>

//run the accessibility functionality here.

5 var textSize = document.getElementById("t");
6 var styleNum = localStorage.getItem("styleC");
7 var getTextSize = localStorage.getItem("font-size");
8 document.getElementById("t").style.fontSize = localStorage.getItem("font-size");
4 function changeSize()
{
var textP = document.getElementById("TEXTBOX_ID").value+ "px";

textSize.style.fontSize = textP;

localStorage.setItem("font-size", textP);
}
3 function swapStyleSheets(sheet, num)
{
document.getElementById('pageStyle').setAttribute('href', sheet);

localStorage.setItem('styleC', num);

}

9 switch(styleNum)

{

```

```
    case "a":
        document.getElementById('pageStyle').setAttribute('href', 'styles/one.css');
        break;

    case "b":
        document.getElementById('pageStyle').setAttribute('href', 'styles/two.css');
        break;

    case "c":
        document.getElementById('pageStyle').setAttribute('href', 'styles/three.css');
        break;

    case "d":
        document.getElementById('pageStyle').setAttribute('href', 'styles/four.css');
        break;
}
```

```
</script>
```

```
</body>
```

```
</html>
```

So how does this work then?

This page contains 3 properties HTML, CSS and JavaScript.

JavaScript is able to do very complicated computer instruction which we can take advantage of. In the index page is where to change all of the font size and style sheets because it's not feasible to do it in every page you visit. The idea is to change it in one page and then the whole website should follow the settings.

Let's explore the code in detail

1. This line of code is on top of the screen which links the CSS to the page itself. Now it's important to have the same line on each of your page because otherwise the affects you desire will not show up on all of them. In this case we have given the LINK tag an ID pageStyle. We will use this ID tag to detect the style sheet and use our swap style sheet function to move different style sheets. This might seem complicated at first but don't worry it's pretty simple in practice.
2. Body tag ID is "t". Now I've used "t" only because it's just easy to do so, you can use any name you wish. There is a way to detect tags and change the styles of them using JavaScript but I have tested it with few browsers and it didn't seem to work as well as I hoped it would so we are going to give the body tag an ID and use that small hack instead. It works great overall now.
3. Inside the list items there are 4 different buttons which correspond with the JavaScript function. Now these buttons are directly linked to the **swap style function** which then will take the information we have given it and change the function for us. Check the theory below where it explains it in simple form -

```
onclick="swapStyleSheets( 'styles/one.css' , 'a' )"
```

```
function swapStyleSheets( sheet, num ){  
  document.getElementById('pageStyle').setAttribute('href', sheet);  
  localStorage.setItem('styleC', num);  
}
```

Saves the setting inside the browser local storage and then it will enable us to change the style sheet on every page linked to this css file.

Swap style sheets function accepts two arguments one for the style sheet and second the local storage value. When we change the style sheet we also need to assign a value in the local storage.

a = one.css b = two.css c = three.css d = four.css

You can see the illustration above how the JavaScript function is being called to change the style sheet.

Notice there is a tag called script in the html file above. All of our JavaScript instructions go inside that. HTML has a special place for JavaScript. There are other ways to attach a script to the html page but for learning purposes we chose to do this.

4. The text size changing function is similar to the swap style sheets function but it doesn't have any internal arguments to send or receive. All it does is it takes the value from the text box and changes the texts to that size. In order for us to have the same effect across the website we need to insert some JavaScript in all of them which will check what values are set in the local storage and then change the text size to it otherwise it can stay the default size texts.

```
<button id="button"
onclick="changeSize()">Submit</button>
```

```
function changeSize() {
var textP = document.getElementById("TEXTBOX_ID").value+"px";
    textSize.style.fontSize = textP;
    localStorage.setItem("font-size", textP);
}
```

In this function first we are assigning the value of the text box to this textP variable.
Then we will add a styling rule which will by default change the font size to the one from the text box
Last command will store in the browser local storage which then can be used to change the text size on other pages of the website.

5. `var textSize = document.getElementById("t");` This line of code is setting up a variable called text size and inside the variable we are linking the body tag.
6. `var styleNum = localStorage.getItem("styleC");` This variable is called style num or style number this one will store between a, b, c, or d value. Depends on which style sheet is changed in the function.
7. `var getTextSize = localStorage.getItem("font-size");` this variable is receiving the text size from the local storage item. So if the user has stored a text size from the page it will stored in the font-size option and then the website can simply pick it up from here and change the text with ease.
8. `document.getElementById("t").style.fontSize = localStorage.getItem("font-size");` This is the line that's changing the body text size from local storage. When this line is present in a web page it will change the the text size. Inside your browser there will be a local storage option called font size which will contain a number and the word px (pixels). When this line will run in javascript the css will automatically change the body text to that option.
9. This is the most important statement. This statement makes the style sheets change in the HTML files. Look at the code below

