Experiment No. 2

Aim:

CSS3-Cascading Style Sheet- Syntax, Inclusion, Color, Background, Fonts, Tables, lists, CSS3 selectors, Pseudo classes, Pseudo elements.

A. Theory:

HTML Vs CSS:

HTML is Hypertext Markup Language. CSS is Cascading Style Sheet language. HTML is used to structure the content on the web page. CSS is used to add style to the content of a web page.

CSS:

CSS stands for Cascading Style Sheet. Its main objective is to provide styling and fashion to the web page. CSS provides color, layout, background, font, and border properties. CSS features allow better content accessibility, enhanced flexibility, and control, as well as the specification of the characteristics of presentation.

CSS3:

CSS3 stands for Cascading Style Sheet level 3, which is the advanced version of CSS. It is used for structuring, styling, and formatting web pages. Several new features have been added to CSS3 and it is supported by all modern web browsers. The most important feature of CSS3 is the splitting of CSS standards into separate modules that are simpler to learn and use.

Difference between CSS and CSS3:

S.No.	CSS	CSS3
1	CSS is capable of positioning texts and objects.	On the other hand, CSS3 is capable of making the web page more attractive and takes less time to create. CSS3 is backward compatible with CSS.
2	Responsive designing is not supported in CSS	CSS3 is the latest version, hence it supports responsive design.
3	CSS cannot be split into modules.	Whereas CSS3 can be breakdown into modules.
4	Using CSS, we cannot build 3D animation and transformation.	But in CSS3 we can perform all kinds of animation and transformations as it supports animation and 3D transformations.
5	CSS is very slow as compared to CSS3	Whereas CSS3 is faster than CSS.
6	In CSS we have set of standard colors and it uses basic color schemes only.	Whereas CSS3 has a good collection of HSL RGBA, HSLA, and gradient colors.

7	In CSS we can only use single text blocks.	But in CSS3 we can use multi-column text blocks
8	CSS does not support media queries.	But CSS3 supports media queries
9	CSS codes are not supported by all types of modern browsers.	Being the latest version, CSS3 codes are supported by all modern browsers.
10	In CSS, designers have to manually develop rounded gradients and corners.	But CSS3 provides advanced codes for setting rounded gradients and corners
11	There is no special effect like shadowing text, text animation, etc. in CSS. The animation was coded in jQuery and JavaScript.	CSS3 has many advance features like text shadows, visual effects, and a wide range of font styles and colors.
12	In CSS, the user can add background colors to list items and lists, set images for the list items, etc.	Whereas CSS3 list has a special *display* property defined in it. Even list items also have counter reset properties.
13	CSS was developed in 1996.	CSS3 is the latest version of CSS and was released in 2005.
14	CSS is memory intensive.	CSS3 memory consumption is low as compared to CSS.

New features of CSS3:

Combinator: CSS3 has a new General sibling combinator which matches up with sibling elements via the tilde (~) combinator.

CSS Selectors: CSS3 selectors are much advanced in comparison to simple selectors offered by CSS, and are termed as a sequence of easy to use and simple selectors.

Pseudo-elements: Plenty of new pseudo-elements have been added to CSS3 to give easy styling in depth. Even a new convention of double colons: is also added.

Border Style: The latest CSS3 also has new border styling features like *border-radius, image-slice, image-source,* and values for "width stretch", etc.
Background style properties: New features like *background-clip, size, style,* and *origin* properties have been added to CSS3.

Note: Student should write the purpose and syntax of each tag mentioned in the aim one by one.

