Automation Testing

Introduction to CSS

A Day in the Life of an Automation Test Engineer

Michael is working in an organization as a developer, and he is seeking for a promotion as web developer.

In order to achieve his promotion, he wants to upgrade his skills by learning CSS along with HTML as CSS is a fundamental to web design.

He learns how to use CSS to style HTML document and how HTML elements should be displayed.

Learning Objectives

By the end of this lesson, you will be able to:

- Explain the basics of CSS
- Classify different ways to add CSS
- Apply styling features in CSS
- Summarize class and CSS selectors

What Is CSS?

What Is CSS?

CSS stands for Cascading Style Sheets.

It specifies how HTML elements should appear on a screen or in other media.

Features of CSS

The various features of CSS are:

Easily maintainable

Time saving

Compatible with search engines

Efficient in cache storing

How to Add CSS ?

How to Add CSS ?

When a browser reads a style sheet, it uses the information present in the sheet to format the HTML document.

Three ways to add CSS :

1. External CSS
2. Internal CSS
3. Inline CSS

External CSS

Users can modify the look of a complete website with external CSS by changing just one file.

Example:

```
<!DOCTYPE html>
<html>
<head>
<link rel="stylesheet" href=“simpli.css">
</head>
<body>

<h1>Welcome</h1>
<p>This is a paragraph.</p>

</body>
</html>
```

simpli.css

```
body {
  background-color: lightblue;
}

h1 {
  color: red;
  margin-left: 50px;
}
```

Each HTML page must provide a link to the external style sheet file in the head section through the <link> element.

Internal CSS

If a single HTML page has a distinct style, an internal style sheet can be used.

Example:

```
<!DOCTYPE html>
<html>
<head>
<style>
body {
  background-color: linen;
}

h1 {
  color: maroon;
  margin-left: 40px;
}
</style>
</head>
<body>

<h1>Welcome</h1>
<p>This is a paragraph.</p>

</body>
</html>
```

The internal style is defined within the <style> element, which is located within the head section.

Inline CSS

An inline style can be used to apply a distinct look to a single element.

Example:

```
<!DOCTYPE html>
<html>
<body>

<h1 style="color:blue;text-align:center;">Welcome</h1>
<p style="color:red;">This is a paragraph.</p>

</body>
</html>
```

To use inline styles, add the style attribute to the relevant element. Any CSS property can be included in the style attribute.

CSS for Input

CSS for Input

A user can use attribute selectors to style a particular input type in CSS. The syntax of the three types are:

CSS to select text fields:

```
input[type=text]
```

CSS to select password fields:

```
input[type=password]
```

CSS to select number fields:

```
input[type=number]
```

CSS Comments

CSS Comments

CSS comments are not visible in the browser, but they help in source code documentation.

Example:

```
/* This is a CSS comment */
P {
Color : red;
}
```

It starts with /* and ends with */.

CSS Attributes with Color and Background Color

CSS Color Property

The color property in CSS is used to add color to text, the web page's background, and borders.

CSS Color

Color in CSS can be added by using the HEX, RGB, or HSL value of the required color.

CSS color using HEX value:

```
body {color: #92a8d1;}
```

CSS color using RGB value:

```
body {color: rgb(201, 76,
76);}
```

CSS color using HSL value:

```
body {color: hsl(89, 43%,
51%);}
```

CSS Background-Color

The background-color attribute specifies the color of an element's background. The total size of an element, including padding and border, is the background of that element.

CSS background-color using HEX value:

```
body {background-color:
   #92a8d1;}
```

CSS background-color using RGB value:

```
body {background-color:
  rgb(201, 76, 76);}
```

CSS background-color using HSL value:

```
body {background-color:
  hsl(89, 43%, 51%);}
```

CSS Padding

CSS Padding

CSS padding properties are used to create space around an element's content while staying within any defined borders.

Padding for each sides :

```
padding-top
padding-right
padding-bottom
padding-left
```

Example :

```
div {
padding-top: 60px;
padding-right: 40px;
padding-bottom: 60px;
padding-left: 70px;
}
```

CSS Padding: : Shorthand Property

In shorthand property, users can specify all the padding properties in one property.

If padding property has four values:

```
padding: 50px 30px 50px 30px;

top padding- 50px
right padding- 30px
bottom padding- 50px
left padding- 30px
```

If padding property has three values:

```
padding: 50px 30px 50px;

top padding- 50px
right and left padding- 30px
bottom padding- 50px
```

CSS Padding – Shorthand Property

In shorthand property, users can specify all the padding properties in one property.

If padding property has two values:

```
padding: 50px 30px;

top and bottom padding – 50px
right and left padding – 30px
```

If padding property has one value:

```
padding: 50px;

All four paddings are 50px
```

FULL STACK

Grouping Form Elements with Fieldset

CSS Fieldset

The <fieldset> tag groups the related elements in a form by drawing a box around the related elements.

Syntax:

```
<fieldset>
 <legend> Title </legend>
 ... content, form ...
</fieldset>
```

The <legend> tag specifies a caption for the <fieldset> element

FULL STACK

Styling Fieldsets with CSS

Styling with CSS

There are few styling considerations for <fieldset>:

- The display value of <fieldset> is block by default, and it creates a block formatting context.
- If the <fieldset> has an inline-level display value, it will behave as an inline-block; otherwise, it will behave as a block.

- By default, the contents are surrounded by a 2px groove border and a small amount of padding.
- By default, the element has min-inline-size: min-content.

Styling with CSS

There are few styling considerations for fieldset:

If there is a <legend>, it is placed over the block-start border. The <legend> both shrink-wraps and creates a formatting context. The value of the display is blockified.

Example:

display : inline behaves as a block.

