

# HTML and CSS

## Web Programming and Testing



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# Objectives

- The objective of this session is the following:
  - The students are able to elaborate the role of CSS.
  - The students are able to distinguish the difference of CSS selector.
  - The students are able to style web pages by using CSS.

# Outlines

1. CSS and CSS Selectors.
2. Styling Methods.
3. CSS Framework.

# CSS and CSS Selectors

# Cascading Style Sheet (CSS)

- CSS is a way to style HTML page.
  - The browser is responsible to read and apply the rules.
- The style is written in rules.
  - A style can be applied to one or more type selectors.
  - A type selector might be use multiple styles.



# CSS Selectors

- CSS selector is a patterns used to select element(s) to which the style is going to be applied.
- Selector could be in the form of:
  - Type selector: based on the element tag name.
  - ID selector: based on the element's `id` attribute.
  - Class selector: based on the element's `class` attribute.
  - etc.

Please visit: [https://www.w3schools.com/cssref/css\\_selectors.asp](https://www.w3schools.com/cssref/css_selectors.asp)

# CSS Rule

If there's more than one selector, use a comma and a space between each selector.

*selector(s) {property1: value; property2: value;}*

space

no space

Include a semicolon after every property-value pair.

Source: Dean, J. (2018). *Web Programming with HTML5, CSS, and JavaScript*. Jones & Bartlett Learning

# CSS Type Selector

- An element type selector is used for matching element tag.
  - The style will be applied to any matched elements.
- On the example:
  - The style will be applied to h2 and p tags on the page.
  - The style will target both font-style and color attributes.

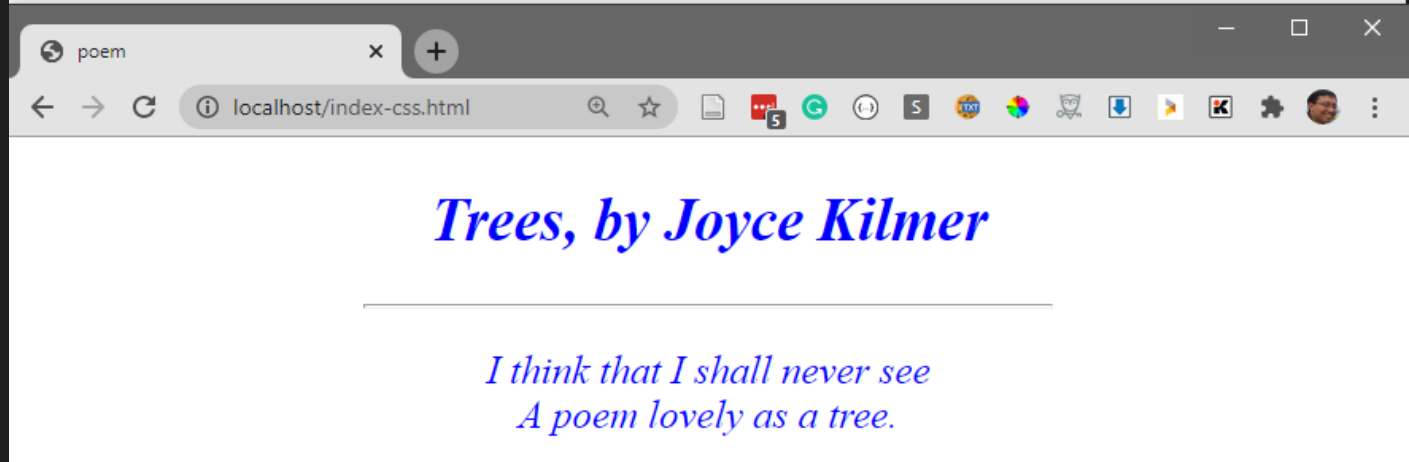
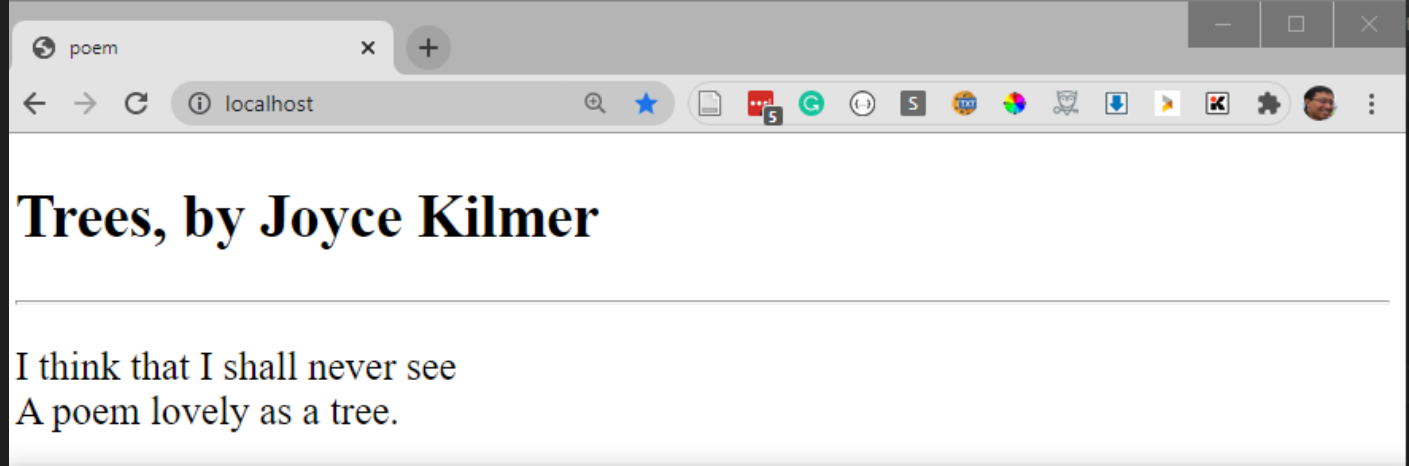
```
h2, p {  
    font-style: italic;  
    color: blue;  
}
```