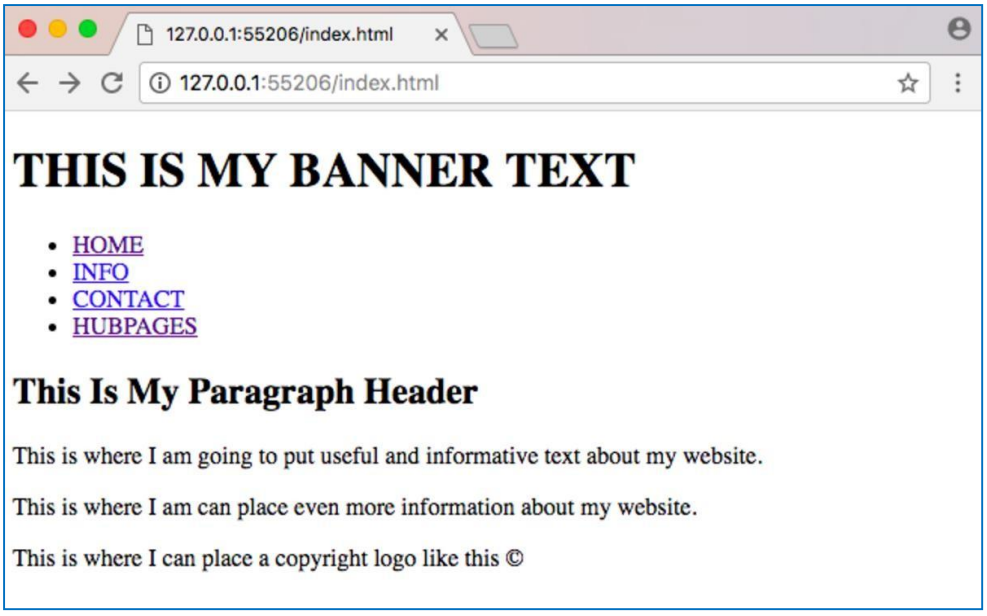
Adding Some Style With CSS

HTML file name: Index.html

```
<!DOCTYPE html>
<html lang="en">
  <head>

  </head>
  <body>
    <div><h1>THIS IS MY BANNER TEXT</h1></div>
    <div>
      <ul>
        <li><a href="index.html">HOME</a></li>
        <li><a href="info.html">INFO</a></li>
        <li><a href="contact.html">CONTACT</a></li>
                              <li><a href="https://hubpages.com">HUBPAGES</a></li>
      </ul>
    </div>
    <h2>This Is My Paragraph Header</h2>
    <p>
      This is where I am going to put useful and informative text about my website.
    </p>
    <p>
      This is where I am can place even more information about my website.
    </p>
    <div>This is where I can place a copyright logo like this &copy;</div>
  </body>
</html>
```

O/P:



Now that we have our website, let's add some styling with CSS. Using your text editor create another file and name it "style.css". Before we can start writing in our new CSS file, we need to add one more thing to our index.html file.

For each of our main tags we will want to assign either an id or a class inside its opening tag. If the tag is a unique section of your website, then we will assign it an id, but for tags that represent a repeating element of the website that will have similar styling, like the body text, we will assign a class instead. Last, we need to link our HTML file to our CSS file inside the <head> tags.

```
<!DOCTYPE html>
<html lang="en">
   <head>
      <link rel="stylesheet" href="style.css">
   </head>
   <body>
      <div id="banner"><h1>THIS IS MY BANNER TEXT</h1></div>
      <div id="navBar">
         <ul>
            <li><a href="index.html">HOME</a></li>
            <li><a href="info.html">INFO</a></li>
            <li><a href="contact.html">CONTACT</a></li>
                                          <li><a
href="https://hubpages.com">HUBPAGES</a></li>
         </ul>
      </div>
      <h2>This Is My Paragraph Header</h2>
      <p class="bodyText">
         This is where I am going to put useful and informative text about my website.
      </p>
      <p class="bodyText">
         This is where I am can place even more information about my website.
      </p>
      <div id="copyright">This is where I can place a copyright logo like this &amp;copy;</div>
   </body>
</html>
```

Now that the main sections of our page have ids or classes, we can reopen our style.css file and start adding some color to our website.

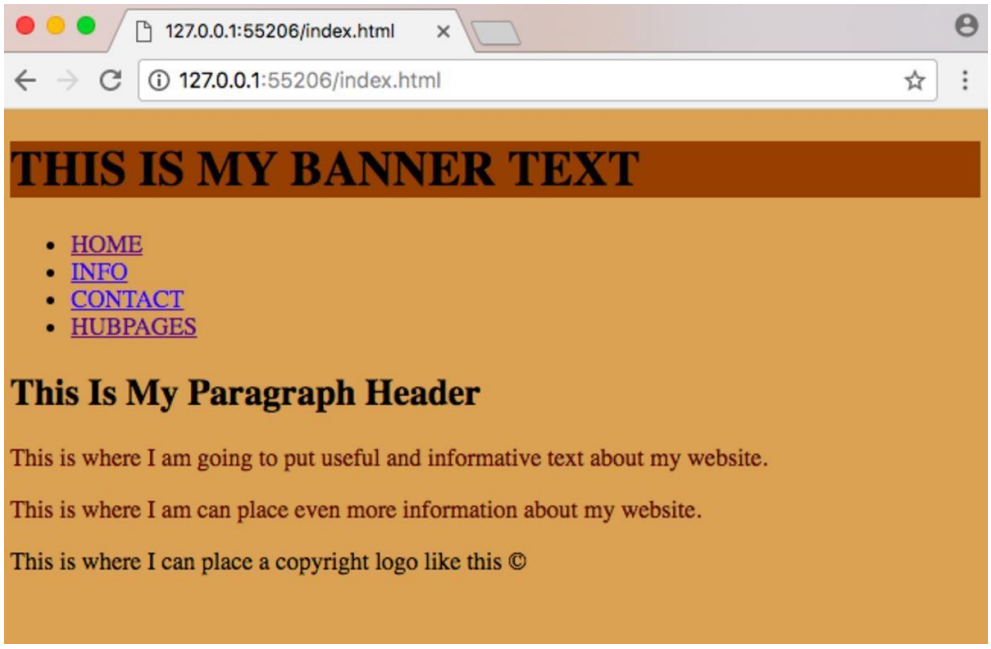
```
#banner {
   background-color: saddlebrown;
}

body {
   background-color: rgb(209, 162, 98);
}
```

```
.bodyText  {
   color: #5b120c;
}
```