```
1. switch(styleNum)
2. {
3. case "a":
4. document.getElementById('pageStyle').setAttribute('href', 'styles/one.css');
5. break;
```



```

</head>

<body id="t">
    And the body ID="t" is here too.
</body>

<div class="main">

<div class="navigation">
<ul>
<li><a href="index.html">Home Page</a></li>
<li><a href="pageA.html">Page A</a></li>
<li><a href="pageB.html">Page B</a></li>
</ul>
</div>

<h1>This is a Page A</h1>

<p>Sample text on page, Sample text on page, Sample text on page, ,Sample text on page, Sample text on page,
Sample text on page, Sample text on page, Sample text on page, Sample text on page, Sample text on page, Sample
text on page, Sample text on page, Sample text on page, Sample text on page, Sample text on page, Sample text on
page, Sample text on page, Sample text on page, Sample text on page, Sample text on page, Sample text on page,
Sample text on page, Sample text on page, Sample text on page, Sample text on page </p>

<u>
<li>Some list stuff</li>
<li>Some list stuff</li>
<li>Some list stuff</li>
<li>Some list stuff</li>
<li>Some list stuff</li>
<li>Some list stuff</li>
<li>Some list stuff</li>
<li>Some list stuff</li>
<li>Some list stuff</li>
</u>

</div>

<script>
1 document.getElementById("t").style.fontSize = localStorage.getItem("font-size");
2 var styleNum = localStorage.getItem("styleC");
3 switch(styleNum)
{
case "a":
document.getElementById('pageStyle').setAttribute('href', 'styles/one.css');
break;
case "b":
document.getElementById('pageStyle').setAttribute('href', 'styles/two.css');
break;
case "c":
document.getElementById('pageStyle').setAttribute('href', 'styles/three.css');
break;
case "d":
document.getElementById('pageStyle').setAttribute('href', 'styles/four.css');
break;
}
</script>

</body>
</html>

```


Notice on top of the code the page style id is shown in the links tags same as the index page. We need it to be the same.

Notice the body tag has the id of "t" we need that too other wise the whole thing wont work.

There are 3 section of JavaScript present on this document.

1. `document.getElementById("t").style.fontSize = localStorage.getItem("font-size");` This line is checking whether we have stored any value for the font size in the local storage and if we have it change it.
2. `var styleNum = localStorage.getItem("styleC");` Declaring the variable which we need to determine which style sheet will be active.
3. The long Switch statement which was discussed earlier. Notice its present on this page because without it the code won't know which value changed and what to do.

You can check the page below it will have exactly the same JavaScript as the one in PageA. We don't need to set anything else up. Right now the page will look at the commands we set in JavaScript and then do what is instructed here.


```
        document.getElementById('pageStyle').setAttribute('href', 'styles/two.css');
        break;
        case "c":
            document.getElementById('pageStyle').setAttribute('href', 'styles/three.css');
            break;
        case "d":
            document.getElementById('pageStyle').setAttribute('href', 'styles/four.css');
            break;
    }
</script>
</body>
</html>
```

Notice the similarities with the PageA.

We need the JavaScript to be on each page you want the effect to be shown otherwise they won't work.

Below is out main CSS. Now we have created 5 css Style.CSS will hold out main components, now you might be wondering that if we change CSS won't we reset everything?

Well not exactly we will use the css import function which will allow us to load style.css first and then add any changes the user wants to make to the website.

Style.css source code

```
body, h1, h2, h3, div, p, li, ul
{
  padding: 0;
  margin: 0;
}

body
{
  font-size: 16;
  padding-left: 20px;
}

ul.boxyy
{
  width: 100%;
}

li.box
{
  width: 250px;
  height: 250px;
  margin: 10px;
  display: inline-block;
  font-size: 25pt;
  padding: 5px;
  line-height: 6em;
  text-align: center;
  font-weight: 600;
  border: 2px dotted red;
}