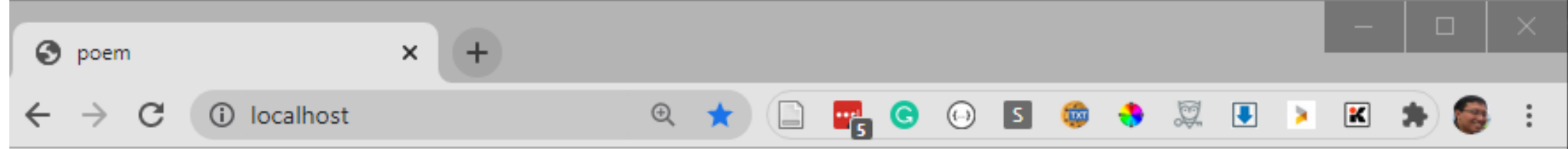


```

index-css.html > html
1  <!DOCTYPE html>
2  <html lang="en">
3
4  <head>
5      <meta charset="utf-8">
6      <meta name="author" content="Jhon Dean">
7      <title>poem</title>
8      <style>
9          * {text-align: center;}
10
11          hr {width: 50%;}
12
13          h2, p {font-style: italic; color: blue;}
14      </style>
15 </head>
16 <body>
17     <h2>Trees, by Joyce Kilmer</h2>
18     <hr>
19     <p>
20         I think that I shall never see <br>
21         A poem lovely as a tree.
22     </p>
23
24 </body>
25 </html>

```

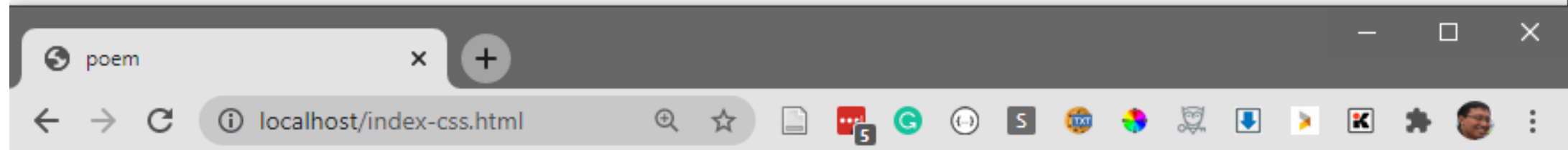




# Trees, by Joyce Kilmer

---

I think that I shall never see  
A poem lovely as a tree.