As you have likely notice from the code above, CSS is styled slightly different from HTML. In CSS, you can specify the piece of your website that you want to style in three ways. First, you can specify a section by referring to its id with a # followed by the elements id. Second, you can specify a section by referring to its tag name like body in the code above. And third, you can specify a group of section by referring to their matching class name with a period followed by the class name. No matter which way you choose to use, you will place an opening and closing bracket after the reference. Any styling in between these brackets will be applied the referenced section and any sub-sections inside that section. For example, if you were to put the code from line 10 inside of the body reference instead, then all the text inside your website body would turn that color instead of just the sections marked with the bodyText class.

The second thing you likely noticed is that there are several ways to refer to a color in CSS. Some colors have been pre-assigned names like blue, red, yellow, and saddlebrown, but for more specific color you can use alternative methods like RGB or hex. I won't dig deep into these alternative methods now, just know that they exist and that there are websites that you can use to find almost any color in RGB or hex. Now, let's take a look at our website and see the difference.



A Website With Some Color

As you can see, even adding a small amount of CSS can make a big difference in the way your website looks. While I admit that the colors chosen are not the best, they are good enough for this example. Now that our website has some color, one problem that you might notice is that the banner is probably not the size that we would like it to be, so let's fix that next.

B. Program:

HTML:

```
<!DOCTYPE html>
<html>
<head>
  <title>Page Title</title>
</head>
<link rel="stylesheet" href="a12.css">

<body>

<h1>Book Store</h1>
<form>
    <label for="fname">First name:</label><br>
    <input type="text" id="fname" name="fname"><br>
    <label for="lname">Last name:</label><br>
    <input type="text" id="lname" name="lname"><br>
    <button type="button"><a href="/response.html">Submit</a></button>
</form>
<p>The Alchemist</p>
<img src="/book.jpg" alt="W3Schools.com" height="120px" width="105"><br>
<a href="https://www.amazon.in/Alchemist-Paulo-Coelho/dp/8172234988">Buy Now</a>

<h2>Social Media Platforms</h2>
<ul>
    <li><a href="https://www.instagram.com/">Instagram</a></li>
    <li><a href="https://www.web.whatsapp.com">WhatsApp</a></li>
    <li><a href="https://www.fb.com/">Facebook</a></li>
</ul>

<table>
  <tr>
    <th>Firstname</th>
    <th>Lastname</th>
    <th>Age</th>
  </tr>
  <tr>
    <td>Jill</td>
    <td>Smith</td>
    <td>50</td>
  </tr>
  <tr>
    <td>ABC</td>
    <td>FGH</td>
    <td>60</td>
  </tr>
</table>

<frameset cols="25%,75%">
```

```
  <frame src="frame_a.htm">
  <frame src="frame_b.htm">
</frameset>

<audio controls>
  <source src="sound.mp3" type="audio/mpeg">
  Your browser does not support the audio element.
</audio>

<video width="320" height="240" controls>
  <source src="video.mp4" type="video/mp4">
</video>

</body>
</html>
```

CSS:

```
h1{
  text-align: center;
}
  body {
  background-color: rgb(166, 184, 166);
}

img {
  width: 104px;
  height: 142px;
  border: 2px solid rgb(22, 19, 19);
  border-radius: 5px;
}

input {
  width: 50%;
}

input[type="text"] {
  width: 50%;
  padding: 10px 20px;
  margin: 8px 0;
  box-sizing: border-box;
  border: 2px solid rgb(22, 19, 19);
  border-radius: 18px;
}

button {
  width: 10%;
  padding: 5px 10px;
  margin: 8px 0;
  box-sizing: border-box;
```