#button
{
  font-size: 32px;
}

#TEXTBOX_ID
{
  font-size: 32px;
}

li.box:hover
{
  border: 3px dotted white;
}

li#blkW
{
  background: black;
  color: white;
}

li#whiteB
{
  background: wheat;
  color: black;
}
```

```
li#blackY
{
  background: black;
  color: yellow;
}
li#blackB
{
  background: aquamarine;
  color: black;
}
```

This is the preview of style.css by default

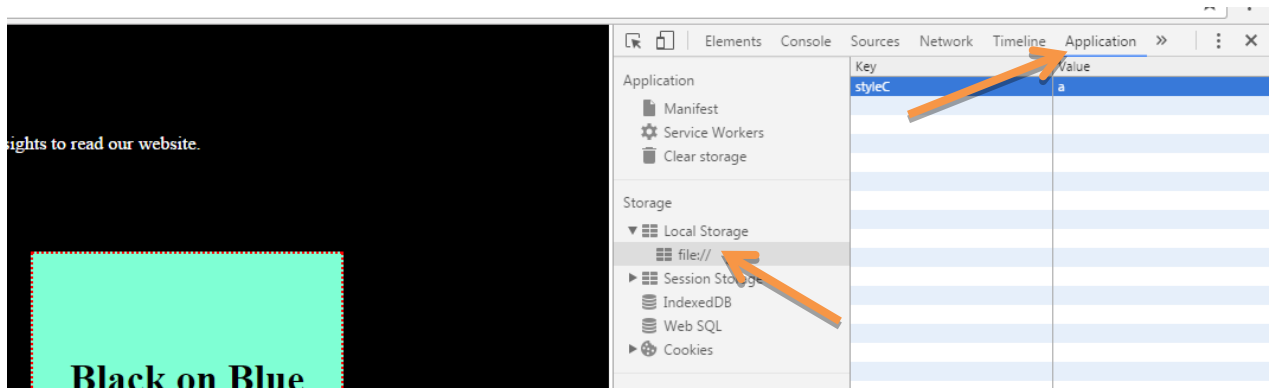
- [Home Page](#)
- [Page A](#)
- [Page B](#)

This is a accessibility Page

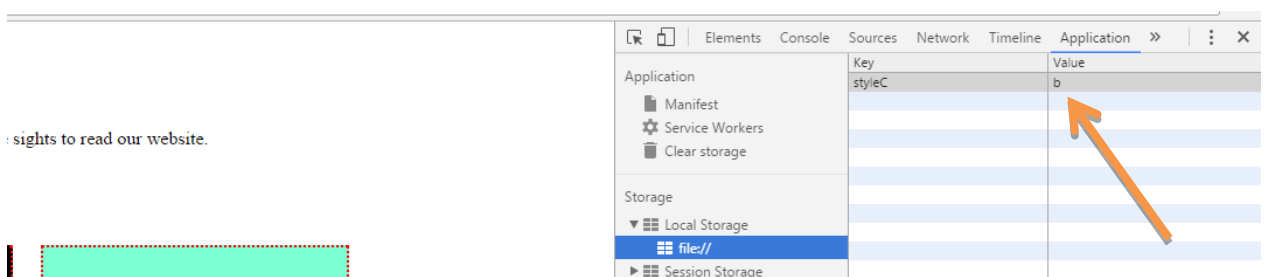
In this experiment we will be using Javascript and CSS to change the style of the existing page which can help people with poor eye sights to read our website. requirements for this experiment are:

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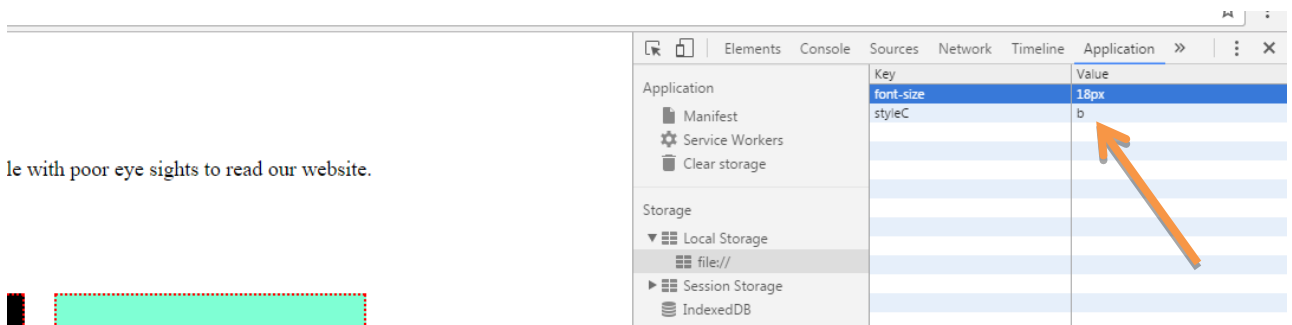




See we have a value called styleC and it contains A which means our first style will be white font and black background.



Now its changed to B so it will be white background a black text colour.



Now we can see the local storage has a number for the font size. If you refresh the page the font should appear to be bigger than before.

How to embed this method into your own website?

In this website we have used it as main preview to show to this functionalities work. In order to use it on your own you can copy and paste the **DIV's** from the index page and JavaScript's to your accessibilities page, remember to copy the code to the other pages too or it won't work.

Use your own styles and preferences. If you get stuck come back to this tutorials and double check the steps you need to take.