# *Trees, by Joyce Kilmer*

---

*I think that I shall never see  
A poem lovely as a tree.*

```
1  <!DOCTYPE html>
2  <html lang="en">
3
4  <head>
5      <meta charset="utf-8">
6      <meta name="author" content="Jhon Dean">
7      <title>poem</title>
8      <style>
9          * {text-align: center;}
10
11          hr {width: 50%;}
12
13          h2, p {font-style: italic; color: blue;}
14      </style>
15 </head>
16 <body>
17     <h2>Trees, by Joyce Kilmer</h2>
18     <hr>
19     <p>
20         I think that I shall never see <br>
21         A poem lovely as a tree.
22     </p>
23
24 </body>
25 </html>
```

# CSS Class Selector

- A class selector will be applied to any element with matched class attribute value.
- On the example:
  - The style will be applied to elements with class value red.
  - The style will target background-color attributes.

```
.red {  
    background-color: tomato;  
}
```

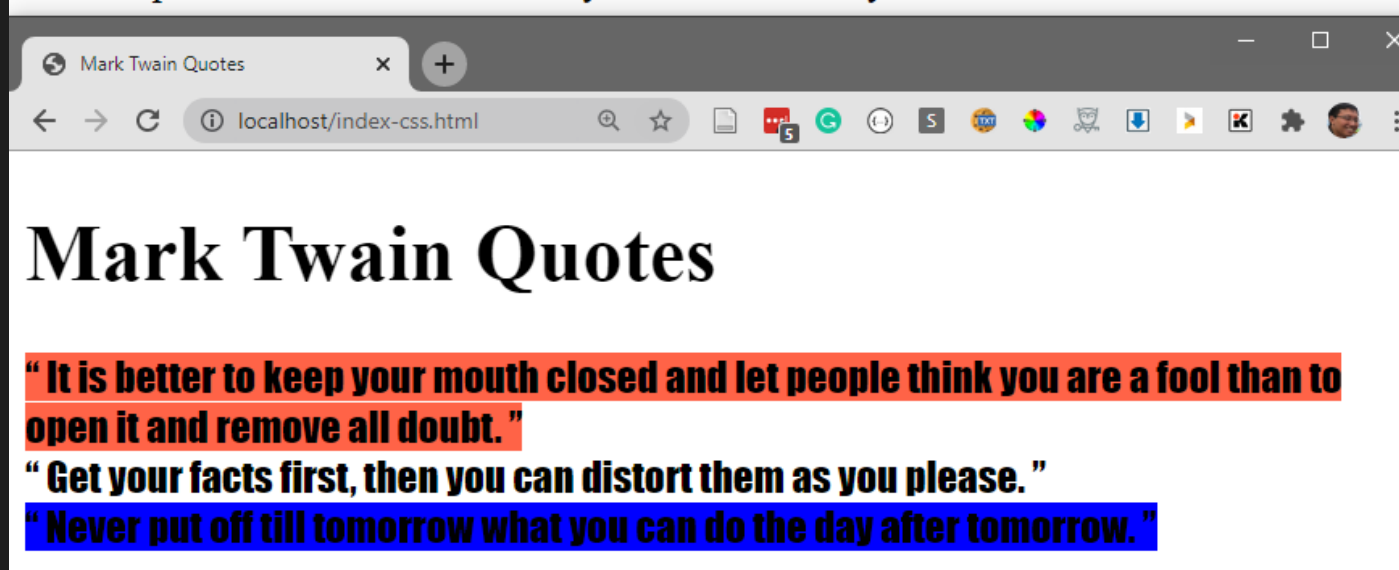
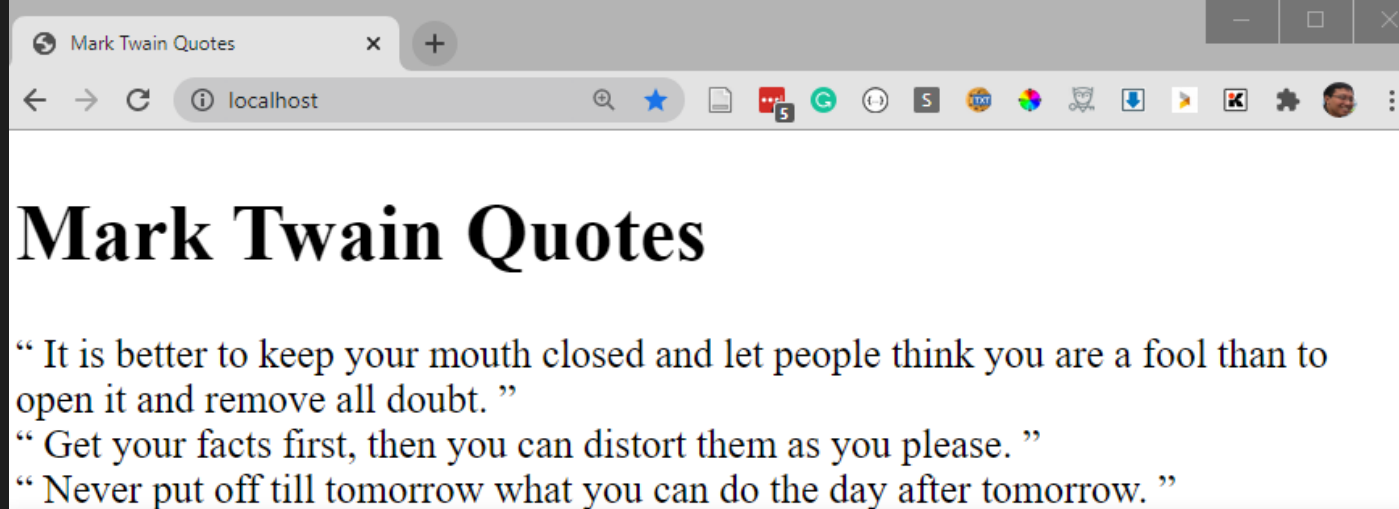
```
<q class="red">  
    It is better to keep your mouth closed  
    and let people think you are a fool than  
    to open it and remove all doubt.  
</q>
```