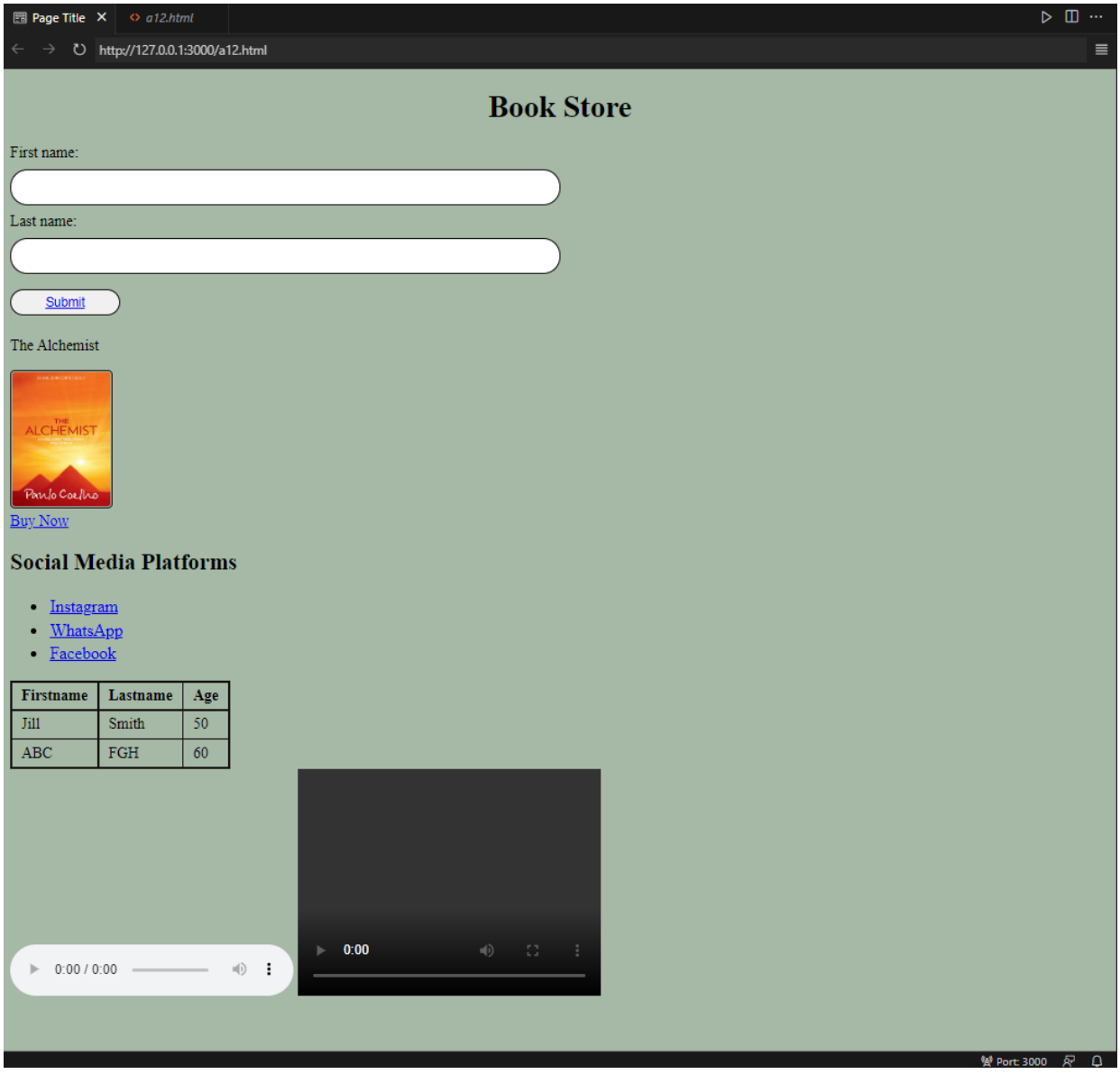
```
  border: 2px solid rgb(22, 19, 19);
  border-radius: 18px;
  cursor: pointer;
  color: black; /* Fixed text-emphasis-color and text-decoration-color */
}

table, th, td {
  padding: 5px 10px;
  border: 2px solid rgb(22, 19, 19);
  border-collapse: collapse;
}

li {
  padding: 2px;
  font-size: large;
}

a:visited {
  color: green;
}
```

B: Output and findings:



C. Conclusion

In this CSS3 experiment, we learned about its syntax, inclusion methods, color options, background styles, fonts, table and list customization, advanced selectors, pseudo-classes, and pseudo-elements. CSS3 empowers developers to create visually appealing and interactive web designs, combining with HTML for structure and content to ensure an excellent user experience.