Styling with CSS

There are few styling considerations for fieldset:

If **display: grid** or **display: inline-grid:**

An anonymous box will be a grid formatting context.

If **display: flex** or **display: inline-flex:**

An anonymous box will be a flex formatting context.

There will be an anonymous box that contains the contents of the <fieldset> and inherits certain properties from it.

Examples of Styling with CSS

Simple fieldset

```
<form action=“#”>
<fieldset>
<legend> Simple fieldset </legend>
<input type=“radio”> id=“radio”>
<label for=“radio”> Examples of
CSS</label>
</fieldset>
</form>
```

Disabled Fieldset (with two controls)

```
<form action="#">
 <fieldset disabled>
 <legend>Disabled fieldset</legend>
  <div>
   <label for="name">Name: </label>
    <input type="text" id="name" value="Chris">
  </div>
  <div>
   <label for="pwd">Archetype: </label>
   <input type="password" id="pwd" value="Wookie">
  </div>
  </fieldset>
</form>
```

Develop CSS for Feedback Form

Problem Statement:

You are required to develop CSS for feedback form.

Assisted Practice: Guidelines

Steps to develop CSS for feedback form are:

1. Develop CSS for feedback form

Develop CSS for Authentication UI

Problem Statement:

You are required to develop CSS for authentication UI.

Assisted Practice: Guidelines

Steps to develop CSS for authentication UI are:

1. Develop CSS for authentication UI

FULL STACK

Understanding CSS Selectors

CSS Selectors

It is a pattern of elements and other phrases that tells the browser which HTML elements should be chosen to apply the CSS property values from the rules.

CSS Selectors

CSS Selectors are used to find or select the HTML elements to style.
Five categories of CSS Selectors are:

Simple Selectors

Select elements based on name, id, and class

Pseudo-elements Selectors

Select and style a part of an element

Pseudo-class Selectors

Select elements based on a certain state

Combinator Selectors

Select elements based on a specific relationship between them

Attribute Selectors

Select elements based on an attribute or attribute value

CSS Element Selector

The element selector uses the element name to pick HTML elements.

Example:

```
p {
  text-align: center;
  color: red;
}
```

CSS ID Selector

Example:

```
#para1 {
  text-align: center;
  color: red;
}
```

- The ID selector selects a specific HTML element based on its ID attribute.
- It is used to select a unique element from a web page.
- A hash *(#)* character followed by the element's ID is used to choose an element with a specified ID.

CSS Class Selector

Example:

```
.center {
  text-align: center;
  color: red;
}
```

- The class selector is used to select HTML items that have a specified class property.
- A period (.) character followed by the class name is used to select components of the particular class.

CSS Universal Selector

All HTML components on the page can be selected using the universal selector (*).

Example:

```
* {
  text-align: center;
  color: blue;
}
```

CSS Grouping Selector

All HTML elements with the same style definitions are selected by the grouping selector.

Example:

```
h1, h2, p {
  text-align: center;
  color: red;
}
```

In the example, the style definitions for the h1, h2, and p elements are the same.

Working with Selectors

Problem Statement:

You are asked to work with Selectors.

ASSISTED PRACTICE

Assisted Practice: Guidelines

Steps to work with selectors are:

1. Work with selectors

Use of Class in CSS

Class in CSS

A CSS class is an attribute that is used to define a group of HTML elements so that CSS can apply unique styling and formatting to those elements.

HTML

```
<h2>This is my first heading.</h2>
<p>This is my first paragraph</p>
<h2 class="bright">This is my second heading.</h2>
<p>This is my second paragraph</p>
<h2 class="bright">This is my third heading.</h2>
<p class="bright">This is my third paragraph</p>
```

CSS

```
.bright {
  color: orange;
  font-family: Avenir;
}
```

These elements have been assigned the class **bright**. When users look at the CSS, they see the **.bright** selector, which applies its style rules to all elements with the class="**bright**" attribute.

How to Create Class in CSS

A user wants to create a paragraph of text and emphasize certain words, they can accomplish this by creating a CSS class for these special words and then assigning it to individual words with <span> tags.

Example:

```
<p>Our <span class="orange-text">marketing
software</span> and
<span class="orange-text">service platform</span>
provide you with the tools you need to <span
class="blue-text">engage</span>
visitors, <span class="blue-text">convert</span>
them to leads, and <span class="blue-text">win
them over</span>
as customers.</p>
```

Orange-text and blue-text are two CSS classes to span tags.

Using ID with CSS

Using ID with CSS

The id selector is used to select a single HTML element that has a distinct id attribute value.

Example:

```
#header { width: 100%; height: 80px; background: blue }
```

The ID attribute must contain at least one character. It cannot begin with a number when used.

CSS Math Functions

CSS Math Functions

CSS math functions allow mathematical expressions to be used as property values.

The three functions are:

- calc()
- max()
- min()

calc() Function

The calc() function performs a calculation to be used as the property value.

Syntax:

```
calc(expression)
```

Example:

```
#div {
............
width: calc(100% - 100px);
............
}
```

max() Function

The max() function uses the maximum or the largest value.

Syntax:

```
max(value1, value2, …)
```

Example:

```
#div {
………….
width: max(60% - 100px);
………….
}
```

min() Function

The min() function uses the minimum or the smallest value.

Syntax:

```
min(value1, value2, …)
```

Example:

```
#div {
………….
width: min(60% - 100px);
………….
}
```

Key Takeaways

- CSS specifies how HTML elements should appear on a screen.

- The color property in CSS is used to add color to text, the web page's background, and borders.

- The id selector is used to select a single HTML element that has a distinct id attribute value.

- The class selector selects HTML elements with a specific class attribute.