*Source: Dean, J. (2018). Web Programming with HTML5, CSS, and JavaScript. Jones & Bartlett Learning*

```

index-css.html > html
1  <!DOCTYPE html>
2  <html lang="en">
3
4  <head>
5      <meta charset="utf-8">
6      <meta name="author" content="Jhon Dean">
7      <title>poem</title>
8      <style>
9          * {text-align: center;}
10
11          hr {width: 50%;}
12
13          h2, p {font-style: italic; color: blue;}
14      </style>
15 </head>
16 <body>
17     <h2>Trees, by Joyce Kilmer</h2>
18     <hr>
19     <p>
20         I think that I shall never see <br>
21         A poem lovely as a tree.
22     </p>
23
24 </body>
25 </html>

```



```
1 <!DOCTYPE html>
2 <html lang="en">
3
4 <head>
5   <meta charset="utf-8">
6   <meta name="author" content="Jhon Dean">
7   <title>Mark Twain Quotes</title>
8   <style>
9     .red {background-color: red;tomato;}
10    .white {background-color: white;}
11    .blue {background-color: blue;}
12    q {font-family: Impact, sans-serif; background-color: yellow;}
13  </style>
14 </head>
15
16 <body>
17   <h1>Mark Twain Quotes</h1>
18
19   <q class="red">
20     It is better to keep your mouth closed and let people think
21     you are a fool than to open it and remove all doubt.
22   </q><br>
23   <q class="white">
24     Get your facts first, then you can distort them as you please.
25   </q><br>
26   <q class="blue">
27     Never put off till tomorrow what you can do the day after tomorrow.
28   </q>
29
30 </body>
```

# CSS ID Selector

- A class selector will be applied to any element with matched class attribute value.
- On the example:
  - The style will be applied to elements with class value red.
  - The style will target background-color attributes.

```
#lizards-lounge {  
  color: green;  
}
```

```
<h3 id="lizards-lounge">Lizards Lounge</h3>
```

Source: Dean, J. (2018). *Web Programming with HTML5, CSS, and JavaScript*. Jones & Bartlett Learning

# Styling Method



# Inline Styling Method

- Styles can be defined right at the element.
  - Using the `style` attribute.
  - This styling is the highest priority.

```
<tag style="attribute1:value1; attribute2:value2;">...</tag>
```

# Embedded Styling Method

- Styles are specified outside the targeted elements.
  - Using the `style` container.
  - The styles reside inside the page.

```
<style>
  selector(s) {attribute1:value1; attribute2:value2;}
  ...        {attribute1:value1; attribute2:value2;}
</style>
```

# External Styling Method

- Styles are specified independent from any page.
  - Using the `style` container.
  - To apply the styles a linking needs to be made.
  - The URL could be relative or absolute.

```
<link rel="stylesheet" href="external-css-URL" type="text/css">
```

```
1 <!DOCTYPE html>
2 <html lang="en">
3
4 <head>
5     <meta charset="utf-8">
6     <meta name="author" content="Jhon Dean">
7     <title>Mark Twain Quotes</title>
8     <style>
9         .white {background-color: ■ white;}
10    </style>
11    <link rel="stylesheet" href="/style.css" type="text/css">
12 </head>
13
14 <body>
15     <h1>Mark Twain Quotes</h1>
16
17     <q style="background-color: ■ tomato;">
18         It is better to keep your mouth closed and let people think
19         you are a fool than to open it and remove all doubt.
20     </q><br>
21     <q class="white">
22         Get your facts first, then you can distort them as you please.
23     </q><br>
24     <q style="font-family: 'Times New Roman', sans-serif;">
25         Never put off till tomorrow what you can do the day after tomorrow.
26     </q>
27
28 </body>
29
30 </html>
```

```

1 <!DOCTYPE html>
2 <html lang="en">
3
4 <head>
5     <meta charset="utf-8">
6     <meta name="author" content="Jhon Dean">
7     <title>Mark Twain Quotes</title>
8     <style>
9         .white {background-color: white;}
10    </style>
11    <link rel="stylesheet" href="/style.css" type="text/css">
12 </head>
13
14 <body>
15     <h1>Mark Twain Quotes</h1>
16
17     <q style="background-color: tomato;">
18         It is better to keep your mouth closed and let people think
19         you are a fool than to open it and remove all doubt.
20     </q><br>
21     <q class="white">
22         Get your facts first, then you can distort them as you please.
23     </q><br>
24     <q style="font-family: 'Times New Roman', sans-serif;">
25         Never put off till tomorrow what you can do the day after tomorrow.
26     </q>
27
28 </body>
29
30 </html>

```

# Mark Twain Quotes

**"It is better to keep your mouth closed and let people think you are a fool than to open it and remove all doubt."**

**"Get your facts first, then you can distort them as you please."**

"Never put off till tomorrow what you can do the day after tomorrow."

```

un Terminal Help
<> index-css-external.html # style.css X
# style.css > q
1 q {font-family: Impact, sans-serif;}

```

# CSS Frameworks

# CSS Frameworks

- CSS frameworks enable developer to:
  - Use it immediately.
  - Have some standards.
- Drawbacks:
  - Increase project dependency.
  - Might be too much for small projects.
- Very common CSS frameworks:
  - Bootstrap, Bulma, and Zurb Foundation.

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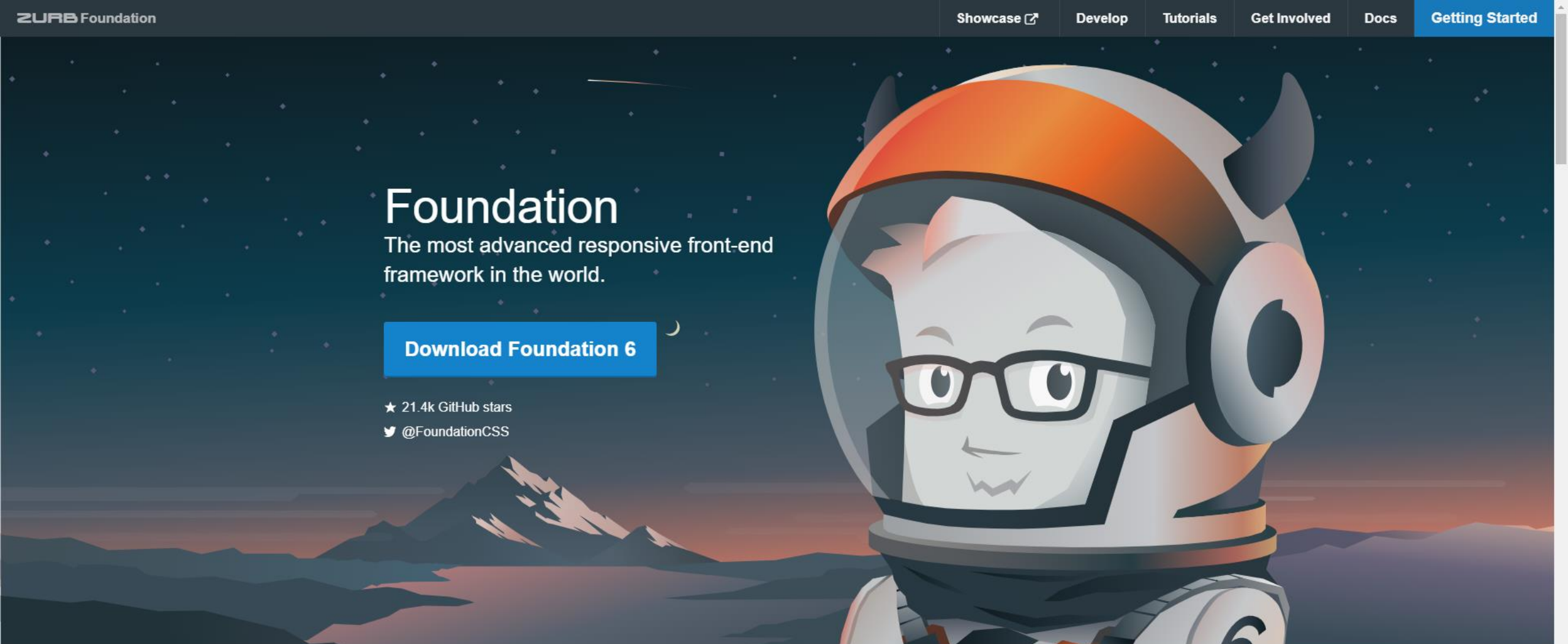
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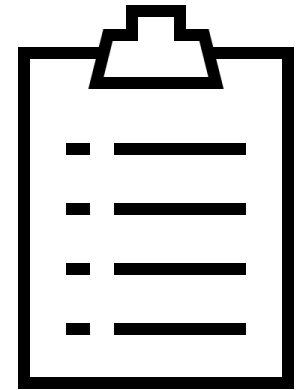


## Responsive design gets a whole lot faster

A Framework for any device, medium, and accessibility. Foundation is a family of responsive front end

# To-dos

1. What are the differences between:
  - Element's class and id attribute?
  - Absolute and relative URL.
2. What is the benefit of using:
  - Embedded styling compared to inline styling?
  - External styling compared to embedded styling?
3. What if you create two exact styling?
  - What should we expect to happen?
4. What if the external styling is missing?



# References

Srinivasan, M. (2012). Web Technology: Theory and Practice. Pearson.

Dean, J. (2018). Web Programming with HTML5, CSS, and JavaScript. Jones & Bartlett Learning.

Mozilla. HTML Element Reference.

<https://developer.mozilla.org/en-US/docs/Web/HTML/Element>

Thank  
you

